WESTERN WATER BULLETIN 2006

Flow of
The Colorado River
and other
Western Boundary Streams
and
Related Data

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

DEPARTMENT OF STATE
UNITED STATES OF AMERICA

2006

WESTERN BOUNDARY WATER BULLETIN - 2006 - INTERNATIONAL BOUNDARY AND WATER COMMISSION

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FOREWORD

This bulletin is the forty-seventh annual compilation of stream discharges and other hydrographic data relating to international aspects of the Colorado River below Imperial Dam, the Tijuana River, and other streams crossing the western land boundary of the United States and Mexico. The compilation was prepared jointly by the United States and Mexican Sections of the International Boundary and Water Commission, solely for the purpose of presenting statistical data relating to stream flow and kindred subjects for the Colorado River from Imperial Dam to the Gulf of California, the Tijuana River and its important tributaries in the United States and Mexico, and other streams, including the Alamo and New Rivers which cross the California-Baja California boundary, and the Santa Cruz River and Whitewater Draw which cross the Arizona-Sonora boundary. This Bulletin contains information for the year 2006.

Stream gaging on the Colorado River below Imperial Dam began in 1902 when the station at Yuma, Arizona was established. Stage records were obtained at this station from January 1878 until December 1973, when it was discontinued. Continuous stream gaging on the Tijuana River and its important tributaries in the United States and in Mexico began in 1936. Each government operates the gaging stations located within its own country.

COLORADO RIVER BELOW IMPERIAL DAM

Below Imperial Dam, the Colorado River flows southward 16 kilometers to the mouth of the Gila River, thence westward 18 kilometers to Pilot Knob Mountain, and south 1.6 kilometers to the point where the northerly international land boundary, between California and Baja California, intersects the river. From this point the river continues to flow southward and forms the boundary between the United States and Mexico for a distance of about 35 kilometers to the point where the southerly international land boundary between Arizona and Sonora intersects the river. From this point the river continues to flow southward about 145 kilometers to discharge into the Gulf of California.

The ordinary flows of Colorado River below Imperial Dam are largely controlled by releases at Hoover Dam, completed in 1935. The releases are further regulated at Davis Dam, completed in 1950, and by Parker and Imperial Dams, completed in 1938. Small amounts of runoff may occasionally be contributed to the flow in the lower river from the usually dry arroyos draining the 28,200 square kilometers along the river from Hoover Dam to the mouth of the Gila River. In addition, flows ranging from usually minor amounts to infrequent torrential floods may enter the lower Colorado River from the Bill Williams River, draining about 1,857 square kilometers below Alamo Dam and Lake, completed in 1963; and from the Gila River, draining about 18,900 square kilometers below Painted Rock Dam and Reservoir, completed in January 1960.

At Imperial Dam, diversions are made to Gila Gravity Main Canal and All-American Canal for irrigation projects in Arizona, including the Yuma Valley, Gila and Wellton-Mohawk projects; and in California, including the Imperial Valley, Coachella Valley and Reservation Division of Yuma Project. Also, under the provisions of the 1944 Water Treaty, there may be diverted to the All-American Canal at Imperial Dam for delivery to Mexico in the Alamo Canal, or substitute canal, at the northerly boundary, a portion of Mexico's scheduled deliveries of waters of the Colorado River, which in 2006 amounted to 1,850,234 thousand cubic meters, in accordance with Article 10 of the 1944 Water Treaty. No diversions were made to a substitute canal in 2006.

Below Laguna Dam, measured and unmeasured flows are returned to the river principally as waste and drainage water from the irrigation projects in the United States. Waste and drainage waters from irrigation projects in the United States also cross the boundary into Mexico near San Luis, Arizona without returning to the river in the United States.

In the limitrophe section of the river, 1.8 kilometers downstream from the northerly boundary, Morelos Dam, the principal diversion structure for Mexico, was completed and placed in operation on November 8, 1950. Since that date, almost all Colorado River waters diverted by Mexico (except emergency deliveries to Tijuana from August 1972 to August 1980, November-December 2003, July and November 2004, October 2005, and October-November 2006) have been diverted to the Alamo Canal at Morelos Dam.

TIJUANA RIVER BASIN

The total drainage area of the Tijuana River basin is 4,483 square kilometers, of which 27 percent lies in the United States and 73 percent in Mexico. This river is formed by the principal tributaries, Cottonwood Creek, which rises in the United States and Rio de las Palmas, which rises in Mexico. Cottonwood Creek crosses the international land boundary 34 kilometers from the Pacific Ocean to join the Rio de Las Palmas in Mexico. From the confluence of these tributaries, the Tijuana River flows northwesterly 8 kilometers to cross the land boundary into the United States near San Ysidro, California and Tijuana, Baja California, and then flows westerly 10 kilometers to discharge into the Pacific Ocean 3 kilometers north of the boundary. The flow of Cottonwood Creek is partially controlled by Barrett and Morena Reservoirs in the United States, and the flow of the Rio de las Palmas is partially controlled by Rodriguez Reservoir in Mexico.

WHITEWATER DRAW NEAR DOUGLAS, ARIZONA

Whitewater Draw rises in the United States and flows south into Mexico, crossing the international boundary near Douglas, Arizona, eventually discharging into the Gulf of California through the Yaqui River in Mexico. The total drainage area above the Douglas Gaging Station is 2,650 square kilometers. A number of mountain streams in the upper reaches of the basin are diverted for irrigation, but they would normally sink or go to ground water before reaching the main water course.

FOREWORD

SAN PEDRO RIVER AT PALOMINAS, ARIZONA

The San Pedro River rises in Mexico and flows north into the United States, crossing the boundary near Palominas, Arizona and thence northwesterly into the Gila River. The river in the vicinity of the international boundary drains an area of 1,919 square kilometers, of which 1,681 square kilometers are in Mexico.

SANTA CRUZ RIVER NEAR NOGALES AND LOCHIEL, ARIZONA

The Santa Cruz River rises in the United States and flows south into Mexico, crossing the international boundary near Lochiel, Arizona and returning to the United States near Nogales, Arizona, eventually discharging into the Gila River southwest of Phoenix, Arizona. The drainage area of the Santa Cruz River above Nogales station is 1,380 square kilometers. Of this amount, 901 square kilometers lie in Mexico. There are a few ground water irrigation diversions above the Lochiel station in Arizona and an unknown amount of water diverted for irrigation in Mexico.

ACKNOWLEDGMENTS

Other agencies which have contributed to the data published herein include the Bureau of Reclamation and the Geological Survey of the U. S. Department of the Interior; the National Weather Service, Department of Commerce; the Yuma County Water Users' Association; the Imperial Irrigation District; the city of San Diego, California; the California Regional Water Quality Control Board; the Otay Municipal Water District; and the National Water Commission of Mexico. Specific notation is made of each of the above named agencies, where the data appear. The courtesy and cooperation of those who have made these contributions are acknowledged with appreciation.

UNITS OF MEASURE

This Bulletin is published in System International (SI) units which are based on the metric system. The following conversion constants may be used to convert to the English system of measurement. Data collected by the Mexican Section are computed and published in a Spanish version of the water bulletin in metric units.

METRIC TO ENGLISH CONVERSION CONSTANTS

	METRIC UNITS				ENGLISH UNITS
			LENGTH		
	Millimeters	x	0.03937	=	Inches
	Meters	x	3.28084	=	Feet
	Kilometers	x	0.62137	=	Miles
			AREA		
	Square Meters	x	10.76391	=	Square Feet
	Hectares	x	2.47105	=	Acres
	Square Kilometers	x	0.38610	=	Square Miles
			VOLUME		
	Cubic Meters	x	35.31467	=	Cubic Feet
1,000	Cubic Meters	x	0.81071	=	Acre-Feet
			WEIGHT		
	Kilograms	x	2.20462	=	Pounds
	Megagrams	x	1.10231	=	Tons (2,000 lbs.)
			TEMPERATURE		
	Degrees Celsius	x	1.8 + 32	=	Degrees Fahrenheit

GENERAL HYDROLOGIC CONDITIONS FOR 2006

COLORADO RIVER

Normally, there is no measurable amount of runoff from the portion of the Colorado River basin in the United States and Mexico below Hoover Dam, not including Bill Williams and Gila Rivers. There was no significant amount in 2006. In the lower basin of the Colorado River in Mexico, from Morelos Diversion Dam to the Gulf of California, the average precipitation during 2006 measured at 3 index stations was 20 millimeters, compared to an average of 50 millimeters during the last 47 years (1959 to 2006).

The flow of the Colorado River reaching Imperial Dam was 6,997,286 thousand cubic meters, about 72% of the 72-year average (1935-2006) of 9,693,786 thousand cubic meters. At the Northerly International Boundary, the total flow of the river during 2006 was 1,735,544 thousand cubic meters, about 39% of the 1935-2006 average of 4,462,868 thousand cubic meters. At the Southerly International Boundary, there was no flow during 2006, about 0% of the 1935-2006 average of 2,932,063 thousand cubic meters.

The total of all flows of the Colorado River entering Mexico in 2006 amounted to 2,027,474 thousand cubic meters, 40% of the 1935-2006 average of 5,019,807 thousand cubic meters, as measured 1) in the Colorado River at the Northerly International Boundary, 2) in the Wellton-Mohawk Main Outlet Drain Extension near Morelos Dam, 3) in the wasteways that discharge into the limitrophe section of the river from the United States bank, 4) in the canal which discharges waste and drainage waters from the Yuma Project across the southerly land boundary into Mexico near San Luis, Arizona, 5) in the Wellton-Mohawk Bypass Drain at the southerly land boundary near San Luis, Arizona, 6) from the 242 Well Field, and 7) in the Diversion Channel near San Luis, Arizona.

During 2006, other waters arrived at the Mexican points of diversion and amounted to 44,681 thousand cubic meters. These waters consisted mainly of excess waters released from reservoirs on the Colorado River. A maximum instantaneous flow of 134 cubic meters per second occurred in the Colorado River at the Northerly International Boundary station on March 21, 2006.

Stored waters at the end of the year in the three major reservoirs on the Colorado River below Lee's Ferry amounted to 20,138.4 million cubic meters, 57% of the usable capacity of 35,263.2 million cubic meters. The greater part (17,471.0 million cubic meters) of the storage was contained in Lake Mead (Hoover Dam). There were no reported shortages of Colorado River water for irrigation during 2006 due to drought or accident to the irrigation system.

The total reported area irrigated from waters of the Colorado River below Imperial Dam in 2006 was 410,749 hectares; 265,759 hectares in the United States and 144,990 hectares in Mexico. An estimated 33% of the total area irrigated in Mexico is served by pumping from ground water.

TIJUANA RIVER BASIN

During 2006, the temperatures at Barrett Dam, California (elevation 533.40 meters) in the upper portion of the basin in the United States averaged 18.1 degrees Celsius, 1.5 degree Celsius above the 76-year mean. In the extreme upper portion of the basin in Mexico at El Pinal, Baja California (elevation 1394.96 meters), the recorded temperatures during the year could not be determined due to incomplete records. At Rodriguez Dam, Baja California (elevation 139.90 meters), the recorded temperatures averaged 20 degrees Celsius, about 1 degree below the normal for many years.

At Barrett Dam, in the upper portion of the basin in the United States, the recorded precipitation was 285 millimeters, 64% of normal; and at Lower Otay Dam near the lower end of the basin, 221 millimeters, or 79% of normal. The recorded precipitation at El Pinal in the upper portion of the basin in Mexico has been discontinued. At Rodriguez Dam, in the lower portion of the basin in Mexico, the recorded precipitation was 153 millimeters, 66% of the 68-year average.

Runoff above Barrett and Rodriguez Reservoirs during 2006 was about 5% of normal. Above Morena Reservoir, the runoff was 2,304 thousand cubic meters, or about 19% of the 70-year 1937-2006 mean of 12,279 thousand cubic meters. Above Barrett Reservoir, the runoff was 2,561 thousand cubic meters, or about 16% of the 70-year 1937-2006 mean of 16,478 thousand cubic meters. At Rodriguez Reservoir, no runoff was reported for 2006.

The flow of the Tijuana River at the international boundary was 8,193 thousand cubic meters during 2006.

WHITEWATER DRAW

During 2006, the average annual temperature could not be determined due to missing data throughout the year, while the annual precipitation was 3% of normal. Runoff for the year at the gaging station near Douglas, Arizona was 13,184 thousand cubic meters, or about 210% of average.

GENERAL HYDROLOGIC CONDITIONS FOR 2006

SAN PEDRO RIVER

During 2006, the average annual temperature could not be determined due to missing data throughout the year. The annual precipitation, as measured at Coronado National Monument Headquarters, was 7% of the 1961-2006 mean of 514 millimeters. The stream flow at the international boundary was 73,075 thousand cubic meters, 274% of the 1951-2006 average.

SANTA CRUZ

During 2006, neither the average annual temperature nor the annual precipitation over the watershed could be determined due to missing data. Runoff measured at the Nogales gaging station, where the stream re-enters the United States, was 9,112 thousand cubic meters. The total runoff for the year measured at the gaging station near Lochiel, Arizona, where the stream enters Mexico from the United States, was 6,715 thousand cubic meters. Therefore, neglecting stream flow depletions in Mexico, the records indicate a contribution of about 2,397 thousand cubic meters from the loop of the river lying in Mexico, or approximately 26% of the flow reaching the Nogales Station.

ALAMO AND NEW RIVERS

During 2006, the average annual temperature over the drainage areas of the Alamo and New Rivers, as recorded at El Centro, California, could not be determined due to missing data throughout the year; and over the drainage area of the New River as recorded at Mexicali, Baja California, it was 25 degrees Celsius, 2 degrees above the 81-year average.

At El Centro, the precipitation was 11 millimeters, about 16% of the 76-year average; and in Mexicali, the annual precipitation record was 8 millimeters, 10% of the 81-year average. The total flow of the New River at the international boundary in 2006 was 139,256 thousand cubic meters, which was about 95% of the 1943-2006 average.

SALTON SEA

During 2006, the average annual temperature around the Salton Sea was 0.9 degree Celsius above the long-term average, while the annual precipitation recorded at Brawley, California was approximately 15% of the long-term mean of 67 millimeters. The water surface of the Salton Sea increased slightly during the year. The maximum stage, 69.585 meters below mean sea level, was recorded on May 5th through the 25th. The mimimum stage, 70.015 meters below mean sea level, was recorded on October 29th through November 7th and November 17th through December 31st.

EMERGENCY DELIVERIES OF COLORADO RIVER WATER FOR USE IN TIJUANA, BAJA CALIFORNIA

DESCRIPTION: Water deliveries are measured at a metering station located near the international boundary near Tijuana and approximately 4.0 kilometers east of International Boundary Monument #253. The metering station consists of an in-line flowmeter with four backflow preventers. Deliveries are made utilizing a 61-centimeter diameter steel pipeline.

RECORDS: Based on totalizer readings read at approximately noon each day. Records are furnished by the Otay Municipal Water District. Records available from August 13, 1972 to December 1983; November 2003 to December 2006. (No deliveries were made from 1984 through October 2003). The records reflect a 12% loss through 1983 and a 7.2% loss thereafter incurred in conveying the water from the point of diversion above Parker Dam to the international boundary.

REMARKS: Emergency deliveries of Colorado River waters for use in Tijuana began August 13, 1972 pursuant to Minute No. 240 of this Commission. Pursuant to Minute No. 310, emergency deliveries resumed in November 2003. The deliveries are conveyed approximately 520 kilometers using the following conveyance works: the diversion works from Lake Havasu above Parker Dam and the Colorado River Aqueduct, the San Diego Aqueducts, the Otay Reservoir and facilities of the Otay Municipal Water District. The facilities were developed to circumvent serious water shortages in Tijuana.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0.16	0
2	0	0	0	0	0	0	0	0	0	0	.17	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	0	0
30	0		0	0	0	0	0	0	0	.03	0	0
31	0		0		0		0	0		.20		0
Sum	0	0	0	0	0	0	0	0	0	0.23	0.33	0

Current Year 2006 | Period 1973-2006

Month	Extreme Gage Meters High	Extreme Gage Meters Low	Extreme-Cubic Meters per Second Day @ High	Extreme-Cubic Meters per Second @ High	Extreme-Cubic Meters per Second Day @ Low	Extreme-Cubic Meters per Second @ Low	Average	Volume-Thousand Cubic Meters Total	Period 1973-2006 Average	Period 1973-2006 Maximum	Period 1973-2006 Minimum
Jan.			! 1	0	! 1	0	0	0	390	1,113	0
Feb.			! 1	0	! 1	0	0	0	392	1,003	0
Mar.			! 1	0	! 1	0	0	0	415	1,047	0
April			! 1	0	! 1	0	0	0	403	1,057	0
May			! 1	0	! 1	0	0	0	425	1,094	0
June			! 1	0	! 1	0	0	0	426	1,216	0
July			! 1	0	! 1	0	0	0	459	1,259	0
Aug.			! 1	0	! 1	0	0	0	411	1,132	0
Sept.			! 1	0	! 1	0	0	0	338	1,115	0
Oct.			31	.20	! 1	0	.01	19.9	369	1,116	0
Nov.			2	.17	! 3	0	.01	28.5	365	1,113	0
Dec.			! 1	0	! 1	0	0	0	361	1,225	0
Yearly				0.20		0	0	48.4	4,754	12,653	0

@ Mean daily ! And other days

09-5300.00 RESERVATION MAIN DRAIN NO. 4 (CALIFORNIA DRAIN)

DESCRIPTION: Water-stage recorder (digital) located 152 meters upstream from railroad culvert and 1.6 kilometers northwest of Yuma, Arizona. Discharge measurements are made from a footbridge immediately below the gage. The drainage canal discharges into the outfall channel of the Yuma Main Canal Wasteway 61.0 meters downstream from the spillway structure, and thence into the Colorado River on the right bank, 305 meters upstream from Colorado River below Yuma Main Canal Wasteway, and 10.5 kilometers upstream from the northerly international boundary. Prior to October 1955, published as "California Drainage Canal near Yuma, Arizona."
RECORDS: Based on current meter measurements and a continuous record of gage heights. Records are computed and furnished by the U. S. Geological Survey. Records available: Monthly discharge, January 1913 to April 1920, October 1921 to March 1925, and January 1934 to September 1947; daily and monthly discharge, October 1947 through 2006.
REMARKS: Reservation Main Drain No. 4 collects drainage and wastewater from the area east of the Yuma Main Canal on the Reservation Division of the Yuma Project, located in California. Since 1939, collection of seepage from the All-American Canal has caused large increases in drainage flows. Average annual flow prior to 1937 was 15,789 TCM. Monthly and annual averages since 1937 are shown in the table below.
EXTREMES: Prior to 1937: Maximum annual flow 24,904 TCM, 1916; minimum annual flow 11,003 TCM, 1913.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.88	1.42	1.08	1.25	1.53	1.44	1.30	1.56	1.42	1.30	1.81	1.78
2	.85	1.73	1.08	1.39	1.47	1.39	1.30	1.56	1.42	1.30	1.84	1.76
3	1.16	1.42	1.08	1.33	1.44	1.39	1.33	1.56	1.50	1.50	1.87	1.76
4	.82	1.47	1.05	1.22	1.61	1.33	1.36	1.56	1.47	1.25	1.81	1.73
5	1.02	1.56	1.10	1.22	1.73	1.39	1.36	1.56	1.47	1.39	1.84	1.76
6	1.10	1.70	1.02	1.67	1.81	1.50	1.39	1.56	1.47	1.47	1.90	1.78
7	1.16	1.30	.99	1.81	1.78	1.61	1.39	1.53	1.50	1.30	1.87	1.81
8	1.22	1.25	.99	1.90	1.78	1.61	1.42	1.47	1.50	1.44	1.84	1.78
9	1.56	1.16	.96	1.90	1.78	1.61	1.44	1.42	1.42	1.47	1.87	1.78
10	1.53	1.44	1.02	1.61	1.84	1.56	1.47	1.47	1.36	1.47	1.87	1.76
11	1.50	1.33	1.02	1.22	1.84	1.56	1.33	1.50	1.42	1.50	1.81	1.81
12	1.33	1.22	1.70	1.25	1.64	1.56	1.30	1.53	1.44	1.50	1.84	1.78
13	.85	1.47	1.95	1.33	1.59	1.59	1.16	1.44	1.42	1.67	1.87	1.76
14	.88	1.27	1.59	1.39	1.64	1.56	1.19	1.53	1.59	1.36	1.87	1.73
15	.79	1.19	1.61	1.42	1.56	1.53	1.25	1.50	1.61	1.42	1.84	1.78
16	.82	1.25	1.67	1.50	1.59	1.50	1.30	1.44	1.61	1.44	1.73	1.70
17	.91	1.25	1.50	1.53	1.59	1.50	1.36	1.47	1.61	1.44	1.76	1.70
18	.91	1.16	1.10	1.44	1.61	1.50	1.36	1.44	1.59	1.53	1.81	1.67
19	.99	1.10	1.05	1.36	1.59	1.53	1.56	1.44	1.61	1.64	1.76	1.64
20	1.08	1.08	1.05	1.36	1.64	1.50	1.56	1.47	1.67	1.73	1.81	1.70
21	.88	1.19	1.22	1.59	1.67	1.47	1.59	1.47	1.67	1.64	1.78	1.67
22	.82	1.10	1.19	1.53	1.64	1.42	1.53	1.42	1.70	1.64	1.84	1.64
23	1.02	1.08	1.22	1.56	1.53	1.27	1.56	1.47	1.70	1.73	1.81	1.70
24	.99	1.13	1.27	1.53	1.59	1.22	1.50	1.50	1.67	1.70	1.81	1.64
25	.96	1.02	1.13	1.47	1.59	1.22	1.56	1.50	1.73	1.76	1.76	1.59
26	.99	1.02	1.25	1.53	1.64	1.22	1.59	1.44	1.64	1.73	1.81	1.67
27	1.02	1.05	1.25	1.56	1.47	1.22	1.59	1.44	1.59	1.78	1.84	1.67
28	1.30	1.16	1.27	1.84	1.47	1.25	1.59	1.47	1.47	1.76	1.78	1.70
29	1.70		1.16	1.70	1.44	1.27	1.59	1.44	1.56	1.73	1.81	1.67
30	1.47		1.19	1.59	1.42	1.27	1.59	1.42	1.59	1.76	1.81	1.64
31	1.22		1.22		1.47		1.53	1.42		1.76		1.64
Sum	35.52	45.00		42.99		46.00		48.11		53.20		
	33.73	37.98		49.99		44.35		46.42		54.67		

Current Year 2006						Period 1937-2006		
	Extreme Gage Meters		Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
Month	High	Low	@ High Day	@ High	@ Low Day	@ Low	Average	Total	Average	Maximum	Minimum
Jan.			29	1.70	15	0.79	1.09	2,914	4,166	6,054	711
Feb.			2	1.73	!25	1.02	1.27	3,069	3,864	5,493	456
Mar.			13	1.95	9	.96	1.23	3,281	4,697	6,617	1,005
April			! 8	1.90	! 4	1.22	1.50	3,888	4,723	6,476	940
May			!11	1.84	30	1.42	1.61	4,319	4,968	6,895	804
June			! 7	1.61	!24	1.22	1.43	3,714	4,732	6,883	717
July			!21	1.59	13	1.16	1.43	3,832	4,953	8,079	662
Aug.			! 1	1.56	! 9	1.42	1.48	3,974	4,973	8,400	698
Sept.			25	1.73	10	1.36	1.55	4,011	4,720	7,672	721
Oct.			27	1.78	4	1.25	1.55	4,157	4,973	7,080	843
Nov.			6	1.90	16	1.73	1.82	4,723	4,751	7,367	806
Dec.			! 7	1.81	!19	1.59	1.72	4,596	4,517	6,241	783
Yearly				1.95		0.79	1.47	46,478	56,037	78,573	10,410

@ Mean daily ! And other days

09-5250.00 YUMA MAIN CANAL WASTEWAY TO COLORADO RIVER AT YUMA, ARIZONA

DESCRIPTION: The wasteway receives water from the Yuma Main Canal at the check structure on the canal, 501 meters upstream from the intake of the Colorado River siphon, and 5.1 kilometers downstream from the Siphon Drop Power Plant. This wasteway discharges into the Colorado River on the California side, 305 meters upstream from Colorado River below Yuma Main Canal Wasteway, and 10.5 kilometers upstream from the northerly international land boundary.
RECORDS: Discharge is computed as the difference between the measured discharge of the Yuma Main Canal at the Siphon Drop Power Plant upstream and that of the same canal below the Colorado River siphon, with deductions for small irrigation diversions from the canal between the two gaging stations. Records obtained and furnished by U. S. Geological Survey. Records available: April 1913 through 2006.
REMARKS: The wasteway discharges to the river the flow in excess of irrigation water in the Yuma Main Canal.
EXTREMES: Prior to 1935, when storage began in Lake Mead: Average annual flow, 367,333 TCM; maximum annual flow, 1,127,040 TCM, 1932; minimum annual flow, 141,728 TCM, 1917. Since 1935: Maximum mean daily discharge, 57.2 CMS, December 24-25, 1948; minimum mean daily discharge, no flow on numerous occasions.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.40	3.91	1.50	6.66	5.64	1.16	0.93	16.5	3.54	7.36	7.62	2.24
2	5.15	3.14	1.22	10.1	3.14	1.56	3.17	14.8	7.70	3.31	9.26	1.05
3	.79	3.20	.31	12.2	1.53	.85	1.90	13.7	7.33	1.30	8.61	1.30
4	.99	13.8	0	10.9	9.57	2.46	.54	16.6	8.01	2.61	7.42	.79
5	9.91	18.9	.65	10.1	13.2	2.24	1.02	14.3	10.0	3.00	8.72	4.73
6	12.9	11.0	.62	8.10	15.9	1.87	4.02	13.0	12.3	3.91	11.5	6.12
7	14.6	1.98	.12	6.32	16.2	2.58	.45	5.47	14.9	5.07	12.7	4.84
8	16.6	2.32	.51	8.52	15.9	5.49	.51	0	12.8	5.58	14.0	2.41
9	22.0	2.27	.96	12.1	14.9	5.69	.42	0	10.6	5.10	14.0	2.12
10	21.9	2.21	1.42	9.86	16.1	2.55	.99	2.86	8.72	5.64	15.2	4.76
11	21.4	2.24	1.42	6.03	10.1	3.00	.91	7.87	7.93	7.79	11.8	3.54
12	14.8	4.16	2.49	3.17	0	3.06	1.02	6.54	4.76	6.34	8.84	5.35
13	2.78	3.34	.99	2.04	.65	2.27	.37	1.39	3.68	1.53	8.13	4.67
14	1.87	2.41	.48	4.36	1.08	1.81	0	12.4	2.69	3.48	7.59	5.55
15	4.93	1.76	1.27	7.36	1.59	8.78	.82	12.7	5.95	3.20	8.58	2.35
16	3.17	1.44	1.22	10.8	1.33	5.38	1.25	6.88	5.72	1.93	8.81	1.27
17	2.10	1.25	.93	10.3	.96	1.93	1.10	7.79	7.31	3.65	7.14	5.64
18	2.44	.85	1.08	7.45	.99	3.26	.82	8.50	6.00	3.79	8.41	2.75
19	2.80	4.25	.71	6.68	.62	3.40	1.13	9.35	5.64	2.46	14.9	2.78
20	3.12	2.63	1.39	7.36	1.19	1.78	.28	8.84	8.55	1.81	6.09	5.44
21	1.67	1.73	3.77	6.54	1.67	1.13	.99	9.50	13.5	3.40	1.08	2.58
22	4.08	1.95	5.95	6.63	0	.96	.91	10.7	16.3	2.29	1.25	2.78
23	7.00	1.95	9.83	9.01	0	1.08	3.00	14.7	17.4	2.63	5.35	5.30
24	7.05	2.15	11.5	7.87	.08	1.61	2.52	15.3	17.2	1.47	3.23	15.2
25	6.46	1.67	6.66	5.30	0	.16	1.36	14.8	15.8	3.74	1.73	15.8
26	5.64	1.90	10.5	5.27	0	.71	.82	11.8	12.1	2.46	4.50	10.5
27	3.60	1.93	11.1	6.23	1.93	.54	.74	12.7	7.36	2.69	2.18	16.3
28	1.73	2.04	11.4	7.99	3.82	.88	1.25	13.1	9.35	2.27	1.87	17.4
29	2.61		7.45	6.40	4.47	1.02	2.44	10.3	9.91	2.95	1.56	18.9
30	3.34		6.80	7.00	3.06	.74	5.83	10.0	9.86	3.12	1.59	18.0
31	3.00		6.80		1.50		14.9	8.72		4.67		14.4
Sum	219.83	102.38	111.05	228.65	147.12	69.95	56.41	311.11	282.91	110.55	223.66	206.86

Current Year 2006						Period 1935-2006		
	Extreme Gage Meters		Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
Month	High	Low	@ High Day	@ High	@ Low Day	@ Low	Average	Total	Average	Maximum	Minimum
Jan.			9	22.0	3	0.79	7.09	18,993	50,576	136,546	550
Feb.			5	18.9	18	.85	3.66	8,846	40,934	109,952	444
Mar.			24	11.5	4	0	3.58	9,595	40,808	111,248	440
April			3	12.2	13	2.04	7.62	19,755	40,307	106,795	402
May			7	16.2	!12	0	4.75	12,711	48,243	108,892	411
June			15	8.78	25	.16	2.33	6,044	42,155	107,263	422
July			31	14.9	14	0	1.82	4,874	38,986	112,518	455
Aug.			4	16.6	! 8	0	10.0	26,880	43,841	110,878	455
Sept.			23	17.4	14	2.69	9.43	24,443	47,964	103,193	440
Oct.			11	7.79	3	1.30	3.57	9,552	42,072	111,075	699
Nov.			10	15.2	21	1.08	7.46	19,324	43,767	125,198	882
Dec.			29	18.9	4	.79	6.67	17,873	49,387	134,203	570
Yearly				22.0		0	5.67	178,890	529,040	1,286,335	8,226

@ Mean daily ! And other days

09-5211.00 COLORADO RIVER BELOW YUMA MAIN CANAL WASTEWAY AT YUMA, ARIZONA - DISCHARGES

DESCRIPTION: Water-stage recorder located in California on the right bank of the river, 305 meters downstream from the mouth of the Yuma Main Canal Wasteway, 1.0 kilometers downstream from the abandoned gaging station on the Colorado River at Yuma, 8.4 kilometers downstream from the mouth of the Gila River, 31.5 kilometers downstream from Imperial Dam, and 10.3 kilometers upstream from the northerly international boundary. Zero of the gage is 31.09 meters above mean sea level, U. S. C. & G. S. datum.
RECORDS: Based on current meter measurements and a continuous record of gage heights. Computations by shifting control methods. Records obtained and furnished by U. S. Geological Survey. Records available: October 1963 through 2006. Records from January 1951 through September 1963 deduced from "Colorado River at Yuma" plus flows from "Reservation Main Drain No. 4" and "Yuma Main Canal Wasteway."
REMARKS: Reservoirs on the Colorado River, power developments, transmountain diversions, reservoirs on the Gila River, irrigation diversions, and return flows modify the river flow at this station.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.3	37.1	15.3	25.6	23.7	17.4	16.3	32.9	28.9	22.2	21.8	20.7
2	27.8	47.3	15.3	27.9	20.6	17.4	19.1	31.4	27.2	22.9	23.8	19.6
3	36.8	24.8	15.7	28.9	19.1	16.3	19.0	29.2	26.8	32.0	23.4	19.7
4	27.2	27.5	15.1	27.3	25.4	17.9	17.9	30.3	26.9	20.4	22.9	19.9
5	29.7	31.2	15.6	27.0	28.9	17.7	17.4	30.9	27.3	19.8	23.5	23.6
6	30.0	36.0	15.6	40.2	31.7	18.0	20.6	31.7	28.9	19.5	25.9	24.4
7	31.2	19.7	14.6	64.6	31.2	17.5	16.0	41.3	33.1	19.7	26.3	23.3
8	32.0	16.2	15.5	62.6	30.9	19.6	16.2	21.4	32.0	19.8	28.0	20.4
9	36.0	15.1	15.6	51.8	30.9	20.6	15.7	18.4	28.9	19.4	27.9	20.0
10	35.4	28.2	17.6	37.9	31.2	18.7	16.0	24.8	28.1	19.7	28.9	22.7
11	34.8	30.0	18.6	26.2	30.0	22.0	15.4	27.8	28.6	20.1	28.9	22.8
12	33.7	21.9	60.9	27.7	17.8	22.1	15.3	30.0	54.7	23.3	28.1	24.2
13	19.4	30.9	73.1	25.0	16.7	20.6	15.3	54.1	57.5	36.2	27.6	23.6
14	17.7	27.8	62.9	24.2	17.2	19.7	15.1	66.8	34.0	22.5	27.3	23.6
15	21.4	20.3	71.4	26.0	17.5	36.8	15.4	36.8	27.0	20.7	27.9	30.6
16	20.9	19.4	60.3	28.2	16.9	50.4	17.3	26.3	26.8	18.0	36.0	43.9
17	18.4	19.1	37.1	27.4	16.9	48.4	21.8	26.7	26.9	18.5	39.1	43.0
18	18.0	18.8	22.3	24.9	16.7	51.5	21.0	26.8	27.0	18.5	34.8	29.5
19	18.6	20.3	19.6	22.7	16.9	39.1	37.1	27.3	27.1	31.0	34.6	22.7
20	18.6	19.5	18.7	23.0	17.0	20.8	35.1	26.6	28.0	36.2	24.8	23.7
21	16.7	17.4	21.3	22.7	21.2	18.0	21.3	26.9	28.6	28.2	16.1	21.2
22	18.8	22.1	24.5	22.7	21.6	17.2	19.8	27.5	29.7	21.4	19.2	20.5
23	21.9	17.9	26.9	25.9	18.9	16.1	21.6	30.6	30.0	28.2	24.5	22.8
24	22.4	17.0	27.8	24.6	22.5	15.3	20.5	32.6	30.3	20.5	23.1	34.3
25	21.7	16.7	24.8	22.6	23.9	15.9	17.7	30.9	31.4	32.3	21.1	42.5
26	20.4	16.4	27.6	22.8	21.3	16.8	16.9	28.6	28.0	38.5	25.6	35.4
27	20.7	16.1	27.5	28.6	20.0	15.9	16.5	28.3	30.0	22.2	27.8	33.4
28	34.8	15.7	28.1	38.2	20.1	16.6	17.0	28.6	26.5	20.6	20.4	31.7
29	56.6		26.4	31.2	19.3	17.0	18.4	27.1	26.4	19.7	20.8	31.4
30	40.5		32.0	25.2	17.8	16.4	23.3	26.8	25.9	19.3	20.8	32.0
31	30.0		26.3		16.8		32.0	27.5		20.4		31.2
Sum	838.4	650.4	894.0	913.6	680.6	677.7	608.0	956.9	912.5	731.7	780.9	838.3

Month	Current Year 2006 Extreme Gage Meters High	Current Year 2006 Extreme Gage Meters Low	Extreme-Cubic Meters per Second @ High Day	@ High	Extreme-Cubic Meters per Second @ Low Day	@ Low	Average	Volume-Thousand Cubic Meters Total	Period 1951-2006 Average	Maximum	Minimum
Jan.			29	56.6	21	16.7	27.0	72,438	244,770	1,317,479	36,828
Feb.			2	47.3	9	15.1	23.2	56,195	201,916	1,228,424	41,083
Mar.			13	73.1	7	14.6	28.8	77,242	224,112	1,610,496	42,683
April			7	64.6	25	22.6	30.5	78,935	200,991	1,119,312	41,552
May			6	31.7	!13	16.7	22.0	58,804	199,275	1,065,554	43,383
June			18	51.5	24	15.3	22.6	58,553	193,512	1,113,679	36,996
July			19	37.1	14	15.1	19.6	52,531	216,421	2,013,773	37,956
Aug.			14	66.8	9	18.4	30.9	82,676	223,926	2,073,958	41,457
Sept.			13	57.5	30	25.9	30.4	78,840	201,730	1,669,785	53,264
Oct.			26	38.5	16	18.0	23.6	63,219	174,271	1,789,911	43,129
Nov.			17	39.1	21	16.1	26.0	67,470	176,685	1,292,035	42,965
Dec.			16	43.9	2	19.6	27.0	72,429	204,316	1,374,775	40,733
Yearly				73.1		14.6	26.0	819,332	2,461,925	13,065,596	633,707

@ Mean daily ! And other days

09-5211.01 COLORADO RIVER BELOW YUMA MAIN CANAL WASTEWAY
AT YUMA, ARIZONA - STAGES

(See Preceding Page for Description)

MEAN DAILY GAGE HEIGHT IN METERS 2006

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.095	3.315	2.895	3.095	3.060	2.945	2.925	3.255	3.175	3.045	3.020	2.995
2	3.130	3.515	2.895	3.150	2.995	2.945	2.985	3.230	3.145	3.055	3.065	2.970
3	3.325	3.075	2.900	3.175	2.965	2.925	2.980	3.180	3.135	3.235	3.055	2.970
4	3.120	3.120	2.890	3.135	3.100	2.955	2.960	3.210	3.140	3.010	3.040	2.980
5	3.175	3.195	2.900	3.130	3.175	2.955	2.945	3.220	3.145	2.995	3.055	3.055
6	3.180	3.280	2.900	3.395	3.235	2.960	3.010	3.235	3.180	2.985	3.105	3.070
7	3.205	2.980	2.880	3.855	3.225	2.950	2.920	3.420	3.265	2.995	3.115	3.050
8	3.220	2.910	2.900	3.815	3.215	2.990	2.925	3.030	3.240	2.995	3.155	2.985
9	3.310	2.895	2.900	3.620	3.215	3.010	2.915	2.970	3.180	2.985	3.150	2.980
10	3.295	3.140	2.930	3.355	3.225	2.975	2.915	3.095	3.165	2.985	3.175	3.040
11	3.280	3.170	2.955	3.115	3.195	3.040	2.905	3.160	3.175	3.000	3.175	3.040
12	3.255	3.020	3.760	3.145	2.945	3.040	2.905	3.200	3.675	3.060	3.155	3.070
13	2.950	3.190	3.990	3.090	2.925	3.010	2.905	3.660	3.725	3.320	3.145	3.055
14	2.915	3.135	3.815	3.070	2.935	2.995	2.895	3.890	3.275	3.045	3.140	3.055
15	2.985	2.985	3.970	3.105	2.940	3.330	2.905	3.330	3.135	3.010	3.150	3.205
16	2.975	2.965	3.760	3.160	2.930	3.590	2.945	3.125	3.135	2.950	3.320	3.465
17	2.925	2.960	3.305	3.140	2.930	3.555	3.035	3.135	3.135	2.960	3.375	3.450
18	2.915	2.955	3.025	3.090	2.925	3.620	3.020	3.135	3.140	2.960	3.295	3.180
19	2.930	2.985	2.970	3.040	2.930	3.375	3.340	3.145	3.140	3.215	3.290	3.040
20	2.935	2.970	2.955	3.045	2.930	3.020	3.300	3.135	3.160	3.320	3.090	3.060
21	2.900	2.930	3.000	3.040	3.020	2.960	3.025	3.140	3.170	3.160	2.910	3.010
22	2.940	3.020	3.070	3.040	3.025	2.945	2.995	3.150	3.195	3.020	2.970	2.995
23	3.005	2.940	3.120	3.105	2.970	2.925	3.035	3.215	3.205	3.160	3.075	3.040
24	3.020	2.925	3.140	3.080	3.045	2.900	3.010	3.250	3.210	3.000	3.050	3.275
25	3.000	2.920	3.080	3.035	3.070	2.915	2.955	3.220	3.230	3.245	3.005	3.440
26	2.980	2.915	3.140	3.040	3.020	2.935	2.940	3.175	3.160	3.360	3.105	3.305
27	2.985	2.910	3.135	3.165	2.995	2.915	2.930	3.170	3.200	3.035	3.150	3.265
28	3.270	2.900	3.150	3.360	3.000	2.930	2.940	3.175	3.125	3.000	2.990	3.235
29	3.700		3.115	3.215	2.985	2.940	2.970	3.140	3.125	2.980	3.000	3.230
30	3.385		3.235	3.090	2.955	2.930	3.065	3.135	3.115	2.970	3.000	3.235
31	3.175		3.110		2.935		3.235	3.150		2.990		3.220
Avg.	3.110	3.045	3.155	3.195	3.035	3.050	2.990	3.215	3.205	3.065	3.110	3.130

09-5302.00 YUMA MESA OUTLET DRAIN TO COLORADO RIVER NEAR YUMA, ARIZONA

DESCRIPTION: Venturi meter with recorder 0.5 kilometer from outlet to Colorado River, 0.8 kilometer west of Joe Henry Memorial Park in Yuma, Arizona. Outlet is 2.7 kilometers downstream from the mouth of Yuma Main Canal Wasteway.
RECORDS: Records are furnished by U. S. Geological Survey. Records available: July 1970 through 2006. Prior to July 21, 1972, records furnished by U. S. Bureau of Reclamation.
REMARKS: Records show water pumped from wells on the Yuma Mesa and conveyed by underground conduit to Colorado River.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.13	1.13	1.13	1.27	1.16	1.16	1.16	1.16	1.05	1.05	1.05	0.45
2	1.13	1.13	1.19	1.33	1.16	1.16	.51	1.16	1.05	1.05	1.05	.45
3	1.13	1.13	1.19	1.33	1.16	1.16	.10	1.16	1.05	1.05	1.05	.45
4	1.13	1.13	1.19	1.33	1.16	1.16	.10	1.16	1.05	1.05	1.05	.45
5	1.13	1.13	1.19	1.33	1.16	1.16	.10	1.08	1.05	1.05	1.05	.82
6	1.13	1.13	1.19	1.33	1.16	1.16	.10	1.02	1.05	1.05	1.05	1.05
7	1.13	1.13	1.19	1.33	1.16	1.16	.10	1.08	1.05	1.05	1.05	1.05
8	1.13	1.13	1.19	1.33	1.16	1.16	.10	1.16	1.05	1.05	1.05	1.05
9	1.13	1.13	1.19	1.33	1.16	1.16	.10	1.16	1.05	1.05	1.05	1.05
10	1.13	1.13	1.19	1.33	1.16	1.16	.59	1.16	1.05	1.05	1.05	1.05
11	1.13	1.13	1.19	1.33	1.16	1.16	1.16	1.16	1.05	1.05	1.05	1.05
12	1.13	1.13	1.19	1.33	1.16	1.16	1.16	1.16	1.05	1.05	1.05	1.05
13	1.13	1.13	.91	1.33	1.16	1.16	1.16	1.16	1.05	1.05	1.05	1.05
14	1.13	1.16	.65	1.33	1.16	1.16	1.16	1.16	1.05	1.05	1.05	1.05
15	1.13	1.16	.65	1.33	1.16	1.16	1.16	1.16	1.05	1.05	1.05	1.05
16	1.13	1.16	.65	1.33	1.16	1.16	1.16	1.10	1.05	1.05	1.05	1.05
17	1.13	1.16	.65	1.33	1.16	1.16	1.16	1.08	1.05	1.05	1.05	1.05
18	1.13	1.16	.65	1.33	1.16	1.16	1.16	1.08	1.05	1.05	1.05	1.05
19	1.13	1.16	.65	1.33	1.10	1.16	1.05	.91	1.05	1.05	1.05	1.05
20	1.13	1.16	.88	1.33	1.05	.45	1.16	.76	.76	1.05	1.05	1.05
21	1.13	1.16	1.19	1.33	1.05	.26	1.16	.82	.45	1.05	1.05	1.05
22	1.13	1.16	1.19	1.33	1.10	.26	1.16	.79	.45	1.05	1.05	1.05
23	1.13	1.16	1.19	1.33	1.16	.26	1.16	.85	.45	1.05	1.05	1.05
24	1.13	1.16	1.19	1.33	1.16	.26	1.16	.85	.45	1.05	1.05	1.05
25	1.13	1.16	1.19	1.30	1.16	.26	1.16	.85	.71	1.05	.76	1.05
26	1.13	1.16	1.19	1.30	1.16	.26	1.16	.85	1.05	1.05	.45	1.05
27	1.13	1.16	1.19	1.30	1.16	.26	1.16	.85	1.05	1.05	.45	1.05
28	1.13	1.19	1.19	1.30	1.16	.65	1.16	.85	1.05	1.05	.45	1.05
29	1.13		1.19	1.30	1.16	1.16	1.16	.85	1.05	1.05	.45	1.05
30	1.13		1.19	1.30	1.16	1.16	1.16	.85	1.05	1.05	.45	1.05
31	1.13		1.19		1.16		1.16	.85		1.05		1.05
Sum	35.03	32.12	33.00	39.66	35.62	27.28	27.21	31.29	28.47	32.55	28.21	29.92

Current Year 2006					Period 1971-2006			
	Extreme Gage Meters	Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters			
Month	High	Low	@ High Day	@ Low Day	Average	Total	Average	Maximum	Minimum
Jan.			! 1	1.13	! 1	1.13	1.13	3,027	3,129	7,204	0
Feb.			28	1.19	! 1	1.13	1.15	2,775	2,966	6,753	0
Mar.			! 2	1.19	!14	.65	1.06	2,851	3,209	7,530	4.9
April			! 2	1.33	1	1.27	1.32	3,427	3,246	7,491	0
May			! 1	1.16	!20	1.05	1.15	3,078	3,277	7,617	0
June			! 1	1.16	!21	.26	.91	2,357	3,072	7,206	0
July			! 1	1.16	! 3	.10	.88	2,351	3,272	6,796	613
Aug.			! 1	1.16	20	.76	1.01	2,703	3,235	7,401	222
Sept.			! 1	1.05	!21	.45	.95	2,460	3,192	7,253	0
Oct.			! 1	1.05	! 1	1.05	1.05	2,812	3,313	7,106	194
Nov.			! 1	1.05	!26	.45	.94	2,437	3,324	7,103	386
Dec.			! 6	1.05	! 1	.45	.97	2,585	3,537	7,580	0
Yearly				1.33		0.10	1.04	32,863	38,772	78,926	2,162

@ Mean daily ! And other days

09-5305.00 DRAIN NO. 8-B (ARAZ DRAIN)

DESCRIPTION: This drain discharges into the Colorado River 6.4 kilometers downstream from Colorado River below Yuma Main Canal Wasteway, and 4.0 kilometers upstream from the northerly international boundary. Prior to October 1955, published as "Araz Drain."
RECORDS: Records are furnished by the U. S. Geological Survey from current meter measurements during the year. Records available: May 1948 through 2006.
REMARKS: Drain 8-B, which was constructed in February 1948, collects seepage water in the westerly section of the Reservation Division of the Yuma Project which lies in California. Flow in the drain between the mouth and the U. S. Highway No. 80 culvert, about 975 meters upstream, is affected by backwater from the river during ordinary high stages.
EXTREMES: Mean daily discharge: Maximum, 1.08 CMS on May 31, 2000; minimum no flow several days in February 1966.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.25	0.26	0.23	0.23	0.23	0.21	0.23	0.26	0.25	0.28	0.31	0.31
2	.25	.24	.23	.22	.24	.21	.23	.25	.25	.28	.31	.34
3	.40	.25	.22	.22	.23	.21	.23	.24	.25	.28	.34	.34
4	.28	.25	.23	.22	.22	.21	.23	.24	.25	.28	.37	.34
5	.25	.23	.22	.22	.22	.20	.23	.27	.25	.28	.34	.34
6	.25	.25	.22	.24	.21	.20	.23	.25	.27	.28	.34	.28
7	.27	.31	.21	.24	.22	.21	.23	.24	.31	.28	.31	.28
8	.24	.23	.20	.23	.21	.21	.23	.24	.34	.31	.34	.28
9	.24	.23	.21	.22	.21	.21	.23	.24	.31	.31	.34	.27
10	.28	.24	.20	.22	.21	.21	.22	.24	.27	.28	.34	.31
11	.28	.24	.20	.24	.21	.21	.22	.25	.27	.28	.34	.28
12	.25	.22	.20	.26	.21	.21	.22	.24	.26	.31	.31	.31
13	.26	.23	.20	.23	.22	.21	.23	.24	.27	.28	.31	.31
14	.26	.28	.26	.24	.23	.21	.23	.24	.27	.28	.34	.28
15	.23	.26	.23	.24	.23	.21	.23	.24	.26	.31	.31	.28
16	.22	.22	.22	.24	.22	.21	.23	.24	.26	.31	.31	.28
17	.25	.24	.22	.23	.23	.22	.24	.24	.26	.31	.34	.31
18	.24	.22	.22	.23	.23	.22	.24	.24	.27	.34	.37	.28
19	.28	.22	.22	.22	.22	.22	.24	.24	.28	.31	.34	.31
20	.25	.22	.21	.23	.22	.22	.24	.27	.28	.34	.31	.31
21	.24	.22	.21	.22	.21	.22	.24	.26	.28	.34	.31	.28
22	.24	.24	.20	.22	.21	.22	.24	.28	.27	.31	.31	.28
23	.25	.24	.22	.22	.21	.22	.24	.26	.27	.34	.37	.42
24	.26	.24	.23	.22	.21	.22	.24	.26	.27	.34	.34	.31
25	.40	.22	.24	.22	.21	.22	.24	.25	.27	.31	.31	.28
26	.28	.22	.23	.23	.20	.22	.24	.25	.27	.34	.31	.28
27	.25	.22	.22	.27	.22	.22	.24	.25	.27	.34	.28	.28
28	.27	.24	.22	.25	.22	.22	.25	.25	.27	.31	.28	.31
29	.40		.24	.25	.22	.22	.26	.25	.27	.34	.28	.28
30	.28		.24	.25	.22	.22	.25	.25	.27	.37	.28	.31
31	.26		.24		.22		.24	.25		.34		.28
Sum	8.36	6.68	6.84	6.97	6.77	6.42	7.29	7.72	8.14	9.61	9.69	9.35

Current Year 2006					Period 1948-2006		
	Extreme Gage Meters	Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
Month	High	Low	@ High Day	@ High	@ Low Day	@ Low	Average	Total	Average	Maximum	Minimum
Jan.			! 3	0.40	16	0.22	0.27	722	535	1,337	48.5
Feb.			7	.31	!12	.22	.24	577	449	920	50.0
Mar.			14	.26	! 8	.20	.22	591	519	1,052	77.3
April			27	.27	! 2	.22	.23	602	529	1,233	82.4
May			2	.24	26	.20	.22	585	565	1,551	71.9
June			!17	.22	! 5	.20	.21	555	540	1,270	83.1
July			29	.26	!10	.22	.24	630	601	1,554	89.8
Aug.			22	.28	! 3	.24	.25	667	665	1,665	91.0
Sept.			8	.34	! 1	.25	.27	703	678	1,690	66.1
Oct.			30	.37	! 1	.28	.31	830	764	1,505	68.2
Nov.			! 4	.37	!27	.28	.32	837	710	1,530	71.2
Dec.			23	.42	9	.27	.30	808	616	12,295	52.1
Yearly				0.42		0.20	0.26	8,107	7,171	15,331	955

@ Mean daily ! And other days

09-5270.00 PILOT KNOB POWER PLANT AND WASTEWAY
NEAR PILOT KNOB, CALIFORNIA

DESCRIPTION: The Pilot Knob Power Plant and Wasteway is located on the All-American Canal, 33.5 kilometers downstream from the intake at Imperial Dam, 9.7 kilometers west of Yuma, about 1.6 kilometers north of the northerly international boundary and empties into the old Alamo Canal in the United States and thence into the Colorado River through Rockwood gates, about 1.6 kilometers upstream from the northerly international boundary. Water-stage recorder is located in forebay on right bank of the All-American Canal, 168 meters upstream from wasteway gates and 549 meters from the entrance to the power plant. Datum of gage is 45.72 meters above mean sea level. Tailrace gage is on left bank, 207 meters downstream from power plant with automatic recording equipment in control house. All bypass gates are equipped with calibrated openings which are read on all gate changes. Datum of tailrace gage is at mean sea level; elevation of sill of wasteway gates is 45.07 meters, U. S. C. & G. S. datum. Prior to October 1956, this station was published as "Pilot Knob Wasteway near Pilot Knob, California."

RECORDS: Daily discharge is computed from flowmeter equipment and head and openings on wasteway gates or from head and gate opening on wicket and wasteway gates. Records furnished by the U. S. Geological Survey. Records available: July 1944 through 2006. The wasteway was operated for the purpose of diverting Colorado River water to the Alamo Canal for use in Mexico from July 1944 to November 8, 1950 in accordance with arrangements between the United States and Mexico for emergency use of the All-American Canal facilities. Records since 1950 show water released through Pilot Knob Power Plant and Wasteway from the All-American Canal and returned to the Colorado River through Rockwood gates.

REMARKS: Pilot Knob Wasteway was completed in 1938, and the first flow occurred on February 5, 1939. Pilot Knob Power Plant was completed in January 1957, and the first flow occurred on January 14, 1957.

EXTREMES: Maximum mean daily discharge, 281 CMS on October 6, 1985; minimum daily discharge, no flow during long periods.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	25.9	53.5	62.6	28.3	31.2	34.3	0	0	0	0	24.9
2	0	19.7	56.9	60.9	26.6	35.1	35.1	0	0	0	0	26.2
3	0	33.9	56.9	64.0	22.4	36.2	33.1	0	0	0	0	26.3
4	0	27.5	57.2	59.8	20.4	35.4	33.1	0	0	0	0	27.4
5	0	21.3	57.2	54.4	10.5	35.7	33.4	0	0	0	0	25.9
6	0	23.7	57.8	47.3	0	35.1	32.0	0	0	0	0	24.5
7	0	36.0	60.3	34.0	0	35.7	33.7	8.98	0	0	0	24.2
8	0	47.9	58.1	33.7	0	34.6	34.3	13.5	0	0	0	26.2
9	0	48.7	61.7	34.3	0	34.3	34.6	13.5	0	0	0	27.8
10	0	34.3	60.6	48.7	0	35.1	33.1	6.85	0	0	0	26.6
11	0	28.6	63.4	61.5	9.06	34.6	32.0	0	0	0	0	25.5
12	8.13	36.2	27.9	59.8	24.9	34.6	32.0	0	0	0	0	23.2
13	27.2	33.7	22.9	63.2	23.8	35.7	32.0	0	0	0	0	23.4
14	29.2	34.8	24.7	64.3	23.5	36.2	32.0	0	0	0	0	24.1
15	28.1	48.4	22.4	60.0	23.5	24.0	32.0	0	0	0	0	21.8
16	28.1	47.3	27.3	56.9	23.5	0	31.7	0	0	0	0	19.7
17	33.1	48.1	51.3	59.2	24.6	0	30.0	0	0	0	0	19.7
18	33.7	47.9	68.8	61.2	25.8	0	30.0	0	0	0	0	22.2
19	35.1	47.3	71.1	65.4	26.6	12.1	24.4	0	0	0	0	23.0
20	35.7	47.6	73.3	64.6	27.2	25.9	24.6	0	0	0	9.35	22.8
21	37.1	48.7	73.6	62.3	25.5	37.1	30.9	0	0	0	24.9	20.1
22	36.2	46.4	66.6	61.5	24.1	35.1	31.4	0	0	0	24.2	21.1
23	35.4	51.0	63.7	56.1	26.9	35.1	29.7	0	0	0	19.8	22.0
24	35.1	52.1	62.6	51.5	26.9	35.1	25.4	0	0	0	20.5	9.46
25	35.1	51.5	65.1	49.3	24.9	35.1	32.3	0	0	0	23.6	0
26	37.4	52.7	62.6	44.5	26.6	35.1	31.7	0	0	0	22.2	0
27	38.5	52.7	62.6	28.9	28.0	35.1	27.7	0	0	0	19.9	0
28	33.4	51.0	64.6	22.3	28.0	35.4	26.6	0	0	0	23.1	0
29	19.8		68.5	27.4	28.3	34.8	29.5	0	0	0	21.9	0
30	23.9		59.8	33.7	28.3	34.8	28.0	0	0	0	23.2	0
31	28.1		65.1		28.3		13.8	0		0		0
Sum	618.33	1,144.9	1,748.1	1,553.3	636.46	904.2	944.4	42.83	0	0	232.65	558.06

Current Year 2006						Period 1944-2006			
	Extreme Gage Meters		Extreme-Cubic Meters per Second				Volume-Thousand Cubic Meters		
Month	High	Low	@ High Day	@ High	@ Low Day	@ Low	Average	Total	Average	Maximum	Minimum
Jan.			27	38.5	! 1	0	19.9	53,424	112,007	643,620	0
Feb.			!26	52.7	2	19.7	40.9	98,919	95,787	579,127	0
Mar.			21	73.6	15	22.4	56.4	151,036	146,195	501,939	0
April			19	65.4	28	22.3	51.8	134,205	151,310	447,013	0
May			! 1	28.3	! 6	0	20.5	54,990	71,905	454,461	0
June			21	37.1	!16	0	30.1	78,123	109,507	501,523	0
July			2	35.1	31	13.8	30.5	81,596	155,371	512,385	0
Aug.			! 8	13.5	! 1	0	1.38	3,701	146,375	498,782	0
Sept.			! 1	0	! 1	0	0	0	92,835	591,679	0
Oct.			! 1	0	! 1	0	0	0	66,148	617,269	0
Nov.			21	24.9	! 1	0	7.76	20,101	66,459	609,196	0
Dec.			9	27.8	!25	0	18.0	48,216	104,874	700,894	0
Yearly				73.6		0	23.0	724,311	1,318,773	6,000,505	0

@ Mean daily ! And other days

09-5220.00 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY - DISCHARGES

DESCRIPTION: Water-stage recorder on the left (Arizona) bank and cableway at the point where the northerly international land boundary (California-Baja California) intersects the Colorado River, about 10.3 kilometers downstream from Colorado River below Yuma Main Canal Wasteway, 8.0 kilometers west of Yuma, Arizona, 1.8 kilometers upstream from Morelos Diversion Structure, and about 1.6 kilometers downstream from Rockwood Gate. Zero of the gage is at mean sea level, U. S. C. & G. S. datum. On May 1, 1988, the gage was relocated 52 meters upstream of the old gage on the left bank. Zero of the new gage is at mean sea level, U. S. C. & G. S. datum. Elevation of the new gage is equal to that of the old gage. Station is operated by the United States Section of the Commission.

RECORDS: Based on 185 current meter measurements during the year, 121 by the United States Section, 62 by the Mexican Section of the Commission, 2 by the U. S. Geological Survey, and a continuous record of gage heights. Discharges are computed on the basis of a water-stage recorder 512 meters upstream from the northerly international boundary where the remains of an old weir serve as a partial controlling section. A continuous gage height record is available November 15, 1948 through 2004; daily discharge records available January 1, 1950 through 2006.

REMARKS: Reservoirs on the Colorado River, including Lake Mead above Hoover Dam, where storage began in 1935, reservoirs on the Gila River, and many irrigation diversions and return flows regulate the river flow at this station except for infrequent flood flows. During 2006 the flow at this point represented the total amount of the Colorado River water which crossed the northerly international boundary.

EXTREMES: Prior to January 1935: Maximum instantaneous discharge estimated about 7,080 CMS, January 22, 1916; minimum discharge, no flow several days during August and September 1934; average annual flow 16,581,806 TCM; maximum annual flow 31,429,325 TCM, 1907; minimum annual flow 1,448,117 TCM, 1934. Since January 1935: Maximum instantaneous discharge 1,150 CMS on August 20, 1983, minimum discharge, no flow during April 1935.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.0	63.8	76.4	92.1	55.9	53.9	54.7	41.0	38.5	30.1	29.0	51.2
2	36.7	72.0	77.6	93.8	48.8	57.0	53.9	39.9	36.6	29.8	32.1	51.9
3	47.9	62.1	77.7	95.6	45.0	59.0	52.9	38.4	36.0	40.4	31.0	51.8
4	38.3	66.1	77.5	95.2	47.0	57.8	52.6	39.0	36.5	28.4	31.0	52.5
5	39.3	63.3	77.8	94.2	45.0	59.0	53.3	39.3	35.7	27.5	31.3	54.0
6	39.9	68.2	78.5	93.6	40.9	57.0	52.9	38.9	36.5	27.6	34.6	52.9
7	40.9	65.7	79.7	103	40.3	57.2	52.9	50.5	40.9	26.9	34.2	51.5
8	41.3	68.8	77.8	107	39.7	57.7	54.7	43.2	40.4	26.9	37.1	51.4
9	46.3	69.3	82.6	93.9	39.8	57.6	54.4	39.5	37.9	26.4	37.1	54.3
10	46.6	71.5	82.9	95.1	39.6	58.2	54.7	38.9	37.5	26.4	38.4	54.2
11	45.9	69.7	86.8	93.9	45.3	59.7	52.3	37.5	36.9	26.6	38.5	54.3
12	52.0	69.4	96.0	93.8	44.8	59.8	52.0	38.0	57.3	29.7	37.8	52.2
13	51.1	72.6	109	94.1	42.8	61.1	51.9	56.6	66.7	43.6	37.6	51.5
14	52.6	73.4	94.9	94.2	42.8	62.4	51.4	75.6	45.1	30.5	36.8	52.7
15	52.3	73.6	102	91.0	43.1	56.5	51.6	48.0	36.1	28.8	37.2	56.2
16	52.4	71.6	103	90.0	42.8	57.6	51.8	35.5	36.2	25.2	44.1	71.7
17	52.5	72.3	97.2	91.7	43.6	56.0	52.9	35.8	36.1	25.2	47.6	68.7
18	53.4	71.5	97.7	91.6	43.9	58.6	51.9	35.8	36.3	25.6	44.1	60.1
19	59.0	71.7	96.8	93.0	44.6	60.7	58.8	35.9	37.0	36.5	43.9	51.4
20	58.6	71.9	97.0	92.6	45.2	54.4	60.8	35.1	37.3	46.1	43.7	52.1
21	59.5	71.5	101	89.5	47.0	61.7	54.8	35.5	37.1	37.6	48.0	47.6
22	59.5	71.6	95.5	87.4	46.9	55.4	53.9	36.1	38.2	29.4	50.0	48.3
23	59.5	74.9	95.4	87.3	46.7	54.3	52.5	38.8	39.1	36.7	51.7	49.9
24	60.1	76.2	95.8	79.3	49.0	53.4	46.5	40.7	39.2	28.5	51.2	50.9
25	59.2	74.5	95.2	74.5	49.8	53.0	53.7	39.3	39.9	38.9	50.4	50.5
26	63.5	76.1	95.6	65.6	48.9	53.6	53.5	37.7	37.7	47.3	52.6	46.3
27	66.6	76.0	96.1	59.7	49.4	53.0	45.1	36.9	39.0	30.8	55.6	42.9
28	68.3	73.2	98.3	63.0	49.0	54.4	43.9	38.0	35.8	28.6	48.2	41.8
29	82.7		100	61.4	50.7	54.8	49.0	36.2	35.1	27.0	47.8	41.3
30	70.7		98.4	59.9	50.7	54.1	49.7	36.1	35.0	26.6	48.3	41.7
31	61.0		96.8		48.5		46.6	36.6		27.5		41.5
Sum	1,653.6	1,982.5	2,837.0	2,617.0	1,417.5	1,708.9	1,621.6	1,254.3	1,177.6	967.1	1,250.9	1,599.3

Current Year 2006 | Period 1935-2006

Month	Extreme Gage Meters High	Extreme Gage Meters Low	Extreme-Cubic Meters per Second High	Day	Extreme-Cubic Meters per Second Low	Day	Average	Total	Volume-Thousand Cubic Meters Average	Maximum	Minimum
Jan.	31.950	31.270	85.9	29	33.2	2	53.3	142,871	464,951	2,027,841	39,348
Feb.	31.895	31.605	80.3	23	55.9	3	70.8	171,288	403,985	1,705,506	74,502
Mar.	32.100	31.660	134	21	73.6	1	91.5	245,117	435,588	1,642,378	23,930
April	32.000	31.505	122	8	55.7	27	87.2	226,109	361,025	1,322,616	0
May	31.570	31.295	60.5	1	38.5	8	45.7	122,472	335,140	1,419,735	88,077
June	31.695	31.350	67.1	19	48.2	1	57.0	147,649	334,661	1,629,906	10,485
July	31.595	31.200	102	25	41.9	28	52.3	140,106	355,761	2,303,937	30,097
Aug.	31.570	31.105	81.6	14	31.9	16	40.5	108,372	361,490	2,485,718	54,026
Sept.	31.505	31.160	71.6	13	32.0	30	39.3	101,745	322,087	2,286,076	66,424
Oct.	31.585	31.140	54.0	26	22.6	16	31.2	83,557	310,749	2,417,702	52,985
Nov.	31.675	31.250	59.8	27	26.6	1	41.7	108,078	344,221	1,889,976	51,070
Dec.	31.830	31.390	81.0	16	39.4	31	51.6	138,180	433,210	2,259,735	51,806
Yearly	32.100	31.105	134		22.6		55.0	1,735,544	4,462,868	19,033,105	890,696

Unable to determine flow ! And other days

WESTERN BOUNDARY WATER BULLETIN - 2006 - INTERNATIONAL BOUNDARY AND WATER COMMISSION

09-5220.01 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY - STAGES

(See Preceding Page for Description)

MEAN DAILY GAGE HEIGHT IN METERS 2006

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.285	31.650	31.830	31.770	31.535	31.525	31.460	31.190	31.190	31.205	31.275	31.475
2	31.295	31.765	31.835	31.785	31.460	31.565	31.450	31.170	31.175	31.190	31.330	31.485
3	31.480	31.650	31.840	31.800	31.390	31.590	31.440	31.150	31.180	31.340	31.310	31.485
4	31.360	31.665	31.800	31.805	31.395	31.605	31.430	31.155	31.190	31.235	31.315	31.515
5	31.335	31.650	31.765	31.790	31.390	31.610	31.415	31.165	31.170	31.250	31.430	31.550
6	31.360	31.705	31.730	31.775	31.345	31.585	31.400	31.165	31.180	31.240	31.430	31.535
7	31.355	31.705	31.725	31.840	31.340	31.575	31.360	31.320	31.235	31.270	31.280	31.525
8	31.370	31.735	31.695	31.885	31.330	31.580	31.420	31.235	31.250	31.350	31.305	31.520
9	31.445	31.755	31.710	31.775	31.325	31.575	31.450	31.150	31.205	31.320	31.305	32.550
10	31.440	31.785	31.710	31.800	31.305	31.610	31.445	31.150	31.200	31.245	31.315	32.550
11	31.395	31.770	31.715	31.770	31.400	31.635	31.395	31.145	31.200	31.245	31.325	31.550
12	31.505	31.765	31.770	31.765	31.410	31.630	31.375	31.170	31.365	31.280	31.315	31.530
13	31.525	31.820	31.870	31.775	31.370	31.660	31.375	31.385	31.390	31.360	31.310	32.525
14	31.560	31.820	31.775	31.795	31.375	31.675	31.365	31.475	31.270	31.295	31.305	31.540
15	31.530	31.830	31.810	31.760	31.390	31.575	31.360	31.320	31.180	31.250	31.310	31.575
16	31.550	31.785	31.850	31.740	31.380	31.480	31.360	31.145	31.175	31.155	31.390	31.740
17	31.550	31.790	31.805	31.765	31.390	31.440	31.375	31.150	31.195	31.155	31.455	31.685
18	31.570	31.785	31.825	31.755	31.390	31.470	31.360	31.150	31.215	31.170	31.405	31.615
19	31.640	31.790	31.815	31.775	31.415	31.515	31.450	31.150	31.225	31.270	31.395	31.515
20	31.585	31.800	31.815	31.780	31.430	31.390	31.510	31.145	31.225	31.365	31.385	31.520
21	31.610	31.815	31.850	31.770	31.470	31.455	31.380	31.150	31.210	31.340	31.435	31.475
22	31.620	31.810	31.810	31.755	31.460	31.395	31.385	31.150	31.195	31.310	31.475	31.485
23	31.610	31.840	31.810	31.760	31.430	31.390	31.375	31.180	31.220	31.405	31.505	31.500
24	31.620	31.875	31.810	31.695	31.465	31.385	31.280	31.225	31.220	31.250	31.515	31.515
25	31.625	31.840	31.805	31.655	31.475	31.380	31.355	31.245	31.255	31.365	31.490	31.500
26	31.670	31.875	31.810	31.575	31.455	31.405	31.440	31.215	31.225	31.470	31.520	31.465
27	31.730	31.870	31.810	32.530	31.460	31.385	31.280	31.165	31.240	31.275	31.600	31.430
28	31.750	31.815	31.825	32.580	31.470	31.420	31.220	31.175	31.220	31.270	31.455	31.415
29	31.900		31.840	32.555	31.490	31.455	31.265	31.155	31.230	31.255	31.445	31.410
30	31.785		31.825	32.555	31.500	31.455	31.270	31.160	31.240	31.250	31.455	31.415
31	31.595		31.810		31.470		31.245	31.160		31.255		31.410
Avg.	31.535	31.775	31.795	31.870	31.415	31.515	31.375	31.195	31.220	31.280	31.395	31.615

09-5318.50 COOPER WASTEWAY (VALLEY DIVISION, YUMA PROJECT)

DESCRIPTION: Water-stage recorder and control weir on wasteway for discharging regulatory waste water from the Cooper Canal to the Colorado River. This wasteway is located 0.8 kilometer downstream from the northerly international boundary and 1.0 kilometer upstream from Morelos Diversion Dam. Prior to July 14, 1971, the wasteway was located 0.6 kilometer downstream from Morelos Diversion Dam. This wasteway discharges waste water from the Valley Division of the Yuma Project in the United States into the Colorado River. Since July 14, 1971, zero of the gage is 35.86 meters above mean sea level, U. S. C. & G. S. datum.

RECORDS: Flow is computed from head on the weir measured by the water-stage recorder and weir rating determined by current meter measurements. Station operated by the United States Section of the Commission. Records available: Daily discharge March 1950 through 2006 obtained by the United States Section; monthly discharge, January 1934 through 1950 by the Bureau of Reclamation.

EXTREMES: Prior to March 1950, maximum monthly discharge 1,127 TCM in January 1940; minimum monthly discharge, zero for various months. Since March 1950, maximum instantaneous discharge, 2.25 CMS on June 19, 1965, at a maximum gage height of 34.785 meters (old datum); minimum instantaneous discharge, zero during parts of most months.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.01	0	0.14	0.03	0	0	0.01	0.10	0.08	0.25	0.24	0.26
2	.02	.17	.19	0	.04	.06	.01	.03	.05	.12	.10	.09
3	.14	.28	.19	0	.11	0	.04	0	0	.14	.42	.04
4	.07	.16	.12	.50	.07	.21	.07	.10	.11	.14	.44	.13
5	.22	.15	.06	.01	.06	.07	.05	.07	.07	.23	.17	.04
6	.14	.07	.01	.13	.11	.07	.04	.20	.06	.09	.23	.18
7	.08	.21	.09	0	.06	.04	0	.07	.07	.10	.43	.16
8	.01	.13	.10	.14	.08	.06	0	.01	.06	.12	.15	.13
9	.13	.12	.14	.05	.05	.06	0	.01	.06	.13	.21	.30
10	.02	.17	.25	.07	.04	.06	.06	.01	.07	.23	.01	.09
11	.08	.06	.20	.10	.16	.06	.07	.10	.08	.10	.22	.13
12	.13	.12	.19	.09	.03	.03	.18	.07	.22	.28	.09	.16
13	.05	.13	.08	.01	0	.04	.15	.08	.20	.29	.10	.19
14	.02	.01	.13	.13	.05	.05	.07	.08	.14	.31	.09	.18
15	.05	.06	.16	.02	0	.05	.02	.08	.08	.46	.01	.05
16	.08	.04	.15	.01	0	.09	.06	.05	.10	.09	.01	.09
17	.12	.13	.15	.11	0	.10	.05	.02	.19	.09	.22	.20
18	.43	.16	.14	.02	.15	.17	.07	.05	.21	.06	.20	.03
19	.01	.07	.14	.02	.46	.03	.10	.06	.18	.30	.27	.21
20	.02	.11	.15	.02	.07	0	.14	.08	.14	.24	.05	.15
21	.06	.20	.08	.01	.07	0	.16	.11	.04	.35	0	.07
22	.02	.07	.08	0	.02	0	.06	.09	.06	.20	.08	.10
23	.06	.09	.14	.04	0	0	0	.07	.13	.02	.25	.05
24	.24	.14	.14	.02	.19	0	0	.07	.11	.31	.55	.05
25	.10	.07	.16	.02	.04	0	.01	.09	.13	.44	.31	.07
26	.27	.46	.06	0	.25	.02	.18	.09	.12	.17	.13	.11
27	.12	.27	.08	0	.11	.03	.12	.08	.08	.15	.32	.08
28	0	.22	.16	0	.07	.08	.17	.12	.10	.09	.16	.21
29	.07		.07	0	.04	.06	.23	.10	.01	.36	.03	.03
30	.01		.16	0	0	.18	.08	.13	.01	.21	.16	.01
31	0		.05		0		.07	.06		.27		.01
Sum	3.87		1.55		1.62		2.28		6.34			3.60
	2.78		3.96		2.33		2.27		2.96		5.65	

Current Year 2006					Period 1935-2006			
	Extreme Gage Meters		Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
Month	High	Low	High Day	Low Day	Average	Total	Average	Maximum	Minimum
Jan.	0.720	0	9	1.47	! 2	0	0.09	240	180	1,127	0
Feb.	.765	0	17	1.61	! 1	0	.14	334	161	493	7.4
Mar.	.730	0	28	1.51	! 2	0	.13	342	164	638	0
April	.600	0	4	1.12	! 1	0	.05	134	156	524	4.3
May	.725	0	24	1.48	! 1	0	.08	201	158	543	4.3
June	.760	0	4	1.59	! 1	0	.05	140	142	734	19.0
July	.515	0	!12	.88	! 6	0	.07	196	133	636	0
Aug.	.585	0	4	1.08	! 2	0	.07	197	112	761	0
Sept.	.545	0	23	.97	! 2	0	.10	256	130	570	0
Oct.	.825	0	22	1.81	! 8	0	.20	548	184	604	0
Nov.	.840	0	27	1.86	! 2	0	.19	488	184	570	11.1
Dec.	.845	0	9	1.87	! 2	0	.12	311	197	730	16.9
Yearly	0.845	0		1.87		0	0.11	3,387	1,901	5,551	500

! And other days

09-5220.21 COLORADO RIVER IMMEDIATELY ABOVE MORELOS DAM - STAGES

DESCRIPTION: Water-stage recorder located on the right bank of the Colorado River in Mexico attached to the upstream abutment of the gates of the Intake Canal at Morelos Dam, 1.8 kilometers downstream from the northerly international boundary, and about 12.1 kilometers downstream from the Colorado River below Yuma Main Canal Wasteway. Since April 17, 1969, zero of the gage is at mean sea level, U. S. C. & G. S. datum; prior to that date, zero of the gage was 0.05 meter below mean sea level.
RECORDS: Records obtained and furnished by the Mexican Section of the Commission. Records available: Staff gage height records November 8, 1950 to June 3, 1951; a continuous record of gage heights June 4, 1951 through 2006.
REMARKS: Prior to June 4, 1951, when a continuous water-stage recorder was installed, mean daily gage height records were determined from hourly readings of a staff gage.
EXTREMES: Since November 8, 1950: Maximum mean daily elevation above mean sea level, 35.91 meters on February 15, 1998; minimum mean daily elevation above mean sea level, 30.94 meters on February 17, 1957.

MEAN DAILY GAGE HEIGHT IN METERS 2006

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.320	31.650	31.790	31.740	31.500	31.510	31.610	31.350	31.240	31.200	31.230	31.380
2	32.320	31.770	31.800	31.740	31.420	31.580	31.600	31.300	31.230	31.170	31.270	31.400
3	31.500	31.660	31.820	31.730	31.360	31.590	31.590	31.270	31.240	31.300	31.250	31.390
4	31.390	31.660	31.770	31.740	31.370	31.600	31.580	31.270	31.230	31.160	31.270	31.430
5	31.370	31.650	31.710	31.720	31.370	31.590	31.560	31.280	31.260	31.170	31.380	31.460
6	31.410	31.700	31.690	31.710	31.320	31.580	31.540	31.270	31.280	31.330	31.400	31.450
7	31.420	31.680	31.680	31.770	31.310	31.600	31.480	31.430	31.280	31.210	31.220	31.430
8	31.420	31.730	31.650	31.810	31.310	31.580	31.550	31.370	31.240	31.230	31.240	31.430
9	31.480	31.740	31.650	31.700	31.310	31.570	31.600	31.260	31.240	31.260	31.250	31.460
10	31.490	31.770	31.650	31.720	31.280	31.590	31.590	31.260	31.240	31.180	31.260	31.460
11	31.440	31.770	31.660	31.700	31.380	31.620	31.530	31.250	31.240	31.180	31.270	31.450
12	31.540	31.750	31.710	31.700	31.400	31.610	31.500	31.250	31.430	31.210	31.260	31.440
13	31.570	31.810	31.810	31.700	31.350	31.650	31.520	31.460	31.460	31.290	31.250	31.440
14	31.580	31.800	31.710	31.720	31.350	31.670	31.500	31.580	31.340	31.250	31.240	31.430
15	31.560	31.810	31.750	31.680	31.370	31.600	31.500	31.430	31.220	31.210	31.250	31.480
16	31.580	31.780	31.800	31.670	31.360	31.610	31.490	31.240	31.220	31.110	31.320	31.620
17	31.580	31.780	31.760	31.690	31.370	31.580	31.510	31.240	31.230	31.110	31.410	31.600
18	31.590	31.770	31.780	31.690	31.370	31.610	31.490	31.230	31.230	31.120	31.350	31.470
19	31.650	31.770	31.780	31.700	31.370	31.640	31.590	31.240	31.250	31.220	31.330	31.420
20	31.600	31.770	31.780	31.710	31.410	31.510	31.650	31.230	31.260	31.240	31.320	31.430
21	31.620	31.780	31.820	31.700	31.440	31.580	31.510	31.230	31.250	31.270	31.360	31.390
22	31.640	31.770	31.780	31.680	31.440	31.530	31.520	31.230	31.230	31.180	31.410	31.390
23	31.630	31.780	31.780	31.680	31.420	31.520	31.510	31.240	31.290	31.370	31.440	31.410
24	31.640	31.840	31.780	31.660	31.450	31.520	31.390	31.300	31.300	31.210	31.460	31.420
25	31.640	31.820	31.780	31.580	31.450	31.510	31.490	31.320	31.280	31.320	31.430	31.420
26	31.680	31.840	31.780	31.500	31.440	31.530	31.590	31.270	31.260	31.430	31.460	31.370
27	31.750	31.850	31.780	31.470	31.450	31.530	31.410	31.240	31.250	31.260	31.530	31.320
28	31.770	31.780	31.780	31.510	31.460	31.560	31.310	31.240	31.240	31.220	31.380	31.310
29	31.910		31.810	31.490	31.490	31.600	31.420	31.230	31.220	31.200	31.370	31.300
30	31.790		31.800	31.470	31.490	31.590	31.510	31.220	31.230	31.200	31.370	31.310
31	31.600		31.780		31.460		31.460	31.220		31.200		31.300
Avg.	31.630	31.760	31.755	31.670	31.395	31.580	31.520	31.290	31.265	31.225	31.335	31.420

09-5220.30 INTAKE CANAL AT MORELOS DIVERSION STRUCTURE - DISCHARGES

DESCRIPTION: Water-stage recorder and staff gage on left bank of Intake Canal, 61 meters downstream from the intake at Morelos Dam, 410 meters upstream from the point where it joins the old Alamo Canal, 3.5 kilometers upstream from Matamoros Check, and about 1.6 kilometers south of the northerly international boundary. The zero of the gage is 0.05 meter below mean sea level, U. S. C. & G. S. datum.

RECORDS: The records are deduced from the flows arriving in the limitrophe section of the Colorado River at the northerly international boundary, the flows that pass downstream from the structure, and leakage through the structure. Records available: November 8, 1950 through 2006. Records obtained and furnished by the Mexican Section of the Commission.

REMARKS: The canal is operated with a minimum hydraulic slope to permit the maximum retention of silt above Matamoros Check, and the lower velocities in the canal do not permit measuring the flow with a current meter. Records for this station show the amounts of Colorado River water diverted at Morelos Diversion Dam to the Intake Canal and thence to the Alamo Canal for use in Mexico. Under conditions set forth in the 1944 Water Treaty, water for use in Mexico may be diverted to the Alamo Canal in the United States directly from the river at Rockwood Heading or by means of Imperial Dam, the All-American Canal, and certain facilities of the Imperial Irrigation District. No diversions of this nature have been made during the years 1951 through 2006, and consequently the records reported below show the total water diverted from the Colorado River to the Alamo Canal during those years. Mexico occasionally pumps water from the Colorado River at other points below Morelos Dam when water is available in the channel.

EXTREMES: Maximum mean daily discharge, 187 CMS, July 12 and 14, 1983; maximum mean daily gage height, 32.96 meters October 30, 1993 and other days. Minimum daily discharge, no flow on various occasions.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.0	63.8	76.5	92.1	55.9	53.9	54.7	41.1	38.6	30.4	29.2	51.5
2	36.7	72.2	77.8	93.8	48.8	57.1	53.9	39.9	36.6	29.9	32.2	52.0
3	48.0	62.4	77.9	95.6	45.1	59.0	52.9	38.4	36.0	40.5	31.4	51.8
4	38.4	66.3	77.6	95.7	47.0	58.0	52.7	39.1	36.6	28.5	31.4	52.6
5	39.5	63.4	77.9	94.2	45.0	59.1	53.3	39.4	35.8	27.7	31.5	54.0
6	40.0	68.3	78.5	93.7	41.0	57.1	52.9	39.1	36.6	27.7	34.8	53.1
7	41.0	65.9	79.8	103	40.0	57.2	52.9	50.6	41.0	27.0	34.6	51.7
8	41.3	68.9	77.9	107	40.0	57.8	54.7	43.2	40.5	27.0	37.2	51.5
9	46.4	69.4	82.7	93.9	39.8	57.7	54.4	39.5	38.0	26.5	37.3	54.6
10	46.6	71.7	83.2	95.2	39.6	58.3	54.8	38.9	37.6	26.6	38.4	54.3
11	46.0	69.8	87.0	94.0	45.4	59.8	52.4	37.6	37.0	26.7	38.7	54.4
12	52.1	69.5	96.2	93.9	44.8	59.8	52.2	38.1	47.2	30.0	37.9	52.4
13	51.1	72.7	109	94.1	42.8	61.1	52.0	44.5	51.4	42.8	37.7	51.7
14	52.6	73.4	95.0	94.3	42.8	62.4	51.5	61.1	45.2	30.8	36.9	52.9
15	52.3	73.7	102	91.0	43.1	56.5	51.6	48.1	36.2	29.3	37.2	56.3
16	52.5	71.6	103	90.0	42.8	57.7	51.9	35.5	36.3	25.3	44.1	71.8
17	52.6	72.4	97.4	91.8	43.6	56.1	52.9	35.8	36.3	25.3	47.8	68.9
18	53.8	71.7	97.8	91.6	44.0	58.8	52.0	35.8	36.5	25.7	44.3	60.1
19	59.0	71.8	96.9	93.0	45.0	60.7	58.9	36.0	37.2	35.6	44.1	51.6
20	58.6	72.0	97.2	92.6	45.2	54.4	60.9	35.2	37.4	42.9	43.7	52.3
21	59.6	71.7	101	89.5	47.0	61.7	55.0	35.6	37.1	38.0	48.0	47.7
22	59.5	71.7	95.6	87.4	46.9	55.4	54.0	36.2	38.3	29.6	50.1	48.4
23	59.6	75.0	95.5	87.3	46.7	54.3	52.5	38.9	39.2	36.7	51.9	50.0
24	60.3	76.3	95.9	79.3	49.1	53.4	46.5	40.8	39.3	28.8	51.7	51.0
25	59.3	74.6	95.4	74.5	49.8	53.0	53.7	39.4	40.0	39.3	50.7	50.6
26	63.8	76.6	95.7	65.6	49.1	53.6	53.7	37.8	37.8	47.5	52.7	46.4
27	66.7	76.3	96.2	59.7	49.5	53.0	45.2	37.0	39.1	31.0	55.9	43.0
28	68.3	73.4	98.5	63.0	49.0	54.5	44.1	38.1	35.9	28.7	48.4	42.0
29	82.8		100	61.4	50.7	54.9	49.2	36.3	35.1	27.4	47.8	41.3
30	70.7		98.6	59.9	50.7	54.3	49.8	36.2	35.0	26.8	48.5	41.7
31	61.0		96.8		48.5		46.7	36.7		27.8		41.5
Sum	1,986.5	1,656.1	2,618.1	2,840.5	1,710.6	1,418.7	1,623.9	1,229.9	1,154.8	967.8	1,256.1	1,603.1

Current Year 2006						Period 1950-2006		
	Extreme Gage Meters		Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
Month	High	Low	@ High Day	@ High	@ Low Day	@ Low	Average	Total	Average	Maximum	Minimum
Jan.			29	82.8	1	36.0	53.4	143,087	120,965	275,305	1,192
Feb.			26	76.6	3	62.4	70.9	171,634	131,475	292,464	11,387
Mar.			13	109	1	76.5	91.6	245,419	237,207	435,370	120,761
April			8	107	27	59.7	87.3	226,204	252,476	404,698	189,700
May			1	55.9	10	39.6	45.8	122,576	146,504	286,174	81,665
June			14	62.4	!25	53.0	57.0	147,796	190,690	332,588	117,400
July			20	60.9	28	44.1	52.4	140,305	250,100	439,171	135,475
Aug.			14	61.1	20	35.2	39.7	106,263	237,898	420,673	106,263
Sept.			13	51.4	30	35.0	38.5	99,775	151,892	336,960	66,156
Oct.			26	47.5	!16	25.3	31.2	83,618	93,146	280,817	12,894
Nov.			27	55.9	1	29.2	41.9	108,527	89,929	258,388	9,271
Dec.			16	71.8	29	41.3	51.7	138,508	120,724	247,899	10,886
Yearly				109		25.3	55.0	1,733,712	2,023,006	3,451,533	1,569,404

@ Mean daily ! And other days

09-5220.31 INTAKE CANAL AT MORELOS DIVERSION STRUCTURE - STAGES

(See Preceding Page for Description)

MEAN DAILY GAGE HEIGHT IN METERS 2006

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.330	31.630	31.730	31.730	31.490	31.510	31.590	31.320	31.230	31.050	31.030	31.250
2	31.330	31.750	31.750	31.730	31.410	31.510	31.580	31.230	31.210	31.030	31.080	31.240
3	31.490	31.640	31.760	31.720	31.330	31.580	31.570	31.180	31.220	31.150	31.070	31.230
4	31.380	31.640	31.710	31.720	31.340	31.590	31.580	31.180	31.220	31.050	31.080	31.250
5	31.360	31.630	31.650	31.710	31.350	31.590	31.540	31.180	31.210	31.050	31.070	31.270
6	31.400	31.680	31.630	31.700	31.290	31.570	31.520	31.180	31.230	30.900	31.100	31.250
7	31.410	31.660	31.620	31.760	31.290	31.590	31.480	31.430	31.250	30.860	31.110	31.240
8	31.410	31.700	31.590	31.800	31.280	31.570	31.540	31.350	31.260	30.860	31.110	31.250
9	31.460	31.710	31.600	31.690	31.260	31.560	31.590	31.200	31.220	30.880	31.120	31.250
10	31.470	31.740	31.600	31.700	31.250	31.580	31.570	31.150	31.180	30.900	31.130	31.250
11	31.430	31.740	31.610	31.690	31.370	31.610	31.520	31.140	31.180	30.900	31.140	31.250
12	31.520	31.720	31.650	31.690	31.390	31.610	31.500	31.130	31.390	30.930	31.130	31.200
13	31.560	31.790	31.760	31.690	31.330	31.630	31.510	31.430	31.400	31.170	31.120	31.180
14	31.570	31.780	31.660	31.710	31.340	31.650	31.480	31.570	31.230	31.150	31.120	31.160
15	31.550	31.790	31.690	31.670	31.350	31.570	31.480	31.420	31.110	31.110	31.120	31.200
16	31.570	31.760	31.740	31.660	31.350	31.590	31.470	31.220	31.110	31.010	31.190	31.300
17	31.570	31.750	31.700	31.680	31.360	31.570	31.500	31.210	31.130	31.010	31.330	31.280
18	31.580	31.740	31.720	31.680	31.360	31.600	31.470	31.210	31.130	31.020	31.280	31.200
19	31.640	31.750	31.720	31.690	31.360	31.630	31.570	31.210	31.150	31.140	31.290	31.150
20	31.590	31.740	31.730	31.700	31.400	31.500	31.620	31.200	31.160	31.220	31.260	31.170
21	31.610	31.740	31.760	31.690	31.430	31.570	31.490	31.200	31.150	31.180	31.280	31.130
22	31.630	31.760	31.720	31.670	31.430	31.520	31.500	31.200	31.130	31.120	31.370	31.130
23	31.620	31.770	31.730	31.660	31.410	31.510	31.480	31.220	31.130	31.170	31.420	31.150
24	31.630	31.830	31.730	31.650	31.440	31.510	31.380	31.290	31.130	31.150	31.430	31.200
25	31.630	31.810	31.720	31.570	31.440	31.500	31.480	31.320	31.110	31.230	31.410	31.230
26	31.670	31.830	31.720	31.490	31.440	31.520	31.570	31.250	31.110	31.280	31.420	31.200
27	31.740	31.840	31.720	31.450	31.440	31.520	31.400	31.230	31.120	31.070	31.510	31.190
28	31.760	31.770	31.730	31.500	31.450	31.540	31.280	31.230	31.080	31.040	31.350	31.180
29	31.900		31.750	31.480	31.480	31.580	31.400	31.220	31.080	31.020	31.300	31.170
30	31.780		31.760	31.460	31.490	31.570	31.490	31.200	31.070	31.010	31.300	31.180
31	31.590		31.720		31.450		31.440	31.210		31.020		31.170
Avg.	31.555	31.740	31.700	31.660	31.380	31.565	31.505	31.250	31.180	31.055	31.220	31.210

09-5220.41 COLORADO RIVER IMMEDIATELY BELOW MORELOS DAM - STAGES

DESCRIPTION: Water-stage recorder located on the right bank of the Colorado River in Mexico immediately downstream from Morelos Dam, 1.8 kilometers downstream from the northerly international boundary, and about 12.1 kilometers downstream from the Colorado River below Yuma Main Canal Wasteway. Since April 17, 1969, zero of the gage is at mean sea level, U. S. C. & G. S. datum; prior to that date, zero of the gage was 0.05 meter below mean sea level.
RECORDS: Records obtained and furnished by the Mexican Section of the Commission. Records available: Staff gage heights, February 20, 1951 to June 6, 1966; continuous record of gage heights June 7, 1966 through 2006.
REMARKS: On June 7, 1966 a continuous water-stage recorder was installed; prior to this date, mean daily gage heights were determined from hourly readings of staff gage.
EXTREMES: Maximum mean daily gage height, 35.87 meters on February 15, 1998; minimum mean gage height, 29.06 meters from October 3, 1996 to January 13, 1997.

MEAN DAILY GAGE HEIGHT IN METERS 2006

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
2	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
3	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
4	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
5	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
6	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
7	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
8	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
9	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
10	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
11	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
12	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
13	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.350	29.350	29.400	29.400	29.400
14	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.310	29.310	29.400	29.400	29.400
15	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
16	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
17	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
18	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
19	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
20	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
21	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
22	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
23	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
24	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
25	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
26	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
27	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
28	30.500	30.500	30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
29	30.500		30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
30	30.500		30.500	30.500	30.500	30.500	30.500	29.300	29.300	29.400	29.400	29.400
31	30.500		30.500		30.500		30.500	29.300		29.400		29.400
Avg.	30.500		30.500		30.500		30.500	29.300		29.400		29.400
	30.500		30.500		30.500		30.500	29.300		29.400		

09-5319.00 WELLTON-MOHAWK DRAINAGE WATER DISCHARGED TO COLORADO RIVER BELOW MORELOS DAM

DESCRIPTION: Water-stage recorder located on downstream end of the Wellton-Mohawk Drainage Extension Channel on the Arizona bank of the Colorado River at the east end of the weir section of Morelos Dam, 1.8 kilometers downstream from the northerly international boundary. The elevation of the zero of the gage has not been determined.
RECORDS: Based on discharge measurements and a continuous record of gage heights. Station is operated by the United States Section of the Commission. Records available: November 16, 1965 through 2006.
REMARKS: Pursuant to Minute 218 of the Commission, an extension to the Wellton-Mohawk Drainage Conveyance Channel was constructed along the left bank of the Colorado River to a point immediately below Morelos Dam, a distance of about 19.3 kilometers, and placed in operation on November 16, 1965. Drainage flows may be discharged on an emergency basis to the Gila River and thence to the Colorado River at the diversion structure, Main Outlet Drain Extension No. 1, at the upstream end of the extension; directly to the Colorado River at Main Outlet Drain Extension No. 2, 3.1 kilometers upstream from Morelos Dam; and directly to the Colorado River immediately below Morelos Dam at this station, Main Outlet Drain Extension No. 3. On July 14, 1972, Minute No. 241 of the Commission became effective. The Minute called for discharge of all Wellton-Mohawk drainage waters to be made below Morelos Dam. On August 30, 1973, Minute No. 242 of the Commission became effective. The Minute called for construction of a concrete-lined bypass drain from Morelos Dam to the Santa Clara Slough in Mexico. On June 23, 1977, the first flow was recorded in the bypass drain. Drainage flows through Main Outlet Extension No. 3 will be only on an emergency basis.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	1.06	0	0	0	0	0
19	0	0	0	0	0	0	1.19	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	0	0
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0
Sum	0	0	0	0	0	0	2.25	0	0	0	0	0

Current Year 2006					Period 1966-2006		
	Extreme Gage Meters		Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
Month	High	Low	High	Low	Average	Total	Average	Maximum	Minimum
Jan.	0	0	0 ! 1	0 ! 1	0	0	5,913	23,088	0
Feb.	0	0	0 ! 1	0 ! 1	0	0	4,545	20,959	0
Mar.	0	0	0 ! 1	0 ! 1	0	0	3,207	22,827	0
April	0	0	0 ! 1	0 ! 1	0	0	2,873	22,944	0
May	0	0	0 ! 1	0 ! 1	0	0	4,330	23,548	0
June	0	0	0 ! 1	0 ! 1	0	0	3,409	23,135	0
July	.495	0	18	3.06 ! 1	0	.07	194	3,134	23,370	0
Aug.	0	0	0 ! 1	0 ! 1	0	0	0	3,182	23,668	0
Sept.	0	0	0 ! 1	0 ! 1	0	0	0	4,472	22,787	0
Oct.	0	0	0 ! 1	0 ! 1	0	0	0	6,294	23,683	0
Nov.	0	0	0 ! 1	0 ! 1	0	0	0	5,967	22,792	0
Dec.	0	0	0 ! 1	0 ! 1	0	0	0	5,489	23,585	0
Yearly	0.495	0	3.06	0 ! 1	0	0.01	194	52,815	264,928	0

! And other days

09-5325.00 ELEVEN MILE WASTEWAY (VALLEY DIVISION, YUMA PROJECT)

DESCRIPTION: Water-stage recorder and control weir on wasteway for discharging water from the West Main Canal to the Colorado River. This wasteway is located in Arizona, 6.9 kilometers downstream from the northerly international boundary and 5.1 kilometers downstream from Morelos Diversion Dam. It is the largest of three wasteways discharging waste water from the Valley Division of the Yuma Project in the United States into the limitrophe section of the Colorado River. Since June 1986, zero of the gage is 34.05 meters above mean sea level, U. S. C. & G. S. datum; prior to that date, zero of the gage was mean sea level, U. S. C. & G. S. datum.

RECORDS: Flow is computed from head on the weir measured by the water-stage recorder and weir rating determined by current meter measurements. Station operated by the United States Section of the Commission. Records available: Daily discharge, January 1951 through 2006, obtained by the United States Section; monthly discharge, January 1924 through 1950 by Bureau of Reclamation.

EXTREMES: Prior to January 1951, maximum monthly discharge, 12,014 TCM in August 1940; minimum monthly discharge, zero in April 1941. Since January 1, 1951, maximum instantaneous discharge, 22.7 CMS on December 3, 1961, at a maximum gage height of 35.845 meters; minimum instantaneous discharge, zero during parts of most years.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.28	0.30	0.17	0.01	0.03	0.03	0.05	0.03	0.09	0.72	0.14	0.25
2	.01	.02	.08	.19	.02	.34	.17	.03	.40	.17	.17	.03
3	.14	.11	.48	.55	0	.14	.10	.03	.01	.05	.41	.02
4	.03	.14	.28	.14	.42	.03	.06	.03	.07	.24	.34	.62
5	.36	.02	.15	.04	.18	.05	.06	.03	.05	.09	.76	.21
6	.24	.18	.01	.01	.05	.03	.01	.23	.01	.01	.51	.02
7	.49	.01	.05	.05	.13	.24	0	.19	.66	.01	.06	.04
8	.51	.33	.14	.04	.35	.01	0	.02	.07	.01	.31	.02
9	.19	.65	.22	.53	.02	.01	0	0	.39	.01	.03	.67
10	.17	.46	.12	.24	.01	.01	0	0	.35	.01	.12	.08
11	.06	.02	.74	.01	.01	0	.02	.02	.42	.01	.33	.03
12	.04	.09	.20	.04	.13	.28	.14	.02	.02	.01	.81	.13
13	.06	.24	.04	.10	.28	.09	.05	.01	.02	.37	.02	.47
14	.55	.29	.02	.04	0	0	.02	.06	.01	.36	.06	.02
15	.46	.24	.17	.10	.02	.05	0	0	.01	.46	.02	.07
16	.05	.12	.03	.19	0	.01	.01	0	.14	.01	.01	.29
17	.08	.16	.01	.04	0	.01	.11	.10	.26	.01	.41	.30
18	.36	.86	.01	.04	.48	.02	0	.07	.05	.01	.19	.22
19	.37	.89	.01	.42	.14	.11	.04	.02	.01	.15	.05	.21
20	.49	.03	.02	.32	.38	.01	.01	.06	.01	.58	.16	.07
21	.76	.12	.24	.31	.47	.02	.01	.05	.05	.04	.03	.24
22	.35	.11	.10	.33	.16	.25	.36	.02	.27	.27	.51	.73
23	.27	.01	.27	.34	.12	0	.15	.07	.01	.05	.26	.37
24	.01	.01	.19	.08	.02	.05	.07	.19	.04	.10	.13	.32
25	.21	.27	.16	.11	.11	.01	.03	.01	.24	.01	.23	.13
26	.22	.72	.25	.27	.18	.01	.03	.03	.08	.01	.12	.09
27	.06	.67	.29	.06	.67	0	.04	.04	.01	.01	.26	.07
28	.01	.56	.09	.01	.67	.01	.05	.03	.01	.19	.71	.49
29	.02		.18	.01	.49	.29	.12	.01	.01	.01	.06	.23
30	.22		.25	.03	.29	.22	.16	.08	.78	.01	.38	.35
31	.36		.03		.13		.27	.11		.10		.29
Sum	7.63		4.65		2.33		1.59		4.09			7.08
	7.43		5.00		5.96		2.14		4.55		7.60	

Current Year 2006					Period 1935-2006			
	Extreme Gage Meters		Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
Month	High	Low	High Day	High	Low Day	Low	Average	Total	Average	Maximum	Minimum
Jan.	0.590	0	14	2.45	! 1	0	0.24	642	2,444	11,804	0
Feb.	.505	.010	19	2.16	! 1	.01	.27	659	1,994	10,398	17.9
Mar.	.500	.010	8	2.14	! 1	.01	.16	432	1,877	7,685	51.8
April	.515	0	9	2.17	! 5	0	.16	402	1,702	7,771	0
May	.455	0	! 8	2.05	! 3	0	.19	515	2,019	11,496	10.2
June	.460	0	29	2.06	! 1	0	.08	201	1,913	9,177	13.0
July	.365	0	2	1.90	! 1	0	.07	185	1,943	10,263	11.2
Aug.	.295	0	24	1.57	! 9	0	.05	137	1,685	12,014	18.1
Sept.	.985	.010	2	5.47	! 1	.01	.15	393	1,276	7,574	7.4
Oct.	.490	.010	24	2.13	! 2	.01	.13	353	1,769	7,006	14.7
Nov.	.600	.015	27	2.52	! 1	.01	.25	657	2,115	10,139	23.2
Dec.	.775	.015	4	3.73	! 4	.01	.23	612	2,687	11,632	51.8
Yearly	0.985	0		5.47		0	0.16	5,188	23,424	102,255	707

! And other days

WESTERN BOUNDARY WATER BULLETIN - 2006 - INTERNATIONAL BOUNDARY AND WATER COMMISSION

09-5221.00 COLORADO RIVER AT ELEVEN MILE GAGE - STAGES

DESCRIPTION: Water-stage recorder on the left (Arizona) bank of the river, 6.9 kilometers downstream from northerly international boundary, 5.1 kilometers downstream from Morelos Dam, about 15 meters downstream from the mouth of Eleven Mile Wasteway of the Yuma Project, and 17.7 kilometers downstream from Yuma, Arizona, along the river levee. The zero of the gage is at mean sea level, U. S. C. & G. S. datum. On April 1, 1988, the gage was relocated 399 meters downstream of the old gage on the left bank. Zero of the new gage is at mean sea level, U. S. C. & G. S. datum. Elevation of the new gage is 0.12 meter lower than the old gage. On August 1, 1993, the gage was relocated 81.0 meters upstream of the original 1947 gage. The datum is equal to the 1947 gage.
RECORDS: Mean daily gage heights based on continuous water-stage records. Records available: Continuous record of gage heights, November 1947 through 2006; once weekly readings obtained by the U. S. Bureau of Reclamation, January 1940 through October 1947.
REMARKS: This station is maintained by the United States Section of the Commission as part of the continuing study of channel conditions in the limitrophe section of the river.
EXTREMES: Since November 1947, maximum mean daily gage height, 33.840 meters on February 18, 1998; minimum mean daily gage height, 27.575 meters on April 19, 2005 and other days since that time.

MEAN DAILY GAGE HEIGHT IN METERS 2006

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	27.730	27.675	27.645	27.650	27.720	27.770	27.785	27.875	27.890	27.950	27.905	27.880
2	27.700	27.655	27.630	27.670	27.720	27.805	27.795	27.880	27.920	27.895	27.900	27.835
3	27.710	27.665	27.670	27.710	27.725	27.790	27.790	27.885	27.860	27.875	27.930	27.830
4	27.705	27.665	27.650	27.675	27.765	27.780	27.785	27.895	27.860	27.905	27.905	27.900
5	27.735	27.655	27.640	27.675	27.750	27.790	27.785	27.905	27.855	27.900	27.995	27.865
6	27.725	27.670	27.625	27.650	27.735	27.785	27.775	27.935	27.845	27.885	27.955	27.820
7	27.740	27.655	27.630	27.660	27.750	27.800	27.775	27.930	27.950	27.885	27.890	27.820
8	27.745	27.685	27.645	27.665	27.775	27.775	27.780	27.925	27.860	27.880	27.920	27.815
9	27.720	27.705	27.650	27.720	27.740	27.780	27.785	27.915	27.890	27.890	27.885	27.865
10	27.710	27.690	27.645	27.695	27.740	27.785	27.785	27.925	27.870	27.885	27.900	27.810
11	27.690	27.650	27.700	27.675	27.740	27.785	27.790	27.945	27.885	27.885	27.920	27.800
12	27.685	27.660	27.655	27.680	27.760	27.815	27.800	27.950	28.105	27.885	27.980	27.810
13	27.750	27.670	27.640	27.685	27.770	27.800	27.790	28.015	28.695	28.385	27.880	27.840
14	27.700	27.670	27.645	27.685	27.740	27.785	27.790	28.835	27.970	28.050	27.885	27.790
15	27.735	27.670	27.645	27.690	27.745	27.790	27.790	28.070	27.860	27.945	27.880	27.795
16	27.680	27.655	27.640	27.705	27.745	27.785	27.800	27.895	27.860	27.880	27.875	27.810
17	27.680	27.660	27.630	27.700	27.750	27.790	27.810	27.895	27.855	27.870	27.900	27.805
18	27.695	27.715	27.630	27.700	27.800	27.790	27.880	27.890	27.850	27.865	27.885	27.790
19	27.705	27.735	27.630	27.735	27.775	27.805	27.905	27.880	27.840	28.005	27.875	27.770
20	27.710	27.645	27.635	27.725	27.810	27.790	27.810	27.885	27.840	28.485	27.890	27.745
21	27.735	27.655	27.655	27.730	27.815	27.790	27.810	27.895	27.845	27.925	27.875	27.750
22	27.690	27.650	27.640	27.730	27.785	27.815	27.860	27.885	27.870	27.915	27.930	27.780
23	27.690	27.640	27.695	27.725	27.805	27.785	27.850	27.900	27.840	27.890	27.905	27.755
24	27.665	27.640	27.665	27.710	27.845	27.795	27.845	27.915	27.850	27.890	27.885	27.735
25	27.680	27.665	27.650	27.710	27.775	27.790	27.855	27.885	27.880	27.875	27.895	27.720
26	27.685	27.700	27.660	27.735	27.785	27.790	27.860	27.890	27.865	27.875	27.890	27.705
27	27.700	27.695	27.670	27.710	27.845	27.790	27.865	27.890	27.860	27.875	27.895	27.700
28	27.665	27.700	27.645	27.710	27.870	27.790	27.865	27.885	27.865	27.900	27.945	27.730
29	27.670		27.660	27.710	27.845	27.820	27.885	27.875	27.870	27.875	27.850	27.705
30	27.700		27.675	27.715	27.810	27.820	27.880	27.895	27.950	27.875	27.890	27.710
31	27.705		27.655		27.800		27.915	27.900		27.885		27.700
Avg.	27.705	27.670	27.650	27.700	27.775	27.795	27.820	27.940	27.910	27.935	27.905	27.785

09-5330.00 TWENTY-ONE MILE WASTEWAY (VALLEY DIVISION, YUMA PROJECT)

DESCRIPTION: Water-stage recorder and control weir on wasteway from West Main Canal to Colorado River. Located on the east side of the levee at the site used prior to May 1, 1971. The site used May 1, 1971 to September 20, 1977 was located 61 meters downstream from present site on the west side of levee. This wasteway is located in Arizona, 29.8 kilometers downstream from the northerly international boundary, 28.0 kilometers downstream from Morelos Diversion Dam, and 3.5 kilometers upstream from the southerly international boundary. It is the farthest downstream of the two wasteways discharging waste water from the Valley Division of the Yuma Project in the United States into the limitrophe section of the Colorado River. The elevation of the zero of the gage at the new location has not been determined.

RECORDS: Flow is computed from head on the weir measured by the water-stage recorder and weir rating determined by current meter measurements. Station operated by the United States Section of the Commission. Records available: Daily discharge, January 1951 through 2006, obtained by the United States Section; monthly discharge, March 1939 through 1950, by Bureau of Reclamation.

REMARKS: This wasteway was completed and flow began March 14, 1939. Since May 13, 1944, waste water from the West Main Canal which previously discharged across the southerly land boundary has been returned to the Colorado River through this wasteway. The West Main Canal Wasteway was completed in February of 1971, and the waste water from the West Main Canal is normally discharged across the southerly land boundary.

EXTREMES: Prior to January 1951, maximum monthly discharge 3,528 TCM in January 1946; minimum monthly discharge, 150 TCM in September 1950. Since January 1, 1951, maximum instantaneous discharge, 2.89 CMS on January 24, 1954, at a maximum gage height of 29.095 meters (old datum); minimum instantaneous discharge, zero during a part of most months.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0.22	0	0.09	0	0	0	0	0.11	0.13	0
2	0	0	.06	0	0	0	0	0	0	.29	.01	0
3	0	0	0	0	0	0	0	0	0	0	.15	.14
4	0	0	0	0	0	0	0	0	.01	0	0	.13
5	0	.01	0	0	0	0	0	0	.15	0	.10	.13
6	0	.01	.01	0	0	0	0	0	.04	.05	.15	.02
7	0	0	0	0	.01	0	0	0	.16	.16	.13	.01
8	.05	0	0	.11	.14	0	0	0	0	0	.11	.01
9	.01	0	0	0	0	.01	0	0	0	.04	0	.01
10	.14	.02	0	0	0	0	0	0	.05	.50	.13	.21
11	.21	.05	.06	0	0	0	0	0	.03	.04	.24	.09
12	.25	0	.01	0	0	.09	0	0	.22	0	.03	.10
13	.27	0	.01	0	0	.04	0	0	.07	0	.12	.16
14	.16	0	.01	0	0	.08	0	0	0	.12	.10	.11
15	.09	0	0	0	0	.23	0	0	0	.19	0	0
16	.01	.05	0	0	0	0	0	0	0	0	.04	0
17	0	.10	0	0	.01	0	0	0	0	.04	.02	.03
18	0	.18	0	0	0	0	0	0	0	.16	.24	.03
19	0	.08	0	0	0	0	0	0	0	0	0	.18
20	0	.06	0	0	.01	0	0	0	0	0	.01	.16
21	0	0	.01	0	.01	0	0	0	0	0	.13	.13
22	0	0	.02	0	0	0	0	0	.32	0	.04	.03
23	0	0	.01	0	0	0	0	0	.08	0	.02	0
24	0	0	0	0	0	0	0	0	.01	0	.01	0
25	0	0	0	0	.12	0	0	0	.08	.07	0	0
26	0	.04	0	0	.01	0	0	0	.13	.20	0	0
27	0	.17	.02	0	.07	0	.05	0	.10	0	0	.10
28	0	0	0	0	0	0	0	0	0	0	.01	.12
29	0		0	0	0	.06	.05	0	.11	0	.17	.18
30	0		0	.04	0	0	0	0	.32	.02	.01	.02
31	0		0		.03		0	0		.06		.01
Sum	1.19	0.77	0.44	0.15	0.50	0.51	0.10	0	1.88	2.05	2.10	2.11

Current Year 2006					Period 1939-2006		
	Extreme Gage Meters	Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
Month	High	Low	High Day	High	Low Day	Low	Average	Total	Average	Maximum	Minimum
Jan.	0.525	0	13	0.96	! 1	0	0.04	103	609	3,528	0
Feb.	.425	0	27	.70	! 1	0	.03	66.5	516	3,096	0
Mar.	.505	0	1	.90	! 1	0	.01	38.0	468	2,048	0
April	.335	0	30	.49	! 1	0	.01	13.0	495	2,393	0
May	.410	0	25	.66	! 1	0	.02	43.2	607	3,047	0
June	.415	0	14	.67	! 1	0	.02	44.1	522	2,899	0
July	.345	0	27	.51	! 1	0	0	8.6	454	2,405	0
Aug.	.020	0	! 1	0	! 1	0	0	0	472	3,121	0
Sept.	.555	0	22	1.04	! 1	0	.06	162	431	2,689	0
Oct.	.540	0	25	1.00	! 1	0	.07	177	571	2,590	0
Nov.	.530	0	18	.97	! 1	0	.07	181	695	2,936	0
Dec.	.460	0	29	.78	! 1	0	.07	182	711	3,306	0
Yearly	0.555	0		1.04		0	0.03	1,018	6,551	30,060	0

! And other days

09-5345.00 EAST MAIN CANAL WASTEWAY (VALLEY DIVISION, YUMA PROJECT)

DESCRIPTION: Water-stage recorder and control weir located about 91 meters north of the international boundary near San Luis, Arizona and 2.4 kilometers east of the Colorado River. From September 28, 1977 to April 6, 1978, recorder was moved west 31 meters to a temporary bypass channel. On April 7, 1978, recorder was moved back to its original site. On August 17, 1992, flow ceased through the wasteway due to construction upstream of the gage. The gage was relocated 20 meters west of the original site providing continuous record since December 21, 1992.
RECORDS: Wasteway discharges computed by United States Section of the Commission beginning November 1, 1953, from head on control weir as measured by water-stage recorder and weir ratings as determined by current meter measurements. Records available: October 1946 through 2006. Records of monthly discharges also are available for the periods January 1924 through June 1928, January 1932 through 1933, and April 1935 through September 1946.
REMARKS: Wasteway discharges from the East Main Canal comprise regulatory waste and drainage waters from the eastern half of the Valley Division of the Yuma Project and are considered as part of the volumes arriving at the land boundary at San Luis.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0.01	0	0	0	0
2	.01	0	0	0	0	0	0	.01	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	.02	0	0	0	.01	0	0	0	0	0	0
10	0	0	0	0	0	.01	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	.02	0	0	0	0	0	0	0
15	0	0	0	0	.01	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	.02	0	0	0	0	0	0	0	0	0	0
25	0	.01	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	0	0
30	0		0	0	0	0	.03	0	0	0	0	0
31	.02		0		0		.03	0		0		0
Sum	0.05		0		0.03	0.02	0.06	0.02	0	0	0	0

Current Year 2006					Period 1935-2006		
Month	Extreme Gage Meters High	Extreme Gage Meters Low	Extreme-Cubic Meters per Second High Day	Extreme-Cubic Meters per Second Low Day	Average	Volume-Thousand Cubic Meters Total	Volume-Thousand Cubic Meters Average	Volume-Thousand Cubic Meters Maximum	Volume-Thousand Cubic Meters Minimum
Jan.	0.030	0	31	0.03 ! 1	0	0	2.6	1,047	4,144	2.6
Feb.	.050	0	9	.06 ! 1	0	0	4.3	875	3,910	4.3
Mar.	.030	0	18	.03 ! 1	0	0	0	995	3,602	0
April	0	0	! 1	0 ! 1	0	0	0	965	3,910	0
May	.030	0	!14	.03 ! 1	0	0	2.6	1,082	3,750	2.6
June	.025	0	! 9	.02 ! 1	0	0	1.7	903	4,515	1.7
July	.045	0	30	.05 ! 1	0	0	5.2	981	4,428	5.2
Aug.	.020	0	! 1	.02 ! 1	0	0	1.7	1,014	4,885	1.7
Sept.	0	0	! 1	0 ! 1	0	0	0	947	3,910	0
Oct.	0	0	! 1	0 ! 1	0	0	0	991	4,046	0
Nov.	0	0	! 1	0 ! 1	0	0	0	1,072	4,404	0
Dec.	0	0	! 1	0 ! 1	0	0	0	1,055	3,799	0
Yearly	0.050	0		0.06	0	0	18.1	11,927	47,255	18.1

! And other days

09-5340.00 YUMA MAIN DRAIN (VALLEY DIVISION, YUMA PROJECT)

DESCRIPTION: Water-stage recorder located in the afterbay, with flow meters in the four discharge pipes at the Boundary Pumping Plant on the Main Drain about 61 meters north of the international boundary near San Luis, Arizona, 2.1 kilometers east of the Colorado River.
RECORDS: Main Drain discharges are lifted 3.05 to 3.66 meters at the pumping plant. Prior to April 1, 1969, discharges were computed from pump ratings and the differential head measured by the two gages. Beginning April 1, 1969 discharges were computed from flow meter charts. Pump ratings and flow meter discharges are checked by current meter measurements. Records obtained and computed by the United States Section of the Commission. Records available: Monthly discharges, June 1919 through 1951; daily discharges January 1952 through 2006.
REMARKS: Flows in the Main Drain are principally drainage waters from the Valley Division of the Yuma Project. The Main Drain, the East Main Canal Wasteway, West Main Canal Wasteway, and 242 Lateral discharge into Mexico at the international land boundary near San Luis, Sonora. The water is used for irrigation in Mexico on the left (Sonora) bank of the Colorado River and is considered as part of the volumes arriving at the land boundary at San Luis.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.80	3.10	2.82	3.16	2.85	2.66	3.33	2.54	2.49	3.88	5.59	4.09
2	1.73	3.39	2.77	3.02	2.71	2.72	3.05	2.50	3.33	4.44	5.23	4.04
3	2.76	3.21	3.04	3.78	2.64	2.62	3.45	2.48	3.38	3.38	5.12	3.72
4	3.41	3.31	2.85	3.44	2.80	2.93	3.47	2.67	3.37	3.86	5.30	4.27
5	3.24	3.49	2.91	2.91	3.47	2.97	2.84	2.89	2.60	4.00	5.59	4.51
6	3.40	3.17	3.38	2.44	3.11	2.75	3.13	2.49	2.81	3.85	5.05	4.43
7	2.94	3.39	3.06	2.65	3.83	2.23	2.80	2.28	2.98	3.52	5.10	3.08
8	3.25	3.14	2.75	3.36	3.60	2.30	3.63	2.15	2.68	3.80	4.38	3.66
9	2.72	2.59	3.19	3.01	3.26	2.71	3.32	1.67	3.62	4.53	4.93	4.43
10	3.21	3.09	2.76	2.73	3.32	2.62	2.95	1.55	3.10	4.14	5.25	4.81
11	2.63	2.36	3.28	2.55	3.44	2.40	3.13	1.45	3.21	4.36	4.92	4.71
12	2.68	3.44	2.51	2.44	2.99	2.66	3.19	2.76	2.87	4.51	4.63	3.28
13	2.36	2.56	2.69	2.72	3.12	2.85	3.09	2.97	2.77	4.57	5.17	3.29
14	2.84	2.78	2.46	2.51	4.05	2.52	3.17	2.68	2.88	4.78	4.67	2.92
15	2.90	3.05	2.53	2.73	3.58	2.57	2.64	2.91	2.83	5.21	4.95	2.78
16	2.69	2.94	2.47	2.94	3.10	1.92	2.90	2.70	3.59	5.18	4.66	3.89
17	2.53	3.10	2.85	2.76	3.05	1.87	2.42	3.11	3.03	5.13	3.97	4.65
18	3.31	3.70	2.46	2.76	2.86	2.14	3.26	2.74	3.48	5.41	4.79	4.23
19	3.28	3.76	2.98	2.44	2.59	1.85	3.11	3.32	3.48	4.81	5.38	4.96
20	3.67	3.22	2.42	2.77	3.08	2.21	2.36	2.84	3.21	5.31	4.62	3.88
21	2.71	2.75	2.55	2.47	3.41	2.95	2.23	2.91	3.96	4.77	4.97	3.33
22	3.63	2.29	2.16	2.68	3.16	3.08	2.43	2.38	4.39	5.21	4.97	4.97
23	3.30	2.45	2.76	2.79	2.31	3.15	2.32	2.53	4.25	5.39	4.97	4.09
24	3.20	2.39	2.47	2.99	2.50	2.77	2.91	2.45	4.64	4.50	4.97	3.66
25	2.33	3.45	2.96	3.19	2.43	3.56	2.07	2.31	3.91	4.54	4.97	2.40
26	2.20	3.30	3.20	3.04	2.84	3.35	2.39	2.71	4.16	5.95	4.97	1.99
27	2.11	3.17	2.65	2.80	3.33	2.80	2.77	2.21	4.51	5.57	4.97	2.85
28	3.06	3.09	2.90	3.27	2.60	2.96	2.84	2.27	4.52	5.29	4.97	3.52
29	4.57		2.89	2.51	2.61	2.66	3.10	2.21	3.77	4.65	4.97	3.72
30	3.86		2.89	3.20	2.61	2.87	3.20	1.98	3.93	4.87	4.97	3.89
31	2.90		2.50		2.39		2.32	2.18		4.62		4.40
Sum	85.68		86.06		79.65		76.84		144.03		118.45	
	92.22		86.11		93.64		89.82		103.75		149.00	

Current Year 2006							Period 1935-2006		
	Extreme Gage Meters		Extreme-Cubic Meters per Second				Volume-Thousand Cubic Meters		
Month	High	Low	High Day		Low Day	Average	Total	Average	Maximum	Minimum
Jan.			4	5.87	! 2	2.97	7,968	9,377	13,819	2,146
Feb.			7	6.78	20	.87	3.06	7,403	8,983	14,787	2,023
Mar.			10	7.65	!10	0	2.78	7,440	10,227	15,332	2,393
April			8	5.62	21	.85	2.87	7,436	10,246	14,666	2,368
May			8	5.62	19	0	3.02	8,090	10,633	16,208	2,405
June			28	5.73	17	0	2.66	6,882	9,634	14,851	2,825
July			4	5.87	26	0	2.90	7,760	9,495	14,715	3,121
Aug.			19	5.44	! 9	0	2.48	6,639	9,407	14,752	3,158
Sept.			24	6.56	7	0	3.46	8,964	9,682	14,269	2,812
Oct.			26	7.17	24	1.98	4.65	12,444	11,483	15,321	3,626
Nov.			5	6.96	9	1.87	4.97	12,874	11,052	15,206	3,454
Dec.			7	7.64	7	1.11	3.82	10,234	10,263	14,160	3,022
Yearly				7.65		0	3.30	104,134	120,482	171,922	33,353

! And other days

Diversion Channel at Southerly International Boundary

DESCRIPTION: Water-stage recorder and control weir on Wasteway located immediately below the Yuma Main Drain Pumping Plant, approximately 52 meters north of the international boundary near San Luiz, Arizona/Sononora and approximately two kilometers east of the Colorado River.
RECORDS: Weir flows are checked by current meter discharge measurements. Records obtained and computed by the United States Section of the Commission. Records available from October 6, 2004 through December 2006. Records considered poor due to backwater conditions caused by insignificant s lope of channel. Alternative measurement methods undergoing r eview to improve station accuracy.
REMARKS: Operation began October 6, 2004. Channel constructed as a part of a salinity reduction program undertaken by U.S. Bureau of Reclamation and U.S. Section of the Commission. Main purpose is to divert a maximum of 9,868 thousand cubic meters of higher saline drainage water into the Wellton Mohawk Bypass chain during the four (4) critical planting season months of September through December within San Luis, Sonora and left bank irrigation zone.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	.52	0	0
8	0	0	0	0	0	0	0	0	0	.07	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	.04	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	0	0
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0
Sum	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0.04	0.59			

Current Year 2006					Period 2004-2006		
	Extreme Gage Meters	Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
Month	High	Low	High (Day)	Low (Day)	Average	Total	Average	Maximum	Minimum
Jan.	0	0	0 (! 1)	0 (! 1)	0	0	40.0	79.5	0
Feb.	0	0	0 (! 1)	0 (! 1)	0	0	0	0	0
Mar.	0	0	0 (! 1)	0 (! 1)	0	0	7.0	14.7	0
April	0	0	0 (! 1)	0 (! 1)	0	0	43.0	86.4	0
May	0	0	0 (! 1)	0 (! 1)	0	0	0	0	0
June	0	0	0 (! 1)	0 (! 1)	0	0	3.0	6.0	0
July	0	0	0 (! 1)	0 (! 1)	0	0	0	0	0
Aug.	0	0	0 (! 1)	0 (! 1)	0	0	0	0	0
Sept.	.160	0	.28 (21)	0 (! 1)	0	3.5	25.0	45.8	0
Oct.	0	0	0 (! 1)	0 (! 1)	0	0	51.0	864	0
Nov.	.345	0	1.01 (7)	0 (! 1)	.02	51.0	633	1,755	51.0
Dec.	0	0	0 (! 1)	0 (! 1)	0	0	266	765	0
Yearly	0.345	0	1.01	0	0	54.5	1,518	3,159	54.5

! And other days

09-5343.00 WEST MAIN CANAL WASTEWAY (VALLEY DIVISION, YUMA PROJECT)

DESCRIPTION: Water-stage recorder located about 0.5 kilometer upstream from outlet to Yuma Main Drain, which is 53 meters upstream from East Main Canal Wasteway outlet and 0.6 kilometer west of San Luis, Arizona. Prior to August 1, 1975, the recorder was located about 46 meters upstream from outlet to Yuma Main Drain.
RECORDS: Wasteway discharges computed by United States Section of the Commission beginning February 23, 1971, from water-stage recorder and ratings as determined by current meter measurements. Records available: February 23, 1971 through 2006.
REMARKS: Wasteway discharges from West Main Canal Wasteway comprise regulatory waste from the West Main Canal and this water is considered as part of the volumes arriving at the land boundary at San Luis.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.36	0.18	0.52	0.20	0.09	0.04	0.14	0.02	0.21	0.05	0.25	0.03
2	.34	.19	.15	.28	.31	.01	.20	.10	.15	.06	.04	.06
3	.39	.33	.32	.37	.11	.22	.16	.08	.12	.16	.22	.09
4	.13	.24	.32	.12	.10	.17	.14	.35	.37	.36	.02	.13
5	.35	.22	.21	.10	.13	.29	.02	.17	.33	.28	.07	.35
6	.15	.16	.14	.34	.25	.19	.01	.30	.42	.07	.08	.08
7	.68	.27	.30	.13	.25	.14	0	.25	.34	.05	.06	.01
8	1.38	.40	.32	.15	.08	.02	.01	.11	.18	.15	.14	.06
9	.49	.31	.18	.12	.01	.20	0	.12	.18	.14	.02	.24
10	.34	.12	.12	.16	.22	.06	.03	.10	.13	.07	.16	.18
11	.28	.20	.35	.11	.19	.03	.03	.03	.08	.11	.17	.03
12	.10	.32	.04	.07	.02	.13	.04	.10	.13	.06	.33	.05
13	.12	.05	.18	.05	.14	.17	0	.21	.20	.10	.17	.12
14	.28	.25	.08	.14	.04	.19	0	.22	.25	.17	.33	.18
15	.45	.13	.08	.09	.04	.14	.05	.10	.26	.31	.05	.08
16	.23	.09	.12	.06	.04	.17	.01	.04	.28	.14	.22	.13
17	.11	.19	.11	.10	.15	.16	.18	.13	.10	.14	.09	.08
18	.17	.17	.23	.09	.06	.40	.09	.10	.09	.13	.27	.06
19	.35	.16	.22	.16	.01	.15	0	.11	.18	.11	.13	.11
20	.19	.29	.15	.09	.15	.11	.05	.20	.14	.06	.01	.06
21	.16	.11	.24	.13	.15	.09	.15	.18	.21	.21	.03	.01
22	.09	.24	.31	.10	.09	.27	.18	.21	.26	.16	.09	.13
23	.04	.23	.08	.11	.11	.28	.18	.30	.12	.06	.14	.13
24	.22	.12	.19	.03	.14	.17	.19	.23	.12	.10	.07	.14
25	.30	.29	.07	.06	.21	.19	.15	.21	.10	.15	.13	.03
26	.17	.39	.23	.16	.10	.08	.06	.20	.01	.20	.28	.01
27	.15	.21	.14	.19	.17	.09	.34	.13	.09	.38	.19	.06
28	.07	.33	.08	.03	.16	.07	.10	.18	.03	.25	.33	.02
29	.24		.04	.23	.11	.04	.24	.17	.02	.18	.16	.08
30	.16		.19	.28	.12	.20	.06	.42	.10	.15	.06	.12
31	.08		.17		.17		.04	.53		.17		.05
Sum	6.19	4.25		4.47		5.60		4.73			2.91	
	8.57	5.88		3.92		2.85		5.20		4.31		

Current Year 2006						Period 1971-2006		
	Extreme Gage Meters		Extreme-Cubic Meters per Second				Volume-Thousand Cubic Meters		
Month	High	Low	High Day	Low	Average	Total	Average	Maximum	Minimum
Jan.	1.080	0.040	8	2.81	!24	0.02	0.28	740	571	1,376	44.9
Feb.	.690	.010	8	.99	!14	0	.22	535	521	1,117	19.0
Mar.	.700	.010	11	1.03	!16	.01	.19	508	568	1,158	68.3
April	.605	.010	29	.73	29	0	.14	367	554	1,280	49.2
May	.650	0	6	.86	! 8	0	.13	339	473	1,445	38.9
June	.615	.005	22	.76	! 2	0	.15	386	459	1,067	25.1
July	.710	0	27	1.05	! 6	0	.09	246	478	944	77.3
Aug.	.665	0	30	.91	! 1	0	.18	484	555	1,447	121
Sept.	.600	0	6	.73	!26	0	.17	449	532	1,128	234
Oct.	.605	0	27	.74	! 3	0	.15	409	509	1,135	15.6
Nov.	.285	0	14	.72	! 2	0	.14	372	414	845	13.0
Dec.	.325	0	5	.90	! 1	0	.09	251	494	1,204	19.0
Yearly	1.080	0		2.81		0	0.16	5,086	6,128	10,047	1,808

! And other days

09-5345.50 242 WELL FIELD NEAR SAN LUIS, ARIZONA

DESCRIPTION: Water-stage recorder and 3.7 meter Parshall flume located 31 meters upstream from confluence of East Main Canal Wasteway, 34 meters north of the southerly land boundary, and 2.3 kilometers east of the Colorado River.
RECORDS: Based on current meter measurements and a continuous record of gage heights. The station is operated by the United States Section of the Commission. Records available: October 18, 1978 through 2006.
REMARKS: Records show the pumping of ground water from the 242 well field east of San Luis, Arizona. This water is considered as part of the volumes arriving at the land boundary at San Luis.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.63	1.99	2.13	1.24	2.49	1.01	0.94	2.37	2.16	0.44	0.27	0.27
2	.63	1.98	2.20	1.24	2.57	1.01	.94	2.28	2.17	.42	.27	.27
3	.63	1.98	1.99	1.11	2.63	1.01	.94	2.28	2.18	.43	.26	.28
4	.63	1.98	2.10	.91	2.15	1.00	.94	2.29	2.18	.42	.26	.28
5	.63	1.99	2.11	.92	1.56	1.01	.94	2.30	.93	.25	.26	.29
6	.83	2.00	2.17	.96	1.55	.99	1.34	2.31	.41	.25	.26	.30
7	1.12	2.06	2.29	1.05	1.55	.99	2.20	2.32	1.53	.25	.26	.29
8	1.12	2.15	2.19	1.05	1.18	.99	2.19	2.31	1.59	.25	.27	.29
9	1.12	2.14	1.99	1.06	.53	.98	2.18	2.32	1.59	.26	.26	.29
10	1.13	2.14	2.11	1.07	.73	.98	2.07	2.34	1.59	.25	.26	.29
11	1.12	2.13	2.12	1.09	1.18	.98	2.13	2.34	1.77	.25	.27	.29
12	1.12	2.14	1.15	1.51	1.37	.98	2.21	2.36	1.93	.27	.27	.28
13	1.12	2.14	.04	2.22	1.90	.97	2.15	2.37	1.92	.28	.27	.27
14	1.12	2.16	.16	2.24	1.90	.97	2.23	2.36	1.94	.27	.26	.27
15	1.12	2.16	.13	2.27	1.81	.98	2.24	2.37	1.95	.27	.25	.27
16	1.12	2.15	0	2.28	1.73	.98	2.25	2.36	1.96	.27	.25	.27
17	1.12	2.17	0	2.40	.89	.98	2.21	2.35	1.96	.27	.25	.27
18	1.12	2.17	0	2.64	.27	.98	2.06	2.34	1.95	.26	.25	.27
19	1.10	2.16	0	2.75	.88	.98	2.05	2.33	2.12	.26	.25	.26
20	1.11	2.15	.38	2.78	.88	.99	1.93	2.32	2.42	.26	.25	.26
21	1.11	2.15	1.63	2.78	.87	.99	1.92	2.31	1.85	.26	.25	.26
22	1.11	2.15	2.07	2.78	.88	.98	1.93	1.81	.85	.26	.25	.26
23	1.11	2.11	1.98	2.76	.97	.97	1.92	1.98	.60	.26	.26	.26
24	1.11	2.16	2.11	2.74	1.02	.99	2.04	2.19	.60	.26	.26	.26
25	1.28	2.30	1.97	2.58	1.01	.99	2.28	2.36	.59	.26	.26	.25
26	1.83	2.31	1.93	2.51	1.00	.98	2.03	2.35	.59	.26	.26	.26
27	1.96	2.28	1.97	2.50	.98	.96	2.00	2.38	.58	.26	.26	.26
28	1.98	2.07	1.93	2.51	.98	.95	2.00	2.37	.58	.26	.27	.26
29	1.99		2.09	2.51	.90	.95	2.00	2.35	.58	.26	.27	.26
30	1.97		1.75	2.49	.90	.94	2.01	2.22	.58	.26	.27	.26
31	1.97		1.24		.98		2.22	2.15		.27		.26
Sum	37.06	59.47	45.93	58.95	40.24	29.46	58.49	71.09	43.65	8.75	7.81	8.41

Current Year 2006 | Period 1979-2006

Month	Extreme Gage Meters High	Extreme Gage Meters Low	Extreme-Cubic Meters per Second High	Day	Extreme-Cubic Meters per Second Low	Day	Average	Total	Volume-Thousand Cubic Meters Average	Maximum	Minimum
Jan.	0.390	0.165	2.15	*26	0.62	!2	1.20	3,202	901	3,406	0
Feb.	.420	.350	2.35	!25	1.84	2	2.12	5,138	1,286	5,138	0
Mar.	.435	0	2.46	*30	0	!17	1.48	3,968	1,240	4,717	0
April	.500	.220	3.05	*19	.89	4	1.97	5,093	1,549	5,093	0
May	.480	0	2.84	*2	0	!17	1.30	3,477	1,287	4,269	0
June	.310	.210	1.45	*6	.80	12	.98	2,545	1,384	4,748	0
July	.440	.230	2.50	*31	.91	5	1.89	5,054	1,838	6,426	0
Aug.	.470	.220	2.75	*7	.88	22	2.29	6,142	1,880	6,142	0
Sept.	.440	0	2.51	*20	0	6	1.46	3,771	1,545	5,818	0
Oct.	.165	.085	.58	*1	.23	!10	.28	756	860	3,542	0
Nov.	.115	.080	.38	*11	.24	!18	.26	675	428	2,101	0
Dec.	.110	.080	.37	*5	.23	27	.27	727	812	3,654	0
Yearly	0.500	0	3.05		0		1.29	40,548	15,010	40,548	201

* Discharge measurement(s) made on this day ! And other days

09-5348.00 TOTAL FLOWS CROSSING INTERNATIONAL BOUNDARY INTO MEXICO NEAR SAN LUIS, SONORA

DESCRIPTION: The tabulated data below are the combined flows of the East Main Canal Wasteway, West Main Canal Wasteway, 242 Lateral, Yuma Main Drain and the Diversion Channel. These represent the total water crossing the international land boundary into the Sanchez Mejorada Canal near San Luis, Arizona. The mean daily discharges are combined and rounded and adding the volumes of the four stations and subtracting the Diversion Channel obtain the monthly volumes.
RECORDS: Records obtained and computed by the United States Section of the Commission. Records available: February 23, 1971 through 2006; 242 Lateral from November 1978 through 2006; Diversion Channel from October 6, 2004 through 2006.
REMARKS: Descriptions and flows of the individual stations, East Main Canal Wasteway, West Main Canal Wasteway, the Yuma Main Drain, 242 Lateral and the Diversion Channel at SIB are published separately on preceding pages of this bulletin.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.79	5.27	5.47	4.60	5.43	3.71	4.41	4.93	4.86	4.37	6.11	4.39
2	2.71	5.56	5.12	4.54	5.59	3.74	4.19	4.88	5.65	4.92	5.54	4.37
3	3.78	5.52	5.35	5.26	5.38	3.85	4.55	4.84	5.68	3.97	5.60	4.09
4	4.17	5.53	5.27	4.47	5.05	4.10	4.55	5.31	5.92	4.64	5.58	4.68
5	4.22	5.70	5.23	3.93	5.16	4.27	3.80	5.36	3.86	4.53	5.92	5.15
6	4.38	5.33	5.69	3.74	4.91	3.93	4.48	5.10	3.64	4.17	5.39	4.81
7	4.74	5.72	5.65	3.83	5.63	3.36	5.00	4.85	4.85	3.82	4.90	3.38
8	5.75	5.69	5.26	4.56	4.86	3.31	5.83	4.57	4.45	4.20	4.72	4.01
9	4.33	5.06	5.36	4.19	3.80	3.90	5.50	4.11	5.39	4.93	5.21	4.96
10	4.68	5.35	4.99	3.96	4.27	3.67	5.05	3.99	4.81	4.46	5.67	5.28
11	4.03	4.69	5.75	3.75	4.81	3.41	5.29	3.82	5.06	4.72	5.36	5.03
12	3.90	5.90	3.70	4.02	4.38	3.77	5.44	5.22	4.93	4.84	5.23	3.61
13	3.60	4.75	2.91	4.99	5.16	3.99	5.24	5.55	4.89	4.95	5.61	3.68
14	4.24	5.19	2.70	4.89	6.01	3.68	5.40	5.26	5.07	5.22	5.26	3.37
15	4.47	5.34	2.74	5.09	5.44	3.69	4.93	5.38	5.04	5.79	5.25	3.13
16	4.04	5.18	2.59	5.28	4.87	3.07	5.16	5.10	5.82	5.59	5.13	4.29
17	3.76	5.46	2.96	5.26	4.09	3.01	4.81	5.59	5.08	5.54	4.31	5.00
18	4.60	6.04	2.69	5.49	3.19	3.52	5.41	5.18	5.52	5.80	5.31	4.56
19	4.73	6.08	3.20	5.35	3.48	2.98	5.16	5.76	5.78	5.18	5.76	5.33
20	4.97	5.66	2.95	5.64	4.11	3.31	4.34	5.36	5.77	5.63	4.88	4.20
21	3.98	5.01	4.42	5.38	4.43	4.03	4.30	5.40	5.98	5.24	5.25	3.60
22	4.83	4.68	4.54	5.56	4.13	4.33	4.54	4.40	5.50	5.63	5.31	5.36
23	4.45	4.79	4.82	5.66	3.39	4.40	4.42	4.81	4.97	5.71	5.37	4.48
24	4.53	4.69	4.77	5.76	3.66	3.93	5.14	4.87	5.35	4.86	5.30	4.06
25	3.91	6.05	5.00	5.83	3.65	4.74	4.50	4.88	4.60	4.95	5.36	2.68
26	4.20	6.00	5.36	5.71	3.94	4.41	4.48	5.26	4.75	6.41	5.51	2.26
27	4.22	5.66	4.76	5.49	4.48	3.85	5.11	4.72	5.18	6.21	5.42	3.17
28	5.11	5.49	4.91	5.81	3.74	3.98	4.94	4.82	5.13	5.80	5.57	3.80
29	6.80		5.02	5.25	3.62	3.65	5.34	4.73	4.37	5.09	5.40	4.06
30	5.99		4.83	5.97	3.63	4.01	5.30	4.62	4.61	5.28	5.30	4.27
31	4.97		3.91		3.54		4.61	4.86		5.06		4.71
Sum	151.39		149.26		113.60		153.53		157.51			129.77
	137.88		137.92		137.83		151.22		152.51		160.53	

Current Year 2006						Period 1935-2006			
	Extreme Gage Meters		Extreme-Cubic Meters per Second				Volume-Thousand Cubic Meters		
Month	High	Low	Day @ High		Day @ Low	Average	Total	Average	Maximum	Minimum
Jan.			29	6.80	2	2.71	4.45	11,913	11,856	14,963	2,619
Feb.			19	6.08	22	4.68	5.41	13,080	11,665	15,998	2,495
Mar.			11	5.75	16	2.59	4.45	11,916	13,023	16,904	2,864
April			30	5.97	6	3.74	4.98	12,896	13,271	16,013	2,611
May			14	6.01	18	3.19	4.45	11,909	13,475	17,145	3,050
June			25	4.74	19	2.98	3.79	9,815	12,377	15,505	3,115
July			8	5.83	5	3.80	4.88	13,065	12,792	15,320	3,610
Aug.			19	5.76	11	3.82	4.95	13,265	12,856	15,612	3,687
Sept.			21	5.98	6	3.64	5.08	13,177	12,681	15,357	3,210
Oct.			26	6.41	7	3.82	5.08	13,609	13,342	17,143	4,248
Nov.			1	6.11	17	4.31	5.35	13,870	12,333	16,066	4,202
Dec.			22	5.36	26	2.26	4.19	11,212	12,358	14,863	3,562
Yearly				6.80		2.26	4.75	149,727	152,029	183,801	39,274

@ Mean daily

WESTERN BOUNDARY WATER BULLETIN - 2006 - INTERNATIONAL BOUNDARY AND WATER COMMISSION

09-5222.00 COLORADO RIVER AT SOUTHERLY INTERNATIONAL BOUNDARY - DISCHARGES

DESCRIPTION: Water-stage recorder was located in Mexico on the right bank of the river about 305 meters upstream from the southerly international boundary, 3.2 kilometers west of San Luis, Arizona, and 35 river kilometers downstream from Morelos Dam. The zero of the gage was at mean sea level, U. S. C. & G. S. datum. This gage was destroyed on January 19, 1983. Between January 19, 1983 and December 10, 1985, temporary gages were installed on the United States side and levels were established to ensure continuous record. On December 10, 1985, a permanent water-stage recorder was relocated on the left bank of the river about 24 meters upstream from the southerly international boundary. On January 30, 1998 a new gage was installed on the left bank of the river about 305 meters downstream from the southerly international boundary.
RECORDS: Records obtained and furnished by the United States Section of the Commission. Computations by shifting control methods. Records available: Daily discharges, January 1950 through 2006; continuous record of gage heights, January 1947 through 1993. During 1993, from January 1 to February 4 and May 1, 1993 to January 30, 1998, the gage was inoperable. Records of gage height and discharge were estimated from instantaneous observations and discharge measurements. Monthly flows for this station have been derived for the period January 1935 through 1949 based on the computed records of monthly flows of the Colorado River at the northerly international boundary combined with the measured flows from the wasteways discharging into the boundary section of the river from the Yuma Project in Arizona.
REMARKS: Reservoirs, diversions in the United States and Mexico, drainage returns, and waste flows modify the river flow at this station. In September 2002, a dike was constructed in Mexico by CNA approximately 1 mile downstream of the boundary, to divert the water into a new channel. This construction has caused a backwater condition upstream.
EXTREMES: Since January 1950: Maximum instantaneous discharge, 937 CMS on August 19, 1983; maximum gage height, 25.860 meters on November 29, 1957. Minimum discharge, no flow on several occasions since September 1, 1956.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	0	0
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0
Sum	0		0		0		0		0		0	
	0		0		0		0		0		0	

Current Year 2006				Period 1935-2006		
	Extreme Gage Meters	Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters	
Month	High	Low	High Day	High	Low Day	Low	Average	Total	Average	Maximum	Minimum
Jan.	21.880	21.880	! 1	0	! 1	0	0	0	373,275	2,062,379	0
Feb.	21.880	21.880	! 1	0	! 1	0	0	0	307,005	1,708,370	0
Mar.	21.880	21.880	! 1	0	! 1	0	0	0	257,883	1,458,432	0
April	21.880	21.880	! 1	0	! 1	0	0	0	167,769	947,722	0
May	21.880	21.880	! 1	0	! 1	0	0	0	224,243	1,430,837	0
June	21.880	21.880	! 1	0	! 1	0	0	0	191,191	1,455,506	0
July	21.880	21.880	! 1	0	! 1	0	0	0	164,631	1,821,962	0
Aug.	21.880	21.880	! 1	0	! 1	0	0	0	177,965	2,103,318	0
Sept.	21.880	21.880	! 1	0	! 1	0	0	0	205,822	1,956,768	0
Oct.	21.880	21.880	! 1	0	! 1	0	0	0	241,429	2,144,909	0
Nov.	21.880	21.880	! 1	0	! 1	0	0	0	278,173	1,761,409	0
Dec.	21.880	21.880	! 1	0	! 1	0	0	0	342,677	2,268,370	0
Yearly	21.880	21.880		0		0	0	0	2,932,063	15,656,495	0

! And other days

09-5222.01 COLORADO RIVER AT SOUTHERLY INTERNATIONAL BOUNDARY - STAGES

(See Preceding Page for Description)

MEAN DAILY GAGE HEIGHT IN METERS 2006

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
2	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
3	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
4	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
5	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
6	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
7	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
8	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
9	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
10	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
11	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
12	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
13	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
14	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
15	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
16	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
17	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
18	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
19	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
20	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
21	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
22	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
23	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
24	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
25	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
26	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
27	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
28	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
29	21.880		21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
30	21.880		21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880	21.880
31	21.880		21.880		21.880		21.880	21.880		21.880		21.880
Avg.	21.880		21.880		21.880		21.880		21.880		21.880	

09-5333.00 WELLTON-MOHAWK BYPASS DRAIN AT SOUTHERLY INTERNATIONAL BOUNDARY

DESCRIPTION: Water-stage recorder and Parshall flume located 24 meters upstream from the southerly land boundary, 168 meters east of the Colorado River, and 2.9 kilometers west of San Luis, Arizona. The zero of the gage has not been determined.
RECORDS: Based on current meter measurements and a continuous record of gage heights. Station is operated by United States Section of the Commission. Records available: June 23, 1977 through 2006.
REMARKS: Pursuant to Minute No. 242 of the Commission, a bypass drain of the Wellton-Mohawk extension channel was constructed from Morelos Dam to the Santa Clara Slough in Mexico along the left bank of the Colorado River.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.73	3.98	4.06	3.63	3.23	3.62	4.35	4.53	4.73	4.72	5.03	3.90
2	3.53	4.17	4.13	3.66	3.61	4.06	4.38	4.41	4.64	4.70	5.22	3.94
3	3.70	3.85	4.13	4.15	3.38	4.09	4.47	4.21	4.62	4.64	4.88	4.00
4	3.98	3.74	4.17	4.11	3.42	4.03	4.80	4.29	4.83	4.46	5.17	4.19
5	4.10	3.86	4.38	3.93	3.64	4.16	4.70	4.25	4.92	4.38	5.19	4.40
6	3.96	3.96	4.07	4.03	3.50	4.05	4.33	4.34	4.37	4.81	4.97	5.16
7	3.86	4.02	3.71	3.99	3.47	4.27	4.53	4.22	4.64	4.84	4.60	4.78
8	3.74	3.95	3.60	3.55	3.51	4.19	4.71	4.47	4.91	4.91	4.88	5.04
9	3.77	3.80	3.82	3.72	3.54	4.12	4.49	4.38	4.53	4.75	5.22	4.85
10	3.74	3.68	3.75	3.65	3.37	4.51	4.61	4.38	4.85	4.62	5.19	5.01
11	4.03	3.55	3.74	3.68	3.44	4.17	4.48	4.48	4.62	4.70	5.09	5.09
12	4.02	3.98	4.02	3.73	3.41	4.17	4.20	4.59	5.09	5.03	5.04	4.32
13	4.21	3.70	4.23	3.48	3.26	4.35	4.15	4.48	4.90	4.95	4.66	4.48
14	4.09	3.81	4.11	3.42	3.15	4.34	4.10	4.46	4.81	5.02	4.57	4.33
15	4.16	3.96	4.02	3.69	3.47	4.14	4.08	4.44	4.85	5.01	4.88	4.21
16	4.39	4.22	4.12	3.70	3.14	4.46	3.97	4.44	4.89	4.64	5.01	4.33
17	4.24	3.85	4.11	3.48	3.38	4.33	4.17	4.69	4.79	4.64	4.77	4.35
18	4.22	3.73	4.15	3.52	3.21	4.17	3.56	4.53	4.80	4.69	4.82	4.29
19	4.06	4.00	3.95	3.67	3.35	4.13	1.57	4.56	5.06	4.99	4.58	4.87
20	4.21	3.89	3.80	3.44	3.58	4.19	4.23	4.62	4.93	4.84	4.95	4.27
21	4.32	3.75	3.57	3.30	3.58	4.27	4.05	4.74	4.74	5.05	4.50	4.16
22	4.35	3.98	3.69	3.50	3.65	4.11	4.00	4.44	4.61	4.82	4.43	4.29
23	3.96	3.97	3.56	3.68	3.65	4.19	4.08	4.46	4.58	5.21	4.55	4.43
24	3.76	4.16	3.78	3.41	3.56	4.37	3.93	4.30	4.91	4.86	5.01	4.33
25	4.16	4.15	3.57	3.32	3.44	4.16	4.09	4.54	4.72	4.53	5.18	4.35
26	4.01	4.27	3.56	3.22	3.26	4.37	4.01	4.58	4.75	4.71	5.01	3.91
27	3.76	3.87	3.92	3.32	3.25	4.21	4.21	4.71	4.19	4.59	4.17	4.02
28	3.62	3.74	3.72	3.30	3.20	4.21	4.24	4.90	4.63	4.66	4.08	3.93
29	3.89		3.66	3.29	3.34	4.27	4.13	4.62	4.71	4.83	4.05	4.03
30	4.25		3.64	3.31	3.26	4.34	4.45	4.67	4.67	4.51	4.07	4.19
31	4.09		3.71		3.50		4.43	4.46		4.83		4.25
Sum	109.59	107.88		126.05		139.19		147.94			135.70	
	123.91		120.45		105.75		129.50		142.29		143.77	

Current Year 2006						Period 1977-2006			
	Extreme Gage Meters		Extreme-Cubic Meters per Second				Volume-Thousand Cubic Meters		
Month	High	Low	High Day	Low Day	Average	Total	Average	Maximum	Minimum
Jan.	0.490	0.400	13	4.67	! 2	3.43	4.00	10,706	13,694	21,638	7,412
Feb.	.485	.400	24	4.57	11	3.42	3.91	9,469	12,896	18,374	8,506
Mar.	.490	.400	5	4.65	28	3.36	3.89	10,407	13,788	21,496	2,593
April	.480	.380	7	4.50	26	3.13	3.60	9,321	12,834	20,613	3,445
May	.450	.360	31	4.07	14	2.83	3.41	9,137	13,031	20,732	5,215
June	.490	.405	16	4.75	1	3.42	4.20	10,891	12,226	19,842	2,227
July	.505	.120	4	4.98	19	.51	4.18	11,189	12,332	22,235	2,728
Aug.	.600	.425	1	5.71	24	4.04	4.49	12,026	12,334	22,444	3,656
Sept.	.445	.430	20	5.51	6	4.19	4.74	12,294	11,906	23,538	51.4
Oct.	.515	.450	23	5.40	5	4.29	4.77	12,782	12,833	23,600	23.9
Nov.	.525	.430	2	5.59	29	3.84	4.79	12,422	11,927	20,944	59.2
Dec.	.550	.420	6	5.67	1	3.78	4.38	11,724	12,763	22,518	138
Yearly	0.600	0.120		5.71		0.51	4.20	132,368	152,564	222,488	75,784

! And other days

09-5350.00 WASTEWAY TO COLORADO RIVER AT KILOMETER 27 IN MEXICO

DESCRIPTION: Water-stage recorder and cableway located on the left bank of the canal wasteway immediately upstream from where it discharges into the Colorado River, 1.0 kilometer downstream from the wasteway gates on the Central Feeder Canal on the right bank of the Colorado River, 27 kilometers downstream from Morelos Dam, and 250 meters south of the junction of the Mexicali-San Luis and Algodones-Pescaderos highways.

RECORDS: Data obtained and computed by the Colorado River Irrigation District 14 of the National Water Commission and furnished by the Mexican Section of the Commission. Records shown in table below are waste returns to the Colorado River. Records available: April 1956 through 2006.

REMARKS: The Colorado River Irrigation District 14 transports water for irrigation of land on the left bank of the Colorado River by the Central Feeder Canal to a point called Kilometer 27. At this point, flows may be returned to the river through the wasteway or diverted to the Bacanora-Monumentos Canal system through the Sanchez Mejorada Siphon, which was placed in operation on June 28, 1963. As part of the rehabilitation works, started in 1968, of the Colorado River Irrigation District, the Canal de Conexion was enlarged and lined, and is now known as the Central Feeder Canal.

MONTHLY DISCHARGE IN THOUSAND CUBIC METERS

MONTH	CURRENT YEAR 2006	PERIOD 1964 - 2006		
		AVERAGE	MAXIMUM	MINIMUM
January	2,346	10,605	85,761	0
February	0	6,469	50,898	0
March	4,535	8,443	72,049	0
April	572	12,203	85,372	0
May	234	11,922	99,576	0
June	0	9,799	61,705	0
July	29	10,092	56,912	0
August	1,012	15,061	132,183	0
September	2,502	13,719	83,943	0
October	619	12,693	136,198	0
November	0	11,650	122,170	0
December	936	10,299	86,607	0
Yearly	12,785	131,675	628,347	0

09-5365.00 WASTEWAY TO COLORADO RIVER AT KILOMETER 38 IN MEXICO

DESCRIPTION: Wasteway to the Colorado River on the left bank of new Barrote Canal at old dam and bridge at Kilometer 18.251 (old Kilometer 38.000). The wasteway is located in the Colonia Bojorquez 1.3 kilometers upstream from the Sonora-Baja California railroad bridge, 5.9 kilometers downstream from the Miguel C. Rodriguez gaging station, and 45 kilometers downstream from the southerly international boundary.
RECORDS: The records are computed by the National Water Commission and are based upon gate openings. Records available: January 1964 through 2006.
REMARKS: The wasteway structure on the left bank of the Colorado River has two manually operated radial gates 3.0 meters wide. It discharges into a dirt canal 200 meters long with a total capacity of 13.0 CMS which discharges to the river.

MONTHLY DISCHARGE IN THOUSAND CUBIC METERS

MONTH	CURRENT YEAR 2005	PERIOD 1964 - 2006		
		AVERAGE	MAXIMUM	MINIMUM
January	0	1,585	10,541	0
February	0	1,385	12,035	0
March	18	813	5,932	0
April	0	440	5,555	0
May	0	1,385	14,246	0
June	0	701	8,585	0
July	0	562	9,114	0
August	0	968	17,765	0
September	11	1,981	16,855	0
October	3	4,091	28,669	0
November	0	2,453	25,263	0
December	4	1,984	13,380	0
Yearly	36	17,993	103,228	0

STORED WATER IN LARGE RESERVOIRS OF THE COLORADO RIVER

Data are presented below for all large storage reservoirs in the Colorado River basin below Lee's Ferry, all of which are located in the United States. The monthly figures represent usable contents on the last day of the month, in million cubic meters. The capacities indicated are usable capacities at the top of the spillway gates in closed position for those dams having controlled spillways; for all others, capacities indicated are at spillway level. Records furnished by the U.S. Geological Survey.

IN MILLION CUBIC METERS

	LAKE MEAD (Capacity 32,266)		LAKE MOHAVE (Capacity 2,232)		HAVASU LAKE (Capacity 764)		TOTAL IN UNITED STATES RESERVOIRS (Capacity 35,263)	
Month	2006	Average 1935-2006	2006	Average 1951-2006	2006	Average 1939-2006	2006	Estimated Average
Jan.	18,915.4	23,252.3	2,014.3	2,052.1	695.3	682.2	21,625.0	25,986.6
Feb.	19,143.6	23,138.6	2,004.4	2,066.1	676.6	687.7	21,824.6	25,892.4
Mar.	18,917.9	22,879.9	2,055.0	2,071.3	697.9	699.9	21,670.8	25,651.1
April	18,460.3	22,838.8	2,064.8	2,061.9	693.7	735.2	21,218.8	25,635.9
May	17,848.5	23,414.1	2,083.3	2,125.8	696.1	742.8	20,627.9	26,282.7
June	17,488.3	24,342.4	2,062.4	2,032.3	712.3	738.1	20,263.0	27,112.8
July	17,260.1	24,451.8	2,052.5	1,914.3	684.7	724.9	19,997.3	27,091.0
Aug.	17,274.9	24,278.1	2,100.6	1,875.0	717.3	711.9	20,092.8	26,865.0
Sept.	17,129.3	24,082.7	1,957.5	1,820.7	687.0	702.9	19,773.8	26,606.3
Oct.	17,224.3	23,892.2	1,812.0	1,795.9	714.7	700.6	19,751.0	26,388.7
Nov.	17,286.0	23,750.7	1,855.2	1,866.2	700.0	689.1	19,841.2	26,306.0
Dec.	17,471.0	23,603.3	1,944.0	1,978.9	723.4	688.3	20,138.4	26,270.5
Avg.	17,868.3	23,660.4	2,000.5	1,971.7	699.9	708.6	20,568.7	26,340.8
Max.	19,143.6 !!	34,266.1	2,100.6	2,230.1 !	723.4	849.5 !	21,824.6	35,934.1 !
Min.	17,129.3 *	13,231.5	1,812.0	1,462.9 !!	676.6	94.9 !!	19,751.0	16,112.5 !!

! Maximum end of month storage for period of record
!! Minimum end of month storage for period of record
* Minimum end of month storage since 1940

SUSPENDED SILT - 2006

The following tables are based on determinations of gravimetric percentages of dry silt in water samples taken at each station by one of the following methods.

A. By lowering a D-43 depth integrating sampler at verticals located at centers of sections of equal discharge in the river cross section, being careful to approach but not strike the bottom. The samples obtained in the section are combined to comprise a composite sample for that date.

B. By lowering a D-43 depth integrating sampler at verticals located at centers of each span of the service bridge across the Alamo Canal, being careful to approach but not strike the bottom. The samples obtained in the section are combined to comprise a composite sample for that date.

C. By sampling at the stream surface with a separate bottle at each of three points, spaced 1/6, 1/2, and 5/6 of the stream width. The gravimetric percentage in each sample is determined, a coefficient of 1.10 is applied to the average of the three, and the product applied to the volume of the stream flow represented by that set of samples.

COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY

2006 Date	Time Std.	Streamflow, Momentary CMS	Gravimetric Percent	Date	Time Std.	Streamflow, Momentary CMS	Gravimetric Percent	Date	Time Std.	Streamflow, Momentary CMS	Gravimetric Percent
Jan. 4	0830	37.2	0.0074	May 16	0835	43.7	0.0016	Oct. 11	0715	25.6	0.0003
11	0825	45.1	0.0048	24	0725	47.5	0.0028	14	0740	25.3	0.0056
18	0820	56.8	0.0024	31	0740	48.7	0.0027	25	0755	27.5	0.0085
25	0820	60.8	0.0025	June 7	0650	57.2	0.0052	31	0830	27.7	0.0080
31	0730	60.8	0.0034	14	0820	62.7	0.0016	Nov. 7	0920	34.2	0.0052
Feb. 8	0830	68.0	0.0031	21	0815	60.5	0.0022	16	0800	42.7	0.0036
22	0950	72.5	0.0047	28	0645	54.2	0.0017	22	0725	51.2	0.0019
Mar. 2	0745	77.7	0.0079	July 3	1000	53.5	0.0016	29	0720	48.6	0.0022
8	0840	80.4	0.0097	12	0650	52.7	0.0011	Dec. 6	0720	52.6	0.0025
16	0735	107	0.0064	19	0740	53.2	0.0021	13	1140	51.5	0.0020
22	0750	94.9	0.0065	26	0715	53.0	0.0022	20	0915	52.3	0.0014
30	0725	97.0	0.0070	Aug. 2	1430	40.1	0.0005	28	0935	42.5	0.0009
Apr. 5	0750	93.5	0.0069	9	0740	40.1	0.0037				
12	0735	91.1	0.0043	16	0700	37.0	0.0065				
19	0655	93.5	0.0044	22	0950	37.8	0.0011				
26	0715	66.7	0.0034	Sept.13	0755	71.6	0.0032				
May 3	0800	45.7	0.0031	27	0920	37.5	0.0055				
10	0700	39.4	0.0041	Oct. 4	0705	28.5	0.0090				

Samples by U. S. Section and analyses by United States Bureau of Reclamation, Method A

INTAKE CANAL AT MORELOS DIVERSION STRUCTURE

2006 Month	Monthly Weight Megagrams Water	Silt	Number of Samples	Gravimetric Percentages Average	Maximum Sample	Minimum Sample	* Silt Volume - Thousand Cubic Meters Total 2006	Period 1952 - 2006 Average	Maximum	Minimum
Jan.	143,087	787	4	0.0005	0.0009	0.0002	0.58	10.5	62.6	0.30
Feb.	171,634	1,620	4	0.0009	0.0013	0.0005	1.19	11.9	128	0.67
Mar.	245,419	1,561	5	0.0006	0.0008	0.0001	1.15	46.7	605	0.99
April	226,204	1,095	4	0.0005	0.0007	0.0002	0.80	50.6	857	0.52
May	122,576	564	5	0.0005	0.0005	0.0004	0.41	18.1	318	0.36
June	147,796	1,245	4	0.0008	0.0011	0.0005	0.91	28.6	257	0.36
July	140,305	1,436	4	0.0010	0.0080	0.0005	1.05	34.9	190	0.53
Aug.	106,263	811	5	0.0008	0.0010	0.0005	0.60	31.9	167	0.31
Sept.	99,775	737	4	0.0007	0.0011	0.0005	0.54	14.7	72.8	0.29
Oct.	83,618	541	4	0.0006	0.0010	0.0005	0.40	8.09	124	0.22
Nov.	108,527	550	5	0.0005	0.0008	0.0004	0.40	8.14	165	0.30
Dec.	138,508	720	4	0.0005	0.0008	0.0004	0.53	8.14	54.4	0.38
Year	1,733,712	11,667	52	0.0007	0.0080	0.0001	8.56	271.7	2,706.5	5.92

* Volume calculated at 1.362 megagrams per cubic meter
Samples and analyses by the National Water Commission of Mexico (CONAGUA)

COLORADO RIVER AT SOUTHERLY INTERNATIONAL BOUNDARY

2006 Date	Time Std.	Streamflow, Momentary CMS	Gravimetric Percent
No samples taken in 2006			

CHEMICAL ANALYSES OF WATER SAMPLES
2006

The tables below are based on chemical analyses of samples from the Colorado River taken at the Northerly International Boundary by the United States Section of the Commission and analyzed under a contract with the U. S. Bureau of Reclamation.

Colorado River at Northerly International Boundary

2006 Date	Time Standard	Streamflow Momentary CMS	Specific Conductance MicroSiemens/cm	pH Units	Hardness, Total (as CaCO3) mg/L	Hardness, Noncarbonate (CaCO3) mg/L	Calcium ion (Ca), Dissolved mg/L	Magnesium ion (Mg), Dissolved mg/L
Jan. 9	0800	46.2	1,620	8.5	414	234	104	37.6
23	0845	58.4	1,530	8.4	339	164	85.0	30.8
Feb. 7	1000	64.6	1,450	8.3	348	179	86.5	32.2
21	1035	70.6	1,440	8.3	317	150	78.6	29.5
Mar. 6	1015	78.7	1,410	8.2	340	175	85.3	31.0
20	1015	97.6	1,400	8.3	361	195	90.3	33.1
April 3	0915	95.2	1,350	8.2	329	171	81.6	30.4
17	0815	92.4	1,360	8.2	340	182	84.2	31.7
May 2	0815	49.4	1,530	8.2	351	177	87.6	32.3
15	0815	41.6	1,520	8.1	350	181	86.9	32.3
June 5	0800	59.7	1,440	8.3	326	155	81.1	30.0
19	0810	63.5	1,380	8.1	327	166	81.6	29.9
July 10	0800	54.9	1,430	8.2	330	164	82.9	29.9
24	1000	56.5	1,500	8.3	344	174	86.0	31.4
Aug. 7	0800	54.9	1,430	8.1	386	226	95.7	35.7
21	0845	36.2	1,610	8.2	409	233	102	37.6
Sept. 5	0800	37.3	1,580	8.2	363	191	88.8	34.3
18	0810	37.9	1,590	8.2	398	220	95.5	38.8
Oct. 2	0840	36.3	1,630	8.2	406	226	102	36.8
16	0800	25.8	1,750	8.2	444	253	111	40.6
Nov. 6	0950	34.4	1,700	8.4	413	223	104	37.4
21	1055	46.6	1,560	8.3	402	224	101	36.5
Dec. 4	1030	52.0	1,540	8.3	402	226	101	36.4
18	1000	70.8	1,420	8.2	334	168	82.4	31.1

2006 Date	Sodium ion (Na), Dissolved mg/L	Potassium ion (K) Dissolved mg/L	Sulfate ion (SO4) Dissolved mg/L	Chloride ion (Cl), Dissolved mg/L	Carbonate (as CO3) mg/L	Bicarbonate (as HCO3) mg/L	Nitrate (as NO3) mg/L	Total Solids Dissolved (Calculated) mg/L
Jan. 9	182	5.5	346	184	8.11	203	0.64	973
23	143	4.6	325	164	5.28	203	0.63	863
Feb. 7	139	5.1	315	152	0	206	0.59	842
21	132	4.8	309	150	0	204	0.59	814
Mar. 6	134	5.0	303	144	0	201	0.61	811
20	140	5.2	309	128	0	203	0.48	815
April 3	130	5.1	289	124	0	193	0.58	764
17	137	5.2	296	126	0	193	0.27	784
May 2	155	5.1	342	162	0	212	0.48	898
15	156	5.3	323	156	0	206	0.75	872
June 5	133	4.7	297	134	3.44	202	0.51	790
19	134	4.8	287	120	0	196	0.53	764
July 10	131	4.7	311	136	0	203	0.67	807
24	149	4.9	328	149	1.51	204	0.70	862
Aug. 7	164	5.7	311	134	0	195	0.65	856
21	185	5.7	337	164	0	215	0.83	954
Sept. 5	167	5.1	317	151	0	210	0.76	881
18	190	5.8	382	151	0	217	0.89	986
Oct. 2	188	5.7	332	167	0	220	0.79	956
16	211	5.9	371	195	0	233	1.04	1,068
Nov. 6	202	5.4	339	176	6.66	218	0	987
21	173	5.4	345	162	2.42	212	0	941
Dec. 4	166	5.4	327	149	0	215	0	904
18	139	4.7	297	129	0	203	0	794

SPECIFIC CONDUCTANCE OF WATER SAMPLES

The following tables show specific conductance of individual water samples taken at Colorado River stations and in Mexican canals. Samples were taken at the Northerly International Boundary and at the Southerly International Boundary by the United States Section of the Commission. Determinations for the Northerly International Boundary were made by the Bureau of Reclamation and the United States Section of the Commission (jointly); and for the Southerly International Boundary, by the United States Section of the Commission. Samples for the Intake Canal at Morelos Dam were taken by the Mexican Section of the Commission, and determinations were made by the Ministry of Agriculture and Hydraulic Resources of Mexico.

COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY

SPECIFIC CONDUCTANCE OF WATER SAMPLES IN MICROSIEMENS/CM @ 25 DEG C - 2006

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1,640 *	1,420	1,390	1,330 *	1,460	1,410	1,380 *	1,530	1,500	1,600 *	1,750	1,530
2	1,640 *	1,360	1,400	1,340 *	1,530	1,420	1,380 *	1,540	1,520 *	1,630	1,700	1,520*
3	1,630	1,450	1,400	1,350	1,540	1,430 *	1,370 *	1,560	1,540 *	1,440	1,710	1,520*
4	1,740	1,450 *	1,400 *	1,320	1,530	1,430 *	1,370 *	1,540	1,560 *	1,590	1,700 *	1,540
5	1,690	1,460 *	1,410 *	1,330	1,520	1,440	1,360	1,500 *	1,580	1,640	1,690 *	1,530
6	1,600	1,460	1,410	1,330	1,530 *	1,430	1,370	1,470 *	1,590	1,690	1,700	1,490
7	1,610 *	1,450	1,400	1,300	1,530 *	1,430	1,390	1,430	1,490	1,710 *	1,670	1,470
8	1,610 *	1,490	1,380	1,320 *	1,540	1,430	1,400 *	1,440	1,510	1,730 *	1,630	1,480
9	1,620	1,450	1,370	1,340 *	1,550	1,410	1,420 *	1,530	1,530 *	1,750 *	1,640	1,480*
10	1,610	1,450	1,400	1,360	1,560	1,420 *	1,430	1,550	1,550 *	1,760	1,630 *	1,470*
11	1,670	1,460 *	1,360 *	1,310	1,500	1,430 *	1,430	1,510	1,570	1,690	1,620 *	1,470
12	1,590	1,480 *	1,320 *	1,370	1,520	1,440	1,470	1,450 *	1,480	1,690	1,610 *	1,510
13	1,590	1,490	1,280	1,360	1,520 *	1,430	1,440	1,380 *	1,300	1,540	1,600	1,500
14	1,570 *	1,400	1,320	1,360	1,520 *	1,410	1,390	1,320	1,400	1,600 *	1,630	1,490
15	1,550 *	1,390	1,280	1,360 *	1,520	1,460	1,400 *	1,400	1,520	1,660 *	1,630	1,490
16	1,520	1,470	1,250	1,360 *	1,550	1,380	1,400 *	1,490	1,540 *	1,750	1,530	1,460*
17	1,500	1,430	1,320	1,360	1,500	1,380 *	1,410	1,560	1,570 *	1,730	1,530	1,450*
18	1,560	1,430 *	1,350 *	1,300	1,510	1,380 *	1,380	1,560	1,590	1,760	1,540 *	1,420
19	1,530	1,430 *	1,370 *	1,340	1,480	1,380	1,360	1,580 *	1,580	1,780	1,560 *	1,540
20	1,500	1,430 *	1,400	1,320	1,480 *	1,470	1,340	1,590 *	1,570	1,430	1,570	1,530
21	1,510 *	1,440	1,370	1,340	1,480 *	1,390	1,420	1,610	1,550	1,530 *	1,560	1,530
22	1,520 *	1,410	1,360	1,350 *	1,480	1,430	1,450	1,590	1,540	1,630 *	1,520	1,550
23	1,530	1,390	1,370	1,350 *	1,500	1,420	1,470	1,590	1,540 *	1,730	1,490 *	1,550*
24	1,470	1,360	1,340	1,360	1,490	1,410 *	1,500	1,510	1,540 *	1,670	1,460 *	1,540*
25	1,460	1,370 *	1,320 *	1,370	1,450	1,390 *	1,490	1,530	1,540	1,640	1,430 *	1,530*
26	1,450	1,380 *	1,310 *	1,410	1,450	1,380	1,430	1,530 *	1,540	1,440	1,400 *	1,530
27	1,460	1,390	1,290	1,440	1,460	1,380	1,480	1,540 *	1,540	1,640	1,380	1,670
28	1,430 *	1,390	1,310	1,420	1,460 *	1,370	1,510	1,540	1,480	1,670 *	1,470	1,700
29	1,400 *		1,310	1,430 *	1,470 *	1,390	1,490 *	1,550	1,540	1,730 *	1,540	1,660
30	1,370		1,300	1,450 *	1,470 *	1,390	1,480 *	1,540	1,570 *	1,730	1,560	1,670*
31	1,490		1,320		1,470		1,460	1,530		1,800		1,680*

* Estimated

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SPECIFIC CONDUCTANCE OF WATER SAMPLES

INTAKE CANAL AT MORELOS DIVERSION STRUCTURE

SPECIFIC CONDUCTANCE OF WATER SAMPLES IN MICROSIEMENS/CM @ 25 DEG C - 2006

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1,740	1,500	1,420	1,380	1,520	1,500	1,480	1,420	1,520	1,660	1,270	1,560
2	1,750	1,420	1,420	1,300	1,550	1,470	1,490	1,450	1,550	1,630	1,240	1,530
3	1,630	1,430	1,390	1,380	1,530	1,470	1,450	1,520	1,540	1,560	1,260	1,520
4	1,750	1,460	1,410	1,360	1,550	1,480	1,440	1,530	1,560	1,570	1,290	1,500
5	1,740	1,470	1,410	1,360	1,480	1,480	1,440	1,460	1,520	1,600	1,330	1,490
6	1,640	1,500	1,430	1,340	1,550	1,500	1,450	1,530	1,550	1,590	1,320	1,490
7	1,670	1,450	1,410	1,340	1,580	1,470	1,260	1,470	1,470	1,430	1,250	1,460
8	1,690	1,490	1,400	1,310	1,570	1,450	1,440	1,450	1,330	1,450	1,280	1,500
9	1,640	1,490	1,400	1,360	1,580	1,440	1,460	1,560	1,490	1,650	1,280	1,510
10	1,640	1,460	1,420	1,390	1,580	1,460	1,480	1,560	1,360	#	1,270	1,460
11	#	1,440	1,410	1,360	1,560	1,480	1,500	1,490	1,460	#	1,270	1,480
12	1,600	1,390	1,380	1,390	1,550	1,470	1,510	1,560	1,500	1,640	1,330	1,420
13	1,630	1,510	1,280	1,380	1,580	1,450	1,500	1,410	1,270	1,590	1,390	1,470
14	1,620	1,430	1,320	1,400	1,580	1,440	1,470	1,330	1,350	1,540	1,300	1,460
15	1,600	1,410	1,300	1,390	1,580	1,500	1,510	1,430	1,520	1,590	1,290	1,470
16	#	1,490	1,260	1,290	1,630	1,410	1,490	1,530	1,440	1,640	1,280	1,420
17	1,570	1,460	1,340	1,390	1,580	1,420	1,470	1,590	1,570	#	1,260	1,480
18	1,580	1,440	1,340	1,370	1,540	1,420	1,460	1,620	1,550	#	1,280	1,400
19	1,560	1,440	1,310	1,360	1,530	1,410	1,450	1,570	1,540	1,770	1,340	1,510
20	1,560	1,430	1,340	1,340	1,530	1,520	1,420	1,630	1,560	1,410	1,290	1,520
21	1,510	1,450	1,390	1,360	1,540	1,430	1,480	1,620	1,550	1,560	1,280	1,530
22	1,530	1,440	1,370	1,360	1,510	1,460	1,480	1,620	1,510	1,630	1,280	1,530
23	1,530	1,400	1,390	1,390	1,520	1,460	1,500	1,570	1,290	1,710	1,280	1,500
24	1,530	1,390	1,400	1,400	1,520	1,440	1,530	1,530	1,410	1,640	1,260	1,490
25	1,490	1,410	1,400	1,390	1,480	1,420	1,530	1,520	1,530	1,620	1,250	1,500
26	1,470	1,420	1,400	1,430	1,490	1,490	1,500	1,520	1,490	1,430	1,230	1,530
27	1,480	1,420	1,380	1,460	1,470	1,440	1,490	1,240	1,490	1,530	1,220	1,620
28	1,450	1,450	1,350	1,450	1,510	1,410	1,530	1,440	1,500	1,670	1,260	1,640
29	1,400		1,380	1,420	1,510	1,430	1,480	1,510	1,590	1,700	1,290	1,600
30	1,400		1,340	1,540	1,490	1,450	1,490	1,450	1,590	1,730	1,270	1,630
31	1,500		1,380		1,510		1,480	1,480		1,790		1,580

- No Sample

COLORADO RIVER AT SOUTHERLY INTERNATIONAL BOUNDARY

SPECIFIC CONDUCTANCE OF WATER SAMPLES IN MICROSIEMENS/CM @ 25 DEG C - 2006

January	March	May	July	September	November
		No samples taken in 2006			
February	April	June	August	October	December

RAINFALL ON THE COLORADO RIVER WATERSHED
IN MILLIMETERS

Tabulated below are monthly records of rainfall at stations located in California and Arizona in the United States and in Baja California and Sonora in Mexico, with averages for their periods of record. Records of daily rainfall amounts, where available, are on file in the offices of the United States or Mexican Sections of the Commission. For location, elevation, period of record, and the observer, see alphabetical listings of these stations on following page in this bulletin.

IN THE UNITED STATES

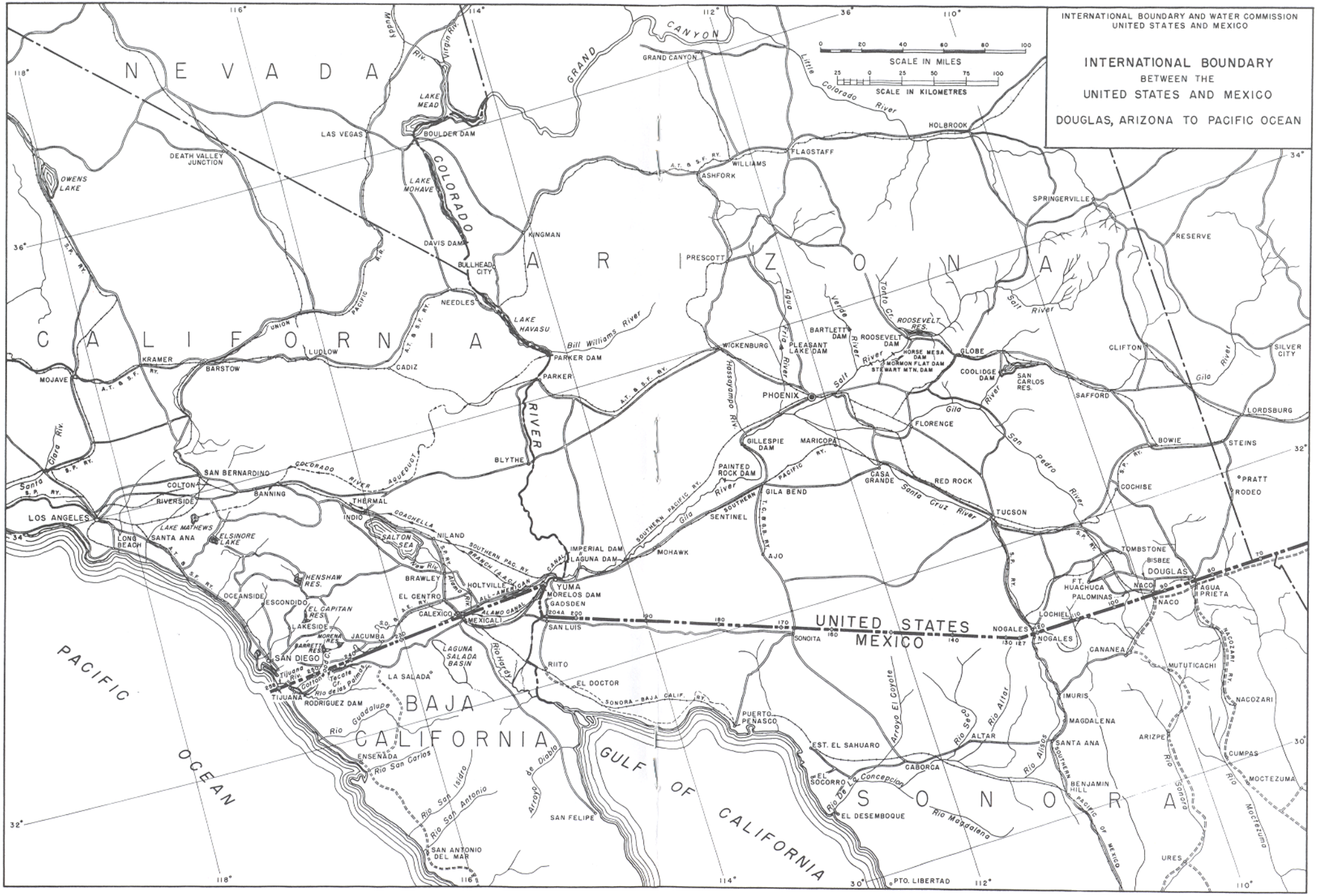
Month	Brawley, California		El Centro, California		Blythe, California		Yuma Quartermaster Depot, Arizona		Bullhead City, Arizona	
	2006	Average 1931-2006	2006	Average 1931-2006	2006	Average 1931-2006	2006	Average 1998-2006	2006	Average 1978-2006
Jan.	0	10	0	10	0	12	0	5	0	25
Feb.	0	10	0	10	0	13	0	15	0	28
Mar.	10	7	10	6	0	10	6	8	8	23
April	0	2	0	2	0	3	T	5	0	4
May	0	1	#	0	0	1	1	0	0	2
June	0	0	#	0	0	1	4	0	0	0
July	0	1	#	2	0	5	1	3	15	8
Aug.	0	8	#	9	17	18	1	4	0	19
Sept.	#	8	#	7	23	10	20	2	4	9
Oct.	0	6	1	7	#	6	1	5	13	12
Nov.	0	4	0	4	0	6	0	3	0	11
Dec.	0	10	0	10	0	13	0	3	0	13
Yearly		67		67		98	34	53	40	155

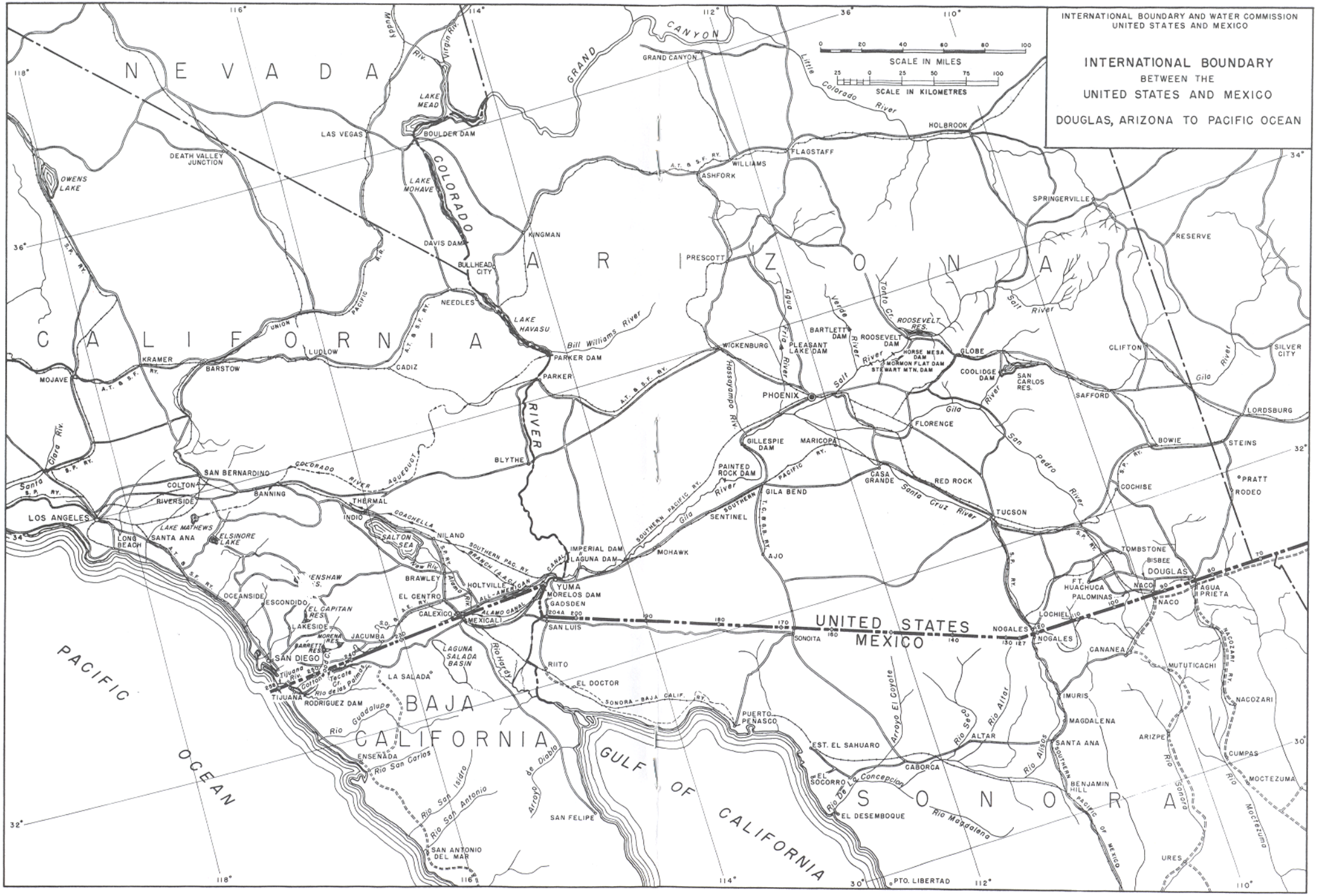
IN MEXICO

Month	Los Algodones, Baja California		Mexicali, Baja California		San Felipe, Baja California		Riito, Sonora		Delta, Baja California	
	2006	Average 1948-2006	2006	Average 1926-2006	2006	Average 1948-2006	2006	Average 1949-2006	2006	Average 1948-2006
Jan.	0	8	0	9	0	6	0	6	0	7
Feb.	0	6	T	9	0	6	0	6	0	7
Mar.	4	4	5	6	1	3	8	5	8	5
April	T	2	0	2	T	1	0	1	1	1
May	T	T	T	T	0	T	0	T	0	T
June	T	T	1	T	0	T	0	T	1	T
July	7	3	T	3	2	3	7	2	3	2
Aug.	0	8	T	9	0	9	0	5	0	6
Sept.	15	4	T	9	19	18	0	8	1	6
Oct.	7	6	2	8	0	8	0	8	0	7
Nov.	0	4	0	4	0	5	0	4	0	3
Dec.	T	8	0	16	0	8	0	9	T	10
Yearly	33	55	8	79	22	72	15	56	14	51

T = Trace # = Missing Record P = Partial Data

WESTERN BOUNDARY WATER BULLETIN - INTERNATIONAL BOUNDARY AND WATER COMMISSION




INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
INTERNATIONAL BOUNDARY
BETWEEN THE
UNITED STATES AND MEXICO
DOUGLAS, ARIZONA TO PACIFIC OCEAN
SCALE IN MILES
SCALE IN KILOMETRES
NEVADA
ARIZONA
CALIFORNIA
BAJA CALIFORNIA
SONORA
UNITED STATES
MEXICO
PACIFIC OCEAN
GULF OF CALIFORNIA
GRAND CANYON
LAKE MEAD
LAKE MOHAVE
LAKE HAVASU
COLORADO RIVER
Little Colorado River
Virgin Riv.
Muddy Riv.
BOULDER DAM
DAVIS DAM
PARKER DAM
Bill Williams River
RIVER
LAS VEGAS
DEATH VALLEY JUNCTION
OWENS LAKE
KINGMAN
BULLHEAD CITY
NEEDLES
PRESCOTT
FLAGSTAFF
WILLIAMS
ASHFORK
HOLBROOK
SPRINGERVILLE
RESERVE
CLIFTON
SILVER CITY
Salt River
Gila River
Verde River
Agua Fria River
Hassayampo Riv.
Santa Cruz River
San Pedro River
BARTLETT DAM
ROOSEVELT DAM
ROOSEVELT RES.
HORSE MESA DAM
MORMON FLAT DAM
STEWART MTN. DAM
PLEASANT LAKE DAM
COOLIDGE DAM
SAN CARLOS RES.
WICKENBURG
PHOENIX
GLOBE
SAFFORD
LORDSBURG
FLORENCE
GILLESPIE DAM
MARICOPA
CASA GRANDE
RED ROCK
PAINTED ROCK DAM
GILA BEND
SENTINEL
AJO
TUCSON
BOWIE
STEINS
COCHISE
PRATT
RODEO
TOMBSTONE
BISBEE
DOUGLAS
FT. HUACHUCA
PALOMINAS
NACO
AGUA PRIETA
NOGALES
LOCHIEL
CANANEA
MUTUTICACHI
NACOZARI
IMURIS
MAGDALENA
SANTA ANA
ARIZPE
CUMPAS
MOCTEZUMA
BENJAMIN HILL
CABORCA
EST. EL SAHUARO
EL SOCORRO
EL DESEMBOQUE
PUERTO PENASCO
SONOITA
RIITO
EL DOCTOR
SAN FELIPE
PTO. LIBERTAD
URES
Río Altar
Río Sasabe
Río Magdalena
Río De La Concepción
Arroyo El Coyote
Arroyo de Diablo
Río Sonora
SAN DIEGO
TIJUANA
RODRIGUEZ DAM
ENSENADA
Río San Carlos
Río San Isidro
Río San Antonio
SAN ANTONIO DEL MAR
Río Guadalupe
Río Tijuana
Río Hardy
LA SALADA
LAGUNA SALADA BASIN
LOS ANGELES
LONG BEACH
SANTA ANA
SAN BERNARDINO
COLTON
RIVERSIDE
BANNING
MOJAVE
KRAMER
BARSTOW
LUDLOW
CADIZ
BLYTHE
THERMAL
INDIO
COACHELLA
NILAND
SALTON SEA
BRAWLEY
IMPERIAL DAM
LAGUNA DAM
YUMA
MORELOS DAM
GADSDEN
HOLTVILLE
EL CENTRO
CALEXICO
MEXICALI
SAN LUIS
MOHAWK
OCEANSIDE
ESCONDIDO
LAKESIDE
EL CAPITAN RES.
BARRETT RES.
MORENA RES.
LAKE MATHEWS
ELSINORE LAKE
JACUMBA
Colorado River Aqueduct
Coachella Canal
All-American Canal
Alamo Canal
New Riv.
Tijuana Riv.
Cottonwood Cr.
Tecate Cr.
Río de las Palmas
Santa Clara Riv.
Santa Ana Riv.
SOUTHERN PACIFIC RY.
SOUTHERN PACIFIC BRANCH (LA AGUA)
A.T. & S.F. RY.
UNION PACIFIC R.R.
S.P. RY.
T.C. & S.F. RY.
SONORA-BAJA CALIF. RY.
SOUTHERN PACIFIC OF MEXICO RY.
NACOZARI RY.

LOCATION OF RAINFALL STATIONS ON THE COLORADO RIVER WATERSHED

The precipitation records of the stations listed alphabetically below began on the date shown and extend through 2005.

IN THE UNITED STATES

NAME OF STATION	LATITUDE	LONGITUDE	@ ELEV. (Meters)	RECORD BEGAN	OBSERVER
* Blythe, California	33` 37'	114` 36'	81.69	1909	State Division of Forestry
Brawley, California	32` 57'	115` 33'	30.48	1908	Agricultural Research Service
Bullhead City, Arizona	35` 07'	114` 36'	176.78	1980	Bullhead City Fire Department
El Centro, California	32` 46'	115` 34'	9.14	1930	El Centro Water Department
Yuma Quartermaster Depot, Arizona	32` 44'	114` 37'	48.77	1998	Yuma Crossing State Park

IN MEXICO

NAME OF STATION	LATITUDE	LONGITUDE	@ ELEV. (Meters)	RECORD BEGAN	OBSERVER
Bataques, Baja California	32` 34'	115` 00'	**20.12	1948-2005	# S. A. R. H. - discontinued
Delta, Baja California	32` 21'	115` 11'	**11.89	1948	National Water Commission of Baja California
El Centinela, Baja California	32` 35'	115` 45'	49.99	1978	S. A. R. H.
Los Algodones, Baja California	32` 42'	114` 44'	35.05	1948	National Water Commission of Baja California
Mexicali, Baja California	32` 40'	115` 28'	3.96	1926	National Water Commission of Baja California
Riito, Sonora	32` 13'	115` 01'	13.11	1959-2005	S. A. R. H. - discontinued
Riito, Sonora	32` 13'	115` 01'	13.11	2006	National Water Commission of Baja California
San Felipe, Baja California	31` 01'	114` 51'	21.95	1948	National Water Commission of Baja California

* Not shown on rainfall map
@ Elevation above mean sea level except Brawley and El Centro, which are elevations below mean sea level
** Elevation obtained from International Boundary and Water Commission topographic maps
# Ministry of Agriculture and Hydraulic Resources

EVAPORATION IN THE COLORADO RIVER BASIN
IN MILLIMETERS

Tabulated below are records of evaporation observed at one station in Arizona, and four stations in Baja, California. The station in the United States is operated by the University of Arizona Experimental Farm. The stations in Mexico are operated by the Ministry of Agriculture and Hydraulic Resources. The type of pan used at all these stations was the National Weather Service s tandard pan of 1.22 meters diameter. For specific location of these stations, refer to data opposite the same station name shown in "Location of Rainfall Stations," in this bulletin.

IN THE UNITED STATES

Month	Yuma Citrus Station, Arizona	
	2006	Average 1931-2006
Jan.	#	99
Feb.	#	120
Mar.	63	181
April	#	250
May	#	318
June	#	359
July	#	378
Aug.	#	333
Sept.	#	262
Oct.	#	190
Nov.	#	122
Dec.	#	92
Yearly		2,704

IN MEXICO

Month	Los Algodones, Baja California		Mexicali, Baja California		San Felipe Baja California		Delta, Baja California	
	2006	Average 1948-2006	2006	Average 1926-2006	2006	Average 1948-2006	2006	Average 1948-2006
Jan.	126	104	93	64	114	119	98	85
Feb.	131	125	118	126	120	136	105	106
Mar.	158	180	172	146	135	170	159	154
April	206	244	224	197	183	199	210	207
May	300	308	317	266	258	245	141	252
June	316	331	366	288	278	260	288	284
July	309	341	376	298	291	261	314	287
Aug.	298	304	351	258	297	264	309	265
Sept.	247	254	277	204	222	229	300	220
Oct.	211	198	196	146	195	196	268	156
Nov.	125	130	123	85	137	146	177	104
Dec.	111	105	87	61	115	119	117	141
Yearly	2,538	2,629	2,700	2,082	2,345	2,407	2,486	2,066

Missing Record

TEMPERATURE IN THE COLORADO RIVER BASIN
IN DEGREES CELSIUS

The maximum, minimum, and monthly mean temperature observations for United States stations are from daily readings of thermometers generally exposed in a shelter located approximately one meter above sod-covered ground. The maximum and minimum temperatures shown for the stations in Mexico are from daily maximum and minimum thermometer observations, with maximum and minimum for their periods of record. For specific location, elevation, period of record, and the observer, refer to data opposite same station name as shown in "Location of Rainfall Stations," in this bulletin.

IN THE UNITED STATES

Month	Blythe, California				Yuma Quartermaster Depot, Arizona				Brawley, California			
	2006				2006				2006			
	Mean	Max.	Min.	Average 1931-06	Mean	Max.	Min.	Average 1998-06	Mean	Max.	Min.	Average 1931-06
Jan.	12.4	25.6	-1.1	11.7	14.3	26.7	2.8	17.0	13.9	28.3	-1.1	12.5
Feb.	15.2	29.4	1.1	14.2	16.8	29.4	1.7	15.6	15.9	30.6	2.2	14.7
Mar.	16.8	31.7	3.3	17.6	16.9	32.2	4.4	18.9	16.3	32.2	0.6	17.5
April	22.3	38.3	6.1	21.4	21.6	37.8	7.8	21.6	20.5	35.6	7.2	21.0
May	28.1	42.2	-1.7	26.0	27.7	41.7	12.8	39.4	26.8	41.1	12.2	25.2
June	33.7	46.1	17.2	30.1	33.6	47.2	18.9	39.5	32.4	44.4	17.8	29.5
July	36.9	49.4	25.6	34.1	35.4	47.8	20.0	38.1	35.8	48.9	23.9	33.1
Aug.	33.8	44.4	20.0	33.0	34.1	46.7	21.1	50.2	33.4	45.0	20.0	33.0
Sept.	29.8	43.9	14.4	29.5	29.9	44.4	14.4	34.2	29.9	42.2	13.9	30.1
Oct.	#	#	#	23.3	23.5	38.9	9.4	32.7	23.6	41.1	8.3	23.9
Nov.	17.6	33.3	0.6	15.9	18.8	35.0	1.7	17.7	19.3	36.1	-1.1	17.0
Dec.	28.1	25.6	-2.2	12.1	12.6	25.6	-2.2	13.3	12.6	26.1	-1.7	12.8
Yearly				22.4	23.8	47.8	-2.2	28.2	23.4	48.9	-1.7	22.5

Month	El Centro, California				Bullhead City, Arizona							
	2006				2006							
	Mean	Max.	Min.	Average 1931-06	Mean	Max.	Min.	Average 1978-06				
Jan.	14.3	27.8	1.7	12.7	13.7	23.9	0.6	12.5				
Feb.	16.7	28.9	4.4	14.8	16.3	28.3	3.3	14.8				
Mar.	16.5	30.0	5.6	17.6	16.2	30.6	3.9	18.1				
April	21.2	35.0	9.4	21.1	22.4	38.3	7.2	22.4				
May	#	#	#	25.3	30.2	43.9	14.4	27.4				
June	#	#	#	29.7	34.6	47.8	18.9	33.7				
July	#	#	#	33.2	37.6	48.9	25.6	35.4				
Aug.	#	#	#	32.9	35.3	45.6	21.1	34.8				
Sept.	#	#	#	30.0	30.4	43.3	15.6	30.8				
Oct.	23.8	37.8	11.1	23.9	24.4	39.4	9.4	24.1				
Nov.	19.6	33.3	1.7	17.0	17.9	32.2	4.4	16.8				
Dec.	13.4	27.8	1.1	12.8	12.7	23.9	-0.6	12.1				
Yearly				22.6	24.3	48.9	-0.6	23.6				

= Missing Data

IN MEXICO

Month	Los Algodones, Baja California				Mexicali, Baja California				Bataquez, Baja California			
	2006		1948-2006		2006		1926-2006		2006		1948-2006	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Jan.	26	1	31	-5	27	4	34	-7	#	#	45	-9
Feb.	29	2	35	-2	30	5	34	-5	#	#	37	-6
Mar.	31	4	39	0	32	7	40	-1	#	#	45	-4
April	37	7	43	3	37	9	41	1	#	#	48	-9
May	41	13	47	6	42	14	47	6	#	#	51	1
June	46	17	52	11	46	20	49	9	#	#	57	6
July	47	23	50	13	48	27	51	13	#	#	56	7
Aug.	45	20	49	16	45	23	49	12	#	#	54	8
Sept.	44	15	50	10	43	16	50	8	#	#	57	4
Oct.	44	9	44	0	41	13	44	0	#	#	48	0
Nov.	35	6	38	-3	34	4	40	-2	#	#	46	0
Dec.	26	0	32	-5	26	3	32	-5	#	#	36	-5
Yearly	47	0	52	-5	48	3	51	-7			57	-9

Missing Data

TEMPERATURE IN THE COLORADO RIVER BASIN
IN DEGREES CELSIUS

IN MEXICO

	Riito, Sonora				San Felipe, Baja California				El Centinela, Baja California			
	2006		1949-2006		2006		1948-2006		2006		1975-2006	
Month	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Jan.	29	3	30	-7	27	5	37	-1	#	#	30	1
Feb.	33	2	35	-6	29	6	40	0	#	#	35	-4
Mar.	31	3	39	-7	29	5	41	0	#	#	38	4
April	33	6	43	2	35	10	45	1	#	#	46	6
May	46	14	48	5	36	14	49	5	#	#	48	9
June	45	14	51	7	42	20	51	5	#	#	49	10
July	48	20	60	11	44	23	51	9	#	#	52	20
Aug.	47	20	50	8	42	21	57	5	#	#	50	18
Sept.	45	15	48	4	39	17	52	3	#	#	50	11
Oct.	39	15	46	-1	39	10	47	-5	#	#	46	3
Nov.	38	7	48	-3	34	4	48	-6	#	#	40	3
Dec.	34	4	37	-6	26	3	39	-2	#	#	30	-3
Yearly	48	2	60	-7	44	3	57	-6			52	-4

	Delta, Baja California											
	2006		1948-2006									
Month	Max.	Min.	Max.	Min.								
Jan.	26	0	40	-4								
Feb.	29	2	40	-2								
Mar.	32	2	45	-2								
April	36	5	48	0								
May	49	10	54	0								
June	48	16	56	2								
July	49	23	57	7								
Aug.	48	21	60	15								
Sept.	43	14	57	4								
Oct.	41	8	47	1								
Nov.	35	2	50	0								
Dec.	26	-2	40	-5								
Yearly	49	-2	60	-5								

Missing Data

IRRIGATED AREAS ALONG COLORADO RIVER BELOW IMPERIAL DAM

2006

The total drainage area within the Colorado River basin is about 637,000 square kilometers, of which 478,100 square kilometers lie above Imperial Dam and about 159,000 square kilometers, are below the dam. Of the area below Imperial Dam, 153,800 square kilometers are in the United States and about 5,180 square kilometers are in Mexico. The area below Imperial Dam includes the Gila River watershed with a total area of about 150,700 square kilometers, of which about 2,850 square kilometers are in Mexico.

The irrigated areas tabulated below comprise the areas in the United States and Mexico which are served by diversions from the Colorado River at or below Imperial Dam. The diversions are supplemented by some pumping from wells in both countries. The areas in the United States include: 1) those within the U. S. Bureau of Reclamation Projects and in the North and South Gila Valleys located near Yuma, Arizona, the data for which are furnished by the U. S. Bureau of Reclamation; 2) those within the Coachella Valley, California, the data for which are furnished by the U. S. Bureau of Reclamation; and 3) those within the Imperial Valley; California, the data for which are furnished by the U. S. Bureau of Reclamation. The areas in Mexico include those in the Mexicali Valley located in the states of Baja California and Sonora, the data for which are furnished by the Ministry of Agriculture and Hydraulic Resources of Mexico. The areas tabulated below refer to the total areas farmed, and insofar as possible, duplication of irrigated areas because of double cropping has been eliminated.

Point of Diversion from Colorado River and Designation of Areas	Total Irrigated Areas Hectares
IN THE UNITED STATES:	
Imperial Dam	
Yuma Valley Division	21,544
Reservation Division	5,808
Yuma Mesa	7,529
Yuma Aux. Project Unit "B" (Yuma Mesa)	1,182
South Gila Valley	3,956
North Gila Valley	2,390
Wellton-Mohawk	25,089
Coachella Valley	22,147
Imperial Valley	172,466
Warren Act	41
Non-Project lands adjacent to Colorado River	3,607
Total in United States	265,759
IN MEXICO:	
San Luis Valley, R. C., Sonora	15,781
Mexicali Valley	129,209
Total in Mexico	144,990
Total in United States and Mexico	410,749

10-2545.80 ALAMO RIVER AT INTERNATIONAL BOUNDARY

DESCRIPTION: Staff gage located on the right bank of the river, about 11.3 kilometers east of Calexico, California, immediately downstream from the international land boundary between the United States and Mexico and approximately three meters upstream from a 1.22-meter Cipolletti weir in the throat of a twin-tube concrete culvert which carries the river flow under the All-American Canal. On November 18, 1992 continuous gage height recording equipment was installed at the site.
RECORDS: From June 1942 through November 18, 1992 flows computed on the basis of head on the Cipolletti weir from daily staff gage readings, and weir ratings as determined by monthly current meter measurements. A continuous gage height record and mean daily discharge records are available November 19, 1992 through 2006. Records obtained and furnished by Imperial Irrigation District.
REMARKS: The flow at this station normally comprises seepage from the All-American Canal and drainage water from the Mexicali Valley which enters the United States. On September 28, 1995 the National Water Commission of Mexico completed the construction of a weir immediately upstream of the international boundary. The result is that all the Alamo River flow, or a portion thereof, is being diverted into the New River via the interconnected agricultural drainage system in Mexico. After September 28, 1995 the recorded flow at the gage is affected by this diversion.
EXTREMES: Maximum mean daily discharge, 7.31 CMS (estimated), April 13, 1946; minimum discharge, no flow July 22-23, 29-30, 1949 and numerous days after September 28, 1995. Prior to the period of record, and since 1900, considerably higher flows occurred. During the years 1905 to 1907, when the Colorado River flowed into the Salton Sea, a part of its flow passed through the Alamo River channel.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.03	0.01	0	0.01
2	.02	.04	.03	.04	.03	.02	.02	.02	.01	0	0	.01
3	.02	.04	.03	.04	.03	.02	.02	.02	.01	0	0	.01
4	.02	.03	.03	.04	.04	.03	.02	.02	.01	.01	.01	.01
5	.02	.03	.03	.03	.04	.03	.02	.02	0	.01	.01	.01
6	.02	.03	.04	.04	.05	.02	.01	.02	0	.01	.01	.01
7	.03	.03	.04	.04	.04	.02	.01	.01	0	0	.01	.01
8	.03	.03	.04	.04	.03	.02	.01	.01	0	0	0	.02
9	.03	.05	.03	.05	.03	.02	.01	.01	0	0	0	.02
10	.03	.03	.04	.05	.03	.02	.01	.01	0	0	0	.02
11	.03	.03	.04	.04	.03	.02	.01	.01	0	0	0	.02
12	.03	.04	.04	.03	.03	.03	.01	.01	0	0	0	.01
13	.02	.04	.05	.03	.02	.03	.01	.01	0	0	0	.01
14	.02	.04	.04	.03	.02	.03	.01	.01	0	0	0	.01
15	.02	.04	.04	.04	.02	.03	.01	.01	0	0	0	.01
16	.02	.04	.04	.04	.02	.03	.01	.01	0	0	0	.01
17	.02	.04	.04	.04	.03	.03	.01	.01	.01	0	0	.01
18	.02	.03	.04	.04	.02	.03	.02	.01	.01	0	0	.02
19	.03	.03	.05	.04	.02	.03	.02	.01	.01	0	0	.03
20	.03	.03	.07	.04	.02	.02	.02	.01	.01	0	0	.03
21	.03	.03	.05	.04	.03	.02	.02	.01	.01	0	0	.02
22	.03	.03	.04	.04	.03	.02	.02	.01	0	0	.01	.01
23	.04	.03	.04	.04	.02	.01	.02	.01	0	0	.01	.01
24	.04	.03	.04	.04	.02	.01	.02	.01	0	0	.01	.01
25	.03	.03	.04	.04	.03	.01	.01	.01	0	0	.01	.01
26	.04	.03	.04	.06	.03	.02	.01	.01	0	0	.01	.01
27	.03	.03	.04	.04	.02	.03	.01	.01	0	0	.01	.01
28	.04	.03	.03	.04	.02	.03	0	.01	0	0	.01	.01
29	.04		.03	.04	.02	.03	.01	.01	0	0	.01	.01
30	.04		.03	.03	.02	.03	.01	.06	0	0	.01	.01
31	.04		.03		.02		.02	.03		0		.01
Sum	0.89	0.94	1.20	1.18	0.84	0.71	0.43	0.44	0.11	0.04	0.13	0.41

Current Year 2006					Period 1943-2006			
Month	Extreme Gage Meters		Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
	High	Low	@ High	@ Low	Average	Total	Average	Maximum	Minimum
Jan.	0.090	0.055	!23 0.04	! 2 0.02	0.03	76.9	306	3,441	0
Feb.	.090	.070	9 .05	! 1 .03	.03	81.2	282	3,481	0
Mar.	.120	.070	20 .07	! 1 .03	.04	104	322	3,890	0
April	.115	.080	26 .06	! 1 .03	.04	102	335	2,741	0
May	.095	.055	6 .05	!13 .02	.03	72.6	276	2,219	0
June	.075	.040	! 4 .03	!23 .01	.02	61.3	261	2,080	0
July	.065	.010	! 1 .02	28 0	.01	37.2	246	2,112	0
Aug.	.110	.035	30 .06	! 7 .01	.01	38.0	280	2,062	0
Sept.	.065	0	1 .03	! 5 0	0	9.5	258	1,734	0
Oct.	.025	0	! 1 .01	! 2 0	0	3.5	271	2,276	0
Nov.	.035	.005	! 4 .01	! 1 0	0	11.2	284	2,566	0
Dec.	.065	.020	!19 .03	! 1 .01	.01	35.4	276	2,080	0
Yearly	0.120	0	0.07	0	0.02	633	3,397	27,317	203

@ Mean daily ! And other days

10-2549.70 NEW RIVER AT INTERNATIONAL BOUNDARY

DESCRIPTION: Water-stage recorder located on the left (west) bank of the river in the limits of the City of Calexico, California, 427 meters downstream (north) from the international land boundary between the United States and Mexico. Measurements are made from a foot bridge at the gage. Gage heights are in meters below mean sea level.

RECORDS: Based on a continuous record of gage heights and current meter measurements by the Imperial Irrigation District. Records computed and furnished by the District. Records available: June 1942 through 2006.

REMARKS: The New River flows northward from Mexico into the United States and thence into the Salton Sea. The flow at this station normally comprises 1) a portion of the waste and drainage water from the irrigation system in the Mexicali Valley, and 2) sewage and other wastes from Mexicali, Baja California. Flood waters enter the river from local drainage in Mexico, and such waters can reach damaging rates during violent desert storms. Waste flows from the Mexican system of canals are limited to an average annual quantity of 43,172 TCM during any successive five-year period under the provisions of Minute No. 197 of the Commission. Gage heights shown are meters below mean sea level.

EXTREMES: Maximum mean daily discharge, 29.2 CMS on December 9, 1982; minimum mean daily discharge, 0.06 CMS on May 14, 1945. Prior to the period of record, and since 1900, much higher flows occurred. During the years 1905 to 1907, when the Colorado River flowed into the Salton Sea, a considerable part of its flow passed through the New River channel.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.59	4.79	5.81	5.81	5.32	4.64	4.28	3.82	3.48	3.88	3.43	3.48
2	4.62	4.64	6.00	5.81	5.44	4.67	4.19	3.94	3.46	3.74	3.40	3.60
3	4.76	4.73	5.92	5.83	5.38	4.25	4.25	3.99	3.40	3.68	3.37	3.60
4	4.70	4.93	5.89	5.78	5.32	4.19	4.28	3.88	3.40	3.71	3.40	3.71
5	4.64	4.76	6.00	5.81	5.38	4.33	4.33	3.62	3.34	3.79	3.57	3.54
6	4.59	4.76	6.00	5.81	5.30	4.25	4.28	3.46	3.40	3.91	3.34	3.26
7	4.53	4.73	5.89	5.83	5.07	4.13	4.25	3.54	3.43	3.68	3.43	3.29
8	4.45	4.64	5.81	5.78	4.98	4.08	4.11	3.60	3.57	3.68	3.48	3.71
9	4.59	4.56	5.89	5.98	4.76	4.05	3.85	3.48	3.62	3.68	3.51	3.71
10	4.62	4.59	5.83	6.00	4.62	4.11	3.91	3.40	3.65	3.68	3.37	3.62
11	4.64	4.50	6.54	6.12	4.56	4.19	3.96	3.40	3.85	3.82	3.29	3.43
12	4.73	4.56	6.26	6.12	4.59	4.30	3.94	3.51	3.96	3.82	3.43	3.48
13	4.64	5.04	6.83	6.00	4.50	4.33	3.85	3.54	3.94	3.65	3.34	3.48
14	4.76	5.15	7.05	5.86	4.25	4.28	3.77	3.51	3.94	3.60	3.29	3.57
15	4.76	4.96	6.94	5.69	4.22	4.39	3.71	3.54	3.82	3.57	3.26	3.79
16	4.70	5.13	6.74	5.72	4.33	4.39	3.62	3.51	3.79	3.74	3.23	3.85
17	4.93	5.30	6.57	5.75	4.30	4.25	3.62	3.48	3.77	3.96	3.14	3.85
18	5.21	5.35	6.37	5.69	4.13	4.11	3.65	3.40	3.71	4.11	3.31	3.88
19	5.21	6.15	6.20	5.64	4.05	4.19	3.60	3.31	3.79	4.05	3.26	3.88
20	5.35	6.20	6.20	5.55	4.08	4.47	3.65	3.23	3.68	3.96	3.31	4.02
21	5.52	6.09	6.29	5.55	4.05	4.50	4.45	3.17	3.68	3.88	3.31	4.05
22	5.35	6.23	6.20	5.47	4.13	4.62	3.54	3.23	3.71	3.79	3.43	4.02
23	5.27	6.09	6.09	5.35	4.11	4.47	3.60	3.29	3.77	4.08	3.40	3.96
24	5.10	5.81	6.15	5.49	4.13	4.36	3.71	3.31	3.74	4.19	3.43	3.94
25	5.13	5.55	6.17	5.81	4.28	4.30	3.62	3.31	3.77	4.08	3.40	3.88
26	6.37	5.55	6.12	5.55	4.45	4.47	3.57	3.34	3.79	3.91	3.43	3.82
27	5.58	5.35	6.00	5.52	4.47	4.45	3.60	3.48	4.16	3.62	3.31	3.96
28	5.30	5.55	5.98	5.52	4.33	4.45	3.71	3.65	4.81	3.43	3.17	4.08
29	5.10		5.98	5.35	4.33	4.45	3.68	3.71	4.64	3.34	3.31	4.22
30	4.96		6.12	5.24	4.50	4.36	3.71	3.68	4.22	3.43	3.54	4.22
31	4.87		6.00		4.64		3.79	3.57		3.54		4.13
Sum	145.69		171.43		130.03		108.90		117.00			117.03
	153.57		191.84		142.00		120.08		113.29		100.89	

Current Year 2006							Period 1943-2006		
	Extreme Gage Meters		Extreme-Cubic Meters per Second				Volume-Thousand Cubic Meters		
Month	High	Low	Day @ High		Day @ Low	Average	Total	Average	Maximum	Minimum
Jan.	12.280	12.565	26	6.37	8	4.45	4.95	13,268	13,286	27,387	2,160
Feb.	12.330	12.545	22	6.23	11	4.50	5.20	12,588	12,080	26,416	1,552
Mar.	12.225	12.395	14	7.05	! 1	5.81	6.19	16,575	13,840	31,213	1,243
April	12.315	12.415	!11	6.12	30	5.24	5.71	14,812	13,842	34,066	1,715
May	12.395	12.620	2	5.44	!19	4.05	4.58	12,269	12,612	29,740	776
June	12.545	12.650	2	4.67	9	4.05	4.33	11,235	10,528	25,024	1,341
July	12.610	12.700	21	4.45	22	3.54	3.87	10,375	10,930	28,368	1,008
Aug.	12.590	12.740	3	3.99	21	3.17	3.51	9,409	12,361	34,066	1,405
Sept.	12.535	12.730	28	4.81	5	3.34	3.78	9,788	11,535	29,251	2,214
Oct.	12.570	12.720	24	4.19	29	3.34	3.77	10,109	11,458	28,072	2,567
Nov.	12.665	12.735	5	3.57	17	3.14	3.36	8,717	10,893	25,310	3,063
Dec.	12.565	12.715	!29	4.22	6	3.26	3.78	10,111	12,841	28,104	2,175
Yearly	12.225	12.740		7.05		3.14	4.42	139,256	146,206	330,444	30,310

@ Mean daily ! And other days

10-2549.60 WASTES FROM MEXICALI POTABLE WATER PLANT TO NEW RIVER IN MEXICO

DESCRIPTION: A 3.5-meter Parshall flume, installed by the State Commission of Public Services of Mexicali, is located 2.0 kilometers upstream of the pumping plant on the supply canal. Excess water discharges into an open channel, thence into a 91 centimeter diameter pipe that empties into Rivera Drain (Drain 134), which is 2.0 kilometers below the plant and 2.0 kilometers south of the international boundary. From this point the waste is carried by a closed concrete box conduit into New River.

RECORDS: During 2006 the mean daily flows were computed from the total inflow to the potable water plant as measured at the Parshall flume, less the water pumped to the city and the water used in the maintenance of the plant. The records are obtained and furnished by the State Commission of Public Services of Mexicali. Records available: January 1968 through December 2006.

REMARKS: The plant began operation on September 28, 1963 by the State Commission of Public Services of Mexicali. Before 1968 the flow was small and infrequent. The potable water plant obtains water from the West Main Canal, which is a part of Mexico's system of canals in the Colorado Irrigation System. Excess water discharges into a closed conduit that empties into New River 1.4 kilometers upstream of the international boundary.

EXTREMES: Maximum instantaneous discharge, 2.32 CMS on March 26, 1969; minimum instantaneous discharge, zero during several days in the years 1977 through 2006.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	0	0
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0
Sum	0	0	0	0	0	0	0	0	0	0	0	0

Current Year 2006					Period 1968-2006		
	Extreme Gage Meters		Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
Month	High	Low	@ High Day	Low Day	Average	Total	Average	Maximum	Minimum
Jan.			! 1	0 ! 1	0	0	132	641	0
Feb.			! 1	0 ! 1	0	0	91.1	384	0
Mar.			! 1	0 ! 1	0	0	163	1,074	0
April			! 1	0 ! 1	0	0	158	532	0
May			! 1	0 ! 1	0	0	171	537	0
June			! 1	0 ! 1	0	0	160	504	0
July			! 1	0 ! 1	0	0	191	651	0
Aug.			! 1	0 ! 1	0	0	206	735	0
Sept.			! 1	0 ! 1	0	0	192	677	0
Oct.			! 1	0 ! 1	0	0	179	625	0
Nov.			! 1	0 ! 1	0	0	158	622	0
Dec.			! 1	0 ! 1	0	0	146	737	0
Yearly				0	0	0	1,947	6,610	0

@ Mean daily ! And other days

10-2549.65 WASTE WATERS FROM MEXICAN SYSTEM OF CANALS ENTERING THE UNITED STATES

DESCRIPTION: During 2006 the flow to the New River in Mexico included waste from the City of Mexicali Potable Water Plant, which discharges into Rivera Drain and then to New River, and drainage water coming from the Colorado River District system of canals that enter the New River below Laguna Xochimilco, and starting January 1988, the north irrigation district watershed is included.

RECORDS: Records of the Potable Water Plant are based on flows measured on a Parshall flume less pumping to the city. Records obtained and furnished by the State Commission of Public Services of Mexicali. Records available: Wisteria Wasteway, January 1951 through 1975; Sifon Wasteway, January 1952 to April 30, 1964; Pueblo Nuevo Wasteway, January 1956 through 1965; and the Potable Water Plant, January 1968 through December 2006.

REMARKS: To obtain data for Sifon and Pueblo Nuevo Wasteways, see bulletins 1 to 6 (1960-1965);and for Wisteria Wasteway, bulletins 1 to 16 (1960-1975). For data on wastes from Potable Water Plant, see previous page of this bulletin.

MONTHLY DISCHARGE IN THOUSAND CUBIC METERS

MONTH	CURRENT YEAR 2006	PERIOD 1956 - 2006		
		AVERAGE	MAXIMUM	MINIMUM
January	0	912	10,803	0
February	0	755	8,981	0
March	0	676	5,506	0
April	0	551	3,940	0
May	0	392	3,174	0
June	0	397	6,994	0
July	0	601	12,644	0
August	0	605	5,103	0
September	0	463	3,966	0
October	0	579	4,285	0
November	0	580	4,668	0
December	0	693	10,720	0
Yearly	0	7,206	34,953	0

10-2540.05 SALTON SEA - ELEVATIONS OF WATER SURFACE

DESCRIPTION: Water-stage recorder and staff gage located on the western shore of the Salton Sea, 24.9 kilometers northwest of Westmorland, Imperial County, California. The Salton Sea is the sink of a closed basin which has a drainage area of 21,652 square kilometers. Zero of the gage is 76.200 meters below mean sea level, U. S. C. & G. S. datum.

RECORDS: Records of water surface elevations available from November 1904 through 2006. From January 1925 to October 22, 1951, once monthly records of elevations were collected by Imperial Irrigation District from a bench mark at Figtree John's Spring, about 35.4 kilometers northwest along the western shore from the present gage. Since October 24, 1951, a continuous record of gage heights has been obtained by the U. S. Geological Survey at new gaging station published as "Salton Sea near Westmorland, California." The elevation of the old station is at a datum of 0.305 meter higher than that of the present station. All records reported below and the area and capacity table are adjusted to the datum of the present station.

REMARKS: Runoff from the basin, irrigation drainage and waste water from Imperial and Coachella Valleys in the United States, and drainage and waste water from part of the Mexicali Valley in Mexico discharge into the Salton Sea. Water from Mexico enters the United States in the Alamo and New River channels. The bottom of the sea is 84.64 meters below mean sea level, U. S. C. & G. S. datum.

EXTREMES: Maximum elevation during 2006 was 69.585 meters below mean sea level. Minimum elevation during 2006 was 70.015 meters below mean sea level. Extremes for period of record: maximum elevation 59.710 below mean sea level February 10 to March 29, 1907; minimum elevation since 1906, 76.690 meters below mean sea level in November 1924.

MEAN DAILY WATER SURFACE ELEVATION IN METERS BELOW MEAN SEA LEVEL- 2006

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	69.770	69.710	69.675	69.615	69.615	69.615	69.645	69.740	69.830	69.920	70.015	70.015
2	69.770	69.710	69.675	69.615	69.615	69.615	69.645	69.740	69.830	69.950	70.015	70.015
3	69.770	69.710	69.675	69.615	69.615	69.615	69.645	69.740	69.830	69.950	70.015	70.015
4	69.770	69.710	69.675	69.615	69.615	69.615	69.645	69.740	69.830	69.950	70.015	70.015
5	69.740	69.710	69.675	69.615	69.585	69.615	69.645	69.740	69.830	69.950	70.015	70.015
6	69.740	69.710	69.675	69.615	69.585	69.615	69.645	69.740	69.830	69.950	70.015	70.015
7	69.740	69.710	69.675	69.615	69.585	69.615	69.645	69.740	69.830	69.950	70.015	70.015
8	69.740	69.710	69.645	69.615	69.585	69.615	69.645	69.740	69.830	69.950	69.980	70.015
9	69.740	69.710	69.645	69.615	69.585	69.615	69.645	69.740	69.830	69.950	69.980	70.015
10	69.740	69.710	69.645	69.615	69.585	69.615	69.645	69.740	69.860	69.950	69.980	70.015
11	69.740	69.710	69.645	69.615	69.585	69.615	69.645	69.740	69.860	69.950	69.980	70.015
12	69.740	69.710	69.645	69.615	69.585	69.615	69.675	69.740	69.860	69.950	69.980	70.015
13	69.740	69.710	69.645	69.615	69.585	69.615	69.675	69.740	69.860	69.950	69.980	70.015
14	69.740	69.675	69.645	69.615	69.585	69.645	69.675	69.740	69.890	69.950	69.980	70.015
15	69.740	69.675	69.645	69.615	69.585	69.645	69.675	69.740	69.890	69.950	69.980	70.015
16	69.740	69.675	69.645	69.615	69.585	69.645	69.675	69.770	69.890	69.980	69.980	70.015
17	69.740	69.675	69.645	69.615	69.585	69.645	69.675	69.770	69.890	69.980	70.015	70.015
18	69.740	69.675	69.645	69.615	69.585	69.645	69.675	69.770	69.890	69.980	70.015	70.015
19	69.740	69.675	69.645	69.615	69.585	69.645	69.675	69.770	69.890	69.980	70.015	70.015
20	69.740	69.675	69.645	69.615	69.585	69.645	69.675	69.800	69.920	69.980	70.015	70.015
21	69.740	69.675	69.645	69.615	69.585	69.645	69.675	69.800	69.920	69.980	70.015	70.015
22	69.740	69.675	69.645	69.615	69.585	69.645	69.675	69.800	69.920	69.980	70.015	70.015
23	69.740	69.675	69.645	69.615	69.585	69.645	69.675	69.800	69.920	69.980	70.015	70.015
24	69.740	69.675	69.645	69.615	69.585	69.645	69.675	69.800	69.950	69.980	70.015	70.015
25	69.740	69.675	69.615	69.615	69.585	69.645	69.675	69.800	69.950	69.980	70.015	70.015
26	69.740	69.675	69.615	69.615	69.615	69.645	69.675	69.800	69.950	69.980	70.015	70.015
27	69.740	69.675	69.615	69.615	69.615	69.645	69.675	69.800	69.950	69.980	70.015	70.015
28	69.740	69.675	69.615	69.615	69.615	69.645	69.675	69.830	69.950	69.980	70.015	70.015
29	69.740		69.615	69.615	69.615	69.645	69.710	69.830	69.950	70.015	70.015	70.015
30	69.740		69.615	69.615	69.615	69.645	69.710	69.830	69.950	70.015	70.015	70.015
31	69.740		69.615		69.615		69.740	69.830		70.015		70.015
Avg.	69.745	69.690	69.645	69.615	69.595	69.630	69.670	69.770	69.885	69.970	70.005	70.015

Current Year 2006			Period 1935-2006		
Month	@ Extreme Elevation Meters		Elevation Meters		
	High	Low	# Average	# Maximum	! Minimum
Jan.	69.740	69.770	71.255	69.280	75.990
Feb.	69.675	69.710	71.165	69.190	75.830
Mar.	69.615	69.675	71.085	69.130	75.770
April	69.615	69.615	71.030	69.100	75.800
May	69.585	69.615	71.020	69.100	75.740
June	69.615	69.645	71.065	69.160	75.830
July	69.645	69.740	71.120	69.220	75.930
Aug.	69.740	69.830	71.180	69.250	76.020
Sept.	69.830	69.950	71.240	69.280	76.020
Oct.	69.920	70.015	71.275	69.310	76.140
Nov.	69.980	70.015	71.285	69.340	76.200
Dec.	70.015	70.015	71.255	69.340	76.080
Yearly	69.585	70.015	71.165	69.100	76.200

Area and Capacity Table		
Elevation Meters Below M.S.L.	Area Hectares	Capacity Million Cubic Meters
84.640	0	0
83.520	8,337	31.7
82.300	25,455	232.8
81.080	38,284	629.8
79.250	49,615	1,443.2
78.030	54,512	2,077.2
76.810	60,218	2,775.3
74.370	72,723	4,393.7
73.150	79,683	5,322.5
71.630	89,760	6,611.5
70.100	95,426	8,022.6
67.060	106,029	11,092.7
64.010	116,753	14,481.1
60.960	127,680	18,206.2

@ Mean daily ! Reading near first day of month # Mean monthly

CHEMICAL ANAYLSIS OF WATER SAMPLES

The tables below are based on samples collected and analyzed by the California Regional Water Quality Control Board - Colorado River Basin, Region-7. The CRWQCB has sampled from 1986 to present; prior to that samples were collected and analyzed by the U.S. Geological Survey from 1974 to 1985. Samples from the New River are taken from the right bank at the road bridge, 137 meters north of the international boundary.

NEW RIVER AT INTERNATIONAL BOUNDARY

2006 Date	Time Std.	Flow CMS	Water Temperature Deg C	pH Units	Oxygen Dissolved (DO) mg/L	Specific Conductance Micro-Siemens/cm	Turbidity NTU	Fecal Coliform MPN/100mL
Jan. 9	0830	4.62	14.2	7.6	0.54	4,790	14.7 (2)	230,000
Feb. 28	0830	5.44	17.5	7.3	1.80	5,380	14.0 (2)	300,000
Mar. 15	0830	6.94	18.4	7.1	1.60	5,210	13.0 (2)	40,000
Apr. 25	0830	5.81	21.6	7.7	1.30	5,010	11.3 (1)	210,000
May 30	0900	4.22	21.7	7.6	0.14	4,830	11.3 (2)	300,000
June 13	0841	3.94	28.5	7.4	0.29	5,700	62.5	800,000
July 17	0842	3.46	30.5	7.8	0.66	5,790	NR	2,400,000
Aug. 29	0815	3.51	30.4	7.8	0.68	5,470	NR	500,000
Sep. 19	0830	3.48	25.1	8.5	1.17	4,950	50.1	800,000
Oct. 17	0815	3.57	21.6	7.2	0.58	4,830	44.5	1,100,000
Nov. 28	0820	3.94	16.4	7.6	12.2	4,510	56.5	300,000
Dec. 12	0830	3.48	14.2	9.3	2.59	4,350	37.9	700,000

Flow provided by Imperial Irrigation District (Mean Daily) NR - Not Reported

(1) = Composite of three water samples collected hourly
(2) = Composite of four water samples collected hourly

NEW RIVER AT INTERNATIONAL BOUNDARY

SAMPLE TYPE	COMPOSITE	DETECTION	COMPOSITE	DETECTION	COMPOSITE	DETECTION
DATE 2006	Jan. 9		Feb. 28		Mar. 15	
PARAMETER	CONCENTRATION	LIMIT	CONCENTRATION	LIMIT	CONCENTRATION	LIMIT
Arsenic	15.3 ug/L	2.0 ug/L	3.70 ug/L	2.0 ug/L	9.53 ug/L	2.0 ug/L
Boron	NA	NA	NA	NA	NA	NA
Cadmium	1.74 ug/L	1.0 ug/L	<RL	1.0 ug/L	2.44 ug/L	1.0 ug/L
Chromium	<RL	10.0 ug/L	<RL	10.0 ug/L	<RL	10.0 ug/L
Copper	<RL	50.0 ug/L	<RL	50.0 ug/L	<RL	50.0 ug/L
Lead	8.39 ug/L	5.0 ug/L	<RL	5.0 ug/L	5.01 ug/L	5.0 ug/L
Phenol	<RL	0.02 mg/L	<RL	0.002 mg/L	<RL	0.002 mg/L
MBAS	5.37 mg/L	0.1 mg/L	3.26 mg/L	0.1 mg/L	1.87 mg/L	0.1 mg/L
Zinc	<RL	50.0 ug/L	<RL	50.0 ug/L	<RL	50.0 ug/L
Total Cyanide	<RL	0.05 mg/L	<RL	0.01 mg/L	<RL	0.01 mg/L
Total Phosphate(PO4-P)	2.36 mg/L	0.15 mg/L	1.98 mg/L	0.5 mg/L	1.72 mg/L	0.5 mg/L
Nitrate (NO3-N)	<RL	0.1 mg/L	0.24 mg/L	0.1 mg/L	<RL	0.2 mg/L
Nitrite (NO2-N)	<RL	0.1 mg/L	<RL	0.1 mg/L	<RL	0.03 mg/L
Ammonia (NH3-NH4-N)	9.83 mg/L	0.1 mg/L	7.83 mg/L	0.1 mg/L	5.41 mg/L	0.1 mg/L
Hardness as (CaCO3)	886 mg/L	1.0 mg/L	1,005 mg/L	1.0 mg/L	916 mg/L	1.0 mg/L
Alkalinity (CaCO3)	329 mg/L	1.0 mg/L	288 mg/L	1.0 mg/L	277 mg/L	1.0 mg/L
Total Dissolved Solids	2,983 mg/L	10.0 mg/L	2,747 mg/L	10.0 mg/L	3,056 mg/L	10.0 mg/L
Total Suspended Solids	30.0 mg/L	10.0 mg/L	30.0 mg/L	10.0 mg/L	26.0 mg/L	10.0 mg/L
Volatile Susp. Solids	NA	NA	NA	NA	NA	NA
Oxygen Demand Biochem.	69.5 mg/L	2.0 mg/L	43.1 mg/L	2.0 mg/L	NA	2.0 mg/L
Oxygen Demand Chemical	110 mg/L	5.0 mg/L	65.0 mg/L	5.0 mg/L	64.8 mg/L	5.0 mg/L

SAMPLE TYPE	COMPOSITE	DETECTION	COMPOSITE	DETECTION	COMPOSITE	DETECTION
DATE 2006	Apr. 25		May 30		June 13	
PARAMETER	CONCENTRATION	LIMIT	CONCENTRATION	LIMIT	CONCENTRATION	LIMIT
Arsenic	NA	2.0 ug/L	5.40 ug/L	2.0 ug/L	NA	NR
Boron	NA	NA	NA	NA	NA	NR
Cadmium	NA	1.0 ug/L	<RL	1.0 ug/L	NA	NR
Chromium	NA	10.0 ug/L	<RL	10.0 ug/L	NA	NR
Copper	NA	10.0 ug/L	<RL	10.0 ug/L	NA	NR
Lead	NA	10.0 ug/L	<RL	10.0 ug/L	NA	NR
Phenol	<RL	0.002 mg/L	<RL	0.002 mg/L	NA	NR
MBAS	NA	0.1 mg/L	0.24 mg/L	0.025 mg/L	NA	NR
Zinc	NA	60.0 ug/L	<RL	50.0 ug/L	NA	NR
Total Cyanide	<RL	0.01 mg/L	<RL	0.01 mg/L	NA	NR
Total Phosphate(PO4-P)	1.85 mg/L	0.5 mg/L	3.47 mg/L	0.01 mg/L	NA	NR
Nitrate (NO3-N)	<RL	0.1 mg/L	<RL	0.2 mg/L	NA	NR
Nitrite (NO2-N)	<RL	0.1 mg/L	<RL	0.03 mg/L	NA	NR
Ammonia (NH3-NH4-N)	6.56 mg/L	0.1 mg/L	5.24 mg/L	0.05 mg/L	NA	NR
Hardness as (CaCO3)	1,015 mg/L	1.0 mg/L	942 mg/L	1.0 mg/L	NA	NR
Alkalinity (CaCO3)	308 mg/L	1.0 mg/L	314 mg/L	1.0 mg/L	NA	NR
Total Dissolved Solids	3,462 mg/L	10.0 mg/L	2,801 mg/L	10.0 mg/L	NA	NR
Total Suspended Solids	40.0 mg/L	10.0 mg/L	<RL	10.0 mg/L	NA	NR
Volatile Susp. Solids	NA	NA	NA	NA	NA	NR
Oxygen Demand Biochem.	26.9 mg/L	2.0 mg/L	20.1 mg/L	2.0 mg/L	NA	NR
Oxygen Demand Chemical	79.3 mg/L	6.0 mg/L	88.6 mg/L	5.0 mg/L	NA	NR

<RL - Below the reporting limit NA - Not Analyzed

NR - Not Reported

CHEMICAL ANAYLSIS OF WATER SAMPLES

NEW RIVER AT INTERNATIONAL BOUNDARY

SAMPLE TYPE	COMPOSITE		COMPOSITE		COMPOSITE	
DATE 2006	Oct. 11	DETECTION LIMIT	Oct. 31	DETECTION LIMIT	Nov. 15	DETECTION LIMIT
PARAMETER	CONCENTRATION		CONCENTRATION		CONCENTRATION	
Arsenic	10.9 ug/L	NR	2.07 ug/L	NR	12.7 ug/L	NR
Boron	NA	NR	NA	NR	NA	NR
Cadmium	<RL	NR	<RL	NR	<RL	NR
Chromium	<RL	NR	<RL	NR	<RL	NR
Copper	<RL	NR	<RL	NR	<RL	NR
Lead	7.78 ug/L	NR	<RL	NR	<RL	NR
Phenol	NA	NR	NA	NR	NA	NR
MBAS	3.04 mg/L	NR	2.74 mg/L	NR	4.82 mg/L	NR
Zinc	137 ug/L	NR	<RL	NR	63.4 ug/L	NR
Total Cyanide	NA	NR	NA	NR	NA	NR
Total Phosphate(PO4-P)	3.04 mg/L	NR	2.51 mg/L	NR	3.36 mg/L	NR
Nitrate (NO3-N)	<RL	NR	NA	NR	<RL	NR
Nitrite (NO2-N)	<RL	NR	NA	NR	<RL	NR
Ammonia (NH3-NH4-N)	10.2 mg/L	NR	9.14 mg/L	NR	12.5 mg/L	NR
Hardness as (CaCO3)	798 mg/L	NR	NA	NR	815 mg/L	NR
Alkalinity (CaCO3)	327 mg/L	NR	NA	NR	316 mg/L	NR
Total Dissolved Solids	2,430 mg/L	NR	2,890 mg/L	NR	1,495 mg/L	NR
Total Suspended Solids	38.0 mg/L	NR	40.0 mg/L	NR	46.0 mg/L	NR
Volatile Susp. Solids	NA	NR	NA	NR	NA	NR
Oxygen Demand Biochem.	63.8 mg/L	NR	54.7 mg/L	NR	58.8 mg/L	NR
Oxygen Demand Chemical	121 mg/L	NR	97.5 mg/L	NR	132 mg/L	NR

SAMPLE TYPE	COMPOSITE		COMPOSITE		COMPOSITE	
DATE 2006	Nov. 29	DETECTION LIMIT	Dec. 6	DETECTION LIMIT	Dec. 28	DETECTION LIMIT
PARAMETER	CONCENTRATION		CONCENTRATION		CONCENTRATION	
Arsenic	5.24 ug/L	NR	10.7 ug/L	NR	10.1 ug/L	NR
Boron	NA	NR	NA	NR	NA	NR
Cadmium	2.99 ug/L	NR	4.40 ug/L	NR	<RL	NR
Chromium	<RL	NR	<RL	NR	<RL	NR
Copper	<RL	NR	108 ug/L	NR	141 ug/L	NR
Lead	<RL	NR	8.78 ug/L	NR	8.59 ug/L	NR
Phenol	NA	NR	NA	NR	NA	NR
MBAS	1.29 mg/L	NR	4.87 mg/L	NR	5.72 mg/L	NR
Zinc	<RL	NR	178 ug/L	NR	250 ug/L	NR
Total Cyanide	NA	NR	NA	NR	NA	NR
Total Phosphate(PO4-P)	1.57 mg/L	NR	2.30 mg/L	NR	2.99 mg/L	NR
Nitrate (NO3-N)	NA	NR	<RL	NR	NA	NR
Nitrite (NO2-N)	NA	NR	<RL	NR	NA	NR
Ammonia (NH3-NH4-N)	6.49 mg/L	NR	9.86 mg/L	NR	15.6 mg/L	NR
Hardness as (CaCO3)	NA	NR	820 mg/L	NR	725 mg/L	NR
Alkalinity (CaCO3)	NA	NR	311 mg/L	NR	292 mg/L	NR
Total Dissolved Solids	3,060 mg/L	NR	2,955 mg/L	NR	2,658 mg/L	NR
Total Suspended Solids	24.0 mg/L	NR	25.0 mg/L	NR	77.0 mg/L	NR
Volatile Susp. Solids	NA	NR	NA	NR	NA	NR
Oxygen Demand Biochem.	30.1 mg/L	NR	60.3 mg/L	NR	57.1 mg/L	NR
Oxygen Demand Chemical	56.6 mg/L	NR	112 mg/L	NR	126 mg/L	NR

<RL - Below the reporting limit
NA - Not Analyzed
NR - Not Reported

SPECIFIC CONDUCTANCE OF WATER SAMPLES

The following table shows specific conductance of individual water samples from the New River in Mexico at the international boundary. Samples were taken by the Mexican Section of the Commission, who also made the determinations.

NEW RIVER AT THE INTERNATIONAL BOUNDARY

SPECIFIC CONDUCTANCE OF WATER SAMPLES IN MICROSIEMENS/CM @ 25 DEG C - 2006

January		February		March		April		May		June	
2	5,100	7	5,430	14	5,480			2	5,650	13	6,590
9	5,600	14	5,810					30	6,320		
16	5,200										
23	5,600										
30	5,400										

July		August		September		October		November		December	
6	6,230	15	5,490	4	5,100	2	5,510	6	5,200	4	5,600
				11	5,010	9	4,870	13	5,700	11	5,400
				18	5,300	16	5,500	20	5,700	18	5,600
				25	4,970	23	5,400	27	5,410	26	5,000
						30	5,400				

CHEMICAL ANALYSES OF WATER SAMPLES

The tables below are based on samples collected and analyzed by the United States Section of the Commission.

Samples from the Alamo River are taken north of the international boundary upstream of the box culvert under the All-American Canal. Flow at this point includes drainage flows across the international boundary and flows from drain interceptors along the toe of the south bank of the All-American Canal. Samples from the New River are taken from the right bank at the road bridge, 137 meters north of the international boundary, at 32`39'57.01" N, 115`30'09.72" W. Records of the sampling extend from April 1951 through 2006.

ALAMO RIVER

2006 Date	Time Std.	Flow * CMS	Water Temperature Deg C	pH Units	Oxygen Dissolved (DO) mg/L	Specific Conductance Micro-Siemens/cm	Fecal Coliform Colonies/ 100 mL
Jan. 25	1145	0.03	12.5	9.60	4.61	4,280	102
Feb. 22	0920	0.03	12.0	8.12	5.00	4,140	10
Mar. 22	0800	0.04	14.3	8.16	12.2	3,450	40
Apr. 26	0755	0.06	20.0	7.71	9.64	4,220	116
May 24	0750	0.02	24.2	7.70	6.47	5,430	120
June 28	0900	0.03	28.8	7.72	11.5	5,110	500
July 26	0650	0	NR	NR	NR	NR	NR
Aug. 16	0805	0.01	30.0	7.44	2.33	4,800	33#
Sep. 27	0725	0	NR	NR	NR	NR	NR
Oct. 25	0850	0	NR	NR	NR	NR	NR
Nov. 29	0800	0.01	14.0	6.94	11.2	5,280	40
Dec. 20	0830	0.03	10.6	6.84	9.38	5,200	80

Note: Temperature, pH, D.O., and Specific Conductance - Data collected in the field
* - Flow provided by Imperial Irrigation District (Mean Daily)
\# - Interference
NR - Not Reported

NEW RIVER AT INTERNATIONAL BOUNDARY

2006 Date	Time Std.	Flow ** CMS	Water Temperature Deg C	pH Units	Oxygen Dissolved (DO) mg/L	Specific Conductance Micro-Siemens/cm	Fecal Coliform Colonies/ 100 mL	Oxygen Demand Biochemical (BOD) mg/L	Oxygen Demand Chemical (COD) mg/L
Jan. 11	0900	4.70	13.6	7.66	0.50	4,670	226,667	44	108
Jan. 25	1100	5.30	12.9	8.31	0.45	4,680	120,000	NS	NS
Feb. 8	0830	4.79	8.5	7.93	0.56	4,680	143,333	33	81
Feb. 22	1010	6.20	13.8	7.63	3.22	5,110	115,000	NS	NS
Mar. 8	0955	5.75	16.0	7.55	1.70	5,070	440,000	22	133
Mar. 22	0845	6.29	15.9	7.55	2.02	4,620	300,000	NS	NS
Apr. 12	0750	6.32	20.7	7.60	1.17	5,170	336,667	31	82
Apr. 26	0855	5.81	21.3	7.65	1.45	5,310	510,000	NS	NS
May 10	1115	4.56	26.4	7.56	0.94	5,730	370,000	33	62
May 24	0840	3.94	25.6	7.43	0.12	5,770	1,676,667	NS	NS
June 7	1135	3.79	29.3	7.39	0	5,810	1,350,000	37	81
June 28	0750	3.94	29.6	7.56	0.16	5,430	1,900,000	NS	NS
July 12	1145	3.68	32.4	7.31	0.10	5,620	1,483,333	30	99
July 26	0715	3.54	31.7	7.52	0.73	5,480	2,950,000	NS	NS
Aug. 2	1315	4.02	31.3	7.52	0.25	5,210	180,000	33	91
Aug. 16	0900	3.48	31.1	7.58	0.60	5,170	1,550,000	NS	NS
Sept. 13	1200	3.65	29.3	7.48	0.24	4,850	1,500,000	42	118
Sept. 27	0750	3.77	26.4	7.56	0.40	4,590	1,833,333	NS	NS
Oct. 11	1225	3.40	23.1	7.50	0.27	4,630	1,036,667	34	64
Oct. 25	0940	4.05	23.0	7.60	0.53	4,330	1,020,000	NS	NS
Nov. 15	0950	4.05	18.9	7.61	0.91	2,520	1,570,000	63	153
Nov. 29	0840	4.11	14.6	7.33	5.98	5,230	1,816,667	NS	NS
Dec. 6	1315	4.05	12.1	7.46	3.80	4,730	606,667	21	74
Dec. 20	0915	4.02	12.4	7.47	2.16	4,670	710,000	NS	NS

Note: Temperature, pH, D.O., and Specific Conductance - Data collected in the field
** - Flow provided by Imperial Irrigation District (Mean Daily)
NS - Not Sampled

CHEMICAL ANALYSES OF WATER SAMPLES

The tables below are based on samples collected and analyzed by the United States Section of the International Boundary and Water Commission.

Samples from the station New River above Agricultural Drain (also referred to as Upstream of Lagoon Discharge Canal) are taken in Mexico near the international boundary at 32`39'48.56" N, 115`29'48.83" W. Samples from the station Effluent - Oxidation Ponds (also referred to as Lagoon Discharge Canal) are taken near the Zaragoza lagoons in Mexicali at 32`36'42.27" N, 115`33'12.25" W.

NEW RIVER ABOVE AGRICULTURAL DRAIN NEAR INTERNATIONAL BOUNDARY

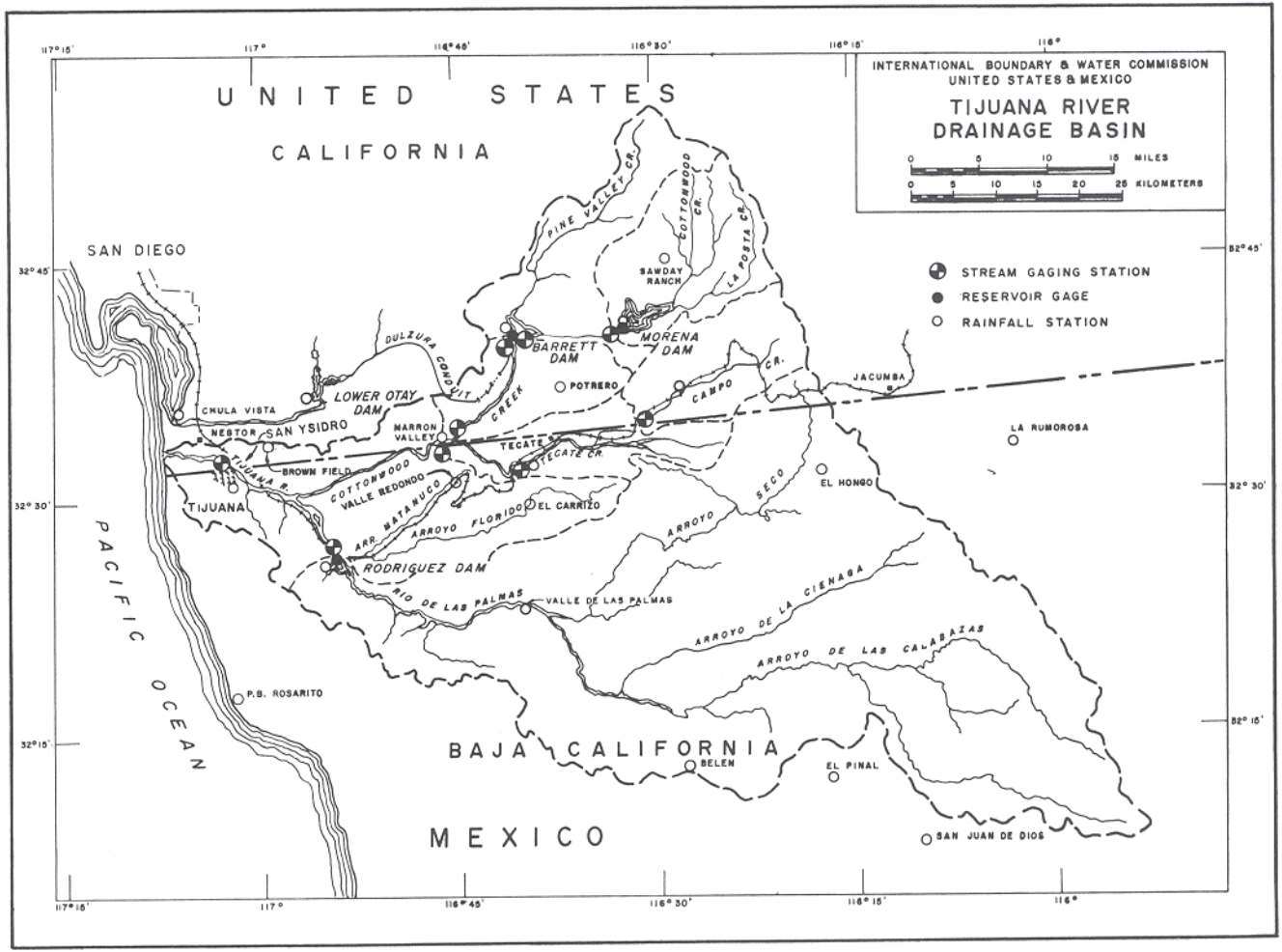
2006 Date	Time Std.	Momentary Streamflow CMS	Water Temperature Deg C	pH Units	Oxygen Dissolved (DO) mg/L	Specific Conductance Micro-Siemens/cm	Fecal Coliform Colonies/ 100 mL	Oxygen Demand Biochemical (BOD) mg/L	Oxygen Demand Chemical (COD) mg/L
Jan. 11	0935	4.8	13.6	7.43	0.50	5,140	113,333	30	98
Feb. 8	0925	4.9	5.6	7.67	0.77	4,960	173,333	26	64
Mar. 8	1045	6.1	16.1	7.51	1.38	5,580	180,000	15	120
Apr. 12	0910	7.1	20.7	7.54	0.18	5,730	170,000	19	56
May 10	0825	4.8	25.8	7.47	0.10	6,020	823,000	27	60
June 7	0850	4.1	28.7	7.25	0.07	6,210	1,350,000	43	110
July 12	0835	3.9	31.7	7.09	0.53	5,920	2,275,000	44	76
Aug. 2	0845	4.2	30.6	7.30	0.31	5,580	1,246,667	52	103
Sept. 13	0925	4.4	29.3	7.33	0.30	5,460	1,275,000	41	109
Oct. 11	0845	3.5	22.7	7.23	0.21	5,000	940,000	68	90
Nov. 15	1020	3.9	19.4	7.51	0.16	5,420	1,940,000	82	181
Dec. 6	0955	3.6	11.9	6.96	0.90	5,320	937,933	53	118

Note: Momentary Streamflow, Temperature, pH, D.O., and Specific Conductance - Data collected in the field

EFFLUENT - OXIDATION PONDS

2006 Date	Time Std.	Momentary Streamflow CMS	Water Temperature Deg C	pH Units	Oxygen Dissolved (DO) mg/L	Specific Conductance Micro-Siemens/cm	Fecal Coliform Colonies/ 100 mL	Oxygen Demand Biochemical (BOD) mg/L	Oxygen Demand Chemical (COD) mg/L
Jan. 11	1050	0.6	14.2	7.80	0.25	2,350	TNTC	106	192
Feb. 8	1025	0.7	14.7	7.21	7.37	5,060	TNTC	82	164
Mar. 8	1240	0.7	17.2	7.96	3.98	2,250	TNTC	72	196
Apr. 12	1040	0.4	21.8	8.18	6.89	2,170	TNTC	52	102
May 10	0955	0.8	25.1	8.27	14.64	2,260	1,590	37	89
June 7	1015	0.5	29.6	8.37	7.57	2,250	364	35	98
July 12	1000	0.6	32.4	8.10	14.00	2,120	1,300	31	95
Aug. 2	1040	0.8	30.0	8.15	3.79	2,160	658	31	92
Sept. 13	1035	0.2	29.4	8.25	2.85	2,200	1,000*	26	78
Oct. 11	1045	0.6	22.4	8.25	3.13	2,250	TNTC	57	114
Nov. 15	1215	0.4	20.0	7.99	0.83	2,360	1,440	40	124
Dec. 6	1110	0.4	11.8	7.99	0.35	2,360	2,000	46	126

Note: Momentary Streamflow, Temperature, pH, D.O., and Specific Conductance - Data collected in the field
TNTC - too numerous to count
* - estimated


INTERNATIONAL BOUNDARY & WATER COMMISSION
UNITED STATES & MEXICO
TIJUANA RIVER
DRAINAGE BASIN
0 5 10 15 MILES
0 5 10 15 20 25 KILOMETERS
STREAM GAGING STATION
RESERVOIR GAGE
RAINFALL STATION
UNITED STATES
CALIFORNIA
MEXICO
BAJA CALIFORNIA
PACIFIC OCEAN
SAN DIEGO
CHULA VISTA
NESTOR
SAN YSIDRO
TIJUANA
TIJUANA R.
BROWN FIELD
COTTONWOOD
VALLE REDONDO
LOWER OTAY DAM
DULZURA CONDUIT
MARRON VALLEY
TECATE
TECATE CR.
BARRETT DAM
MORENA DAM
SAWDAY RANCH
POTRERO
CAMPO
CAMPO CR.
JACUMBA
LA RUMOROSA
EL HONGO
ARR. MATANUCO
ARROYO FLORIDO
EL CARRIZO
ARROYO SECO
RODRIGUEZ DAM
RIO DE LAS PALMAS
VALLE DE LAS PALMAS
ARROYO DE LA CIENAGA
ARROYO DE LAS CALABAZAS
P.B. ROSARITO
BELEN
EL PINAL
SAN JUAN DE DIOS
PINE VALLEY CR.
COTTONWOOD CR.
LA POSTA CR.
117° 15'
117°
116° 45'
116° 30'
116° 15'
116°
32° 45'
32° 30'
32° 15'

11-0100.00 COTTONWOOD CREEK ABOVE MORENA DAM, CALIFORNIA

DESCRIPTION: Staff gage located on east side of outlet tower immediately upstream from face of Morena Dam. The dam is located on Cottonwood Creek 2.9 kilometers upstream from the mouth of Hauser Creek, 13.7 kilometers upstream from Barrett Dam, and about 32.2 kilometers upstream from the international boundary. The zero of the gage is 878.555 meters above mean sea level, U. S. C. & G. S. datum .

RECORDS: Reservoir inflows shown below were computed from monthly reservoir records of storage, releases, spills, leakage, evaporation, and rainfall, by the International Boundary and Water Commission, United States Section. They represent all water reaching Morena Reservoir, including rainfall on reservoir water surface. Basic data were furnished by the City of San Diego, California. Records April 1911 through 2006.

REMARKS: Storage began in Morena Reservoir March 1910. Reservoir capacity and area ratings date from 1910 when Morena Dam was completed. Records for 2003 computed on basis of area-capacity curves determined from 1948 resurvey. Various changes have been made to the spillway section since construction of the dam. Elevation of the present crest of ungated spillway is 47.855 meters, gage datum. Reservoir capacity at spillway crest, 1948 survey, is 61,934 TCM. The entire capacity of Morena Reservoir is used to furnish a part of the water supply of the City of San Diego, California. Water is released from Morena Reservoir down Cottonwood Creek to Barrett Reservoir as required.

EXTREMES: Maximum monthly inflow since 1937, 55,845 TCM, March 1983. Prior to 1937, maximum monthly inflow, 45,886 TCM, January 1916; minimum no flow during parts of many years.

MONTHLY DISCHARGE IN THOUSAND CUBIC METERS

MONTH	CURRENT YEAR 2006	PERIOD 1937 - 2006		
		AVERAGE	MAXIMUM	MINIMUM
January	1	1,163	20,362	0
February	346	2,476	41,407	0
March	804	3,308	55,845	0
April	730	1,948	28,530	0
May	422	970	18,642	0
June	1	545	10,173	0
July	0	340	7,651	0
August	0	257	8,916	0
September	0	177	6,331	0
October	0	156	4,817	0
November	0	254	5,633	0
December	0	685	9,472	0
Yearly	2,304.0	12,279	177,579	149

11-0105.00 COTTONWOOD CREEK BELOW MORENA DAM, CALIFORNIA

DESCRIPTION: Two water-stage recorders, one on the upstream side of the southeast abutment of Morena Dam for measuring head on the spillway crest and one immediately below the dam with a rectangular control weir for measuring ordinary reservoir releases, and cableway located about 1.3 kilometers downstream from the dam. Discharge measurements made at the cableway include leakage, controlled releases, and spillway discharges.
RECORDS: Monthly records shown below represent the water available immediately below Morena Dam, consisting of spillway waste, draft, and leakage from the dam. They are computed by the International Boundary and Water Commission, United States Section, from basic data furnished by the City of San Diego, California. Records available: January 1911 through 2006.
REMARKS: Flows at this station are regulated by Morena Dam; storage began March 1910. Water is released from Morena Reservoir as required and flows down the natural channel of Cottonwood Creek to Barrett Reservoir. There are no major diversions above Morena dam.
EXTREMES: Maximum monthly discharge since 1937, 55,615 TCM, March 1983. Prior to 1937, maximum monthly discharge, 26,397 TCM February 1916; minimum, no flow during several months of various years.

MONTHLY DISCHARGE IN THOUSAND CUBIC METERS

MONTH	CURRENT YEAR 2006	PERIOD 1937 - 2006		
		AVERAGE	MAXIMUM	MINIMUM
January	76.0	283	2,583	0
February	104	933	19,644	0
March	83.0	1,809	55,615	0
April	88.0	1,371	28,159	0
May	167	764	18,100	0
June	189	583	9,260	0
July	243	367	6,236	0
August	158	350	7,937	0
September	128	386	7,253	0
October	132	246	4,639	0
November	131	273	5,071	0
December	154	482	9,099	0
Yearly	1,653	7,847	168,432	0

11-0110.00 COTTONWOOD CREEK ABOVE BARRETT DAM, CALIFORNIA

DESCRIPTION: Staff gage located immediately upstream from face of dam on west side of outlet tower. Barrett Dam is located on Cottonwood Creek 13.7 kilometers downstream from Morena Dam, 1.6 kilometers downstream from the mouth of Pine Valley Creek, and about 19.3 kilometers upstream from the international boundary. Zero of gage is 440.775 meters above mean sea level, U. S. C. & G. S. datum.

RECORDS: Records reported below represent all water reaching Barrett Dam from the sub-basin below Morena Dam, including rainfall on the reservoir water surface. Leakage, releases, and spills from Morena Reservoir are not included. The inflows were computed from monthly reservoir records of storage, releases, spills, leakage, evaporation, and rainfall furnished by the City of San Diego, California. Records available: January 1921 through 2006. Records of stream flow for a station at the dam site are also available for the periods 1906-1915 and 1917-1920.

REMARKS: Storage began at Barrett Reservoir in January 1921. The area-capacity-elevation curves used in the inflow calculations are dated 1948, 1951, and 1955 and were furnished by the City of San Diego, California. Capacity of reservoir at top of flash gates on spillway (gage height 51.475 meters) is 55,205 TCM. Capacity at spillway crest (gage height 49.043 meters) is 46,811 TCM. Dead storage, 887 TCM below lowest outlet (gage height 17.945 meters) is included in these capacities. The entire capacity of Barrett Reservoir is used to furnish a part of the water supply of the City of San Diego, California.

EXTREMES: Maximum monthly discharge since 1937, 67,539 TCM, February 1980. Prior to 1937, maximum monthly discharge, 67,595 TCM February 1927; minimum, no flow during several months of various years.

MONTHLY DISCHARGE IN THOUSAND CUBIC METERS

MONTH	CURRENT YEAR 2006	PERIOD 1937 - 2006		
		AVERAGE	MAXIMUM	MINIMUM
January	68	1,512	29,627	0
February	194	3,249	67,539	0
March	1,004	5,435	62,041	0
April	1,172	2,728	26,680	0
May	58	1,249	10,509	0
June	0	588	4,818	0
July	0	357	5,042	0
August	0	185	4,472	0
September	0	188	3,858	0
October	0	115	796	0
November	0	237	2,519	0
December	65	635	6,845	0
Yearly	2,561	16,478	141,024	159

11-0114.90 DULZURA CONDUIT BELOW BARRETT DAM, CALIFORNIA

DESCRIPTION: Water-stage recorder 0.8 kilometer downstream from Barrett Dam on right bank of Dulzura Conduit 15.2 meters upstream from road crossing to Barrett Dam. Elevation of gage has not been determined.
RECORDS: Computed on basis of head on control section of flume, as measured by water-stage recorder, and rating curve determined from current meter measurements. Records obtained and furnished by the City of San Diego, California. Records available: January 1909 through 2006.
REMARKS: Barrett Dam was completed in 1921. Prior to this date the intake of Dulzura Conduit was located 2.4 kilometers upstream. The conduit carries diversions from Barrett Reservoir on Cottonwood Creek westerly across the divide into Otay Reservoir for municipal use by the City of San Diego. Prior to September 30, 1958, station was located 12.9 kilometers along the conduit from Barrett Dam, being reported as "Dulzura Conduit near Dulzura"; and the draft from Barrett Reservoir was computed from the discharges obtained at the conduit gaging station, multiplied by the factor 1.05 to allow for channel loss in the reach from the reservoir to the gaging station.
EXTREMES: Since 1937: Maximum mean daily discharge, 4.66 CMS on March 8, 1995; minimum discharge, no flow for long periods on many occasions.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0		0	0	0	0	0	0	0	0	0	0
30	0		0	0	0	0	0	0	0	0	0	0
31	0		0		0		0	0		0		0
Sum	0		0		0		0			0		0
	0		0		0		0		0		0	

Current Year 2006						Period 1937-2006		
Month	Extreme Gage Meters High	Extreme Gage Meters Low	Extreme-Cubic Meters per Second @ High Day	@ High	Extreme-Cubic Meters per Second @ Low Day	@ Low	Average	Total	Volume-Thousand Cubic Meters Average	Maximum	Minimum
Jan.			! 1	0	! 1	0	0	0	575	2,899	0
Feb.			! 1	0	! 1	0	0	0	551	2,883	0
Mar.			! 1	0	! 1	0	0	0	800	7,639	0
April			! 1	0	! 1	0	0	0	1,000	5,016	0
May			! 1	0	! 1	0	0	0	1,130	3,750	0
June			! 1	0	! 1	0	0	0	1,160	4,611	0
July			! 1	0	! 1	0	0	0	1,054	4,914	0
Aug.			! 1	0	! 1	0	0	0	982	4,741	0
Sept.			! 1	0	! 1	0	0	0	785	2,862	0
Oct.			! 1	0	! 1	0	0	0	674	3,235	0
Nov.			! 1	0	! 1	0	0	0	707	3,404	0
Dec.			! 1	0	! 1	0	0	0	614	2,843	0
Yearly				0		0	0	0	10,032	40,526	0

@ Mean daily ! And other days

11-0111.00 COTTONWOOD CREEK BELOW BARRETT DAM, CALIFORNIA

DESCRIPTION: Water-stage recorder and cableway located about 4.0 kilometers downstream from Barrett Dam and 0.8 kilometer upstream from Rattlesnake Canyon for measuring Barrett Dam spills; and staff gage and control weir located immediately below the dam for measuring leakage. The elevation of the gage is about 305 meters (from topographic map).

RECORDS: Data furnished by the City of San Diego, California. Prior to January 1953, the records were furnished by the City of San Diego and reviewed and revised by the United States Section of the Commission. The recorder is to be operated only when Barrett Reservoir is near or above spillway level. Spillway discharges have occurred in May 1943, March, April 1979, January to May of 1980, April, December 1982, and the entire year of 1983, January to April 1993 and January to March 1995. Spillway discharges included in the period record below were computed by the City of San Diego from the head on the spillway crest, read on the reservoir gage, and applied to a broad-crested weir formula. Records available: January 1921 through 2006. Storage began in Barrett Reservoir in January 1921.

REMARKS: Records reported below represent the water available in the natural channel of Cottonwood Creek immediately below Barrett Dam. Records of draft from Barrett Reservoir are not included, inasmuch as all releases are made to Dulzura Conduit, which transports water outside the basin. Leakage is mainly through the spillway gates.

EXTREMES: Maximum monthly discharge since 1937, 111,775 TCM March 1983. Prior to 1937, maximum monthly discharge 47,366 TCM February 1927; minimum, no flow during several months of various years.

MONTHLY DISCHARGE IN THOUSAND CUBIC METERS

MONTH	CURRENT YEAR 2006	PERIOD 1937 - 2006		
		AVERAGE	MAXIMUM	MINIMUM
January	5	387	10,114	0
February	5	2,007	86,736	0
March	5	4,097	111,775	0
April	4	2,061	45,417	0
May	0	924	28,287	0
June	4	425	13,503	0
July	4	218	5,311	0
August	6	141	4,206	0
September	4	52.0	1,554	0
October	3	44.0	1,530	0
November	3	136	5,100	0
December	3	177	6,058	0
Yearly	46	10,669	254,099	0

11-0120.00 COTTONWOOD CREEK ABOVE TECATE CREEK NEAR DULZURA, CALIFORNIA

DESCRIPTION: Water-stage recorder and cableway located 2.6 kilometers upstream from the international land boundary between the United States and Mexico, 1.3 kilometers upstream from the confluence with Tecate Creek, and 8.2 kilometers south of Dulzura, California. Low water discharge measurements are made by wading at the gage; high water measurements are made from the cableway, which is located 213 meters downstream from the gage. Zero of the gage is 173.555 meters above mean sea level, U. S. C. & G. S. datum.
RECORDS: Based on a continuous record of gage heights and current meter measurements or observation of no flow. Records obtained and furnished by the U. S. Geological Survey. Records available: October 1936 through 2006.
REMARKS: Flow is largely controlled by Barrett and Morena Reservoirs, 16.1 kilometers and 29.0 kilometers, respectively, upstream from this station.
EXTREMES: Maximum discharge 331 CMS February 21, 1980 (gage height 3.400 meters). Minimum discharge, no flow during part of each year.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	0.01	0	0	0	0	0	0	0	0
2	0	0	0	.01	0	0	0	0	0	0	0	0
3	0	0	0	.01	0	0	0	0	0	0	0	0
4	0	0	0	.01	0	0	0	0	0	0	0	0
5	0	0	0	.08	0	0	0	0	0	0	0	0
6	0	0	0	.08	0	0	0	0	0	0	0	0
7	0	0	0	.06	0	0	0	0	0	0	0	0
8	0	0	0	.05	0	0	0	0	0	0	0	0
9	0	0	0	.03	0	0	0	0	0	0	0	0
10	0	0	0	.03	0	0	0	0	0	0	0	0
11	0	0	.01	.02	0	0	0	0	0	0	0	0
12	0	0	.01	.02	0	0	0	0	0	0	0	0
13	0	0	0	.01	0	0	0	0	0	0	0	0
14	0	0	0	.01	0	0	0	0	0	0	0	0
15	0	0	0	.02	0	0	0	0	0	0	0	0
16	0	0	0	.02	0	0	0	0	0	0	0	0
17	0	0	0	.01	0	0	0	0	0	0	0	0
18	0	0	0	.01	0	0	0	0	0	0	0	0
19	0	0	0	.01	0	0	0	0	0	0	0	0
20	0	0	0	.01	0	0	0	0	0	0	0	0
21	0	0	0	.01	0	0	0	0	0	0	0	0
22	0	0	0	.01	0	0	0	0	0	0	0	0
23	0	0	0	.01	0	0	0	0	0	0	0	0
24	0	0	0	.01	0	0	0	0	0	0	0	0
25	0	0	0	.01	0	0	0	0	0	0	0	0
26	0	0	0	.01	0	0	0	0	0	0	0	0
27	0	0	0	.01	0	0	0	0	0	0	0	0
28	0	0	0	.01	0	0	0	0	0	0	0	0
29	0		.01	.01	0	0	0	0	0	0	0	0
30	0		.01	.01	0	0	0	0	0	0	0	0
31	0		.01		0		0	0		0		0
Sum	0		0.61		0		0		0		0	
	0		0.05		0		0		0		0	

Current Year 2006						Period 1937-2006		
	Extreme Gage Meters		Extreme-Cubic Meters per Second			Volume-Thousand Cubic Meters		
Month	High	Low	@ High Day	@ High	@ Low Day	@ Low	Average	Total	Average	Maximum	Minimum
Jan.			! 1	0	! 1	0	0	0	1,367	45,897	0
Feb.			! 1	0	! 1	0	0	0	3,388	85,134	0
Mar.			!11	.01	! 1	0	0	4.3	4,903	109,418	0
April			! 5	.08	! 1	.01	.02	52.7	2,404	49,635	0
May			! 1	0	! 1	0	0	0	875	22,439	0
June			! 1	0	! 1	0	0	0	305	7,301	0
July			! 1	0	! 1	0	0	0	97.0	3,599	0
Aug.			! 1	0	! 1	0	0	0	75.0	1,850	0
Sept.			! 1	0	! 1	0	0	0	74.0	4,209	0
Oct.			! 1	0	! 1	0	0	0	87.0	291	0
Nov.			! 1	0	! 1	0	0	0	52.0	1,378	0
Dec.			! 1	0	! 1	0	0	0	169	3,169	0
Yearly				0.08		0	0	57.0	13,796	220,556	0

@ Mean daily ! And other days

11-0125.00 CAMPO CREEK NEAR CAMPO, CALIFORNIA

DESCRIPTION: Water-stage recorder and broad-crested weir on left bank, 0.8 kilometer upstream from the international land boundary between the United States and Mexico, just upstream from the bridge on California State Highway 94, 5.6 kilometers southwest of Campo, California. Zero of gage is 664.135 meters above mean sea level, U. S. C. & G. S. datum.
RECORDS: Based on current meter measurements and observation of no flow. Records obtained and furnished by the U. S. Geological Survey from October 1936 through 2006.
REMARKS: Campo Creek originates in the United States and flows southwestward into Mexico where it joins Tecate Creek. The flow at this station was partially regulated by a small conservation reservoir, 1.6 kilometers upstream, from August 1956 to February 20, 1980, when it was destroyed by a flood.
EXTREMES: Maximum discharge, 25.3 CMS, March 24, 1983 (gage height 1.640 meters present datum), from rating curve extended above 3.12 CMS on basis of velocity-depth relation and cross section area at the control. Minimum discharge, no flow during part of most years.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0	0	0	0.01
2	.01	.01	.01	.02	.02	.01	.01	0	0	0	0	.01
3	.01	.01	.01	.01	.02	.01	.01	0	0	0	0	.01
4	.01	.01	.01	.02	.02	.01	.01	0	0	0	0	.01
5	.01	.01	.01	.07	.02	.01	.01	0	0	0	0	.01
6	.01	.01	.01	.05	.02	.01	0	0	0	0	0	.01
7	.01	.01	.01	.03	.02	.01	.01	0	0	0	0	.01
8	.01	.01	.01	.03	.02	.01	.01	0	0	0	0	.01
9	.01	.01	.01	.03	.02	.01	.01	0	0	0	0	.01
10	.01	.01	.02	.02	.01	.01	.01	0	0	0	0	.01
11	.01	.01	.06	.02	.01	.01	.01	0	0	0	0	0
12	.01	.01	.07	.02	.01	.01	0	0	0	0	0	0
13	.01	.01	.03	.02	.01	.01	0	0	0	0	0	0
14	.01	.01	.02	.02	.01	.01	0	0	0	0	0	0
15	.01	.01	.02	.03	.01	.01	0	0	0	0	0	.01
16	.01	.01	.02	.03	.01	.01	0	0	0	0	0	.01
17	.01	.01	.02	.02	.01	.01	.01	0	0	0	0	.01
18	.01	.01	.02	.02	.01	.01	.01	0	0	0	0	.01
19	.01	.01	.02	.02	.01	.01	0	0	0	0	0	.01
20	.01	.01	.02	.02	.01	.01	0	0	0	0	0	.01
21	.01	.01	.02	.02	.01	.01	0	0	0	0	0	.01
22	.01	.01	.02	.02	.01	.01	0	0	0	0	0	.01
23	.01	.01	.02	.02	.01	.01	0	0	0	0	0	.01
24	.01	.01	.02	.02	.01	.01	0	0	0	0	.01	.01
25	.01	.01	.02	.02	.01	.01	0	0	0	0	.01	.01
26	.01	.01	.02	.02	.01	.01	0	0	0	0	.01	.01
27	.01	.01	.02	.02	.01	.01	0	0	0	0	.01	.01
28	.01	.01	.02	.02	.01	.01	0	0	0	0	.01	.01
29	.01		.03	.02	.01	.01	.01	0	0	0	.01	.01
30	.01		.02	.02	.01	.01	.01	0	0	0	.01	.01
31	.01		.02		.01		.01	0		0		.01
Sum	0.31	0.28	0.64	0.72	0.40	0.30	0.15	0.01	0	0	0.07	0.27

Current Year 2006						Period 1937-2006			
	Extreme Gage Meters		Extreme-Cubic Meters per Second				Volume-Thousand Cubic Meters		
Month	High	Low	@ High Day	@ High	@ Low Day	@ Low	Average	Total	Average	Maximum	Minimum
Jan.			! 1	0.01	! 1	0.01	0.01	26.8	395	10,581	0
Feb.			! 1	.01	! 1	.01	.01	24.2	519	5,288	0
Mar.			!12	.07	! 1	.01	.02	55.3	821	11,587	0
April			5	.07	3	.01	.02	62.2	508	8,886	0
May			! 1	.02	!10	.01	.01	34.6	248	3,956	0
June			! 1	.01	! 1	.01	.01	25.9	122	2,234	0
July			! 1	.01	! 6	0	0	13.0	66.2	1,525	0
Aug.			1	.01	! 2	0	0	.9	60.2	2,008	0
Sept.			! 1	0	! 1	0	0	0	44.3	1,214	0
Oct.			! 1	0	! 1	0	0	0	55.3	1,084	0
Nov.			!24	.01	! 1	0	0	6.0	110	1,522	0
Dec.			! 1	.01	!11	0	.01	23.3	187	1,953	0
Yearly				0.07		0	0.01	272	3,136	38,639	0

@ Mean daily ! And other days

11-0131.00 INFLOWS TO RODRIGUEZ RESERVOIR, BAJA CALIFORNIA

DESCRIPTION: Rodriguez Dam is located in Mexico on Rio de las Palmas, the principal tributary to the Tijuana River, about 9.0 kilometers upstream from its confluence with Cottonwood Creek, 17.0 kilometers upstream from the point where the Tijuana River crosses the international boundary between the United States and Mexico, and 16.0 kilometers southeast of Tijuana, Baja California.
RECORDS: Computed from monthly reservoir records of storage, releases, spills, leakage, evaporation, and rainfall. Records obtained by the Ministry of Agriculture and Hydraulic Resources through May 1961; from June 1961 through March 1966 by the Junta de Agua Potable y Alcantarillado del Distrito Urbano de Tijuana, Baja California, and from April 1966 by the State of Baja California Commission of Public Services for Tijuana. Records furnished by the Mexican Section of the Commission. Records available: May 1937 through 2006. Storage began in Rodriguez Reservoir on September 22, 1936.
REMARKS: Records of runoff represent all water reaching Rodriguez Reservoir, including rainfall on the reservoir water surface. Area-capacity-elevation rating for reservoir used in the computations is dated 1927 when the reservoir area was initially surveyed. Elevation of crest of spillway 115.85 meters above mean sea level; at top of spillway gates 125.00 meters above mean sea level. Reservoir capacity at spillway crest 94 TCM; at top of spillway gates 137 TCM.
EXTREMES: Maximum monthly inflow, 237,657 TCM, January 1993; minimum, no flow during part of most years.

MONTHLY DISCHARGE IN THOUSAND CUBIC METERS

MONTH	CURRENT YEAR 2006	PERIOD 1938 - 2006		
		AVERAGE	MAXIMUM	MINIMUM
January	0	5,617	237,657	0
February	0	7,670	194,216	0
March	0	11,293	172,556	0
April	0	3,362	95,953	0
May	0	721	14,136	0
June	0	212	5,749	0
July	0	107	1,806	0
August	0	59.2	950	0
September	0	60.0	575	0
October	0	75.3	432	0
November	0	156	2,393	0
December	0	831	19,348	0
Yearly	0	30,165	412,673	0

11-0132.00 DIVERSIONS FROM RODRIGUEZ RESERVOIR, BAJA CALIFORNIA

DESCRIPTION: Sparling flow meter located immediately below the dam in the pipeline which carries water from Rodriguez Reservoir to Gate No. 1 (Poblado Presa) and to Gate No. 2 (City Aqueduct). Formerly, water for irrigation was also diverted to the North and South Canals.
RECORDS: Direct recording by Sparling flow meter. Records through May 1961 were obtained by the Ministry of Agriculture and Hydraulic Resources; from June 1961 to March 1966 by the Junta de Agua Potable y Alcantarillado del Distrito Urbano de Tijuana; and from April 1966 through 1991 by the State of Baja California Commission of Public Services for Tijuana. Since 1992, the data have been obtained by the Baja California Regional Office of the National Water Commission. Records furnished by the Mexican Section of the Commission. Records available: May 1937 through 2006.
REMARKS: Beginning in January 1937, diversions for irrigation began from both sides for the Tijuana Valley and for domestic use at the village by Rodriguez Dam and the City of Tijuana. Since February 1960, no water has been released for irrigation of farmlands.
EXTREMES: Maximum monthly diversion, 36,018 TCM, March 1996; minimum, no flow on several occasions since March 1941.

MONTHLY DISCHARGE IN THOUSAND CUBIC METERS

MONTH	CURRENT YEAR 2006	PERIOD 1938 - 2006		
		AVERAGE	MAXIMUM	MINIMUM
January	0.45	608	6,183	0
February	0.41	593	6,028	0
March	0.19	1,105	36,018	0
April	0.54	726	6,142	0
May	0.52	911	6,578	0
June	0.61	1,018	5,893	0
July	0.78	1,171	7,523	0
August	0.78	1,095	5,931	0
September	0.71	972	6,158	0
October	0.82	885	6,054	0
November	0.58	765	5,873	0
December	0.49	718	6,212	0
Yearly	6.88	10,566	94,980	0

11-0133.00 TIJUANA RIVER AT INTERNATIONAL BOUNDARY

DESCRIPTION: Water-stage recorder on top of north levee about 1.1 kilometers downstream (north) from boundary, 1.8 kilometers upstream from the new Dairy Mart Road bridge, and 2.3 kilometers west of the international gate at San Ysidro, California. Zero of the gage is at mean sea level, U. S. C. & G. S. datum.
RECORDS: Based on current meter measurements, staff gage readings and record of gage heights. Records obtained and furnished by the United States Section of the Commission. Records available: May 1947 through 2006.
EXTREMES: Since May 1947: Maximum instantaneous discharge, 937 CMS, February 21, 1980; minimum discharge, no flow during many years since 1951.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.14	0	2.15	0.18	0.52	0	0	0	0	0	0	0
2	.52	0	1.81	.22	.23	0	0	0	0	0	0	.05
3	.90	0	.76	.10	0	0	0	0	0	0	0	0
4	1.27	0	.67	0	0	0	0	0	0	0	0	0
5	.96	0	1.13	5.00	0	0	0	0	0	0	0	0
6	.49	0	1.04	1.48	0	0	0	0	0	0	0	0
7	.58	0	.76	1.15	0	0	0	0	0	0	0	0
8	.41	0	.61	.99	0	0	0	0	0	.32	0	0
9	.57	0	.62	.84	0	0	0	0	0	0	0	0
10	.49	0	.85	.94	0	0	0	0	0	0	0	1.04
11	.15	0	5.99	1.11	0	0	0	0	0	0	0	.64
12	.24	0	3.53	1.11	0	0	0	0	.08	0	.13	.08
13	.19	0	1.36	.93	0	0	0	0	.47	0	0	.05
14	.22	0	.83	1.47	0	0	0	0	.01	0	0	.04
15	.45	0	.76	.97	0	0	0	0	0	0	0	.10
16	.23	0	.65	.43	0	0	.83	0	0	.05	0	0
17	.07	0	.58	.26	0	0	.09	0	0	.39	0	.68
18	0	1.04	1.35	.26	0	0	0	0	0	.20	0	.57
19	0	2.15	.96	.19	0	0	0	0	0	0	0	0
20	0	.75	1.97	.17	0	0	0	0	0	0	0	0
21	0	.56	2.88	.17	.01	0	0	0	0	0	0	0
22	0	.68	1.23	.19	2.17	0	0	0	0	0	0	.39
23	0	.60	.80	.60	.53	0	0	0	0	0	0	.72
24	0	.27	.75	.39	.63	0	0	0	0	0	0	.06
25	0	.02	.66	.39	.65	0	0	0	0	0	0	0
26	0	0	.67	.41	.60	0	0	0	0	0	.01	0
27	0	.02	.59	.47	.54	0	0	0	0	0	.10	.36
28	0	2.84	.13	.50	.56	0	0	0	0	0	.74	.81
29	0		2.97	.59	.24	0	0	0	0	0	.01	.06
30	0		.68	.64	0	0	0	0	0	0	0	0
31	0		.36		0		0	0		0		0
Sum		8.93		22.15		0		0		0.64		5.65
	7.88		40.10		6.68		0.92		0.56		1.31	

Current Year 2006						Period 1947-2006			
	Extreme Gage Meters		Extreme-Cubic Meters per Second				Volume-Thousand Cubic Meters		
Month	High	Low	High	Day	Low	Average	Total	Average	Maximum	Minimum
Jan.	12.005	11.920	4	1.48	! 1	0	0.25	681	8,632	297,879	0
Feb.	12.380	11.920	28	8.92	! 1	0	.32	772	13,743	388,951	0
Mar.	12.500	11.925	5	10.9	!28	.02	1.29	3,465	15,838	362,019	0
April	12.505	11.920	5	11.0	! 3	0	.74	1,914	4,164	77,633	0
May	12.220	11.920	22	4.81	! 2	0	.22	577	1,966	52,545	0
June	11.920	11.920	! 1	0	! 1	0	0	0	676	11,960	0
July	12.185	11.920	16	3.89	! 1	0	.03	79.5	490	11,400	0
Aug.	11.920	11.920	! 1	0	! 1	0	0	0	583	21,083	0
Sept.	12.010	11.920	12	.93	! 1	0	.02	48.4	288	5,142	0
Oct.	11.990	11.920	16	.69	! 1	0	.02	55.3	471	6,859	0
Nov.	12.030	11.920	12	1.16	! 1	0	.04	113	625	5,399	0
Dec.	12.185	11.920	10	3.79	! 1	0	.18	488	1,134	8,270	0
Yearly	12.505	11.920		11.0		0	0.26	8,193	48,610	734,832	0

! And other days

STORED WATER IN RESERVOIRS, TIJUANA RIVER BASIN

Data are presented below for all storage reservoirs in the Tijuana River Basin. The data represent contents on the last day of the month in thousand cubic meters. The reservoir capacities indicated are total capacities at the top of the spillway gates in closed position on the controlled spillways of Barrett and Rodriguez Dams, and at spillway level for Morena Dam, which has had an uncontrolled spillway since the spillway gates were removed in 1942. The records of storage reported below for Morena, Barrett, and Rodriguez Reservoirs are based on the capacities as determined by the following surveys: Morena 1948; Barrett 1948, 1951, and 1955; and Rodriguez 1927, when the reservoir area was initially surveyed.

The storage data for Morena and Barrett reservoirs are obtained and provided by the City of San Diego, California and the U.S. Geological Survey. The data for Rodriguez Dam were provided by the Secretariat of Hydraulic Resources in Mexico up to May 1961, from June 1961 to March 1966 the data were provided by the Potable Water and Sewerage Board for the Urban District of Tijuana, from April 1966 to December 1991, the data were provided by the State Public Service Commission of Tijuana, Baja California, and since 1992, by the National Water Commission of Mexico.

IN THOUSAND CUBIC METERS

	MORENA RESERVOIR, CALIFORNIA (Capacity 61,933)		BARRETT RESERVOIR, CALIFORNIA (Capacity 55,211)		RODRIGUEZ RESERVOIR, BAJA CALIFORNIA (Capacity 138,000)		TOTAL IN TIJUANA RIVER BASIN RESERVOIRS (Capacity 255,147)	
Month	2006	Average 1937-2006	2006	Average 1937-2006	2006	Average 1937-2006	2006	Average 1937-2006
Jan.	15,419	23,939	35,181	18,770	45,170	40,158	95,770	82,867
Feb.	15,483	25,231	35,266	19,792	44,180	42,771	94,929	87,794
Mar.	16,272	26,615	36,207	21,997	43,520	47,914	95,999	96,526
April	16,820	26,790	37,074	22,682	42,563	48,715	96,457	98,187
May	16,509	26,590	36,899	22,494	40,880	47,852	94,288	96,936
June	16,039	25,923	36,508	21,751	39,320	45,999	91,867	93,673
July	15,419	25,157	35,948	20,880	38,180	44,181	89,547	90,218
Aug.	14,790	24,452	35,521	19,928	36,200	42,163	86,511	86,543
Sept.	14,244	23,775	35,054	19,219	34,128	40,599	83,426	83,593
Oct.	13,892	23,307	34,801	18,575	31,300	39,089	79,993	80,971
Nov.	13,628	23,108	34,675	18,100	27,758	38,273	76,061	79,481
Dec.	13,454	23,170	34,717	18,258	26,284	38,131	74,455	79,559
Avg.	15,164	24,838	35,654	20,204	37,457	42,987	88,275	88,029
Max.	16,820	#! 76,069	37,074	*! 56,641	45,170	! 138,486	96,457	! 263,471
Min.	13,454	!! 12	34,675	!! 131	26,284	!! 0	74,455	!! 1,559

\# - March 31, 1941 - Prior to removal of spillway gates
* - April 30, 1937 - Sandbags were placed on crest of spillway
! - Maximum end of month storage for period of record
!!- Minimum end of month storage for period of record

RAINFALL ON THE TIJUANA RIVER WATERSHED
IN MILLIMETERS

Tabulated below are monthly records of rainfall with averages for their periods of record at stations located in California and Baja California. Daily records, where available, are on file in the offices of the United States and Mexican Sections of the Commission. For location, elevation, period of record, and the observer, see alphabetical listing of these stations following rainfall data.

IN THE UNITED STATES

Month	Morena Dam, California		Barrett Dam, California		Marron Valley, California		Sawday Ranch, California		Campo, California	
	2006	Average 1906-2006	2006	Average 1907-2006	2006	Average 1951-2006	2006	Average 1950-2006	2006	Average 1900-2006
Jan.	9	96	29	88	14	65	28	87	25	77
Feb.	33	99	34	89	47	57	38	86	33	83
Mar.	161	89	102	80	76	74	137	78	#	72
April	77	42	50	37	32	29	63	37	57	34
May	7	14	11	13	12	8	5	9	6	11
June	0	3	0	2	0	1	5	1	4	2
July	13	9	1	3	2	1	14	14	13	12
Aug.	2	15	1	6	0	3	11	22	1	14
Sept.	0	10	8	6	6	6	0	12	2	9
Oct.	9	23	9	19	10	14	5	17	9	17
Nov.	7	39	6	36	1	33	7	40	4	33
Dec.	26	74	34	66	15	54	50	58	30	59
Yearly	344	513	285	445	215	280	363	461		422

Month	Chula Vista, California		Lower Otay Dam, California							
	2006	Average 1930-2006	2006	Average 1906-2006						
Jan.	1	47	13	54						
Feb.	28	49	28	50						
Mar.	#	43	64	54						
April	26	20	26	25						
May	0	5	15	9						
June	0	1	1	3						
July	2	1	1	1						
Aug.	0	2	3	2						
Sept.	0	4	0	5						
Oct.	6	10	50	13						
Nov.	1	26	3	29						
Dec.	9	37	17	36						
Yearly		244	221	281						

Missing record

IN MEXICO

Month	Rodriguez Dam, Baja California		El Hongo, Baja California		Valle de Palmas, Baja California		Tecate, Baja California		El Carrizo, Baja California	
	2006	Average 1938-2006	2006	Average 1980-2006	2006	Average 1948-2006	2006	Average 1946-2006	2006	Average 1980-2006
Jan.	8	44	11	58	3	43	29	73	4	40
Feb.	29	45	15	66	9	41	38	60	25	56
Mar.	52	43	65	60	67	39	67	65	61	52
April	31	19	44	20	20	15	35	28	23	19
May	16	4	5	5	12	4	11	8	14	4
June	0	T	0	2	0	T	0	2	0	1
July	1	T	5	12	T	2	5	4	1	3
Aug.	0	2	0	20	0	4	0	5	0	2
Sept.	0	5	0	7	0	5	0	5	0	4
Oct.	1	12	0	15	0	9	0	14	T	16
Nov.	2	22	0	25	2	19	12	33	7	25
Dec.	13	37	25	29	8	26	53	48	14	29
Yearly	153	232	170	316	121	200	250	352	149	257

T Trace

LOCATION OF RAINFALL STATIONS ON THE TIJUANA RIVER WATERSHED

The precipitation records of the stations listed alphabetically below began on the date shown and extend through 2006.

IN THE UNITED STATES

NAME OF STATION	LATITUDE	LONGITUDE	@ ELEV. (Meters)	RECORD BEGAN	OBSERVER
Barrett Dam, California	32` 41'	116` 40'	494.69	1907	City of San Diego
Campo, California	32` 38'	116` 28'	801.62	1877	County of San Diego
Chula Vista, California	32` 36'	117` 06'	2.74	1930	Chula Vista Fire Department
Lower Otay Dam, California	32` 37'	116` 56'	164.59	1906	City of San Diego
Marron Valley, California	32` 34'	116` 46'	167.64	1951	County of San Diego
Morena Dam, California	32` 41'	116` 31'	937.26	1906	City of San Diego
Sawday Ranch, California	32` 45'	116` 29'	975.36	1950	Ben and Kelly Tulloch

IN MEXICO

NAME OF STATION	LATITUDE	LONGITUDE	@ ELEV. (Meters)	RECORD BEGAN	OBSERVER
Igncacio Zaragoza, Baja California	32` 12'	116` 29'	555.04	1965-2005	National Water Commission of Baja Ca. - Discontinued
El Carrizo, Baja California	32` 29'	116` 42'	494.99	1980	National Water Commission of Baja California
El Hongo, Baja California	32` 31'	116` 18'	960.12	1981	National Water Comission of Baja California
El Pinal, Baja California	32` 11'	116` 17'	"1350.00	1964-2005	National Water Commission of Baja Ca. - Discontinued
Rodriguez Dam, Baja California	32` 27'	116` 54'	120.09	1938	National Water Commission of Baja California
Tecate, Baja California	32` 33'	116` 41'	480.06	1946	National Water Commission of Baja Ca.
Valle de Las Palmas, Baja California	32` 22'	116` 37'	280.11	1948	National Water Commission of Baja California

@ Elevation above mean sea level

" Estimated from topographic maps

EVAPORATION IN THE TIJUANA RIVER BASIN
IN MILLIMETERS

Tabulated below are records of evaporation observed at 3 stations in California and at 3 stations in Baja California, with averages for their periods of record. The stations in California are observed by Western Salt Company, City of San Diego, California, and the United States Section of the Commission; those in Baja California are observed by the Hydraulic Resources of the National Water Commission in Mexicali. For specific location of these stations, refer to data opposite same station name shown in "Location of Rainfall Stations on the Tijuana River Watershed" in this bulletin.

Types of pans used:

1. Barrett Reservoir: January 1921 through September 1926, square 0.91-meter by 0.91-meter by 0.46-meter deep floating pan. October 1926 through 2006, square 0.91-meter by 0.91-meter by 0.46-meter deep land pan set 0.38-meter in ground.

2. Morena Reservoir: October 1915 through December 1921, square 0.91-meter by 0.91-meter by 0.46-meter deep floating pan. January 1922 through August 1926 records are the average of evaporation in a square 0.91-meter by 0.91-meter by 0.46-meter deep floating pan and a land pan of the same dimensions. September 1926 through 2006, square 0.91-meter by 0.91-meter by 0.46-meter deep land pan set 0.38-meter in ground.

3. Lower Otay Dam: January 1950 through 2006, square 0.91-meter by 0.91-meter by 0.46-meter deep land pan set 0.38-meter in ground.

IN THE UNITED STATES

Month	Morena Dam, California		Barrett Dam, California		Lower Otay Dam, California	
	2006	Average 1916-2006	2006	Average 1921-2006	2006	Average 1950-2006
Jan.	66	56	50	47	65	50
Feb.	117	56	71	54	83	58
Mar.	124	83	47	82	94	86
April	117	119	84	114	88	118
May	261	167	134	161	128	153
June	334	212	163	198	164	175
July	434	247	218	233	185	207
Aug.	249	230	174	219	170	195
Sept.	389	183	160	178	160	162
Oct.	197	129	94	124	109	117
Nov.	175	80	70	77	78	73
Dec.	79	60	42	48	69	55
Yearly	2,542	1,622	1,307	1,535	1,393	1,449

IN MEXICO

Month	Rodriguez Dam, Baja California		El Carrizo, Baja California		El Hongo, Baja California	
	2006	Average 1939-1942 1946-2006	2006	Average 1980-2006	2006	Average 1980-2006
Jan.	80	97	140	132	106	110
Feb.	91	100	177	117	85	89
Mar.	90	109	117	137	55	116
April	97	137	141	178	126	160
May	149	133	201	220	218	246
June	186	188	273	265	277	287
July	204	211	303	292	277	289
Aug.	173	196	274	288	236	258
Sept.	150	163	249	243	227	219
Oct.	124	133	194	202	173	158
Nov.	95	105	165	153	154	120
Dec.	81	83	152	133	98	77
Yearly	1,520	1,668	2,386	2,340	2,032	1,956

TEMPERATURE IN THE TIJUANA RIVER BASIN
IN DEGREES CELSIUS

The maximum, minimum, and monthly average temperature observations for United States stations are from daily readings of thermometers generally exposed in a shelter located a few meters above sod-covered ground. The maximum and minimum temperatures shown for the stations in Mexico are from daily maximum and minimum thermometer observations, with maximum and minimum for their periods of record. For specific location, elevation, period of record, and the observer, refer to data opposite same station name as shown in "Location of Rainfall Stations on Tijuana River Watershed" in this bulletin.

IN THE UNITED STATES

	Barrett Dam, California				Campo, California				Chula Vista, California			
	2006				2006				2006			
Month	Mean	Max.	Min.	Average 1931-2006	Mean	Max.	Min.	Average 1931-2006	Mean	Max.	Min.	Average 1931-2006
Jan.	12.0	27.0	-1.0	9.9	9.4	23.9	-7.8	8.8	#	31.7	2.8	12.6
Feb.	14.0	27.0	-1.0	10.8	10.6	26.7	-6.7	9.3	14.2	28.9	4.4	13.5
Mar.	11.0	26.0	1.0	12.2	#	#	#	10.3	#	#	#	14.2
April	14.0	27.0	3.0	14.6	12.3	30.0	-1.1	12.3	15.7	24.4	7.8	15.4
May	19.0	32.0	6.0	17.3	17.3	35.0	0.6	15.2	#	24.4	12.2	16.9
June	24.0	39.0	11.0	20.6	21.7	40.0	1.7	18.7	#	36.1	15.6	18.3
July	29.0	43.0	17.0	24.5	26.4	42.2	10.6	22.8	#	37.8	18.3	20.4
Aug.	24.0	39.0	13.0	24.7	22.8	38.9	5.0	23.0	#	28.9	16.7	21.4
Sept.	24.0	39.0	10.0	22.6	21.1	40.0	1.7	20.5	#	32.2	13.3	20.7
Oct.	18.0	32.0	6.0	18.1	14.8	31.1	-2.8	16.0	#	30.6	9.4	18.3
Nov.	16.0	32.0	1.0	13.5	13.1	31.7	-3.3	11.6	#	32.2	2.8	15.3
Dec.	12.0	26.0	-1.0	10.5	8.9	27.2	-6.7	8.8	#	27.8	2.8	13.3
Yearly	18.1	43.0	-1.0	16.6				14.8				16.7

IN MEXICO

	Rodriguez Dam, Baja California				El Hongo, Baja Californina				Ignacio Zaragoza, Baja California			
	2006		1938-2006		2006		1981-2006		2006		1965-2006	
Month	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Jan.	32	4	36	-3	21	-5	26	-9	#	#	34	-11
Feb.	30	2	34	0	22	-4	27	-3	#	#	32	-9
Mar.	27	2	38	0	21	-3	31	-6	#	#	42	-9
April	29	7	40	2	25	1	35	-1	#	#	38	-4
May	28	11	39	3	33	4	40	1	#	#	40	-2
June	37	5	42	5	39	7	47	2	#	#	49	-2
July	37	17	40	8	39	14	45	7	#	#	50	0
Aug.	33	15	41	10	36	7	41	3	#	#	51	0
Sept.	37	11	43	8	33	5	39	2	#	#	51	0
Oct.	34	6	42	1	29	1	37	0	#	#	49	-6
Nov.	35	5	37	-1	26	-3	30	-3	#	#	39	-9
Dec.	29	3	34	-3	23	-5	27	-8	#	#	36	-9
Yearly	37	2	43	-3	39	-5	47	-9			51	-11

	Tecate, Baja California				El Carrizo, Baja California				Valle de Palmas, Baja California			
	2006		1946-2006		2006		1980-2006		2006		1948-2006	
Month	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Jan.	29	-1	38	-9	30	3	32	-2	34	0	37	-11
Feb.	31	-2	38	-8	30	2	34	-2	36	-2	37	-5
Mar.	28	0	36	-5	26	3	37	-4	27	0	39	-2
April	29	3	39	-2	32	5	41	3	32	2	41	-2
May	33	4	42	1	32	9	42	5	36	4	46	1
June	42	6	44	0	40	8	42	8	40	5	48	4
July	43	15	46	2	47	14	47	8	50	9	50	6
Aug.	40	11	47	1	37	13	45	5	47	8	49	5
Sept.	43	10	46	2	42	10	43	5	43	4	47	3
Oct.	36	4	41	-3	36	9	43	6	37	4	43	0
Nov.	36	3	37	-3	38	5	35	2	36	2	38	-7
Dec.	32	-2	36	-5	34	5	34	-3	39	0	39	-6
Yearly	43	-2	47	-9	47	2	47	-4	50	-2	50	-11

Missing Data

TEMPERATURE IN THE TIJUANA RIVER BASIN
IN DEGREES CELSIUS

IN MEXICO

	El Pinal, Baja California											
	2006		1964-2006									
Month	Max.	Min.	Max.	Min.								
Jan.	#	#	29	-16								
Feb.	#	#	31	-10								
Mar.	#	#	29	-7								
April	#	#	33	-8								
May	#	#	34	-4								
June	#	#	43	-4								
July	#	#	44	0								
Aug.	#	#	44	0								
Sept.	#	#	45	-4								
Oct.	#	#	40	-5								
Nov.	#	#	35	-10								
Dec.	#	#	29	-4								
Yearly			45	-16								

DRAINAGE AREAS ABOVE GAGING STATIONS ALONG TIJUANA RIVER AND TRIBUTARIES

2006

The total area within the Tijuana River basin is 4,484 square kilometers, as determined from the best available maps from both the United States and Mexico. The drainage areas shown below are tabulated according to their downstream sequence.

Designation of Areas	Drainage Basin-Square Kilometers		
	United States	Mexico	Total
Cottonwood Creek			
above Morena Dam	295	0	295
Morena Dam to Barrett Dam	344	0	344
above Barrett Dam	640	0	640
below Barrett Dam and above Tecate Creek	168	0	168
above the Mouth	808	0	808
Campo Creek			
above International Boundary	220	10	230
Tecate Creek			
above International Boundary (not including Campo Creek)	49	166	215
Cottonwood Creek			
above International Boundary Station	1,070	176	1,246
Rio de las Palmas			
above Rodriguez Dam	18	2,541	2,559
Tijuana River			
above Nestor Gaging Station	1,186	3,279	4,465
above the Mouth	1,197	3,287	4,484


111°
110°
San Carlos Reservoir
Gila River
Calva
Winkelman
Gila River
33°
Pinal
Safford
Graham
Mammoth
UNITED STATES
ARIZONA
Tucson
Santa Cruz River
San Pedro River
Cochise
32°
Pima
Fairbank
Whitewater Draw
Rucker Canyon
Santa Cruz
Lewis Spgs.
Canelo
Patagonia
Nogales
Lochiel
Palominas
Bisbee
Douglas
Nogales
Naco
Agua Prieta
El Cajon
SONORA
31°
MEXICO
Cananea
INTERNATIONAL BOUNDARY & WATER COMMISSION
UNITED STATES & MEXICO
WESTERN INTERNATIONAL BOUNDARY
SANTA CRUZ RIVER, SAN PEDRO RIVER,
AND WHITEWATER DRAW BASINS
STREAM GAGING STATION
RAINFALL STATION
0 10 20 30 40 50 MILES
0 25 50 75 KILOMETERS

09-5375.00 WHITEWATER DRAW NEAR DOUGLAS, ARIZONA

DESCRIPTION: Water-stage recorder located on U. S. Highway 80 bridge between Douglas and Bisbee, Arizona, about 137 meters upstream from the Southern Pacific Railroad bridge, 2.4 kilometers upstream from the international boundary, and 3.2 kilometers west of Douglas, Arizona. Zero of gage is 1,191.505 meters above mean sea level, U. S. C. & G. S. datum of 1929. Location April 26, 1972 to April 10, 1974 was 61 meters upstream from bridge with the datum 1.340 meters higher.
RECORDS: Based on current meter measurements, observations of no flow, and a continuous record of gage heights. Computations by shifting control methods. Records obtained and furnished by the U. S. Section of the Commission are available for: August to October 1911 (gage heights and discharge measurements only), July to October 1912, January to June 1913, October 1913, December 1913 to June 1914, February to June 1915, October 1915 to September 1919, October 1919 to April 1922 (gage heights and discharge measurements only), July 1930 to December 1933, May 1935 to July 1947, October 1947 through August 2002. (July 1954 to March 1955, monthly discharge only). Records from September 2002 through December 2006 obtained and furnished by the U.S. Geological Survey.
REMARKS: Diversions above this station are mainly by pumping from ground water for irrigation. Records show flow at the international boundary into Mexico.
EXTREMES: Prior to 1936: Maximum recorded discharge, 97.7 CMS August 10, 1931 (gage height 3.700 meters); maximum estimated discharge, 115 CMS July 27, 1919; minimum discharge, no flow for several days of many years. Since 1936: Maximum discharge, 143 CMS August 7, 1955; maximum gage height, 5.045 meters July 29, 1966; minimum daily discharge, no flow at times during most years.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0.71	0.16	0	0	0
2	0	0	0	0	0	0	0	.12	.11	0	0	0
3	0	0	0	0	0	0	0	.14	.06	0	0	0
4	0	0	0	0	0	0	0	4.22	.27	0	0	0
5	0	0	0	0	0	0	1.13	13.3	.42	0	0	0
6	0	0	0	0	0	0	1.08	3.20	.34	0	0	0
7	0	0	0	0	0	0	.02	3.00	.13	0	0	0
8	0	0	0	0	0	0	.06	.65	.18	0	0	0
9	0	0	0	0	0	0	0	.21	.08	0	0	0
10	0	0	0	0	0	0	0	.06	.01	0	0	0
11	0	0	0	0	0	0	0	.68	.02	0	0	0
12	0	0	0	0	0	0	0	6.32	.48	0	0	0
13	0	0	0	0	0	0	0	6.57	1.33	0	0	0
14	0	0	0	0	0	0	0	7.65	.03	0	0	0
15	0	0	0	0	0	0	0	6.71	0	0	0	0
16	0	0	0	0	0	0	0	5.86	0	0	0	0
17	0	0	0	0	0	0	0	5.44	0	0	0	0
18	0	0	0	0	0	0	0	4.53	0	0	0	0
19	0	0	0	0	0	0	0	3.26	0	0	0	0
20	0	0	0	0	0	0	0	1.98	0	0	0	0
21	0	0	0	0	0	0	0	2.01	0	0	0	0
22	0	0	0	0	0	0	0	3.82	0	0	0	0
23	0	0	0	0	0	0	0	3.48	0	0	0	0
24	0	0	0	0	0	0	0	3.20	0	0	0	0
25	0	0	0	0	0	0	0	1.87	0	0	0	0
26	0	0	0	0	0	0	0	.71	0	0	0	0
27	0	0	0	0	0	0	37.4	.65	0	0	0	0
28	0	0	0	0	0	0	7.42	.51	0	0	0	0
29	0		0	0	0	0	1.90	.37	0	0	0	0
30	0		0	0	0	0	3.82	.27	0	0	0	0
31	0		0		0		4.42	.22		0		0
Sum	0	0	0	0	0	0	57.25	91.72	3.62	0	0	0

Current Year 2006						Period 1936-2006			
	Extreme Gage Meters		Extreme-Cubic Meters per Second				Volume-Thousand Cubic Meters		
Month	High	Low	High Day	Low Day	Average	Total	Average	Maximum	Minimum
Jan.	1.160	1.150	! 1	! 1	0	0	38.7	556	0
Feb.	1.150	1.145	! 1	! 1	0	0	18.5	163	0
Mar.	1.145	1.135	! 1	! 1	0	0	24.4	364	0
April	1.135	1.125	! 1	! 1	0	0	16.1	213	0
May	1.125	1.120	! 1	! 1	0	0	11.5	170	0
June	1.125	1.120	! 1	! 1	0	0	117	1,961	0
July	4.125	1.120	27	89.5 ! 1	0	1.85	4,946	1,773	10,004	0
Aug.	3.040	1.315	5	22.4 11	0	2.96	7,925	2,943	17,861	0
Sept.	2.175	1.300	13	3.77 !22	0	.12	313	744	3,910	0
Oct.	1.300	1.030	! 1	0 ! 5	0	0	0	425	7,528	0
Nov.	1.030	1.025	! 1	0 ! 1	0	0	0	54.5	765	0
Dec.	1.025	1.020	! 1	0 ! 1	0	0	0	116	2,915	0
Yearly	4.125	1.020		89.5	0	0.42	13,184	6,282	27,533	0

! And other days

SEWAGE INFLUENT, DOUGLAS, ARIZONA
INTERNATIONAL TREATMENT PLANT

DESCRIPTION: Parshall flume in the influent line of the older trickling filter unit and a Parshall flume in the influent line of the newer extended aeration unit. The treatment plant is located about 1.6 kilometers west of the Douglas-Agua Prieta Port of Entry immediately adjacent to the international boundary in Douglas, Cochise County, Arizona.
RECORDS: Continuous monthly records since March 1948; daily records from March 18, 1948 through 1950 and from January 1952 through 2006.
REMARKS: The older 4.9 thousand cubic meters per day trickling filter unit was constructed in 1947 by the International Boundary and Water Commission. Since April 8, 1968 all sewage from Agua Prieta has been retained and treated in Mexico to be used for irrigation along with the effluent from the Douglas International Treatment Plant. On July 1, 1973, ownership and operation of the plant was transferred from the International Boundary and Water Commission to the City of Douglas. In 1980, the plant was enlarged with the addition of the extended aeration unit bringing the total capacity up to 9.8 thousand cubic meters per day. The effluent from the Douglas Treatment Plant is discharged through a conduit to Mexico.

2006	Total Monthly Flows Thousand Cubic Meters			Mean Daily Flows-Thousand Cubic Meters Per Day					
				Current Year 2006			Period 1952-2006		
Month	U.S.	Mexico	Total	Maximum	Minimum	Mean	Maximum	Minimum	Mean
Jan.	312	0	312	12.2	7.4	10.1	18.8	1.6	5.0
Feb.	282	0	282	11.8	8.7	10.1	18.0	2.1	5.0
Mar.	315	0	315	12.9	8.3	10.2	14.4	2.2	4.9
April	298	0	298	12.0	7.5	9.9	18.1	1.4	5.0
May	297	0	297	11.4	8.2	9.6	15.0	1.9	5.0
June	291	0	291	16.6	2.8	9.7	16.6	2.1	5.1
July	293	0	293	11.5	6.1	9.4	14.8	1.8	5.3
Aug.	310	0	310	11.6	7.6	10.0	15.1	1.4	5.3
Sept.	293	0	293	12.3	7.9	9.8	13.6	1.8	5.2
Oct.	313	0	313	12.3	8.3	10.1	13.8	2.2	5.1
Nov.	311	0	311	13.4	5.4	10.4	14.4	1.2	5.1
Dec.	327	0	327	12.9	8.1	10.5	17.9	1.7	5.1
Yearly	3,641	0	3,641	16.6	2.8	10.0	18.8	1.2	5.1

09-4705.00 SAN PEDRO RIVER AT PALOMINAS, ARIZONA

DESCRIPTION: Water-stage recorder located near left bank on downstream side of the bridge pier at Highway 92, 1.1 kilometers east of Palominas, 4.0 kilometers upstream from Green Brush Draw, 7.2 kilometers downstream from international boundary, and 19 kilometers southwest of Bisbee, Arizona. Zero of gage is 1,276.39 meters above mean sea level (State Highway bench mark).
RECORDS: Based on current meter measurements, observations of no flow, and a continuous record of gage heights. Records available: May 1930 to October 1933, May 1935 to July 1941, and July 1950 through 2006. Records obtained and furnished by U. S. Geological Survey prior to October 1, 1981 and from October 1, 1995 through 2006, and by the United States Section of the Commission from October 1, 1981 through September 30, 1995.
REMARKS: There are some small diversions for irrigation for a small area above this station, mostly in Mexico. Record shows approximate flow of river at international boundary.
EXTREMES: Maximum daily discharge, 623 CMS on August 14, 1940 (gage height 4.93 meters present datum), from rating curve extended above 159 CMS on basis of slope-area measurement of peak flow; no flow at times in most years. Greatest flood known occurred on September 28, 1926 (gage height, about 7.28 meters present datum), from flood marks; discharge not determined.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.05	0.05	0.05	0.03	0	0	0	64.0	0.76	0.26	0.10	0.09
2	.05	.05	.05	.02	0	0	0	3.34	.79	.24	.10	.10
3	.05	.05	.05	.02	0	0	0	114	.71	.22	.10	.09
4	.04	.05	.05	.02	0	0	0	26.0	2.83	.20	.10	.09
5	.04	.06	.05	.02	0	0	.37	5.98	3.74	.20	.10	.10
6	.05	.05	.05	.02	0	0	0	.62	73.1	.21	.09	.10
7	.05	.05	.05	.02	0	0	0	1.53	7.84	1.02	.10	.10
8	.05	.05	.05	.02	0	0	.07	1.36	15.1	.42	.10	.10
9	.05	.06	.05	.02	0	0	0	1.05	14.8	.31	.09	.10
10	.04	.06	.06	.02	0	0	0	1.61	3.57	.31	.09	.11
11	.05	.05	.05	.02	0	0	0	19.4	2.55	.26	.09	.10
12	.05	.06	.05	.01	0	0	0	10.5	13.4	.23	.09	.10
13	.05	.06	.04	.01	0	0	0	4.02	31.4	.19	.09	.10
14	.05	.06	.04	.01	0	0	0	.74	4.73	.18	.09	.10
15	.05	.06	.04	.01	0	0	0	5.83	2.52	.18	.09	.10
16	.05	.06	.04	.01	0	0	0	7.59	1.73	.18	.09	.10
17	.05	.06	.04	.02	0	0	0	6.43	1.30	.16	.10	.10
18	.05	.06	.04	.02	0	0	0	3.68	1.02	.15	.09	.10
19	.05	.06	.04	.01	0	0	0	1.02	.85	.14	.09	.10
20	.05	.05	.04	.01	0	0	.01	1.13	.71	.14	.09	.10
21	.05	.05	.04	.01	0	0	0	2.04	.65	.14	.09	.10
22	.05	.05	.04	.01	0	0	0	3.26	.59	.13	.08	.11
23	.04	.05	.03	.01	0	0	0	4.96	.57	.12	.09	.11
24	.04	.05	.03	.01	0	0	0	4.87	.48	.16	.09	.10
25	.05	.05	.03	.01	0	0	0	20.9	.42	.16	.09	.10
26	.05	.05	.03	0	0	0	1.70	12.0	.40	.14	.09	.10
27	.05	.05	.03	0	0	0	16.2	2.38	.37	.12	.10	.11
28	.05	.05	.03	0	0	0	7.79	1.59	.31	.12	.10	.13
29	.05		.03	0	0	0	48.7	1.19	.31	.12	.10	.11
30	.05		.03	0	0	0	45.9	1.02	.28	.11	.08	.11
31	.05		.03		0		185	.88		.11		.11
Sum	1.51		0.39		0		334.92		6.63			3.17
	1.50		1.28		0		305.74		187.83		2.79	

	Current Year 2006						Period 1951-2006		
	Extreme Gage Meters		Extreme-Cubic Meters per Second				Volume-Thousand Cubic Meters		
Month	High	Low	High Day	Low Day	Average	Total	Average	Maximum	Minimum
Jan.	0.875	0.865	!14	0.06	4	0.04	0.05	130	2,129	35,987	3.2
Feb.	.870	.855	14	.08	!15	.05	.05	130	921	8,343	3.7
Mar.	.865	.825	12	.07	!30	.02	.04	111	784	9,129	16.4
April	.830	.775	6	.03	!28	0	.01	33.7	191	1,282	0
May	.785	.755	! 1	0	!25	0	0	0	60.5	502	0
June	.775	.620	1	0	!10	0	0	0	194	3,631	0
July	5.565	.620	31	402	! 1	0	9.86	26,416	5,732	26,416	0
Aug.	5.280	.840	3	362	7	.10	10.8	28,937	9,210	44,860	204
Sept.	4.215	.625	6	221	30	.27	6.26	16,229	2,329	20,160	1.7
Oct.	.835	.580	7	2.55	!30	.10	.21	573	2,577	58,371	0
Nov.	.585	.575	2	.12	!20	.08	.09	241	759	19,006	0
Dec.	.595	.575	28	.13	1	.08	.10	274	1,758	31,428	0
Yearly	5.565	0.575		402		0	2.32	73,075	26,645	80,483	5,427

! And other days

09-4800.00 SANTA CRUZ RIVER NEAR LOCHIEL, ARIZONA

DESCRIPTION: Water-stage recorder located in the United States near left bank on the downstream side of concrete bridge pier of county highway bridge, 4.0 kilometers northeast of Lochiel, Arizona, and 2.7 kilometers upstream from the international land boundary. The elevation of the zero of the gage has not been determined, but topographic maps indicate the elevation of the stream bed at the gage is about 1,408 meters.
RECORDS: Based on current meter measurements, observations of no flow, and a continuous record of gage heights. Records obtained and furnished by the U. S. Geological Survey. Records available: January 1949 through 2006.
REMARKS: There are small diversions by ground water pumping for irrigating about 80.9 hectares above this station.
EXTREMES: Maximum discharge, 362 CMS on August 15, 1984, (gage height 3.19 meters); minimum discharge, no flow for several days of many years.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	0.02	0	0.09	0.04	0.02
2	0	0	0	0	0	0	0	.02	0	.04	.03	.02
3	0	0	0	0	0	0	0	.02	0	.04	.03	.02
4	0	0	0	0	0	0	0	.02	0	.03	.03	.02
5	0	0	0	0	0	0	0	.02	4.42	.03	.04	.01
6	0	0	0	0	0	0	0	.02	1.50	.02	.04	0
7	0	0	0	0	0	0	0	.02	2.29	.02	.04	.01
8	0	0	0	0	0	0	0	24.7	.57	.01	.04	.01
9	0	0	0	0	0	0	0	29.2	.24	0	.03	.01
10	0	0	0	0	0	0	0	2.29	.18	.02	.02	.02
11	0	0	0	0	0	0	0	.02	.13	.05	.02	.02
12	0	0	0	0	0	0	0	.02	.28	.04	.03	.02
13	0	0	0	0	0	0	0	.02	.37	.04	.02	.02
14	0	0	0	0	0	0	0	.02	.16	.04	.02	.02
15	0	0	0	0	0	0	0	.02	.15	.05	.02	.02
16	0	0	0	0	0	0	0	.02	.14	.05	.02	.02
17	0	0	0	0	0	0	0	.02	.14	.04	.02	.02
18	0	0	0	0	0	0	0	.02	.14	.03	.02	.02
19	0	0	0	0	0	0	0	.02	.14	.04	.02	.02
20	0	0	0	0	0	0	0	.02	.14	.04	.02	.02
21	0	0	0	0	0	0	0	.02	.14	.03	.02	.02
22	0	0	0	0	0	0	0	.02	.15	.03	.01	.02
23	0	0	0	0	0	0	0	.02	.14	.03	.01	.02
24	0	0	0	0	0	0	0	3.99	.14	.04	.01	.02
25	0	0	0	0	0	0	0	1.02	.14	.04	.02	.02
26	0	0	0	0	0	0	0	1.22	.13	.03	.02	.02
27	0	0	0	0	0	0	.04	0	.13	.03	.02	.02
28	0	0	0	0	0	0	.07	0	.12	.03	.02	.03
29	0		0	0	0	0	.02	0	.12	.04	.02	.02
30	0		0	0	0	0	.02	0	.12	.05	.02	.02
31	0		0		0		.02	0		.05		.02
Sum	0	0	0	0	0	0	62.82	1.12	0.57	0	0	0.17
							12.32		0.72			

Current Year 2006							Period 1949-2006		
Month	Extreme Gage Meters		Extreme-Cubic Meters per Second				Volume-Thousand Cubic Meters		
	High	Low	@ High Day	@ High	@ Low Day	@ Low	Average	Total	Average	Maximum	Minimum
Jan.			! 1	0	! 1	0	0	0	322	8,822	0
Feb.			! 1	0	! 1	0	0	0	117	1,233	0
Mar.			! 1	0	! 1	0	0	0	129	2,594	0
April			! 1	0	! 1	0	0	0	61.7	638	0
May			! 1	0	! 1	0	0	0	31.8	210	0
June			! 1	0	! 1	0	0	0	22.5	208	0
July			27	.07	! 1	0	.01	14.7	551	5,267	0
Aug.			9	29.2	27	0	2.03	5,428	1,140	14,207	.1
Sept.			5	4.42	! 1	0	.41	1,064	340	3,249	0
Oct.			1	.09	9	0	.04	96.8	332	5,837	0
Nov.			! 1	.04	!22	.01	.02	62.2	88.1	1,185	0
Dec.			28	.03	6	0	.02	49.2	132	1,348	0
Yearly				29.2		0	0.21	6,715	3,267	21,433	96.0

@ Mean daily ! And other days

09-4805.00 SANTA CRUZ RIVER NEAR NOGALES, ARIZONA

DESCRIPTION: Water-stage recorder, cable with sit-down cable car located 8.9 kilometers east of Nogales, Arizona, 1.3 kilometers downstream from the international boundary and 9.7 kilometers upstream from the Santa Cruz bridge on State Highway No. 82. Zero of gage is 1,128.535 meters above mean sea level, U. S. C. & G. S. datum (levels by International Boundary and Water Commission).
RECORDS: Based on current meter measurements, observations of no flow, and a continuous record of gage heights. Records obtained and furnished by the U. S. Geological Survey. Records available: March to November 1907 and April 1909 to December 1912 (discharge measurements and fragmentary gage height record); January 1913 to June 1922 (October 1915 to September 1916, monthly discharges only); May 1930 to December 1933; and July 1935 through 2006.
REMARKS: Diversions in both countries affect the flow at this station. The major diversions occur in Mexico for domestic and irrigation uses. There are no storage dams above the station as of December 2006.
EXTREMES: Maximum discharge, 949 CMS on October 9, 1977 (gage height 4.725 meters); minimum discharge, no flow for several days of many years.

MEAN DAILY DISCHARGE IN CUBIC METERS PER SECOND 2006 --- ANNUAL AND PERIOD SUMMARY

Day	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0	0	0	0	0	0	0	1.84	0.02	0.03	0.03	0.02
2	0	0	0	0	0	0	0	.18	.02	.03	.02	.02
3	0	0	0	0	0	0	.09	6.20	.09	.03	.02	.02
4	0	0	0	0	0	0	.05	5.81	.02	.03	.02	.02
5	0	0	0	0	0	0	0	.34	7.05	.10	.02	.02
6	0	0	0	0	0	0	0	.82	5.35	.03	.02	.02
7	0	0	0	0	0	0	0	1.33	4.62	.03	.02	.02
8	0	0	0	0	0	0	0	1.02	2.32	.03	.02	.02
9	0	0	0	0	0	0	0	1.22	1.61	.03	.02	.02
10	0	0	0	0	0	0	0	.68	.88	.03	.02	.02
11	0	0	0	0	0	0	0	4.79	1.33	.03	.02	.02
12	0	0	0	0	0	0	0	1.05	2.35	.03	.02	.02
13	0	0	0	0	0	0	0	.01	2.52	.03	.02	.02
14	0	0	0	0	0	0	0	1.44	.57	.03	.02	.02
15	0	0	0	0	0	0	0	.99	.20	.03	.02	.02
16	0	0	0	0	0	0	0	.02	.12	.03	.02	.02
17	0	0	0	0	0	0	0	0	.10	.03	.02	.02
18	0	0	0	0	0	0	.18	0	.09	.03	.02	.02
19	0	0	0	0	0	0	.04	.05	.07	.03	.02	.02
20	0	0	0	0	0	0	0	.02	.06	.03	.02	.02
21	0	0	0	0	0	0	0	.05	.06	.03	.02	.02
22	0	0	0	0	0	0	0	.04	.06	.02	.02	.02
23	0	0	0	0	0	0	0	.05	.05	.02	.02	.02
24	0	0	0	0	0	0	0	.91	.05	.03	.02	.02
25	0	0	0	0	0	0	0	.42	.04	.03	.02	.02
26	0	0	0	0	0	0	0	.14	.03	.02	.02	.02
27	0	0	0	0	0	0	9.54	.06	.03	.02	.02	.02
28	0	0	0	0	0	0	1.36	.02	.03	.03	.02	.02
29	0		0	0	0	0	23.2	.02	.03	.03	.02	.02
30	0		0	0	0	0	8.69	.02	.03	.03	.02	.02
31	0		0		0		.76	.02		.03		.02
Sum	0	0	0	0	0	0	43.91	29.56	29.80	0.96	0.61	0.62

Month	Current Year 2006 — Extreme Gage Meters High	Extreme Gage Meters Low	Extreme-Cubic Meters per Second @ High Day	@ High	@ Low Day	@ Low	Average	Volume-Thousand Cubic Meters Total	Period 1936-2006 Average	Maximum	Minimum
Jan.			! 1	0	! 1	0	0	0	2,691	37,352	0
Feb.			! 1	0	! 1	0	0	0	1,999	25,344	0
Mar.			! 1	0	! 1	0	0	0	1,731	24,145	0
April			! 1	0	! 1	0	0	0	561	4,263	0
May			! 1	0	! 1	0	0	0	127	1,272	0
June			! 1	0	! 1	0	0	0	86.0	1,787	0
July			29	23.2	! 1	0	1.42	3,794	2,762	19,255	0
Aug.			3	6.20	!17	0	.95	2,554	5,819	56,481	12.1
Sept.			5	7.05	! 1	.02	.99	2,575	1,644	111,633	0
Oct.			5	.10	!22	.02	.03	82.9	2,226	72,806	0
Nov.			1	.03	! 2	.02	.02	52.7	719	12,180	0
Dec.			! 1	.02	! 1	.02	.02	53.6	2,594	41,405	0
Yearly				23.2		0	0.29	9,112	22,959	108,071	345

@ Mean daily ! And other days

SEWAGE INFLUENT, NOGALES INTERNATIONAL TREATMENT PLANT

DESCRIPTION: One 61-centimeter Parshall flume with a water-stage recorder is located at the international boundary for measuring raw wastewater from Nogales, Sonora. The plant influent and effluent flows are measured by flow meters and recorded on individual chart recorders and continuous totalizers. The Nogales Wash Pumping Plant flows are contaminated surface waters from Mexico captured in the U.S. and pumped into the international sewer trunk line downstream of the influent recorder. Flows determined by pump hour clocks. The Nogales International Treatment Plant is located adjacent to I-19, approximately 14.5 kilometers north of the international boundary, all within the City of Nogales, Santa Cruz County, Arizona.

RECORDS: Flows from the United States are deduced from total plant influent less the flows measured crossing the international boundary from Mexico. Records available: Continuous monthly record for plant influent since August 1951; daily records for plant influent, January 1952 through 2006.

REMARKS: Nogales International Treatment Plant treats combined sewage from both Nogales, Arizona and Nogales Sonora by means of aerated stabilization lagoons. In February 1991, a plant expansion was completed which increased the capacity to 65.1 thousand cubic meters per day. Ultraviolet disinfected effluent is discharged directly into the Santa Cruz River. Prior to the expansion, the plant capacity was 31.0 thousand cubic meters per day and chlorinated effluent was discharged directly to the Santa Cruz River. Prior to December 18, 1971 the plant was located along the right bank of Nogales Wash, approximately 3.2 kilometers north of the international boundary.

2006	Total Monthly Flows Thousand Cubic Meters				Daily Flows-Thousand Cubic Meters Per Day					
					Current Year 2006			Period 1952-2006		
Month	U.S.	Mexico	Plant*	Total	Maximum	Minimum	Mean	Maximum	Minimum	Mean
Jan.	441.8	1,278.0	0	1,720	59.0	48.3	55.5	93.0	2.5	27.9
Feb.	457.7	1,131.7	0	1,589	59.2	52.3	56.8	80.4	2.5	28.7
Mar.	546.6	1,199.3	0	1,746	66.7	51.3	56.3	85.7	2.8	28.4
April	523.5	1,093.3	0	1,617	56.3	51.2	53.9	87.9	2.6	27.0
May	588.4	1,010.3	0	1,599	54.8	43.5	51.6	69.2	2.1	25.5
June	366.0	1,124.3	0	1,490	52.7	41.4	49.7	64.9	2.6	23.9
July	419.5	1,241.2	0	1,661	61.3	42.5	53.6	74.4	2.6	24.9
Aug.	542.1	1,127.5	0	1,670	56.3	51.2	53.9	75.6	2.8	26.6
Sept.	416.3	775.4	0	1,192	61.2	32.0	39.7	67.9	3.0	27.7
Oct.	467.3	1,234.5	0	1,702	62.4	38.9	54.9	87.2	2.6	28.2
Nov.	515.0	1,282.8	0	1,798	61.8	58.0	59.9	84.7	3.0	28.0
Dec.	494.0	1,267.6	0	1,762	61.1	41.3	56.8	75.9	1.3	28.0
Yearly	5,778	13,766	0	19,544	66.7	32.0	53.5	93.0	1.3	27.1

* Nogales Wash Pumping Plant

RAINFALL ON THE SANTA CRUZ RIVER WATERSHED
IN MILLIMETERS

Tabulated below are the monthly records of rainfall with averages for their periods of record at stations located in Arizona. Three stations are operated and maintained by the United States Section of the Commission and two by the National Weather Service. For location, elevation, period of record, type of gage in use, and the observer, see alphabetical listing of stations on this page.

IN THE UNITED STATES

Month	San Rafael #2, Arizona		Canelo, Arizona		Patagonia, Arizona		Nogales Sanitation Plant 6N, Arizona		Brush Hill, Arizona	
	2006	Average 1973-2006	2006	Average 1930-2006	2006	Average 1930-2006	2006	Average 1953-2006	2006	Average 1994-2006
Jan.	#	40	#	31	0	32	0	28	21	23
Feb.	#	38	5	28	5	28	2	22	7	37
Mar.	#	32	45	23	26	24	25	23	45	22
April	#	14	#	11	#	11	#	10	0	24
May	#	7	#	4	#	5	#	6	2	5
June	#	14	#	19	#	12	#	12	28	21
July	#	116	#	104	#	110	#	110	235	119
Aug.	#	109	#	105	#	105	#	105	121	114
Sept.	#	55	#	43	#	43	#	39	116	45
Oct.	#	36	#	27	#	28	#	33	3	29
Nov.	#	24	#	21	#	21	#	17	0	24
Dec.	#	38	17	35	17	36	#	36	14	33
Yearly		523		451		455		441	592	496

Missing Data

LOCATION OF RAINFALL STATIONS ON THE SANTA CRUZ RIVER WATERSHED

The precipitation records of the stations listed alphabetically below begin on the date shown and extend through 2006.

IN THE UNITED STATES

NAME OF STATION	TYPE GAGE	LATITUDE	LONGITUDE	ELEV. (Meters)	RECORD BEGAN	OBSERVER
Brush Hill, Arizona	S	31` 29'	110` 42'	1,426	July 1994	Sonny & Nancy McCuistion
Canelo, Arizona	S	31` 34'	110` 32'	1,527	1930	Richard B. Macmanus
Nogales Sanitation Plant 6N, Arizona	S	31` 25'	110` 57'	1,085	June 1952	I. B. & W. C.
Patagonia, Arizona	S	31` 33'	110` 45'	1,277	1963	George R. Proctor
San Rafael #2, Arizona	S	31` 22'	110` 38'	1,481	Jan. 1973	I. B. & W. C

S Standard 203 millimeter rain gage

TEMPERATURE IN THE SANTA CRUZ RIVER BASIN
IN DEGREES CELSIUS

Tabulated below are monthly records of temperature at the station located at the Nogales Sanitation Plant in Arizona 14.5 kilometers north of the international boundary. On December 18, 1971, the station was moved to correspond with a new Nogales Sanitation Plant. Prior to this date, the station was located 3.2 kilometers north of the international boundary at the old Nogales Sanitation Plant. This station is operated and maintained by the United States Section of the Commission. The equipment at the Nogales Sanitation Plant - 9N consists of a standard 203-millimeter rain gage and maximum and minimum thermometer. The collection of data for mean relative humidity, evaporation, and mean wind speed was discontinued in 1984.

For specific location of this station, refer to data opposite same station name shown in "Location of Rainfall Stations," in this bulletin.

	Nogales Sanitation Plant - 9N		
	2006		
Month	Mean	Max.	Min.
Jan.	8.4	25.6	-8.9
Feb.	10.4	27.2	-6.1
Mar.	11.1	26.7	-4.4
April	#	#	#
May	#	#	#
June	#	#	#
July	#	#	#
Aug.	#	#	#
Sept.	#	#	#
Oct.	#	#	#
Nov.	#	#	#
Dec.	#	#	#
Yearly	#	#	#

Missing Data

DRAINAGE AREAS ABOVE GAGING STATIONS AND IRRIGATED AREAS ALONG SANTA CRUZ RIVER, SAN PEDRO RIVER, AND WHITEWATER DRAW

2006

The drainage basin areas tabulated below are derived from the best available maps from both the United States and Mexico.

Data on irrigated areas in the Whitewater Draw Basin were furnished by the Natural Resource Conservation Service at Douglas, Arizona and estimated from aerial photographs.

Designation of Areas	Drainage Basin-Square Kilometers			Irrigated Areas-Hectares		
	United Stated	Mexico	Total	United States	Mexico	Total
Santa Cruz River:						
Above Lochiel, Arizona Gaging Station	212	0	212	62	0	62
Above El Cajon, Mexico Gaging Station	464	324	788	40	952	992
Above Nogales, Arizona Gaging Station	479	901	1,380	40	1,091	1,131
San Pedro River:						
Above Palominas, Arizona Gaging Station	238	*1,621	1,859	289	1,400	1,689
Whitewater Draw:						
Above Douglas, Arizona Gaging Station	2,650	0	2,650	6,461	0	6,461

* An additional 122 square kilometers in Mexico is tributary to the San Pedro River downstream from this station.

WESTERN BOUNDARY WATER BULLETIN - 2006 - INTERNATIONAL BOUNDARY AND WATER COMMISSION

CORRECTIONS TO PREVIOUS WATER BULLETINS

GENERAL HYDROLOGIC CONDITIONS

2005 Bulletin, Page 7. In the first sentence of the section titled SAN PEDRO RIVER, it should state that data were insufficient to determine the average annual temperature. In the second sentence of the same section, it should state that data were also insufficient to determine annual precipitation measured at Coronado National Monument Headquarters.

2005 Bulletin, Page 7. In the first sentence of the section titled SANTA CRUZ, it should read that the average annual temperature over the watershed averaged 16.3 degrees Celsius, consistent with the long-term average rather than 16.9 degrees Celsius, 0.6 degree Celsius above the long term average. In the second sentence of the same section, it should state that data were insufficient to determine annual precipitation.

2005 Bulletin, Page 7. In the first sentence of the section titled ALAMO AND NEW RIVERS, it should read that the annual temperature over the drainage areas of the Alamo and New Rivers, as recorded at El Centro, California, was 23.4 degrees Celsius, 0.8 degree Celsius above normal.

2005 Bulletin, Page 7. In the first sentence of the section titled SALTON SEA, it should read that the average annual temperature around the Salton Sea was 0.2 degree Celsius above the long-term average.

EMERGENCY DELIVERIES OF COLORADO RIVER WATER FOR USE IN TIJUANA, BAJA CALIFORNIA

2003, 2004, and 2005 Bulletins, Page 8. In the section of the header titled RECORDS, it is stated that no deliveries were made from 1984 through October 2003. This is incorrect, emergency deliveries were made from May 25 to June 1989 and also from December 21 to December 27 1992.

DIVERSION CHANNEL AT SOUTHERLY INTERNATIONAL BOUNDARY

2004 and 2005 Bulletins, Page 29. In the third sentence of the section of the header titled RECORDS, it should state the initial date of record availability is October 6, 2004 rather than just October, 2004.

2005 Bulletin, Page 29. The average volumes for the period of record (2004-2005) are incorrectly listed as 40.0, 0, 7.0, 43.0, 0, 3.0, 0, 0, 23.0, 752, 925, 399, and 2,192 thousand cubic meters for January, February, March, April, May, June, July, August, September, October, November, December, and Yearly values. Instead they should be listed as 79.5, 0, 14.7, 86.4, 0, 6.0, 0, 0, 45.8, 752, 925, 399, and 2,309 thousand cubic meters.

09-5348.00 TOTAL FLOWS CROSSING INTERNATIONAL BOUNDARY INTO MEXICO NEAR SAN LUIS, SONORA

2005 Bulletin, Page 32. The average volumes for the period of record (1935-2005) are incorrectly listed as 11,799, 11,557, 12,976, 13,197, 13,449, 12,387, 12,718, 12,753, 12,626, 13,099, 12,023, 12,251, and 150,835 thousand cubic meters for January, February, March, April, May, June, July, August, September, October, November, December, and Yearly values. Instead they should be listed as 11,759, 11,557, 12,968, 13,154, 13,449, 12,384, 12,718, 12,753, 12,603, 13,099, 12,023, 12,251, and 150,718 thousand cubic meters.

INTERNATIONAL BOUNDARY & WATER COMMISSION
UNITED STATES & MEXICO

LOWER COLORADO RIVER
UNITED STATES & MEXICO

0 5 10 15 20 MILES

0 5 10 15 20 25 KILOMETERS

LEGEND

- Stream Gaging Station
- River Gage (Stages Only)
- Rainfall Station

AREA "A"

LEGEND

- GAGING STATION
- RIVER GAGE (Stages Only)

CALIFORNIA

ARIZONA

BAJA CALIFORNIA

SONORA

SALTON SEA

IMPERIAL DAM

LAGUNA DAM

MORELOS DAM

YUMA

MEXICALI

Brawley

El Centro

Calexico

San Luis

Algodones

Laguna Prieta

El Maritimo

Coahuila

M.C. Rodriguez

Palo Verde

Gore I.

Montague Island

GULF OF CALIFORNIA

UNITED STATES MEXICO