

Prepared in cooperation with the State of Arizona and with other agencies

# Water Resources Data Arizona Water Year 2005

Water-Data Report AZ-05-1

U.S. Department of the Interior  
U.S. Geological Survey

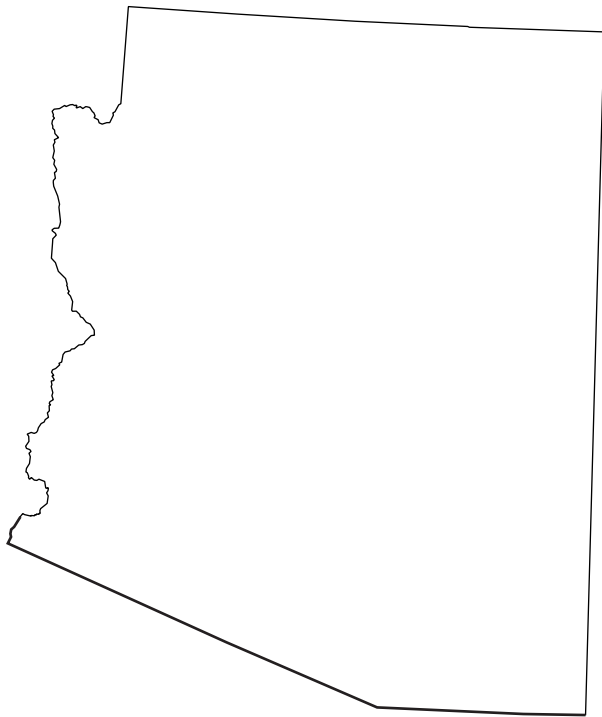




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By G.G. Fisk, N.R. Duet, E.H. McGuire, W.P. Roberts,  
N.K. Castillo, and C.F. Smith

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**U.S. Department of the Interior**  
**U.S. Geological Survey**



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**U.S. Geological Survey**

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2006

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## PREFACE

This volume of the annual hydrologic data report of Arizona is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Survey policy and established guidelines. The following individuals contributed significantly to the collection, processing, and tabulation of the data:

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## SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, BY WHICH RECORDS ARE PUBLISHED

[Letters after station name designate type of data: (c) chemical; (d) discharge; (e) elevation; (g) gage height; (m) microbiological (bacteria); (n) turbidity; (p) pesticide; (q) specific conductance (daily); (r) radiochemical; (s) suspended sediment; (t) water temperature (daily); (v) contents]

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## DISCONTINUED SURFACE-WATER-DISCHARGE OR STAGE-ONLY STATIONS

The following continuous-record streamflow stations in Arizona have been discontinued or converted to partial-record stations. Daily streamflow records were collected and published for the period of record shown for each station.

Station name	Station No.	Drainage area, in square miles	Period of record (water years)
Lee Valley Creek above Lee Valley Reservoir, near Greer, AZ.....	09383200	<sup>1</sup> 1.3	1966–72
Lee Valley tributary near Greer, AZ.....	09383220	<sup>1</sup> 5	1966–72
Lee Valley Creek below Lee Valley Reservoir, near Greer, AZ.....	09383250	<sup>1</sup> 1.9	1966–72
Filler ditch at Greer, AZ.....	09383300	---	1960–77
Little Colorado River at Greer, AZ.....	09383400	29.1	1960–82
Nutrioso Creek above Nelson Reservoir, near Springerville, AZ.....	09383500	83.3	1967–82
Nutrioso Creek below Nelson Reservoir, near Springerville, AZ.....	09383550	86.7	1967–82
Lyman Reservoir near St. Johns, AZ.....	09384500	<sup>2</sup> 811	1940–78
Lyman Canal below Lyman Reservoir, near St. Johns, AZ.....	09385000	---	1950–80
Little Colorado River below Lyman Reservoir, near St. Johns, AZ.....	09385500	<sup>2</sup> 811	1941–80
Little Colorado River at St. Johns, AZ.....	09386000	<sup>2</sup> 964	1906–07, 1909, 1929–33, 1935–40
Little Colorado River above Zuni River, near Hunt, AZ.....	09386500	<sup>2</sup> 3,741	1940–72
Colorado River above Little Colorado River near Desert View, AZ.....	09383100	114,272	1983, 1985–86, 1989–2001
Little Colorado River near Hunt, AZ.....	09388000	<sup>2</sup> 6,383	1929–33, 1940–72
Silver Creek near Shumway, AZ.....	09390000	<sup>2</sup> 172	1942–55
Show Low Creek at Show Low, AZ.....	09392500	90.2	1944–55
Silver Creek at Snowflake, AZ.....	09393000	<sup>2</sup> 488	1906
Cottonwood Wash at Snowflake, AZ.....	09393400	262	1981–84
Silver Creek near Snowflake, AZ.....	09393500	925	1950–95
Silver Creek near Woodruff, AZ.....	09394000	<sup>2</sup> 966	1929–33, 1935–52
Puerco River near Church Rock, NM.....	09395350	205	1977–82, 1989–91
Puerco River near Lupton, AZ.....	09395650	<sup>1</sup> 1,050	1971–72
Black Creek near Lupton, AZ.....	09395900	494	1964–72, 1974–82
Black Creek below West Fork Black Creek, near Houck, AZ.....	09395990	628	1989–91
Puerco River near Adamana, AZ.....	09396500	<sup>2</sup> 2,654	1940–49
Chevelon Creek near Winslow, AZ.....	09398000	<sup>2</sup> 785	1905–06, 1915–19, 1929–72
Clear Creek below Willow Creek, near Winslow, AZ.....	09398500	317	1947–91
Clear Creek near Winslow, AZ.....	09399000	621	1906, 1929–82
Jacks Canyon Creek near Winslow, AZ.....	09399400	295	1969–72

See footnotes at end of table.

## DISCONTINUED SURFACE-WATER-DISCHARGE OR STAGE-ONLY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Period of record (water years)
Salt Creek near Winslow, AZ.....	09399500	287	1939–41
Little Colorado River near Winslow, AZ.....	09400000	<sup>1</sup> 16,100	1954–56
Rio de Flag at Flagstaff, AZ.....	09400600	51.0	1955–60
Little Colorado River at Grand Falls, AZ.....	09401000	<sup>2</sup> 21,068	1925–60, 1989–94
Coal Mine Wash tributary near Kayenta, AZ.....	09401226	.62	1977–81
Coal Mine Wash tributary No. 2 near Kayenta, AZ.....	09401229	.06	1977–79
Coal Mine Wash at mouth, near Shonto, AZ.....	09401239	137	1978–82
Moenkopi Wash near Moenkopi, AZ.....	09401250	<sup>1</sup> 1,650	1973–76
Moenkopi Wash near Tuba City, AZ.....	09401280	1,904	1926–41
Moenkopi Wash near Tuba City, AZ.....	09401400	2,492	1941–53, 1965–78
Moenkopi Wash near Cameron, AZ.....	09401500	2,662	1953–65
Cottonwood Spring above confluence with Cottonwood Creek near Grand Canyon, AZ	09402450	.54	1994–2001
Bright Angel Creek near Grand Canyon, AZ.....	09403000	101	1923–74
Pipe Springs above Tonto Trail near Grand Canyon, AZ.....	09403010	1.70	1994–96
Sediment Tank at Indian Garden near Grand Canyon, AZ.....	09403012	---	1994–06
Pump House Wash Spring near Grand Canyon, AZ.....	09403013	less than .05	1995–2001
Garden Creek below Indian Garden near Grand Canyon, AZ.....	09403015	---	1994–96
Hermit Creek above Tonto Trail near Grand Canyon, AZ	09403043	10.5	1994–2001
Kanab Creek near Fredonia, AZ.....	09403780	1,085	1963–80
Kanab Creek above mouth near Supai, AZ.....	09403850	---	1990–93
Dogtown Wash above Dogtown Reservoir near Williams, AZ.....	09403990	4.69	1964–66
Dogtown Wash above Kaibab Reservoir, near Williams, AZ.....	09404020	15.4	1964–66
Cataract Creek near Williams, AZ.....	09404040	46.4	1965–72
Havasu Creek above Havasu Falls near Supai, AZ.....	09404112	2,898	1995–2000
Colorado River above National Canyon near Supai, AZ.....	09404120	147,931	1983–96
Beaver Dam Wash at Beaver Dam, AZ.....	09414900	579	1993–98
Colorado River near Topock, AZ.....	09424000	<sup>1,2</sup> 176,300	1917–82
Cottonwood Wash No. 1 near Kingman, AZ.....	09424200	143	1964–78
Francis Creek near Bagdad, AZ.....	09424432	134	1985–93
Kirkland Creek near Kirkland, AZ.....	09424470	109	1973–83
Date Creek near Congress, AZ.....	09425000	127	1939–43
Santa Maria River near Alamo, AZ.....	09425500	1,439	1939–66
Bill Williams River at Planet, AZ.....	09426500	5,054	1913–15, 1928–46
Tyson Wash at Quartzsite, AZ.....	09428900	421	1973–74
Colorado River at Palo Verde Dam, AZ–CA.....	09429010	<sup>1,2</sup> 186,200	1969–88
Cibola Lake inlet near Cibola, AZ.....	09429280	---	1975–89
Cibola Lake outlet near Cibola, AZ.....	09429290	---	1975–89
Colorado River below Cibola Valley, AZ.....	09429300	<sup>1,2</sup> 187,800	1956–88
Gila River at New Mexico–Arizona State Line, near Virden, NM.....	09438000	3,349	1939–49
Willow Creek diversion from Black River, near Morenci, AZ	09445000	---	1945–2002
Willow Creek near Point of Pines, near Morenci, AZ.....	09445500	102	1944–67
Willow Creek near Double Circle Ranch, near Morenci, AZ.....	09446000	149	1944–67
Eagle Creek near Double Circle Ranch, near Morenci, AZ.....	09446500	377	1944–67

See footnotes at end of table.



## DISCONTINUED SURFACE-WATER-DISCHARGE OR STAGE-ONLY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Period of record (water years)
Brown Canal St. Head of Safford Valley, near Solomon, AZ.....	09449500	---	1920-32
Gila River near Solomon, AZ.....	09451000	7,896	1914-32, 1940-50
Cave Creek near Paradise, AZ.....	09454500	<sup>1</sup> 39	1919-25
Cave Creek Canal near Paradise, AZ.....	09455000	---	1919-25
East Turkey Creek at Paradise, AZ.....	09455500	<sup>1</sup> 8.2	1919-25
San Simon River near San Simon, AZ.....	09456000	814	1919-25, 1931-33, 1935-41
San Simon River below Fandrop detention dam, near Bowie, AZ.....	09456200	1,400	1955-59
Gold Gulch below Creighton detention dam, near Bowie, AZ.....	09456600	104	1956-59
Gold Gulch below H-X detention dam, near Bowie, AZ.....	09456700	144	1956-59
San Simon River at Tanque, AZ.....	09456800	1,953	1957-59
Goat Well Wash below drop structure, near Solomon, AZ.....	09456900	77.2	1956-59
San Simon River near Solomon, AZ.....	09457000	2,192	1931-32, 1935-82
Marijilda Wash near Safford, AZ.....	09458050	10.9	1971-78
Deadman Creek near Safford, AZ.....	09458200	4.78	1989-93
Gila River at Safford, AZ.....	09458500	10,459	1940-49, 1956-65
Frye Creek at Thatcher, AZ.....	09460200	24.3	1963-74
Gila River at Black Point, near Geronimo, AZ.....	09466000	11,329	1943-45
Gila River near Bylas, AZ.....	09466300	11,380	1965-70
Gila River near Calva, AZ.....	09467100	11,550	1965-70
Gila River at Winkelman, AZ.....	09470000	13,268	1917-18, 1941-80, 1984-94
Greenbush Draw near Palominas, AZ.....	09470520	---	2000-06
Huachuca Canyon near Fort Huachuca, AZ.....	09471300	3.24	1961-64
San Pedro River at Fairbank, AZ.....	09471500	1,672	1926-28
St. David ditch near St. David, AZ.....	09471560	---	1967-72
Pomerene Canal near St. David, AZ.....	09471590	---	1967-72
San Pedro River near Benson, AZ.....	09471800	2,490	1966-76
San Pedro River near Redington, AZ.....	09472000	2,927	1943-47, 1950-98
Peck Canyon tributary near Redington, AZ.....	09472100	8.02	1967-72
San Pedro River near Mammoth, AZ.....	09472500	3,583	1931-41
Aravaipa Creek near Feldman, AZ.....	09473020	557	1919-21
San Pedro River below Aravaipa Creek, near Mammoth, AZ.....	09473100	4,343	1979-83
San Pedro River near Winkelman, AZ.....	09473400	4,430	1962-65
San Pedro River at Winkelman, AZ.....	09473500	4,453	1966-78
Gila River at the Buttes, AZ.....	09474500	<sup>1</sup> 18,300	1898-99
Gila River near Sacaton, AZ.....	09478350	---	1995-98
Queen Creek near Florence Junction, AZ.....	09479000	192	1939-41
Queen Creek tributary at Apache Junction, AZ.....	09479200	.51	1961-68
Gila River near Laveen, AZ.....	09479500	20,615	1940-95
Nogales Wash at Nogales, AZ.....	09481000	<sup>1</sup> 37	1932-34
Sonoita Creek near Patagonia, AZ.....	09481500	209	1930-33, 1935-72

See footnotes at end of table.

## DISCONTINUED SURFACE-WATER-DISCHARGE OR STAGE-ONLY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Period of record (water years)
Airport Wash at Tucson, AZ .....	09482400	23.0	1965–81
Railroad Wash at Tucson, AZ .....	09482950	2.3	1975–83
Tucson Arroyo at Vine Avenue, Tucson, AZ .....	09483000	8.2	1944–81
High School Wash at Tucson, AZ .....	09483010	.95	1973–83
Tanque Verde Creek near Tucson, AZ .....	09483100	43.0	1959–74
Sabino Creek near Mount Lemmon, AZ .....	09483300	3.19	1951–59
Bear Creek near Tucson, AZ .....	09484200	16.3	1959–74
Cienega Creek near Pantano, AZ .....	09484560	289	1968–75
Davidson Canyon Wash near Vail, AZ .....	09484590	50.5	1968–75
Atterbury Wash tributary at Tucson, AZ .....	09485390	4.97	1975–83
Pantano Wash at (near) Tucson, AZ .....	09485500	602	1940–41
Arcadia Wash at Tucson, AZ .....	09485550	2.72	1975–83
Rillito Creek near Tucson, AZ .....	09485850	892	1913–75
Cañada del Oro near Oracle Junction, AZ .....	09486100	42.3	1985–91
Cañada del Oro near Tucson, AZ .....	09486300	250	1965–78
Santa Cruz River at Ina Road, near Tucson, AZ .....	09486490	3,489	1991–93
Arivaca Creek at Arivaca, AZ .....	09486580	56.8	1996–2002
Santa Cruz River near Rillito, AZ .....	09486510	3,559	1991
Arivaca Wash near Arivaca, AZ .....	09486600	78.4	1967–72
Santa Rosa Wash at Gu Komelik, near Sells, AZ .....	09487500	629	1954–59
Kohatk Wash near Chiapuk, near Sells, AZ .....	09488000	185	1954–59
Santa Rosa Wash near Vaiva Vo, near Sells, AZ .....	09488500	1,782	1954–80
Vekol Wash near Stanfield, AZ .....	09488650	150	1991–99
North Fork of East Fork Black River near Alpine, AZ .....	09489070	38.1	1965–78
Forest Service Gage, East For Weir, AZ .....	09489075	---	1973–80
North Fork Thomas Creek near Alpine, AZ .....	09489082	0.73	1986–91
Black River near Maverick, AZ .....	09489100	315	1962–82
Wacheta Creek at Maverick, AZ .....	09489200	14.8	1957–80
Big Bonito Creek near Fort Apache, AZ .....	09489700	119	1957–81
Turkey Creek near Fort Apache, AZ .....	09490000	12.7	1955–60
North Fork White River near Greer, AZ .....	09490800	<sup>1</sup> 39	1965–78
North Fork White River near McNary, AZ .....	09491000	<sup>1</sup> 66	1945–54, 1957–85
North Fork White River at Whiteriver, AZ .....	09492000	357	1916–22
Rock Creek near Fort Apache, AZ .....	09492500	20.3	1955–60
East Fork White River at Fort Apache, AZ .....	09493000	135	1912–20
White River at Fort Apache, AZ .....	09493500	499	1912–19, 1921–22
Carrizo Creek above Corduroy Creek, near Show Low, AZ .....	09494300	225	1953–67
Corduroy Creek above Forestdale Creek, near Show Low, AZ .....	09494500	57.0	1952–61
Forestdale Creek near Show Low, AZ .....	09495500	33.4	1952–61
Cibecue No. 1 tributary to Carrizo Creek, near Show Low, AZ .....	09496600	0.099	1958–71
Cibecue No. 2 tributary to Carrizo Creek, near Show Low, AZ .....	09496700	.065	1958–71
Canyon Creek near Globe, AZ .....	09497850	316	1975–81
Cherry Creek near Young, AZ .....	09497900	62.1	1963–77
Tonto Creek near Gisela, AZ .....	09498800	430	1964–75
Rye Creek near Gisela, AZ .....	09498870	122	1965–85

See footnotes at end of table.

## DISCONTINUED SURFACE-WATER-DISCHARGE OR STAGE-ONLY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Period of record (water years)
Tonto Creek near Roosevelt, AZ.....	09499500	838	1913–40
Salt River at Roosevelt (at reservoir site) (near Livingstone), AZ.....	09500500	5,824	1904–07
Salt River at McDowell, AZ.....	09502500	6,268	1904–09
Willow Creek near Prescott, AZ.....	09503500	25.2	1932–37
Hell Canyon near Williams, AZ.....	09503720	14.9	1965–72
Volunteer Wash near Bellemont, AZ.....	09503800	<sup>2</sup> 130	1965–72
Oak Creek at Sedona, AZ.....	09504430	233	1981–95
Verde River at Camp Verde, AZ.....	09505000	<sup>2</sup> 4,215	1913–20
Rocky Gulch near Rimrock, AZ.....	09505220	1.4	1985–92
Red Tank Draw near Rimrock, AZ.....	09505250	49.4	1957–78
Montezuma Well Outlet near Rimrock, AZ.....	09505260	---	1977–92
Rattlesnake Canyon near Rimrock, AZ.....	09505300	24.6	1957–80
Beaver Creek at Camp Verde, AZ.....	09505500	433	1912–20
Verde River below Camp Verde, AZ.....	09505550	<sup>2</sup> 4,653	1971–78
Verde River at Childs, near Camp Verde, AZ.....	09506500	<sup>2</sup> 5,098	1913
East Verde River near Pine, AZ.....	09507600	6.34	1961–71
Webber Creek above West Fork Webber Creek, near Pine, AZ.....	09507700	4.79	1959–74
West Fork Webber Creek near Pine, AZ.....	09507800	4.07	1959–65
Webber Creek below West Fork Webber Creek, near Pine, AZ.....	09507900	9.63	1959–65
East Verde River near Payson, AZ.....	09507950	272	1961–65
Verde River below East Verde River, near Pine, AZ.....	09508000	<sup>2</sup> 5,606	1934–41
Verde River above Bartlett Reservoir, near Cave Creek, AZ.....	09509000	<sup>2</sup> 6,036	1938–45
West Fork Sycamore Creek above McFarland Canyon, near Sunflower, AZ.....	09510070	4.62	1965–74, 1982–86
West Fork Sycamore (Adler) Creek near Sunflower, AZ.....	09510080	9.82	1961–74
East Fork Sycamore Creek near Sunflower, AZ.....	09510100	4.52	1961–86
Sycamore Creek near Sunflower, AZ.....	09510150	52.3	1961–76
Camp Creek near Sunflower, AZ.....	09510170	2.6	1963–66
Rock Creek near Sunflower, AZ.....	09510180	15.2	1963–72
Salt River at Alma School Road, near Mesa, AZ.....	09512060	12,995	1981–86, 1992–93
Indian Bend Wash near Scottsdale, AZ.....	09512100	62	1961–84
Salt River at Jointhead Dam, near Phoenix, AZ.....	09512170	13,225	1977–80
Salt River tributary No. 2 at Phoenix, AZ.....	09512180	<sup>1</sup> .035	1963–65
Salt River at 24th Street at Phoenix, AZ.....	09512190	13,391	1989–92
Salt River tributary in South Mountain Park, Phoenix, AZ.....	09512200	1.75	1960–98
Cave Creek near Cave Creek, AZ.....	09512300	121	1958–67
Cave Creek at Phoenix, AZ.....	09512400	252	1958–90
Perry Canal near Mayer, AZ.....	09512495	588	1940–59
Sycamore Dam site total.....	09512501	588	1940–81
Turkey Creek near Cleator, AZ.....	09512600	89.4	1979–92
Boulder Creek near Rock Springs, AZ.....	09512830	37.8	1983–93
Humbug Creek near Castle Hot Springs, AZ.....	09512860	59.9	1983–94
Cottonwood Creek near Waddell Dam, AZ.....	09512970	9.28	1983–93
Agua Fria River at Waddell Dam, AZ.....	09513000	1,433	1911–24, 1933–91
Lake Pleasant at Waddell Dam, AZ.....	09513500	1,433	1928–91
Agua Fria at El Mirage, AZ.....	09513650	1,628	1962–98

See footnotes at end of table.

## DISCONTINUED SURFACE-WATER-DISCHARGE OR STAGE-ONLY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Period of record (water years)
Agua Fria River tributary at Youngtown, AZ.....	09513700	.13	1961–68
New River at New River (near Black Canyon), AZ.....	09513800	84.6	1960–82
New River at Bell Road, near Peoria, AZ.....	09513835	185	1968–84, 1990–93
New River near Glendale, AZ.....	09513910	323	1964–98
Agua Fria River at Avondale, AZ.....	09513970	2,066	1967–82
Buckeye Canal near Avondale, AZ.....	09514000	---	1953–71, 1996–2000
Gila River at U.S. Highway 85, near Buckeye, AZ.....	09514300	46,345	1979, 1989–92
Hassayampa River near Wagoner, AZ.....	09514500	77.9	1940–46
Hassayampa River at Walnut Grove, near Wagoner, AZ.....	09515000	106	1912–15, 1917–18, 1980–83
Hassayampa River at Box damsite, near Wickenburg, AZ.....	09515500	417	1938, 1946–82
Centennial Wash near Arlington, AZ.....	09517500	1,870	1961–79
Sauceda Wash near Gila Bend, AZ.....	09519760	126	1989–94
Gila River near Sentinel, AZ.....	09520000	51,610	1913–14
Rio Cornez near Ajo, AZ.....	09520170	243	1967–78
Gila River near Mohawk, AZ.....	09520360	55,430	1966, 1973–93
Gila River at mouth, near Yuma, AZ.....	09520700	57,950	1975–83
Gila River at mouth (flow past gage only).....	09520701	---	1975–83
Colorado River at Yuma, AZ.....	09521000	<sup>1,2</sup> 246,500	1902–64
Colorado River and Pilot Knob wasteway (Colorado River) at Rockwood Gate, CA.....	09521500	<sup>1,2</sup> 246,600	1945–50
Colorado River at southerly international boundary, near San Luis, AZ.....	09522200	<sup>1,2</sup> 246,700	1960–85
Mittry Lake Outlet Channel near Yuma, AZ.....	09527900	---	1975–83 1985–89
Yuma Canal at Laguna Dam, AZ–CA.....	09528000	---	1910–48
Laguna Canal wasteway, AZ.....	09528600	---	1960–97
North Gila Drain No. 3 near Yuma, AZ.....	09529050	---	1962–89
Fortuna wasteway near Yuma, AZ.....	09529100	---	1961–89
Bruce Church Drain, AZ.....	09529200	---	1962–97
Wellton-Mohawk Main Outlet Drain above Gila River, AZ.....	09529350	---	1966–74
South Gila Drain No. 2 near Yuma, AZ.....	09529400	---	1961–89
Vamori Wash at International Boundary near Sells, AZ.....	09535295	250	1995–2000
Quitobaquito Spring near Lukeville.....	09535900	---	1982–89, 1991–92
West Turkey Creek near Light, AZ.....	09536500	<sup>1</sup> 19	1919–25
Whitewater Draw near Rucker, AZ.....	09537000	38.7	1919–25

<sup>1</sup> Approximately.<sup>2</sup> Includes area that is probably noncontributing.

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS

The following surface-water-quality stations in Arizona have been discontinued or converted to partial-record stations. Water-quality data (daily or periodic samples with collection frequency not less than quarterly) were collected and published for the period of record shown for each station. Discontinued project stations with less than 3 years of record are not included. Information regarding these stations may be obtained from the district Chief at the address given on the back of the title page of this report.

[Type of record: (C) chemical, (S) sediment, (T) temperature]

Station name	Station No.	Drainage area, in square miles	Type of record	Period of record
Paria River at Lees Ferry, AZ.....	09382000	1,410	C,S,T	1942, 1947-76, 1978-79
Little Colorado River at Greer, AZ.....	09383400	29.1	C,S,T	1972-73, 1976-79, 1981-84, 1987-88
Little Colorado River above Lyman Lake, near St. Johns, AZ.....	09384000	<sup>a</sup> 706	C,S,T	1976-83
Little Colorado River above Zion Reservoir, near St. Johns, AZ..	09386030	1,007	C,T	1975-94
Zuni River above Black Rock Reservoir, NM.....	09386950	848	C	1978-92, 1993
Show Low Creek near Lakeside, AZ.....	09390500	68.6	C,S,T	1976-79
Cottonwood Creek at Snowflake, AZ.....	09393400	262	C,S,T	1982-84
Little Colorado River at Woodruff, AZ.....	09394500	<sup>a</sup> 8,072	C,S,T	1905-06, 1950-57
Puerco River near Church Rock, NM.....	09395350	205	C,S,T	1979, 1988-91
Little Colorado River near Joseph City, AZ.....	09397300	12,384	C,S,T	1979-94
Little Colorado River at Grand Falls, AZ.....	09401000	<sup>a</sup> 21,068	C,S,T	1991-94
Little Colorado River at Cameron, AZ.....	09401200	<sup>a</sup> 23,119	C,S,T	1948-70, 1975-86, 1995
Moenkopi Wash near Moenkopi, AZ.....	09401250	---	C,T	1973-76
Moenkopi Wash at Moenkopi, AZ.....	09401260	1,629	C,S,T	1974-81
Little Colorado River near Cameron, AZ.....	09402000	26,459	C,S	1970-72; 1990-91
Colorado River near Grand Canyon, AZ.....	09402500	<sup>ab</sup> 141,600	C,S,T	1925-88
Bright Angel Creek near Grand Canyon, AZ.....	09403000	101	C,T	1944-49, 1952-58, 1962-74
Kanab Creek near Fredonia, AZ.....	09403780	1,085	C,S,T	1964-73
Havasu Creek above the mouth, near Supai, AZ.....	09404115	3,020	C,T	1990-97
Las Vegas Wash near Henderson, NV.....	09419700	<sup>a</sup> 2,125	C,T	1957-92

See footnotes at end of table.

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Type of record	Period of record
Las Vegas Wash above Three Kids Wash below Henderson, NV .....	09419753	<sup>b</sup> 2,180	C,T	1988–92
Lake Mead at Hoover Dam, AZ .....	09421000	<sup>ab</sup> 171,700	C,T	1941–62, 1964–85
Colorado River below Davis Dam, AZ .....	09423000	<sup>ab</sup> 173,300	C,T	1969–87
Topock Marsh Outlet near Needles, CA.....	09423640	---	C,T	1980–81, 1983
Topock Marsh Outlet near Topock, AZ.....	09423650	---	C,T	1975–77
Colorado River near Topock, AZ .....	09424000	<sup>ab</sup> 176,300	C,T	1925–27, 1952–62, 1969–82
Central Arizona Project Canal at MP 7.98 near Parker.....	09426700	---	C,M,P	1985–95
Central Arizona Project Canal at MP 162.3 at Phoenix .....	09427100	---	C,M,P,S	1985–95
Central Arizona Project Canal at MP 252 near Coolidge .....	09427300	---	C,M,P	1987–95
Colorado River Indian Reservation Main Canal near Parker, AZ.....	09428500	---	C,T	1970–83
Colorado River Indian Reservation Poston Canal wasteway near Parker, AZ.....	09428510	---	C,T	1969–83
Palo Verde Canal near Blythe, CA .....	09429000	---	C,T	1970–85
Palo Verde Drain near Parker, AZ .....	09429030	---	C,T	*1962–68, 1969–83
Colorado River Indian Reservation Lower Main Drain near Parker, AZ.....	09429060	---	C,T	*1962–68, 1969–83
Colorado River below Palo Verde Dam, AZ .....	09429100	<sup>ab</sup> 186,200	T	1956–66
Palo Verde Irrigation District Olive Lake Drain near Blythe, CA.....	09429130	---	C,T	*1963–65, 1969–81
Colorado River at Taylor Ferry, near Blythe, CA.....	09429188	<sup>ab</sup> 187,700	C,T	1970–83
Palo Verde Irrigation District Outfall Drain near Palo Verde, CA .....	09429220	---	C,T	*1962–65, *1967–68, 1969–83
Palo Verde Irrigation District Anderson Drain near Palo Verde, CA .....	09429225	---	C,T	1969–81
Colorado River below Cibola Valley, AZ.....	09429300	<sup>ab</sup> 187,800	C,T	1956–66, 1969–83
Colorado River below Laguna Dam, AZ.....	09429600	<sup>ab</sup> 188,600	C,T	1972–83

See footnotes at end of table.

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Type of record	Period of record
Colorado River above Gila River, near Yuma, AZ.....	09429690	<sup>ab</sup> 188,700	C,T	*1961–68, 1969–79
Gila River below Blue Creek, near Virden, NM .....	09432000	3,203	C,T	2002
Gila River near Clifton, AZ.....	09442000	4,010	C,S,T	1976–79
Blue River near Clifton, AZ.....	09444200	506	C	1990–93
San Francisco River at Clifton, AZ.....	09444500	<sup>a</sup> 2,766	C,S,T	1943–44, 1964–67
San Francisco River near Clifton, AZ.....	09444600	<sup>a</sup> 2,770	C	1976–79, 1981–84, 1987–88, 1990–93
Gila River at Safford, AZ.....	09458500	10,459	C,T	1941–44
Gila River at Fort Thomas, AZ.....	---	---	C,T	1940–41, 1943–44
San Carlos River near Peridot, AZ.....	09468500	1,026	C	1990–91
Gila River at Winkelman, AZ.....	09470000	<sup>a</sup> 13,268	C,S,T	1976–84
Garden Canyon near Fort Huachuca, AZ.....	09470800	8.38	C,S,T	1962–64
San Pedro River near Benson, AZ.....	09471800	2,500	S	1966–74
San Pedro River near Winkelman, AZ.....	09473400	4,449	C,S,T	1962–66
San Pedro River at Winkelman, AZ.....	09473500	4,471	C,S,T	1966–80
Mineral Wash at Kelvin, AZ.....	09473900	97.9	C,T	1956–58, 1962–64
Santa Cruz River near Nogales, AZ.....	09480500	533	S,T	1966–74
Santa Cruz River at Rio Rico, AZ.....	09481710	1,004	C,T	1976–78
Santa Cruz River near Laveen, AZ.....	09489000	8,581	C,S,T	1976, 1978–79
Black River near Fort Apache, AZ.....	09490500	1,232	C,S,T	1976–79
White River near Fort Apache, AZ.....	09494000	632	C,S,T	1976–79
Pinal Creek at Inspiration Dam.....	09498400	195	C,S,T	1979–2003
Tonto Creek above Gun Creek, near Roosevelt, AZ.....	09499000	675	C,S,T	1976–79, 1983
Oak Creek at Red Rock Crossing near Sedona, AZ.....	09504440	252	C,T	1978–83; 1986–94
Oak Creek near Cornville, AZ.....	09504500	357	C,T	1954–64, 1976–78

See footnotes at end of table.

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Type of record	Period of record
Verde River near Camp Verde, AZ.....	09506000	<sup>a</sup> 5,009	C,S,T	1977, 1979–84
Wet Bottom Creek near Childs.....	09508300	36.4	C,S,T	1968–1996
Turkey Creek near Cleator, AZ .....	09512600	89.4	C,T	1980–82
Agua Fria River near Rock Springs.....	09512800	1,111	C,S,T	1982–1995
Agua Fria River below Waddell Dam, AZ .....	09513600	1,459	C,T	1950–58; 1975; 1982–89; 1991–94
Gila River near Dome.....	09520500	<sup>b</sup> 57,850	C,S,T	1973, 1979, 1984–92
Gila River near mouth, near Yuma .....	09520700	<sup>b</sup> 57,950	C,S,T	*1961–68, 1969–84
Colorado River at Yuma .....	09521000	<sup>ab</sup> 246,500	C,S,T	1905, 1926–28, 1943–44, 1947–63
Colorado River below Yuma Main Canal wasteway, at Yuma, AZ .....	09521100	<sup>ab</sup> 246,500	C,T	1976, 1987–88
Colorado River at southerly international boundary, near San Luis, AZ.....	09522200	<sup>ab</sup> 246,700	C,T	*1962–66, 1969–79
Gila Gravity Main Canal at Imperial Dam, AZ.....	09522500	---	C,T	1956–81
Yuma Main Canal below Colorado River Siphon, at Yuma, AZ .....	09525500	---	C,T	*1926–28, 1943–70
Mittry Lake Outlet Channel near Yuma, AZ.....	09527900	---	C,T	1974–83
North Gila Drain No. 1, near Yuma, AZ .....	09529000	---	C,T	*1966–68, 1969–81
North Gila Drain No. 3, near Yuma, AZ .....	09529050	---	C,T	*1966–68, 1969–81
South Gila Pump Outlet Channel No. 3, near Yuma, AZ.....	09529160	---	C,T	1969–83
Bruce Church Drain near Yuma, AZ.....	09529200	---	C,T	*1966, 1969–81
South Gila Pump Outlet Channel No. 2, near Yuma, AZ.....	09529240	---	C,T	*1968, 1969–83
Wellton-Mohawk Main Outlet Drain near Yuma, AZ.....	09529300	---	C,T	*1961–68, 1969–83
South Gila Pump Outlet Channel No. 1 near Yuma, AZ.....	09529360	---	C,T	*1968, 1969–83

See footnotes at end of table.



## DISCONTINUED SURFACE-WATER-QUALITY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Type of record	Period of record
South Gila Pump Outlet Channel No. 4 near Yuma, AZ.....	09529440	---	C,T	1969-82
Reservation Main Drain No. 4 at Yuma, AZ.....	09530000	---	C,T	*1964-68, 1969-81
Yuma Mesa Outlet Drain near Yuma, AZ .....	09530200	---	C,T	1972-83, 1987-88
Drain 8-B near Yuma, AZ .....	09530500	---	C,T	1970-81, 1987-88
Wellton-Mohawk Main Outlet Drain near Yuma, AZ.....	09531700	---	C,T	1969-74, 1983-85
Main Outlet Drain Extension below Morelos Dam, AZ .....	09531900	---	C	1972-76
Main Drain at southerly international boundary, near San Luis, AZ.....	09534000	---	C,T	*1962-68, 1969-83
West Main Canal wasteway at Arizona-Sonora boundary, AZ.....	09534300	---	C,T	1971-79
East Main Canal wasteway at Arizona-Sonora boundary, AZ.....	09534500	---	C,T	*1965-68, 1969-79
Vamori Wash at Kom Vo, AZ.....	09535300	1,250	C,S,T	1978-86
Whitewater Draw near Douglas, AZ.....	09537500	1,023	C,T	1978-81

\* Unpublished data.

<sup>a</sup> Includes area that is probably noncontributing.

<sup>b</sup> Approximately.

## WATER RESOURCES DATA FOR ARIZONA, WATER YEAR 2005

### INTRODUCTION

The Water Resources Discipline of the U.S. Geological Survey (USGS), in cooperation with State agencies, obtains a large amount of data on the water resources of Arizona each water year. These data, accumulated during many water years, constitute a valuable database for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the USGS, the data are published annually in a report series entitled "Water Resources Data for Arizona."

This report includes records on both surface water and ground water in the State. Specifically, it contains: (1) Discharge records for 195 streamflow-gaging stations and 21 crest-stage, partial-record streamflow stations; (2) stage and (or) content records for 8 lakes and reservoirs; (3) water-quality records for 17 streamflow-gaging stations; and (4) ground-water levels and compaction values for 13 stations; and (5) water levels for 14 wells.

This series of annual reports for Arizona began with the 1961 water year with a report that contained only data relating to surface water. For the 1964 water year, a similar report was introduced that contained only data on water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface water and ground water, and ground-water levels.

Before introduction of this series and for several water years concurrent with it, water-resources data for Arizona were published in the USGS Water-Supply Paper series. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Part 9." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the University of Arizona, Arizona State University, and the State of Arizona in Phoenix; principal cities in the United States; or may be purchased from the Branch of Information Services, USGS, Box 25286, Denver Federal Center, Denver, CO 80225-0046.

Publications similar to this report are published annually by the USGS for all States. These official USGS reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "USGS Water-Data Report AZ-05-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA, 22161. Information for ordering specific reports and data retrievals may be obtained from the Director of the USGS, Arizona Water Science Center at the address given on the back of the title page or by telephone (520) 670-6671.

## COOPERATION

The USGS and organizations of the State of Arizona have had cooperative agreements for the systematic collection of surface-water records since 1912, for ground-water levels since 1939, and for water-quality records since 1969. Organizations that assisted in collecting data through funding agreements with the Survey are:

Arizona Department of Environmental Quality	The Hopi Tribe
Arizona Department of Water Resources	The Hualapai Tribe
Bureau of Indian Affairs	Metropolitan Water District of Southern California
Bureau of Land Management	National Park Service
Bureau of Reclamation	The Navajo Nation
Central Arizona Water Conservation District	Phelps Dodge Corporation
City of Flagstaff	Pima County Flood Control District
City of Nogales	Salt River Valley Water Users' Association
City of Safford	Show Low Irrigation Company
City of Tucson	The Tohono O'odham Nation
Cochise County	U.S. Army Corps of Engineers
Flood Control District of Maricopa County	U.S. Army Fort Huachuca
Forest Service	U.S. Fish and Wildlife Service
Gila Valley Irrigation District	The White Mountain Apache Tribe
Gila Water Commissioner	The Yavapai-Prescott Indian Tribe
The Havasupai Tribe	The Zuni Pueblo

Assistance in the form of services was given by the International Boundary and Water Commission, the National Weather Service, and the Arizona Public Service Co. Organizations that supplied data are acknowledged in station descriptions.

## SUMMARY OF HYDROLOGIC CONDITIONS

The significant hydrologic conditions affecting Arizona in 2005 were drought and floods. Monthly streamflow data from 27 streamflow-gaging stations throughout the State were used along with drought indices developed by the Arizona Governor's Drought Task Force to assign drought levels to the 27 gaged drainages. The drought levels for each month are shown in figure 1.

### **Upper Gila Drainage and Salt River Drainage**

Both the Upper Gila and Salt River drainages started out the year with moderate drought conditions in October, and then went to a condition of no drought for the period November through June, and then ended the year with moderate to severe drought conditions for the period July through September. High flow conditions started at the end of December, and continued through to the end of February for both drainages.

### **Little Colorado Drainage**

The Little Colorado drainage had abnormally dry to severe drought conditions from April through July, and severe drought conditions for November. Most of the year was considered a no drought condition.

### **Santa Cruz Drainage**

The drought conditions for the Santa Cruz drainage were extreme to moderate from October through July and no drought for August and September. With the exception of the Upper Santa Cruz River having a severe drought condition for September.

### **San Pedro Drainage**

Drought conditions for the San Pedro drainage were extreme for the month of June when for the first time in the period of record, the daily mean flow reached zero at Charleston. October through January had moderate to severe drought conditions, the next month February had a no drought condition. March through June produced moderate to extreme drought conditions. July through September had drought conditions of abnormally dry to no drought.

### **Whitewater Draw Drainage**

Drought conditions for the Whitewater Draw drainage were severe to moderate throughout the year.

### **Big Sandy Drainage**

The drought conditions for the Big Sandy drainage was no drought for the year. Extreme flooding started in October and continued through February.

### **Chinle Drainage**

Drought conditions in the Chinle drainage ranged from no drought to moderate drought for the year.

### **Paria Drainage**

Drought conditions for the Paria drainage ranged from no drought to moderate drought for the year.

### **Verde Drainage**

The drought condition for the period October through May was no drought. The period June through September produce drought conditions ranging from no drought to severe drought. High flows started in October, and developed into extreme flooding in January and February.

# Drought Levels Based on Monthly Streamflow Discharge

October 2004

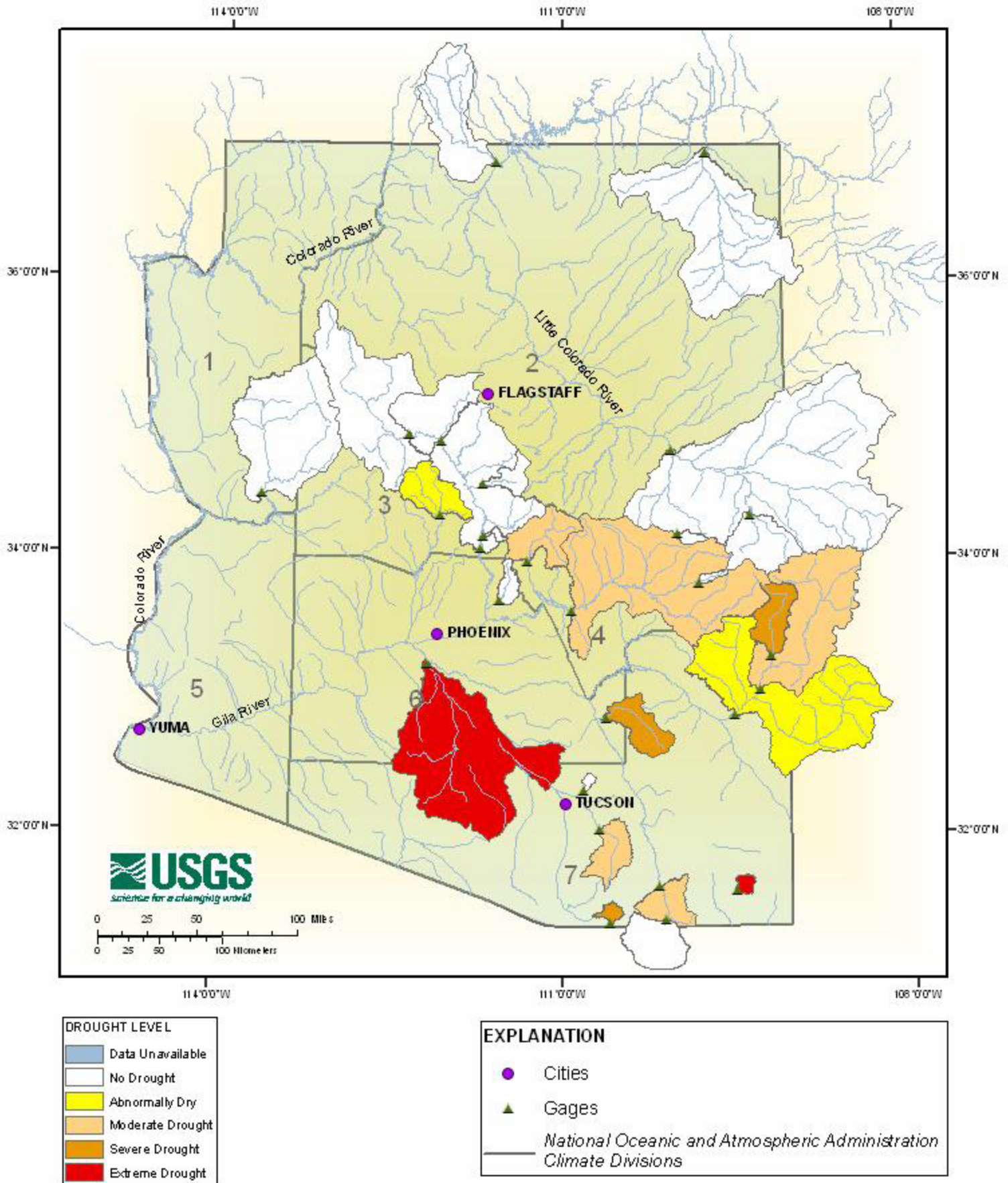


Figure 1. Drought levels for 27 drainage basins in Arizona based on average monthly discharge, water year 2005.

# Drought Levels Based on Monthly Streamflow Discharge

November 2004

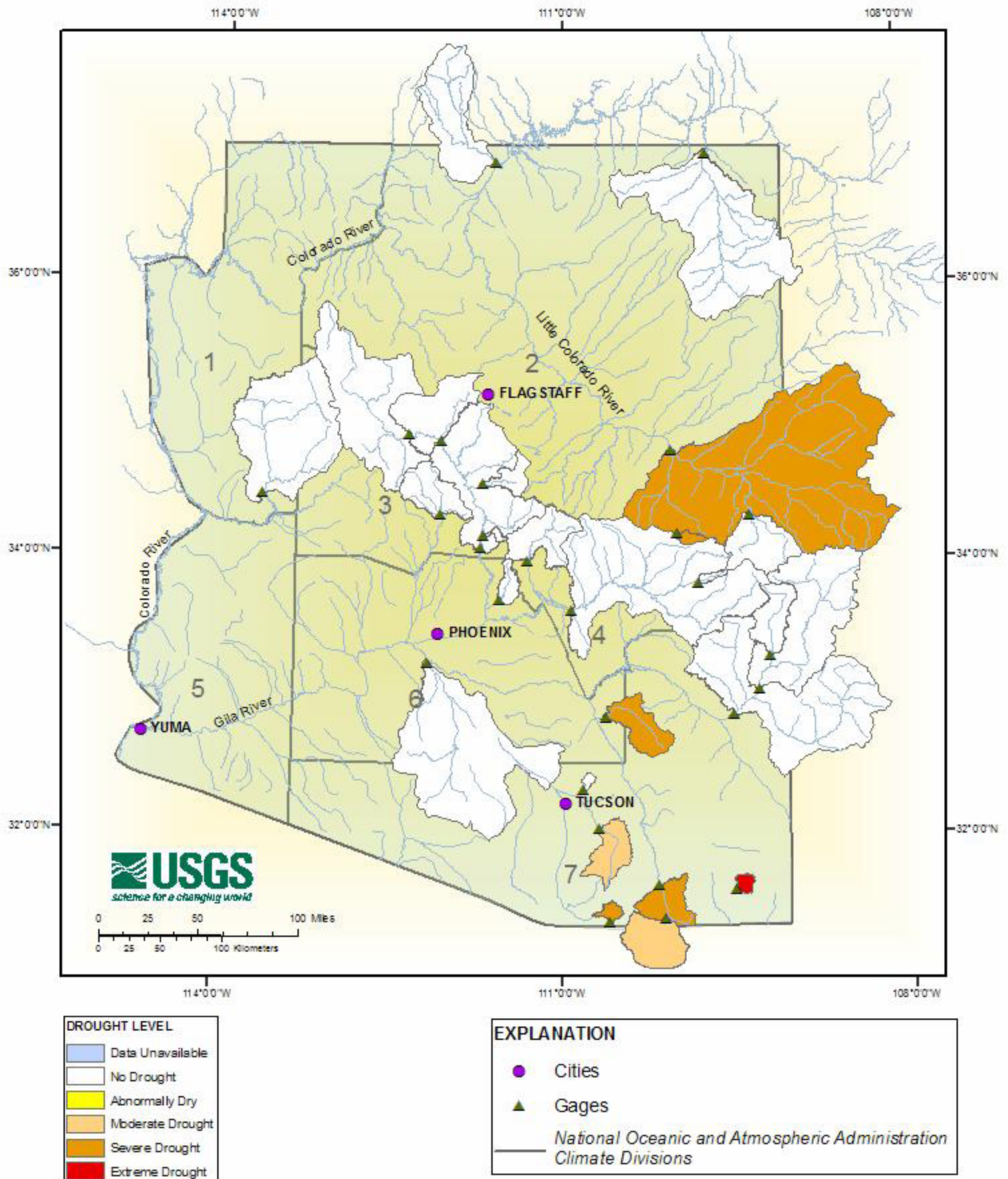


Figure 1—Continued.

# Drought Levels Based on Monthly Streamflow Discharge

December 2004

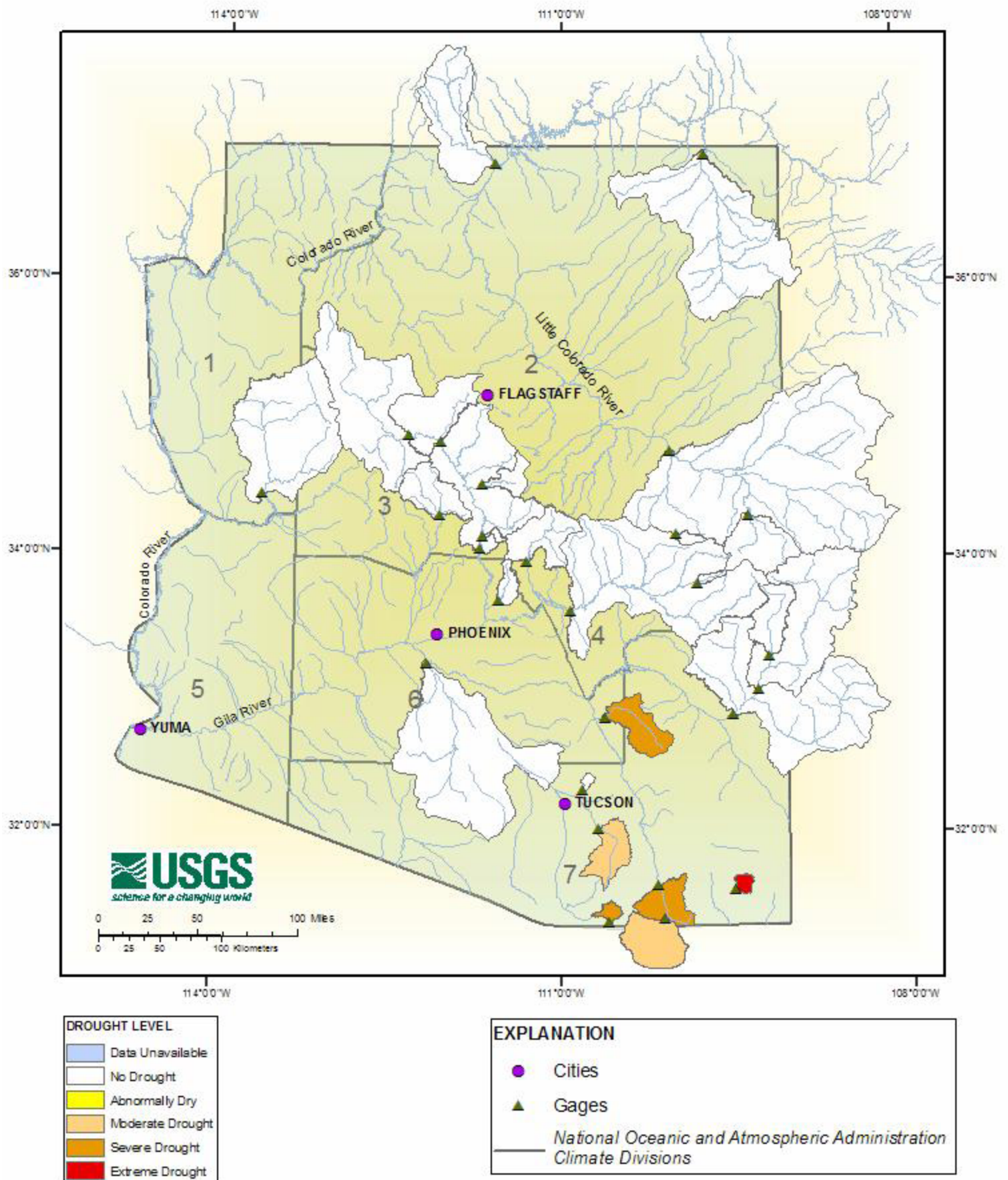


Figure 1—Continued.

# Drought Levels Based on Monthly Streamflow Discharge

January 2005

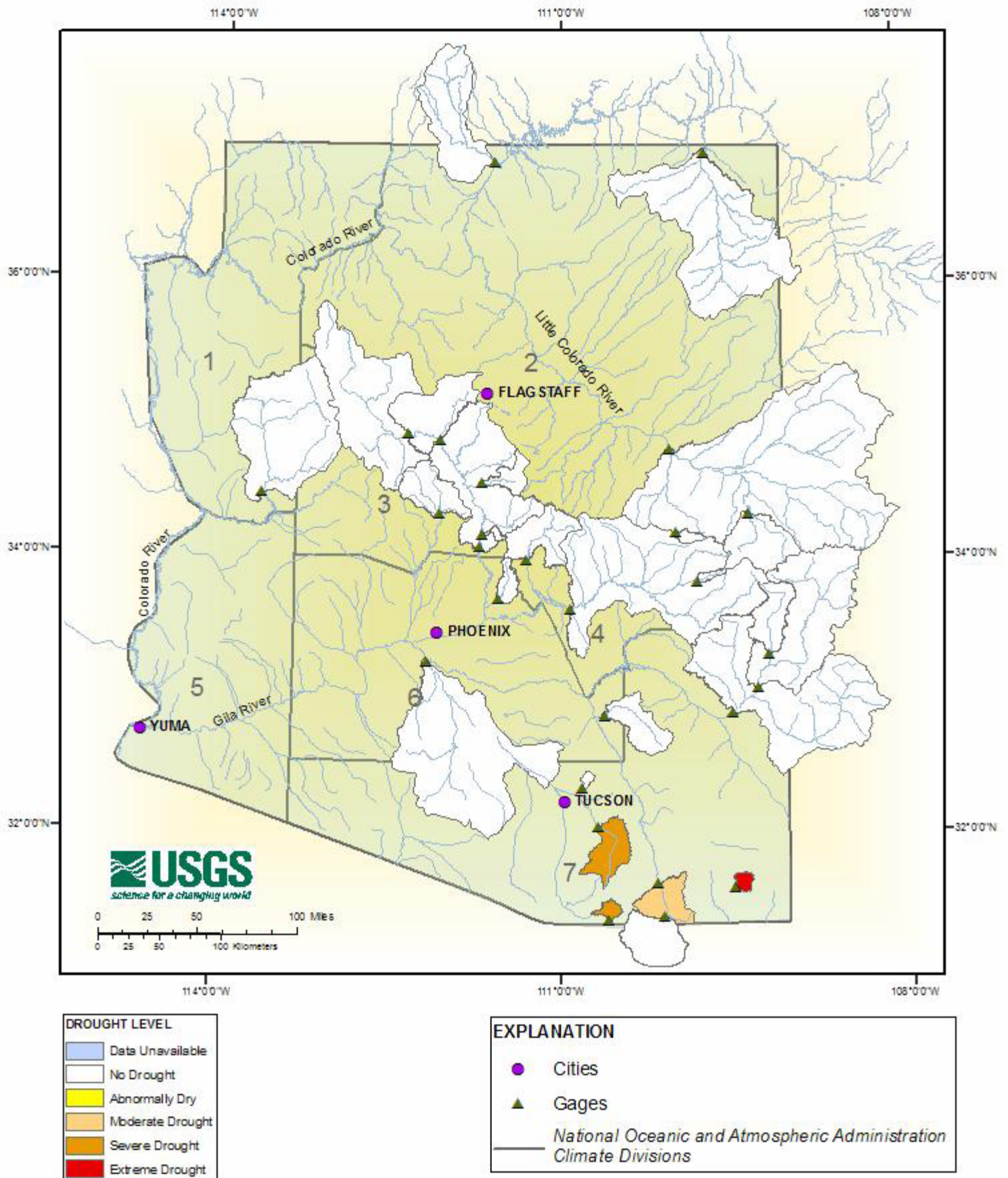


Figure 1—Continued.



# Drought Levels Based on Monthly Streamflow Discharge

February 2005

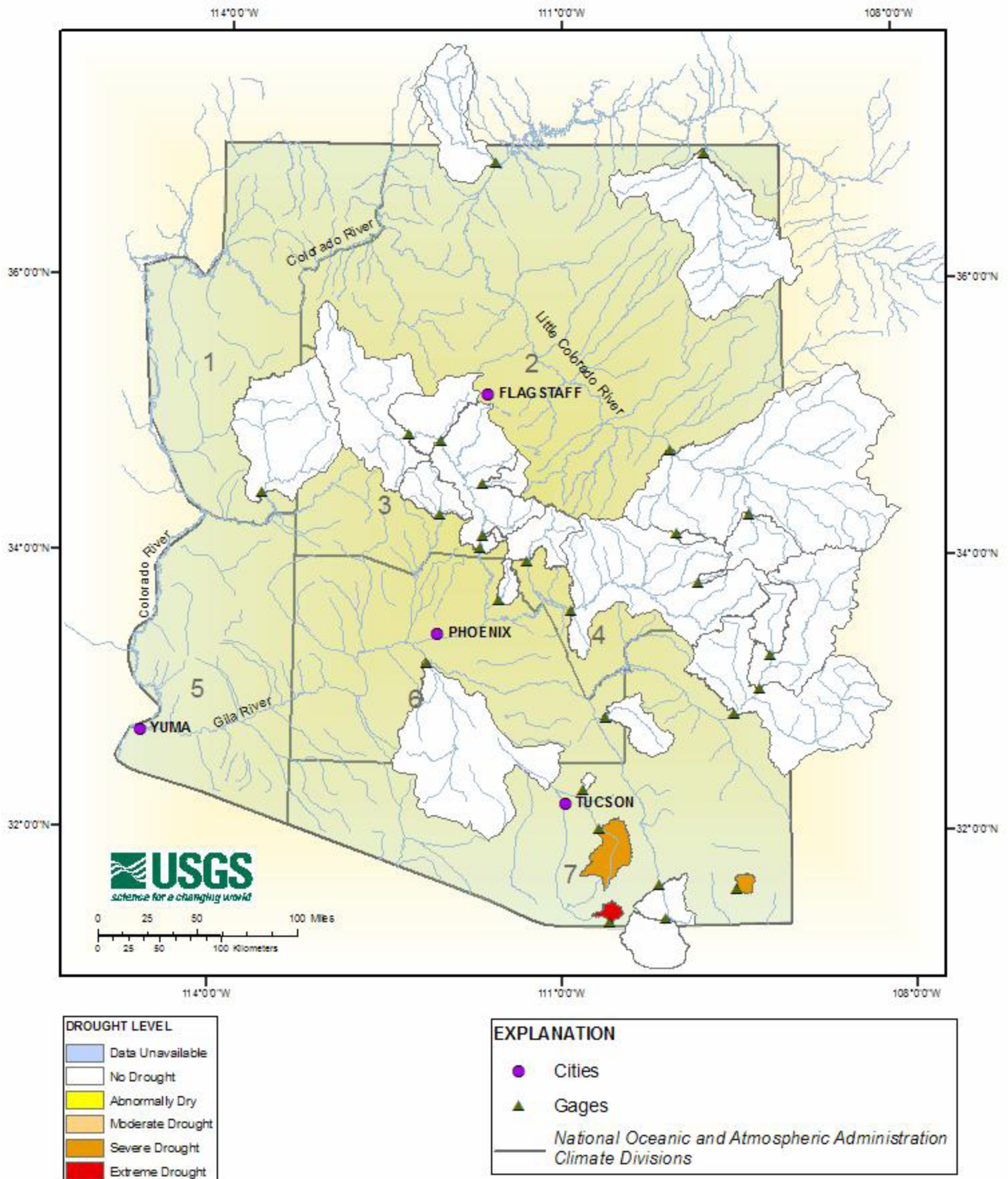


Figure 1—Continued.

# Drought Levels Based on Monthly Streamflow Discharge

March 2005

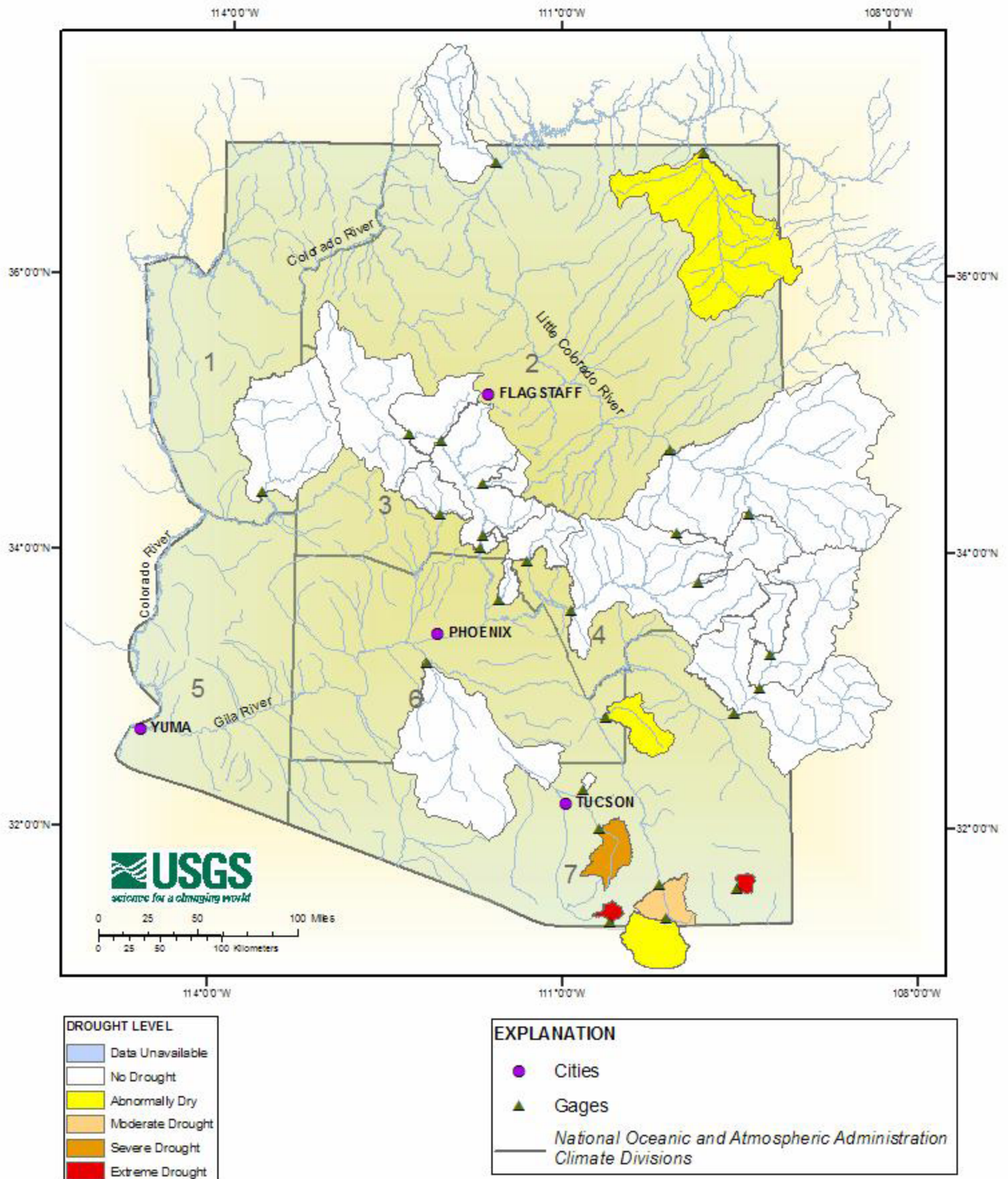


Figure 1—Continued.

# Drought Levels Based on Monthly Streamflow Discharge

April 2005

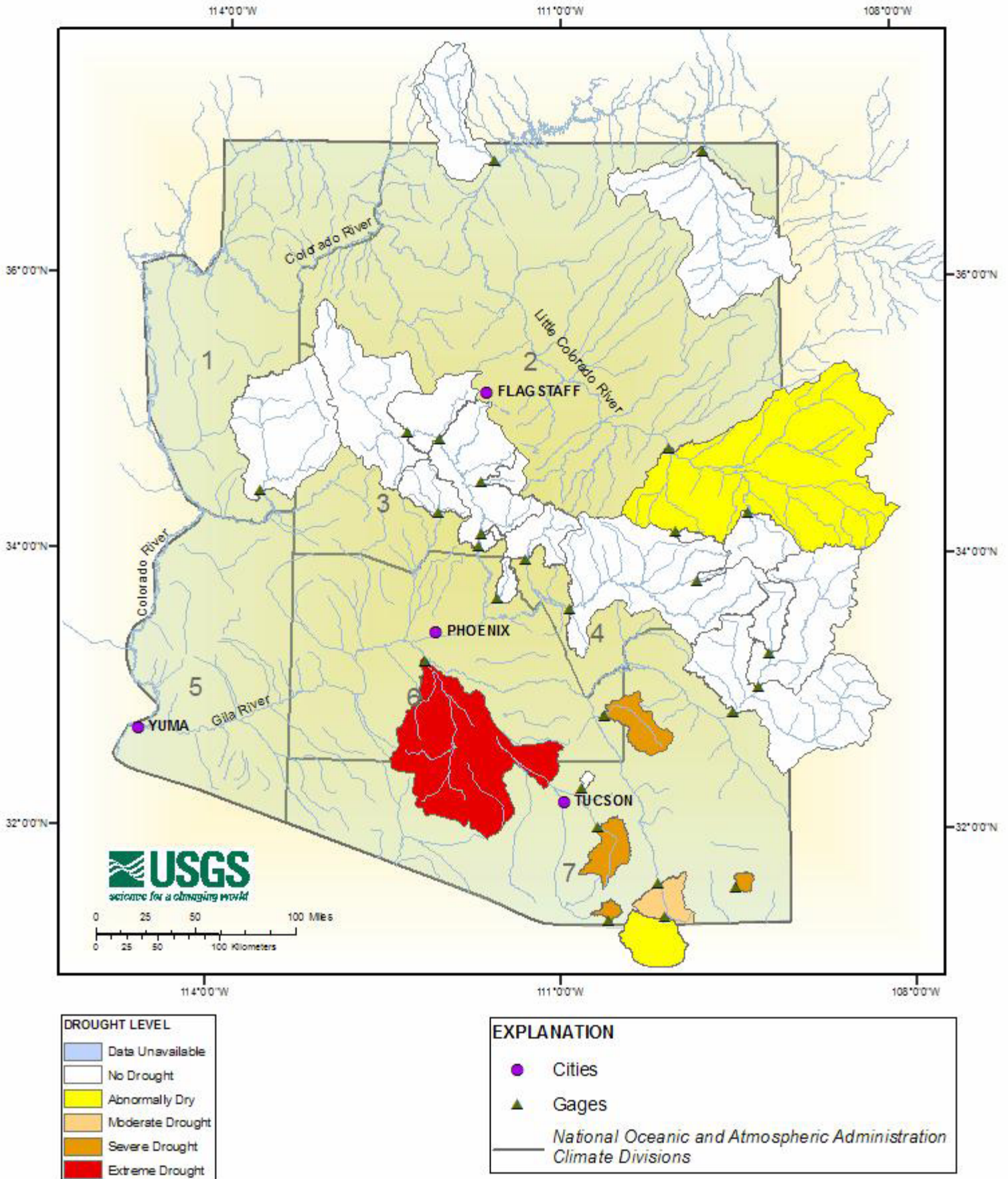


Figure 1—Continued.

# Drought Levels Based on Monthly Streamflow Discharge

May 2005

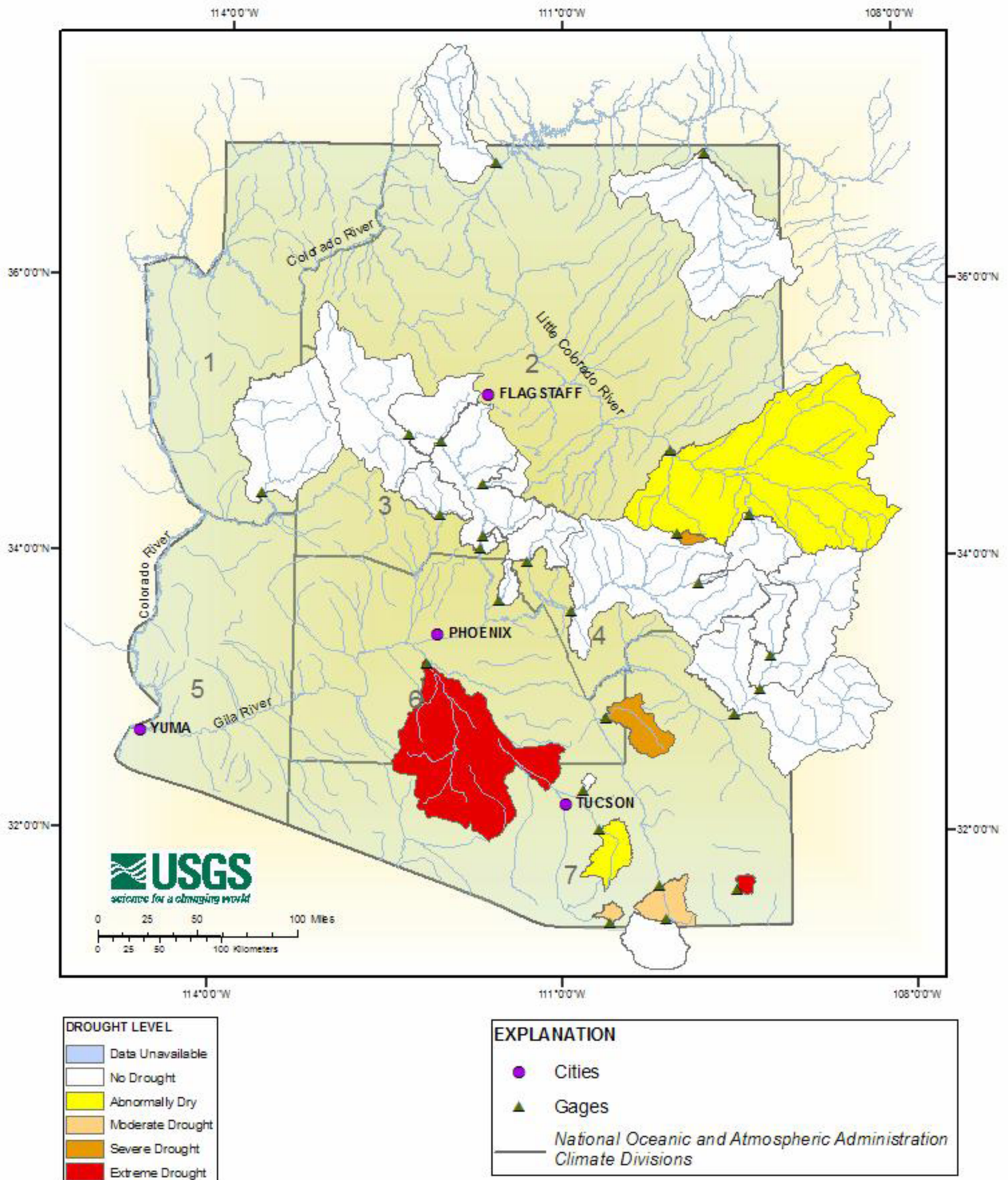


Figure 1—Continued.

# Drought Levels Based on Monthly Streamflow Discharge

June 2005

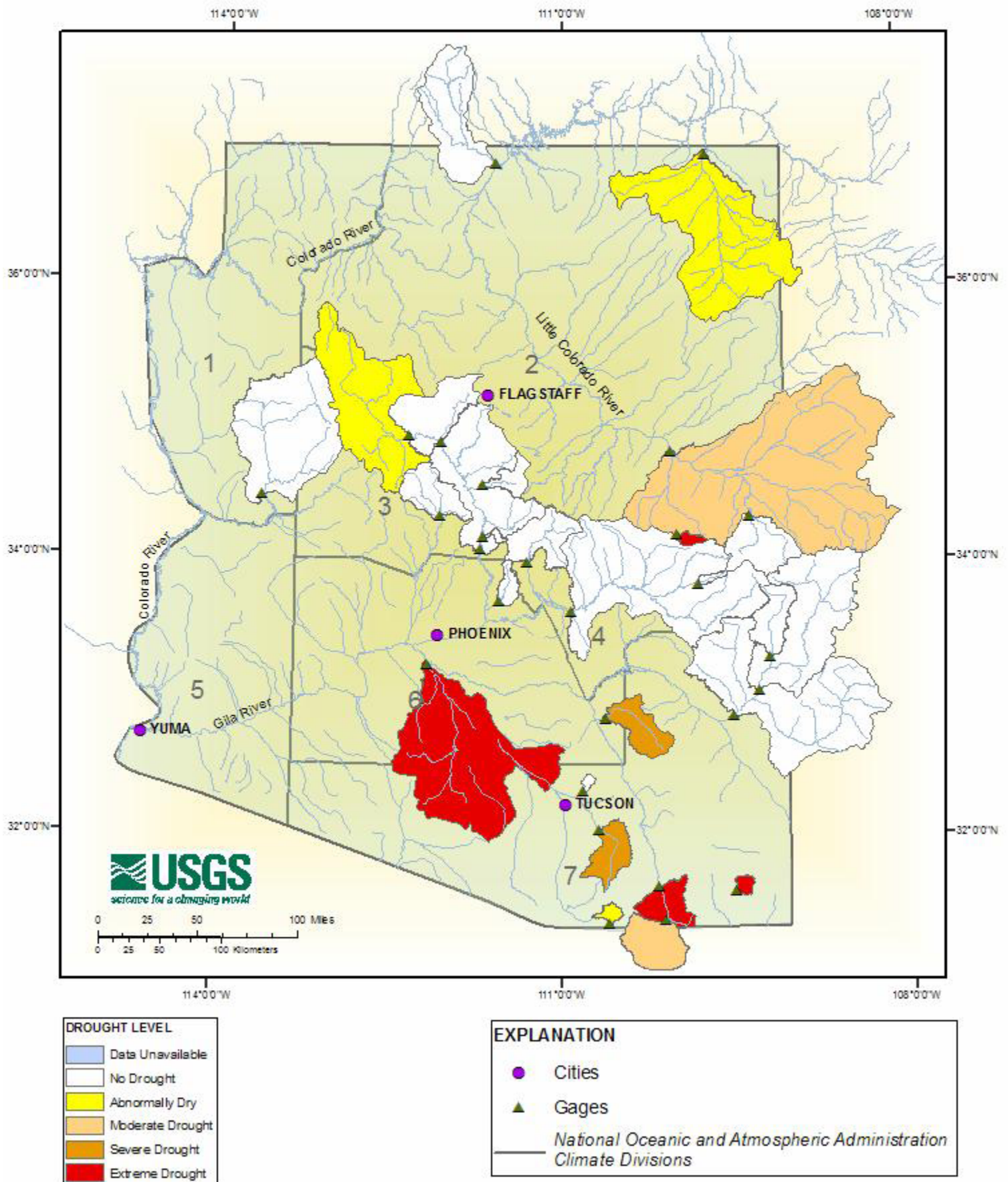


Figure 1—Continued.

# Drought Levels Based on Monthly Streamflow Discharge

July 2005

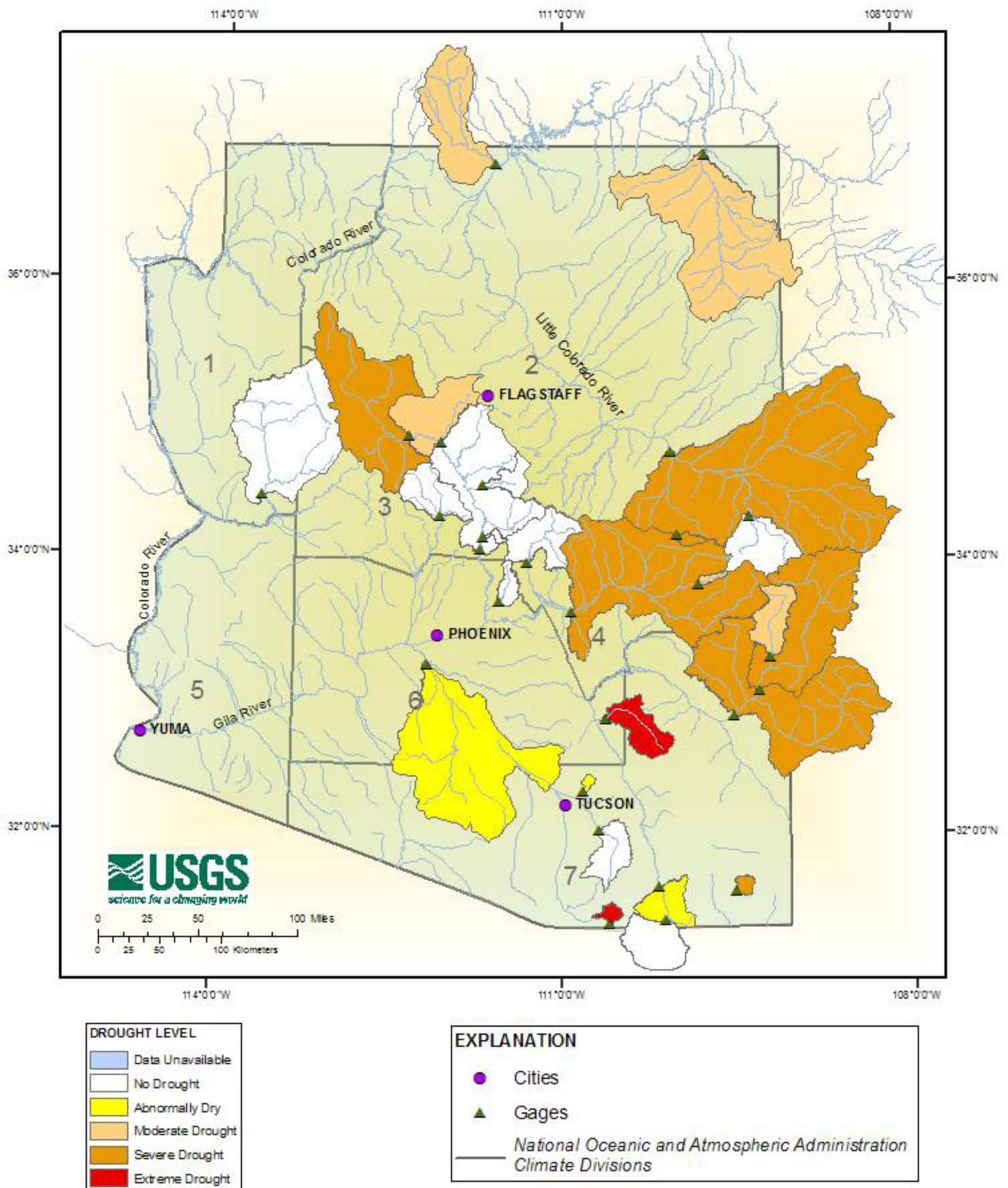


Figure 1—Continued.

# Drought Levels Based on Monthly Streamflow Discharge

August 2005

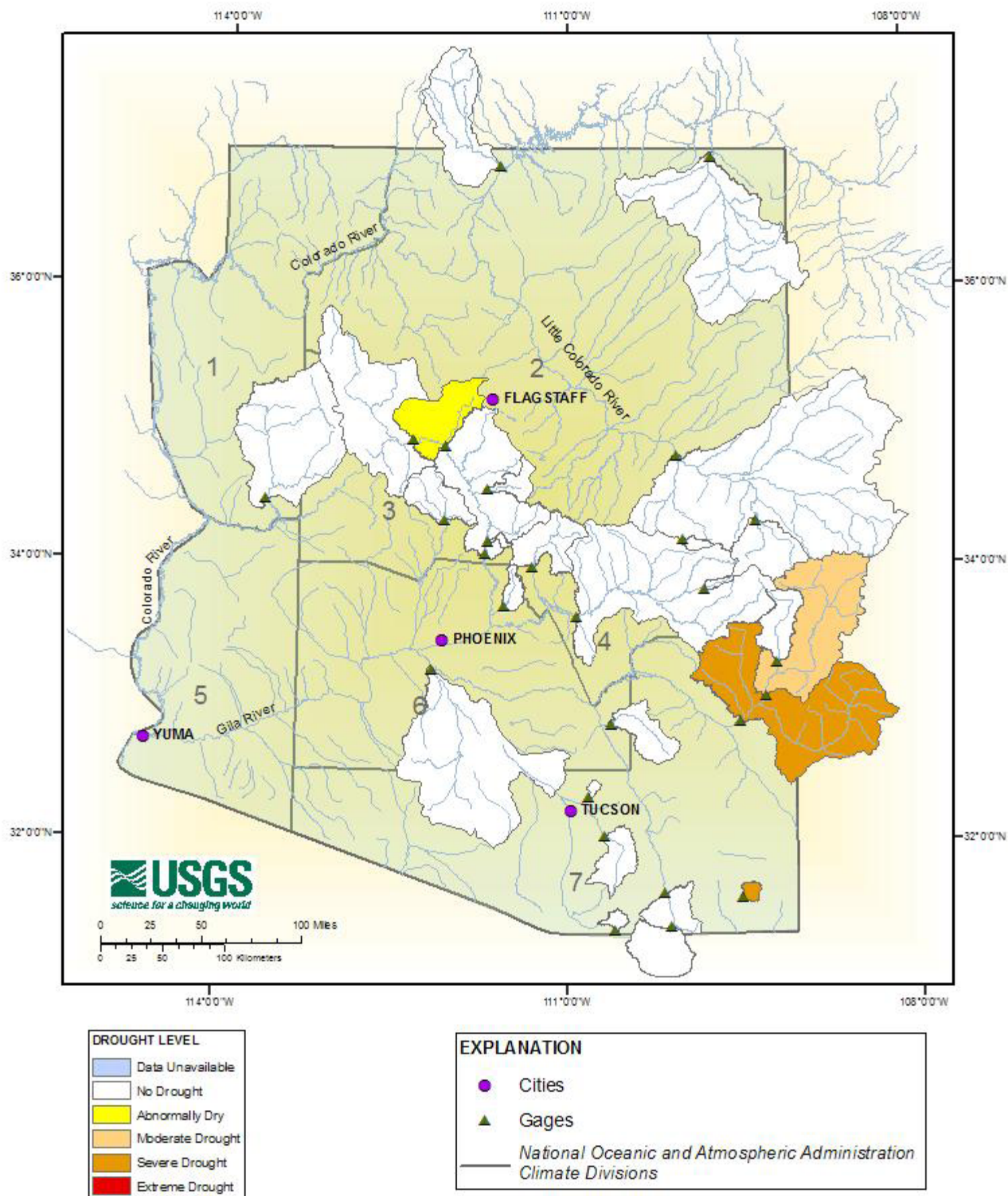


Figure 1—Continued.

# Drought Levels Based on Monthly Streamflow Discharge

September 2005

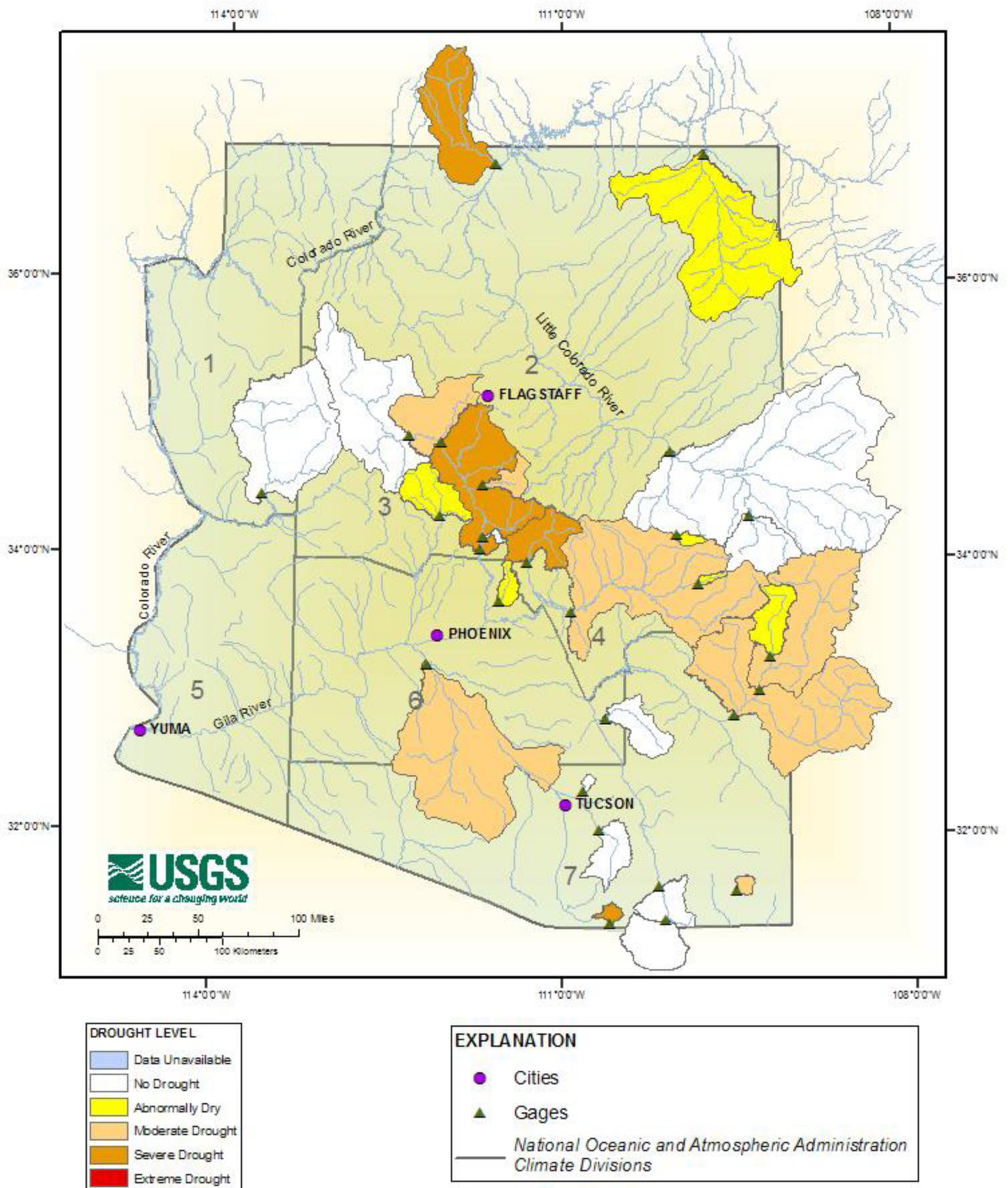


Figure 1—Continued.



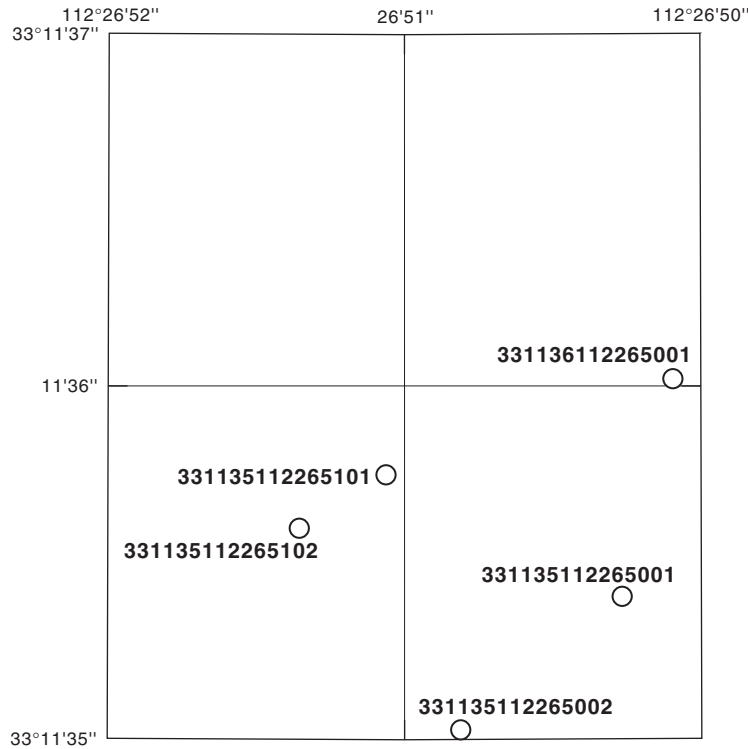
## **DOWNSTREAM ORDER AND STATION NUMBER**

Since October 1, 1950, hydrologic-station records in USGS reports have been listed in order of downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary entering between two main-stream stations is listed between those stations. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is located with respect to the stream to which it is immediately tributary is indicated by an indentation in that list of stations in the front of this report. Each indentation represents one rank. This downstream order and system of indentation indicates which stations are on tributaries between any two stations and the rank of the tributary on which each station is located.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 09004100, which appears just to the left of the station name, includes a 2-digit part number "09" plus the 6-digit (or 8-digit) downstream order number "004100." In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

## **NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES**

The USGS well and miscellaneous site-numbering system is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, and the next 7 digits denote degrees, minutes, and seconds of longitude; the last 2 digits are a sequential number for wells within a 1-second grid. In the event that the latitude-longitude coordinates for a well and miscellaneous site are the same, a sequential number such as "01," "02," and so forth, would be assigned as one would for wells (see fig. 2). The 8-digit, downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

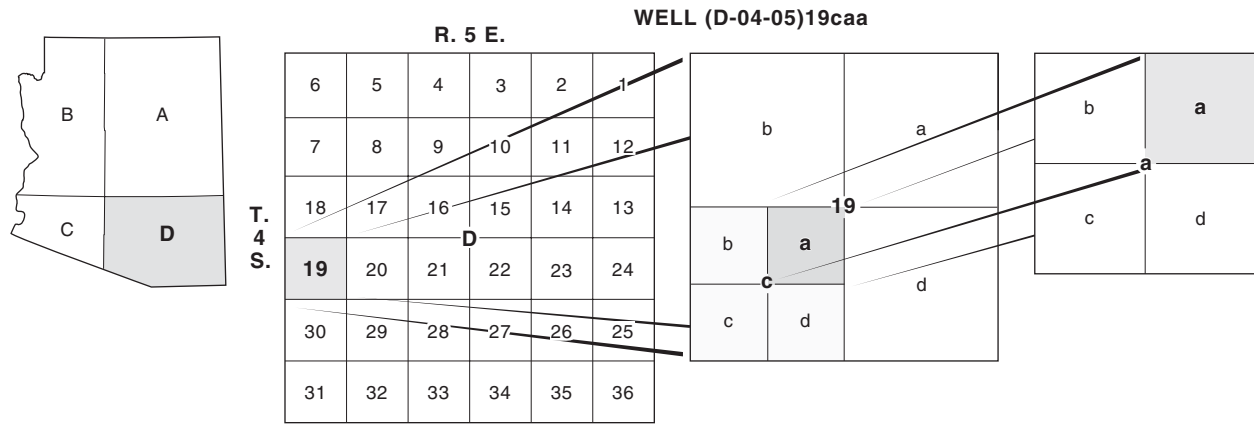


**Figure 2.** System for numbering wells and miscellaneous sites (latitude and longitude)

A local well number is assigned to each ground-water site on the basis of the Gila and Salt River meridian and base line (fig. 3). A different numbering system is used on the Navajo and Hopi Indian Reservations. The Navajo Indian Reservation is divided into 17 administrative districts, numbered 1 to 5 and 7 to 18, and the Hopi Indian Reservation comprises district 6. The area is further divided into 15-minute quadrangles arbitrarily numbered from 1 to 151 starting in the northeast corner of the area and numbered consecutively in rows from east to west. Within the 15-minute quadrangle, the well is located in miles south and west from the northeast corner of the quadrangle. The first two numbers in the well number represent the district, the next three numbers are the quadrangle, the decimal numbers are miles west by (X) miles south of the northeast corner of the quadrangle. Thus, the number 02 021-05.28X10.68 states that the well is in district 2, quadrangle 21, and is 5.28 miles west by 10.68 miles south of the northeast corner of the quadrangle.

The well numbers used by the USGS in Arizona are in accordance with the Bureau of Land Management's system of land subdivision. The land survey in Arizona is based on the Gila and Salt River meridian and base line, which divide the State into four quadrants. These quadrants are designated counterclockwise by the capital letters A, B, C, and D. All land north and east of the point of origin is in A quadrant, that north and west in B quadrant, that south and west in C quadrant, and that south and east in D quadrant. The first digit of a well number indicates the township, the second the range, and the third the section in which the well is situated. The lowercase letters a, b, c, and d after the section number indicate the well location within the section. The first letter denotes a particular 160-acre tract, the second the 40-acre tract, and the third the 10-acre tract. These letters also are assigned in a counterclockwise direction, beginning in the northeast quarter. If the location is known within the 10-acre tract, three lowercase letters are shown in the well number. In the example shown, well number (D-04-05)19caa designates the well as being in the NE1/4NE1/4SW1/4 sec. 19, T. 4 S., R. 5 E. Where more than one well is within a 10-acre tract, consecutive numbers beginning with 1 are added as suffixes.

WELL-NUMBERING AND NAMING SYSTEM



**Quadrant D, Township 04 South, Range 05 East, section 19, quarter section c, quarter section a, quarter section a**

**Figure 3.** Well-numbering and naming system.

## SPECIAL NETWORKS AND PROGRAMS

**Hydrologic Benchmark Network** is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from <http://ny.cf.er.usgs.gov/hbn/>.

**National Stream-Quality Accounting Network (NASQAN)** is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of five stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from <http://water.usgs.gov/nasqan/>.

**The National Atmospheric Deposition Program/National Trends Network (NADP/NTN)** is a network of monitoring sites that provides continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from <http://bqs.usgs.gov/acidrain/>.

**The USGS National Water-Quality Assessment (NAWQA) Program** is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents is measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities for collaboration among the agencies. Additional information about the NAWQA Program may be accessed from <http://water.usgs.gov/nawqa/>.

**The USGS National Streamflow Information Program (NSIP)** is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from <http://water.usgs.gov/nsip/>.

The Central Arizona Basins (CAZB) NAWQA, which includes much of the Gila River above Gillespie Dam and the Phoenix and Tucson areas, began in 1994. Data on physical, chemical, and biological properties of ground-water and surface-water resources in the CAZB study unit will be combined with data from as many as 53 other study units to represent water-quality conditions of resources that provide more than 60 percent of the Nation's public supplies.

Arizona Fixed Station Network is part of the State quality monitoring program and includes a network of water-quality sites at established surface-water stations, except for Verde River above West Clear Creek. Some sites are sampled in conjunction with the NASQAN and NAWQA. This network provides essential data for State water-quality assessment programs including the biennial report required by the Federal Clean Water Act.

Station name	Station No.	NASQAN	Arizona Fixed Station Network
Colorado River at Lees Ferry	09380000		X
Colorado River above Diamond Creek	09404200	X	
Colorado River below Parker Dam	09427520		X
Gila River at the head of Safford Valley near Solomon	09448500		X
Gila River at Calva	09466500		X
Gila River at Kelvin	09474000		X
Pinal Creek at Inspiration Dam, near Globe	09498400		X
Salt River near Roosevelt	09498500		X
Salt River below Stewart Mountain Dam	09502000		X
Verde River near Clarkdale	09504000		X
East Verde River near Childs	09507980		X
Verde River below Tangle Creek above Horseshoe Dam	09508500		X
Verde River below Bartlett Dam	09510000		X
Gila River above diversions at Gillespie Dam	09518000		X
Colorado River at northerly international boundary, above Morelos Dam near Andrade, CA	09522000	X	X

## EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

### Data Collection and Computation

The base data collected at gaging stations (fig. 4) consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2, which may be accessed from <http://water.usgs.gov/pubs/twri/>. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standardization (ISO).

For stream-gaging stations, discharge-rating tables for any stage are prepared from stage-discharge curves. If extensions to the rating curves are necessary to express discharge greater than measured, the extensions are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams and weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features of the stream channel, the daily mean discharge is computed by the shifting-control method in which correction factors that are based on individual discharge measurements and notes by engineers and observers are used when applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the controlling section, the daily mean discharge is computed by the shifting-control method.

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage at some distance from the base gage..

An index velocity is measured using ultrasonic or acoustic instruments at some stream-gaging stations, and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

At some stations, the stage-discharge relation is affected by changing stage. At these stations, the rate of change in stage is used as a factor in computing discharge.

At some stream-gaging stations in the northern United States, the stage-discharge relation is affected by ice in the winter; therefore, computation of the discharge in the usual manner is impossible. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter-discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge from other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the volume or contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly changes are computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

## Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of three parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; and (5) a hydrograph of discharge.

### Station Manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments follow that clarify information presented under the various headings of the station description.

**LOCATION.**—Location information is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

**DRAINAGE AREA.**—Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

**PERIOD OF RECORD.**—This term indicates the time period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that its flow reasonably can be considered equivalent to flow at the present station.

**REVISED RECORDS.**—If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

**GAGE.**—The type of gage in current use, the datum of the current gage referred to a standard datum, and a condensed history of the types, locations, and datums of previous gages are given under this heading.

**REMARKS.**—All periods of estimated daily discharge either will be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See section titled Identifying Estimated Daily Discharge.) Information is presented relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, the outlet works and spillway, and the purpose and use of the reservoir.

**COOPERATION.**—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

**EXTREMES OUTSIDE PERIOD OF RECORD.**—Information here documents major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the USGS.

**REVISIONS.**—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based national data system, NWISWeb (<http://water.usgs.gov/nwis/nwis>). Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations to document the revision in a REVISED RECORDS entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the Arizona Water Science Center (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. Any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the REMARKS and in the inclusion of a stage-capacity table when daily volumes are given.

### **Peak Discharge Greater than Base Discharge**

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

### **Data Table of Daily Mean Values**

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed TOTAL gives the sum of the daily figures for each month; the line headed MEAN gives the arithmetic average flow in cubic feet per second for the



month; and the lines headed MAX and MIN give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month is expressed in cubic feet per second per square mile (line headed CF5M); or in inches (line headed IN); or in acre-feet (line headed AC-FT). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in effect or if the drainage area includes large noncontributing areas. At some stations, monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir volumes are given. These values are identified by a symbol and a corresponding footnote.

### **Statistics of Monthly Mean Data**

A tabular summary of the mean (line headed MEAN), maximum (MAX), and minimum (MIN) of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those values. The designated period will be expressed as FOR WATER YEARS \_\_-\_\_, BY WATER YEAR (WY), and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. The designated period will consist of all of the station record within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are consecutive, unless a break in the station record is indicated in the manuscript.

### **Summary Statistics**

A table titled SUMMARY STATISTICS follows the statistics of monthly mean data tabulation. This table consists of four columns with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, WATER YEARS \_\_-\_\_, will consist of all of the station records within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (see line headings below), except for the ANNUAL 7-DAY MINIMUM statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When the dates of occurrence do not fall within the selected water years listed in the heading, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration-curve statistics and runoff data also are given. Runoff data may be omitted if extensive regulation or diversion of flow is in effect in the drainage basin.

The following summary statistics data are provided with each continuous record of discharge. Comments that follow clarify information presented under the various line headings of the SUMMARY STATISTICS table.

**ANNUAL TOTAL.**—The sum of the daily mean values of discharge for the year.

**ANNUAL MEAN.**—The arithmetic mean for the individual daily mean discharges for the year noted or for the designated period.

**HIGHEST ANNUAL MEAN.**—The maximum annual mean discharge occurring for the designated period.

**LOWEST ANNUAL MEAN.**—The minimum annual mean discharge occurring for the designated period.

**HIGHEST DAILY MEAN.**—The maximum daily mean discharge for the year or for the designated period.

**LOWEST DAILY MEAN.**—The minimum daily mean discharge for the year or for the designated period.

**ANNUAL 7-DAY MINIMUM.**—The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. This value should not be confused with the 7-day 10-year low-flow statistic.

**MAXIMUM PEAK FLOW.**—The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

**MAXIMUM PEAK STAGE.**—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

**INSTANTANEOUS LOW FLOW.**—The minimum instantaneous discharge occurring for the water year or for the designated period.

**ANNUAL RUNOFF.**—Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicate the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.—The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.—The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.—The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first table lists annual maximum stage and discharge at crest-stage stations, and the second table lists discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are often made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for a special reason are called measurements at miscellaneous sites.

### **Identifying Estimated Daily Discharge**

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified. This identification is shown either by flagging individual daily values with the letter “e” and noting in a table footnote, “e—Estimated,” or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

### **Accuracy of Field Data and Computed Results**

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The degree of accuracy of the records is stated in the REMARKS in the station description. “Excellent” indicates that about 95 percent of the daily discharges are within 5 percent of the true value; “good” within 10 percent; and “fair,” within 15 percent. “Poor” indicates that daily discharges have less than “fair” accuracy. Different accuracies may be attributed to different parts of a given record.

Values of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft<sup>3</sup>/s; to the nearest tenths between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to three significant figures above 1,000 ft<sup>3</sup>/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharge values listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, values of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

## **Other Data Records Available**

Information of a more detailed nature than that published for most of the stream-gaging stations such as discharge measurements, gage-height records, and rating tables is available from the USGS Water Science Center. Also, most stream-gaging station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the USGS Water Science Center (see address that is shown on the back of the title page of this report).

## **EXPLANATION OF PRECIPITATION RECORDS**

### **Data Collection and Computation**

Rainfall data generally are collected using electronic data loggers that measure the rainfall in 0.01-inch increments every 15 minutes using either a tipping-bucket rain gage or a collection well gage. Twenty-four hour rainfall totals are tabulated and presented. A 24-hour period extends from just past midnight of the previous day to midnight of the current day. Snowfall-affected data can result during cold weather when snow fills the rain-gage funnel and then melts as temperatures rise. Snowfall-affected data are subject to errors. Missing values are indicated by this symbol “--” in the table.

### **Data Presentation**

Precipitation records collected at surface-water gaging stations are identified with the same station number and name as the stream-gaging station. Where a surface-water daily-record station is not available, the precipitation record is published with its own name and latitude-longitude identification number.

Information pertinent to the history of a precipitation station is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, period of record, and general remarks.

The following information is provided with each precipitation station. Comments that follow clarify information presented under the various headings of the station description.

**LOCATION.**—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

**PERIOD OF RECORD.**—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

**INSTRUMENTATION.**—Information on the type of rainfall collection system is given.

**REMARKS.**—Remarks provide added information pertinent to the collection, analysis, or computation of records.

## **EXPLANATION OF WATER-QUALITY RECORDS**

### **Collection and Examination of Data**

Surface-water samples for analysis usually are collected at or near stream-gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, water temperature, sediment discharge, and so forth); extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, sampling date, or other pertinent data are given in the table containing the chemical analyses of the ground water.

## Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRI's, which may be accessed from <http://water.usgs.gov/pubs/twri/>.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary considerably with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled at several verticals to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values (and sometimes mean or median values) for each constituent measured and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

## SURFACE-WATER-QUALITY RECORDS

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data are useful in the interpretation of surface-water quality. Records of surface-water quality in this report involve a variety of types of data and measurement frequencies.

### Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A *continuous-record station* is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A *partial-record station* is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A *miscellaneous sampling site* is a location other than a continuous- or partial-record station, where samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between *continuous records* as used in this report and *continuous recordings* that refer to a continuous graph or a series of discrete values recorded at short intervals. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 4 and 5.

## Accuracy of the Records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made. Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted..

Rating the accuracy of continuous water-quality records

[≤, less than or equal to; ±, plus or minus value shown; °C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured field parameter	Ratings of accuracy (Based on combined fouling and calibration drift corrections applied to the record)			
	Excellent	Good	Fair	Poor
Water temperature	≤ ±0.2 °C	> ±0.2 to 0.5 °C	> ±0.5 to 0.8 °C	> ±0.8 °C
Specific conductance	≤ ±3%	> ±3 to 10%	> ±10 to 15%	> ±15%
Dissolved oxygen	≤ ±0.3 mg/L	> ±0.3 to 0.5 mg/L	> ±0.5 to 0.8 mg/L	> ±0.8 mg/L
pH	≤ ±0.2 unit	> ±0.2 to 0.5 unit	> ±0.5 to 0.8 unit	> ±0.8 unit
Turbidity	≤ ±5%	> ±5 to 10%	> ±10 to 15%	> ±15%

## Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

## On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made onsite when the samples are collected. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from <http://water.usgs.gov/pubs/twri/>. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS Water Science Center (see address that is shown on the back of title page in this report).

## Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file at the Arizona Water Science Center.

## Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may be collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration are computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples are collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

## Laboratory Measurements

Samples for biochemical oxygen demand (BOD) and indicator bacteria are analyzed locally. All other samples are analyzed in the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRI, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. The TWRI publications may be accessed from <http://water.usgs.gov/pubs/twri/>. These methods are consistent with ASTM standards and generally follow ISO standards.



## Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of “daily values” of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

**LOCATION.**—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

**DRAINAGE AREA.**—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

**PERIOD OF RECORD.**—This indicates the time periods for which published water-quality records for the station are available. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

**INSTRUMENTATION.**—Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

**REMARKS.**—Remarks provide added information pertinent to the collection, analysis, or computation of the records.

**COOPERATION.**—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

**EXTREMES.**—Maximums and minimums are given only for parameters measured daily or more frequently. For parameters measured weekly or less frequently, true maximums or minimums may not have been obtained. Extremes, when given, are provided for both the period of record and for the current water year.

**REVISIONS.**—Records are revised if errors in published water-quality records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based national data system, NWISWeb (<http://waterdata.usgs.gov/nwis>). Users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent updates. Updates to the NWISWeb are made on an annual basis.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

## Remark Codes

The following remark codes may appear with the water-quality data in this section:

Printed Output	Remark
E	Value is estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified, but not quantified
N	Presumptive evidence of presence of material
U	Material specifically analyzed for, but not detected
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks
S	Most probable value.

## Water-Quality Control Data

The USGS National Water Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDLs) and laboratory reporting levels (LRLs). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. Falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a nondetection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as less than LRL for samples in which the analyte either was not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of "E." These data should be used with the understanding that their uncertainty is greater than that of data reported without the E remark code.

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by a USGS Water Science Center are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples. These data are not presented in this report but are available from the Arizona Water Science Center.

## Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated in the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. Many types of blank samples are possible; each is designed to segregate a different part of the overall data-collection process. The types of blank samples collected by this Science Center are:

**Field blank**—A blank solution that is subjected to all aspects of sample collection, field processing, preservation, transportation, and laboratory handling as an environmental sample.

**Trip blank**—A blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

**Equipment blank**—A blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

**Sampler blank**—A blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

**Filter blank**—A blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

**Splitter blank**—A blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

**Preservation blank**—A blank solution that is treated with the sampler preservatives used for an environmental sample.

## Reference Samples

Reference material is a solution or material prepared by a laboratory. The reference material composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

## Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. Many types of replicate samples are possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this Science Center are:

**Concurrent samples**—A type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating the collection of samples into two or more compositing containers.

**Sequential samples**—A type of replicate sample in which the samples are collected one after the other, typically over a short time.

**Split sample**—A type of replicate sample in which a sample is split into subsamples, each subsample contemporaneous in time and space.

### **Spike Samples**

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

## **GROUND-WATER LEVELS AND COMPACTION VALUES**

Since the 1940s, declines of several feet per year in ground-water levels have resulted in aquifer compaction in Picacho Basin, Avra Valley, and Tucson Basin. The USGS, in cooperation with the city of Tucson and the Arizona Department of Water Resources, has been collecting aquifer-compaction data with the use of vertical pipe extensometers in southern Arizona since 1979. Water-level and compaction data for 14 sites in the 2003 water year are summarized in this report. The 14 sites are shown in figure 9, and the water-level and compaction data are listed on page 302. Historical data are available from the Arizona Water Science Center in Tucson, Arizona

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is produced for local needs.

Water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land surface datum is a datum plane that is approximately at land surface at each well. Water levels in wells equipped with recording gages are recorded continuously. Water levels are reported to a tenth or a hundredth of a foot. Compaction of sediment data are reported to a thousandth of a foot.

## **EXPLANATION OF GROUND-WATER-LEVEL RECORDS**

Generally, only ground-water-level data from selected wells with continuous recorders from a basic network of observation wells are published in this report. This basic network contains observation wells located so that the most significant data are obtained from the fewest wells in the most important aquifers.

### **Site Identification Numbers**

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is produced for local needs. (See NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES in this report for a detailed explanation).

### **Data Collection and Computation**

Measurements are made in many types of wells, under varying conditions of access and at different temperatures; hence, neither the method of measurement nor the equipment can be standardized. At each

observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Most methods for collecting and analyzing water samples are described in the TWRI's referred to in the Onsite Measurements and Sample Collection and the Laboratory Measurements sections in this report. In addition, TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in TWRI's Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1 through A9. The TWRI publications may be accessed from <http://water.usgs.gov/pubs/twri/>. The values in this report represent water-quality conditions at the time of sampling, as much as possible, and that are consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. Trained personnel collected all samples. The wells sampled were pumped long enough to ensure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum above sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (EOM).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth of water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

## Data Presentation

Water-level data are presented in alphabetical order by county. The primary identification number for a given well is the 15-digit site identification number that appears in the upper left corner of the table. The secondary identification number is the local or county well number. Well locations are shown in figures 2 and 3; each well is identified on the map by its local well or county well number.

Each well record consists of three parts: the well description, the data table of water levels observed during the water year, and, for most wells, a hydrograph following the data table. Well descriptions are presented in the headings preceding the tabular data.

The following comments clarify information presented in these various headings.

**LOCATION.**—This paragraph follows the well-identification number and reports the hydrologic-unit number and a geographic point of reference. Latitudes and longitudes used in this report are reported as North American Datum of 1927 unless otherwise specified.

**AQUIFER.**—This entry designates by name and geologic age the aquifer that the well taps.

**WELL CHARACTERISTICS.**—This entry describes the well in terms of depth, casing diameter and depth or screened interval, method of construction, use, and changes since construction.

**INSTRUMENTATION.**—This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on continuous, monthly, or some other frequency of measurement.

**DATUM.**—This entry describes both the measuring point and the land-surface elevation at the well. The altitude of the land-surface datum is described in feet above the altitude datum; it is reported with a precision depending on the method of determination. The measuring point is described physically (such as top of casing, top of instrument shelf, and so forth), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above National Geodetic Vertical Datum of 1929 (NGVD 29); it is reported with a precision depending on the method of determination.

**REMARKS.**—This entry describes factors that may affect the water level in a well or the measurement of the water level, when various methods of measurement were begun, and the network (climatic, terrane, local, or areal effects) or the special project to which the well belongs.

**PERIOD OF RECORD.**—This entry indicates the time period for which records are published for the well, the month and year at the start of publication of water-level records by the USGS, and the words “to current year” if the records are to be continued into the following year. Time periods for which water-level records are available, but are not published by the USGS, may be noted.

**EXTREMES FOR PERIOD OF RECORD.**—This entry contains the highest and lowest instantaneously recorded or measured water levels of the period of published record, with respect to land-surface datum or sea level, and the dates of occurrence.

### **Water-Level Tables**

A table of water levels follows the well description for each well. Water-level measurements in this report are given in feet with reference to either sea level or land-surface datum (lsd). Missing records are indicated by dashes in place of the water-level value.

For wells not equipped with recorders, water-level measurements were obtained periodically by steel or electric tape. Tables of periodic water-level measurements in these wells show the date of measurement and the measured water-level value.

### **Hydrographs**

Hydrographs are a graphic display of water-level fluctuations over a period of time. In this report, current water year and, when appropriate, period-of-record hydrographs are shown. Hydrographs that display periodic water-level measurements show points that may be connected with a dashed line from one measurement to the next. Hydrographs that display recorder data show a solid line representing the mean water level recorded for each day. Missing data are indicated by a blank space or break in a hydrograph. Missing data may occur as a result of recorder malfunctions, battery failures, or mechanical problems related to the response of the recorder’s float mechanism to water-level fluctuations in a well.

## GROUND-WATER-QUALITY DATA

### Data Collection and Computation

The ground-water-quality data in this report were obtained as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some wells within a county but not for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality statewide.

Most methods for collecting and analyzing water samples are described in the TWRI, which may be accessed from <http://water.usgs.gov/pubs/twri/>. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in TWRI, Book 1, Chapter D2; Book 5, Chapters A1, A3, and A4; and Book 9, Chapters A1-A6. Also, detailed information on collecting, treating, and shipping samples may be obtained from the USGS Water Science Center (see address shown on back of title page in this report).

### Laboratory Measurements

Analysis for sulfide and measurement of alkalinity, pH, water temperature, specific conductance, and dissolved oxygen are performed onsite. All other sample analyses are performed at the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used by the USGS laboratory are given in TWRI, Book 1, Chapter D2 and Book 5, Chapters A1, A3, and A4, which may be accessed from <http://water.usgs.gov/pubs/twri/>.

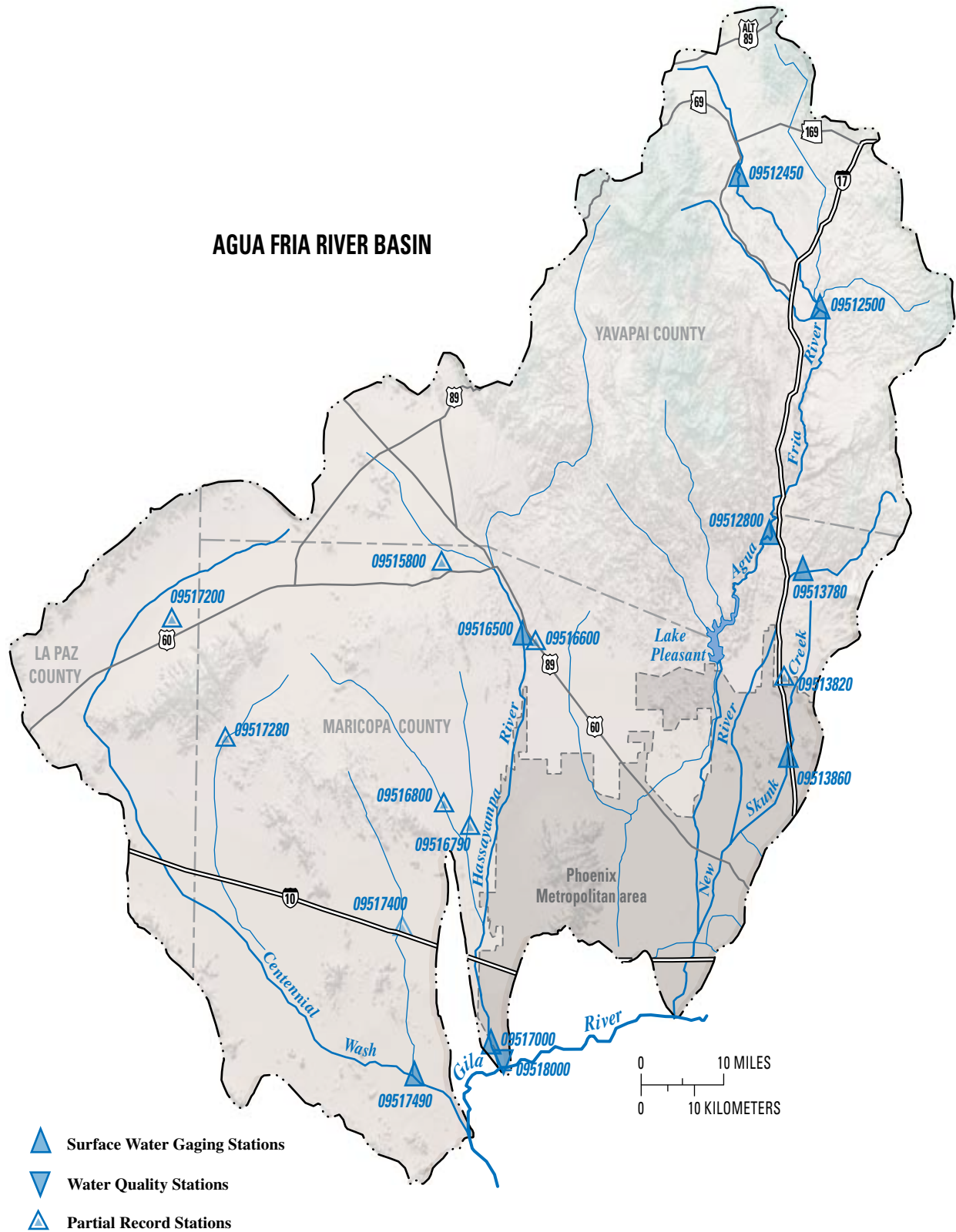
### ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed from <http://water.usgs.gov>.

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each USGS Water Science Center. (See address that is shown on the back of the title page of this report.)

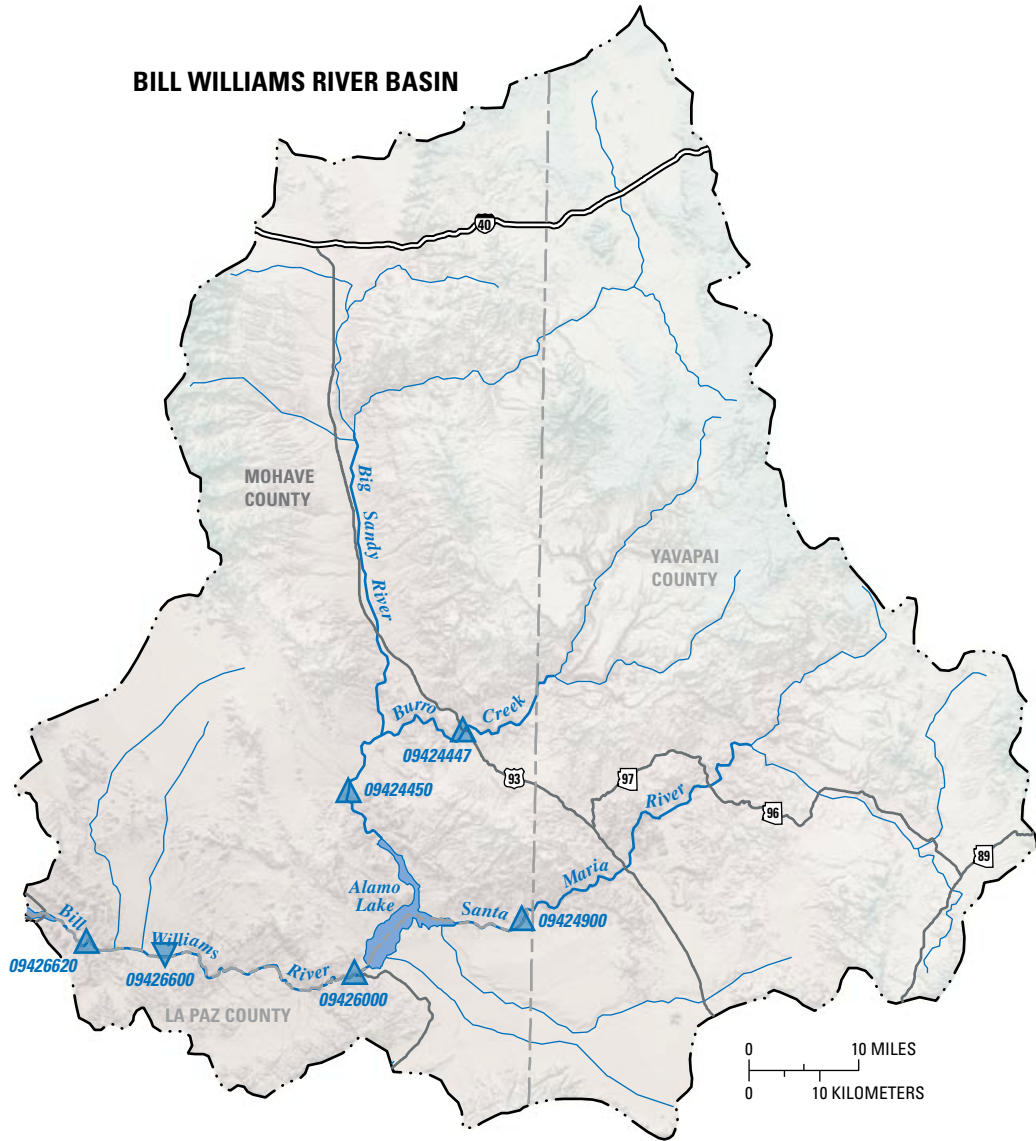
### DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, may be accessed from [http://water.usgs.gov/ADR\\_Defs\\_2005.pdf](http://water.usgs.gov/ADR_Defs_2005.pdf). Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from <http://water.usgs.gov/glossaries.html>.



**Figure 4.** Locations of streamflow-gaging, surface-water-quality, and partial record stations, water year 2005.

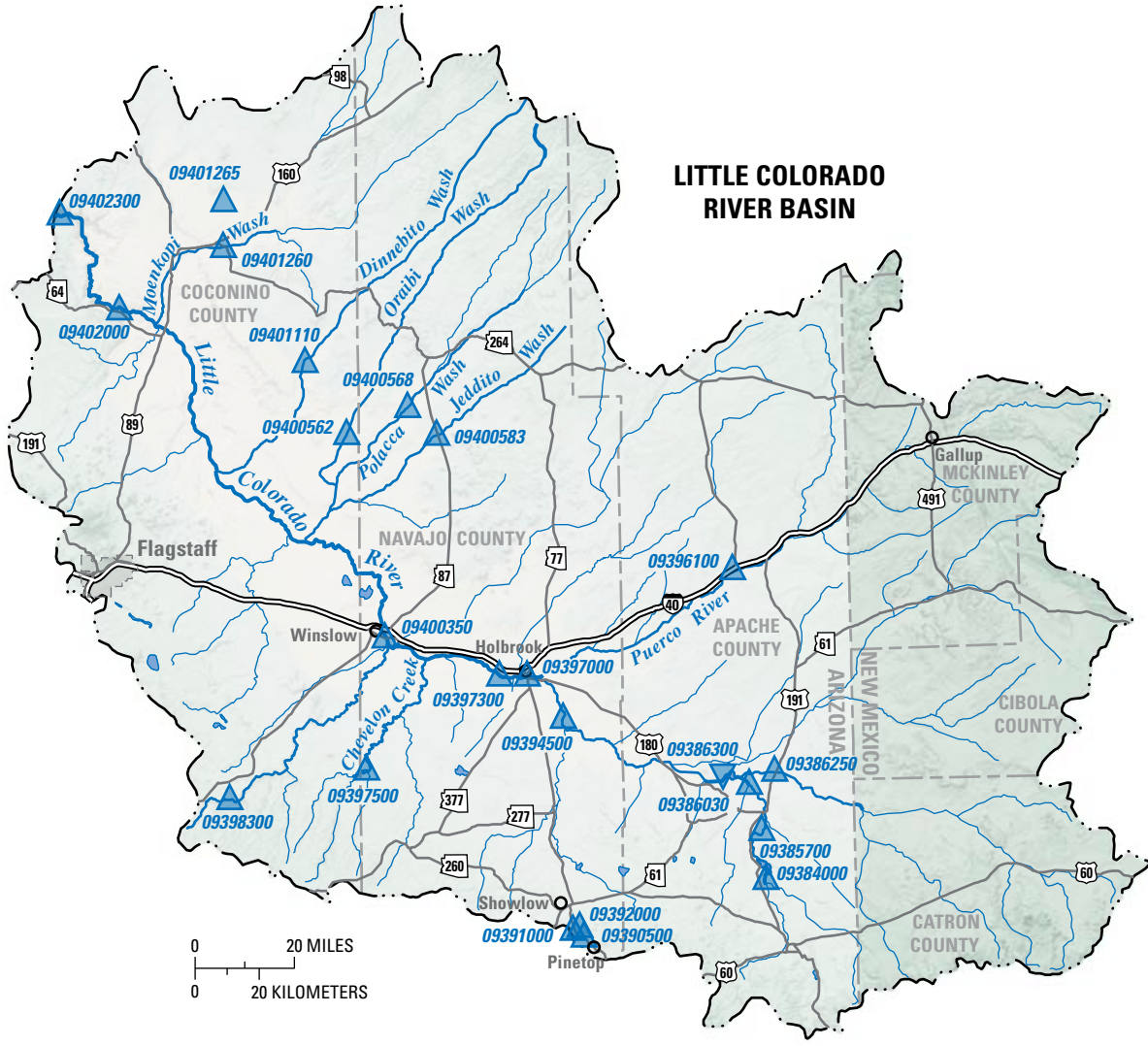




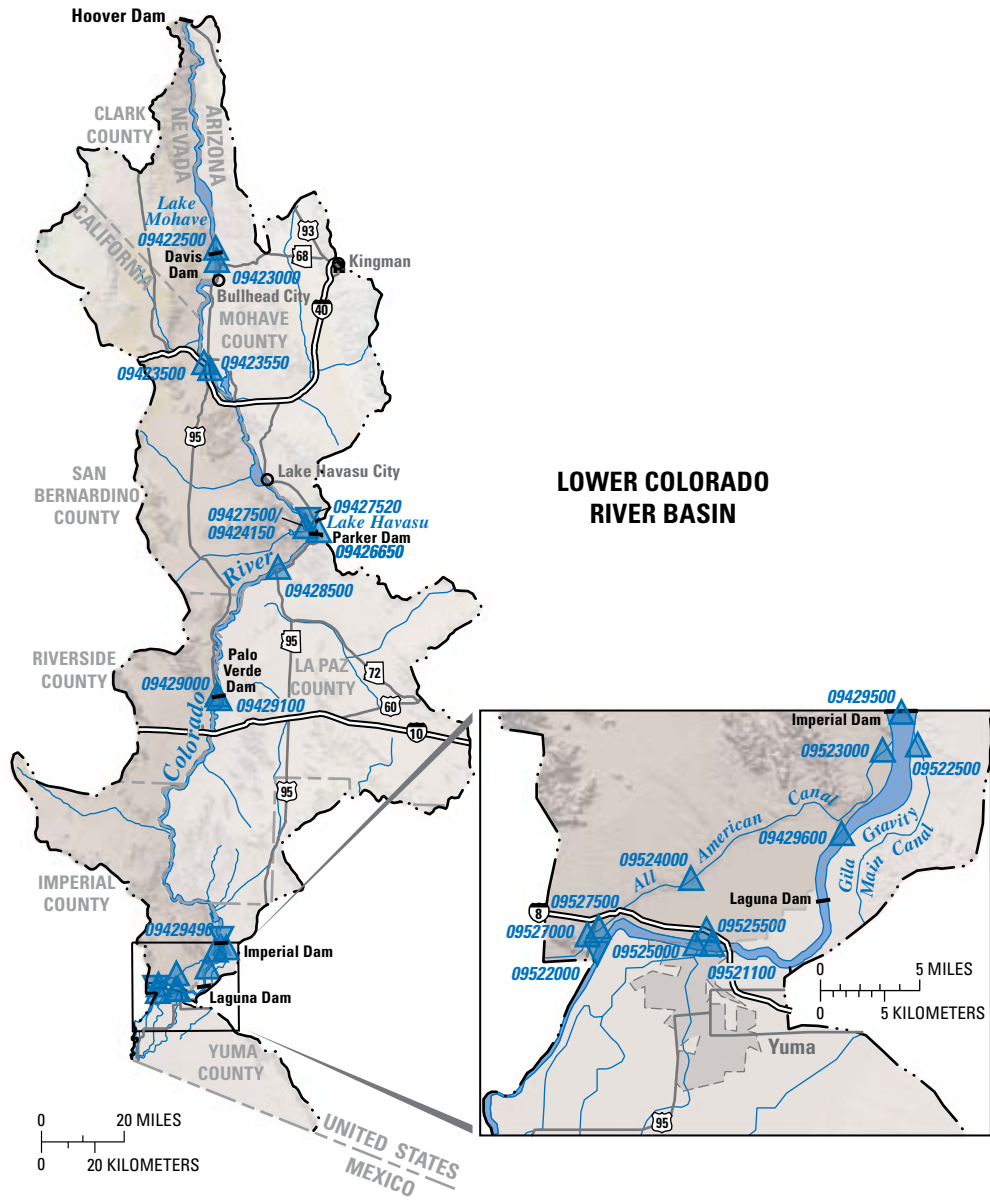
▲ Surface Water Gaging Stations

▼ Water Quality taken at a Surface Water site

**Figure 4**—Continued.



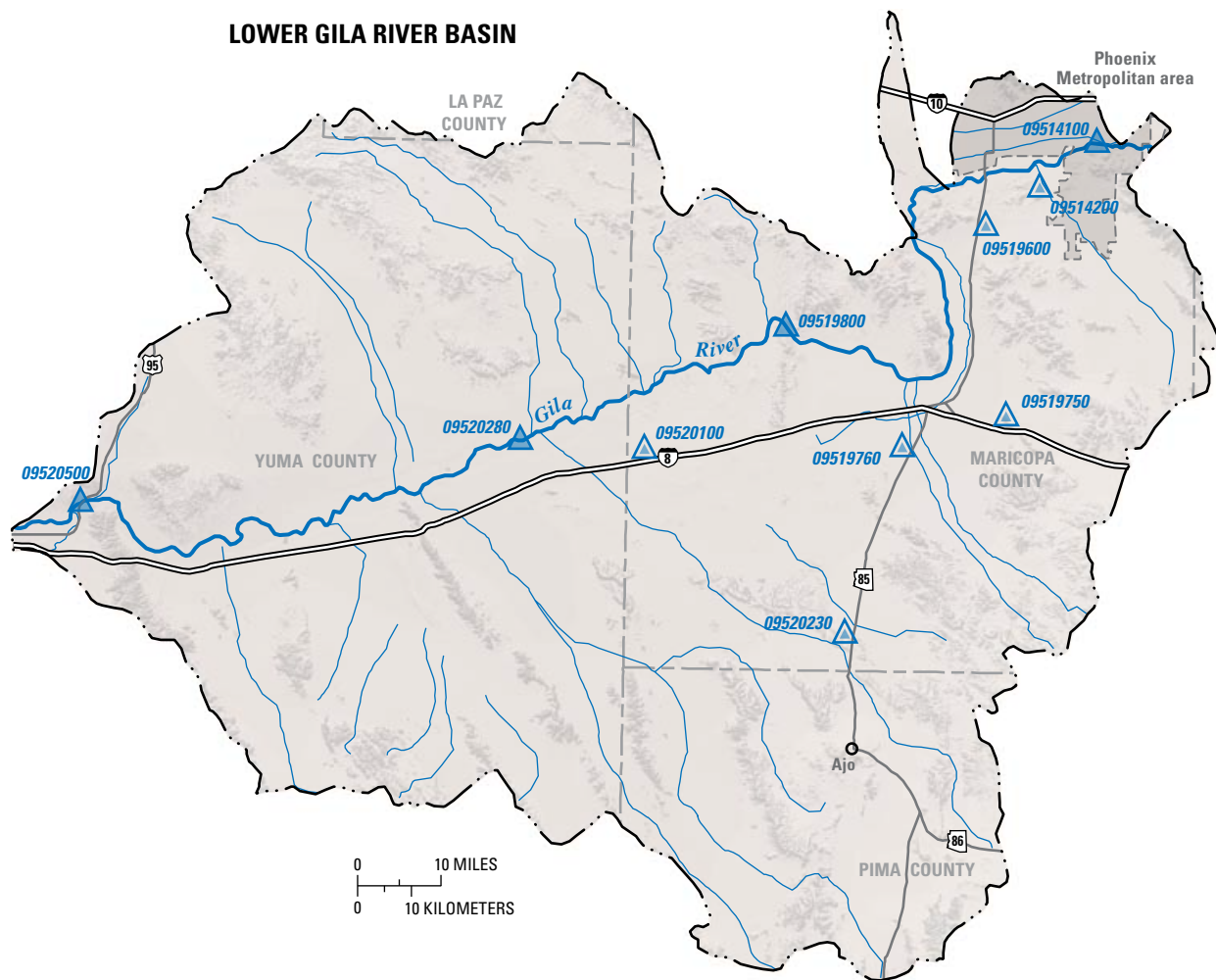
**Figure 4**—Continued.





- ▲ Surface Water Gaging Stations
- ▼ Water Quality taken at a Surface Water site

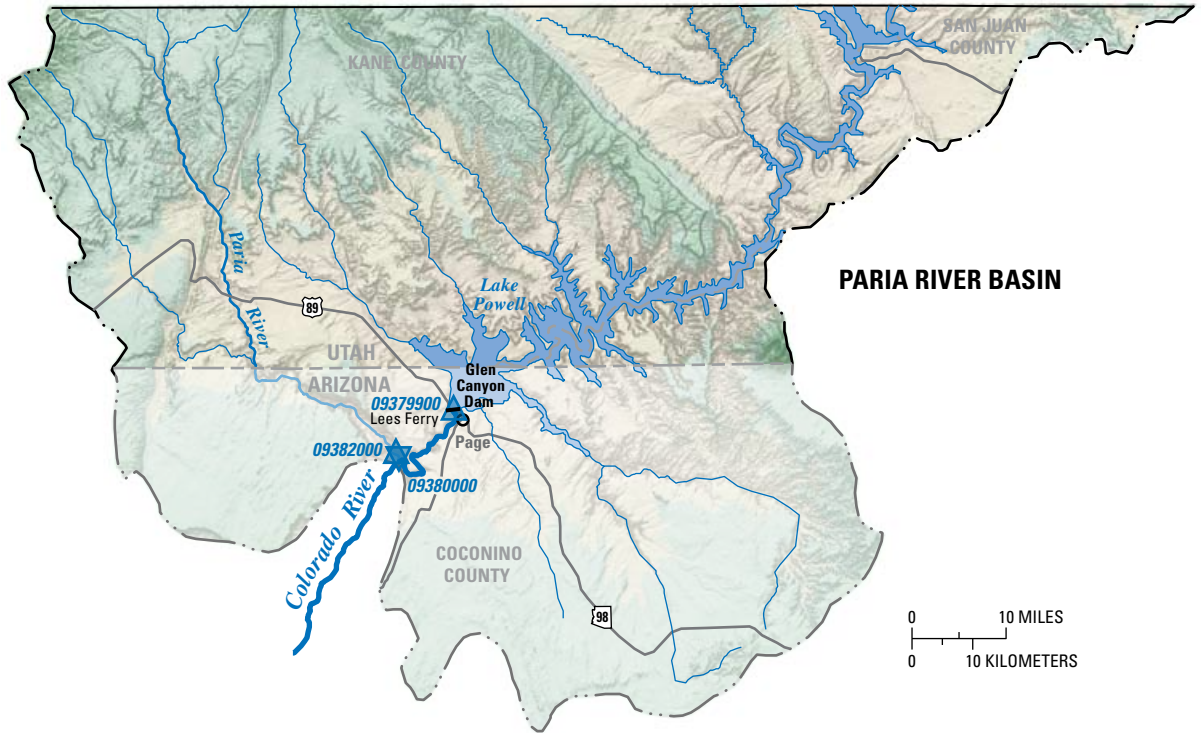
**Figure 4**—Continued.

### LOWER GILA RIVER BASIN



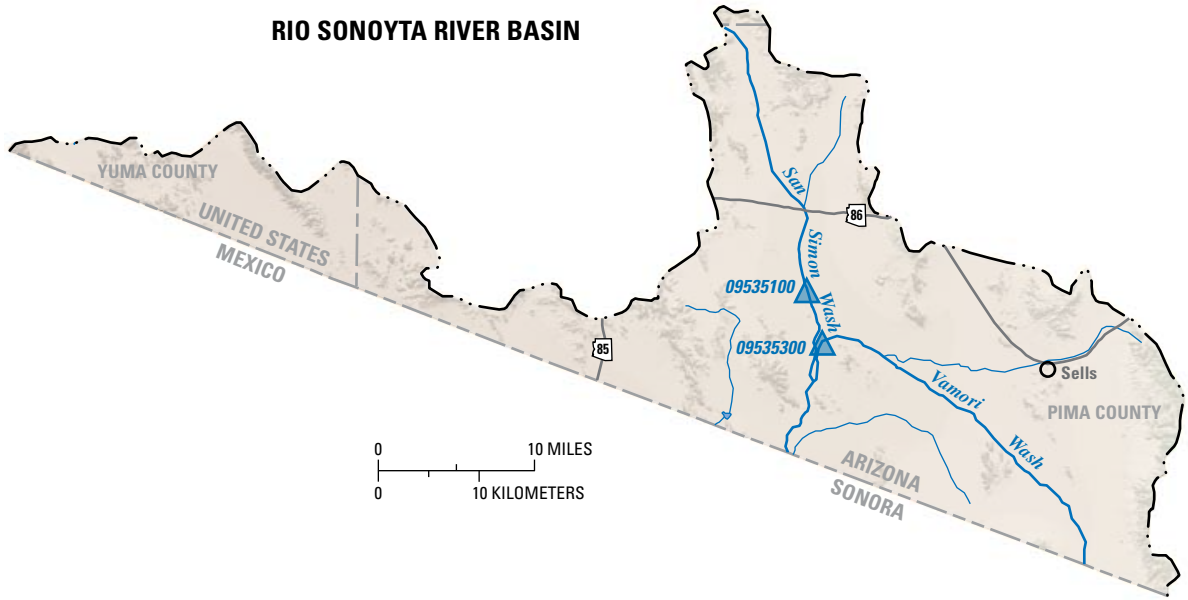
-  Surface Water Gaging Stations
-  Partial Record Stations

**Figure 4**—Continued.



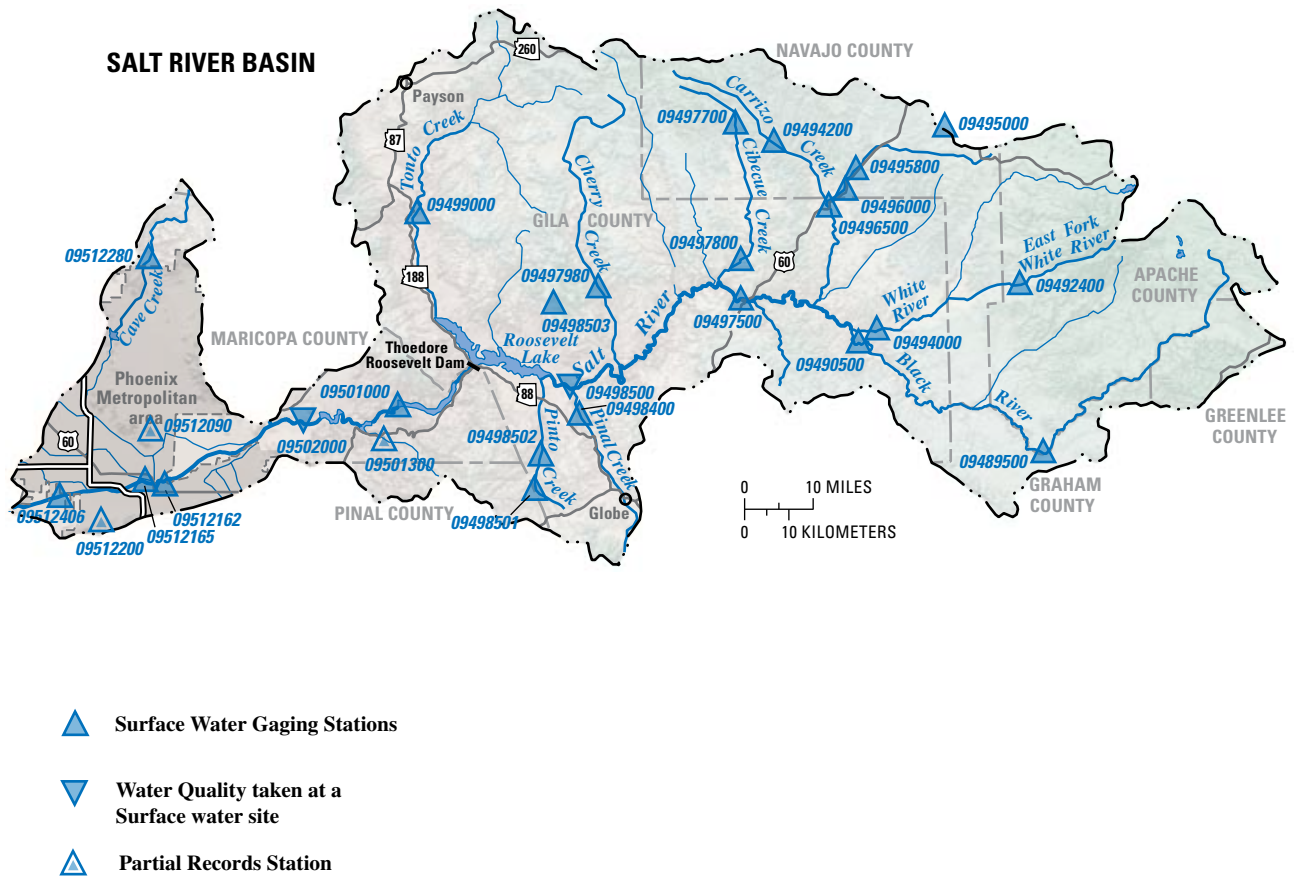
- ▲ Surface Water Gaging Stations
- ▼ Water Quality taken at a Surface Water site

**Figure 4**—Continued.

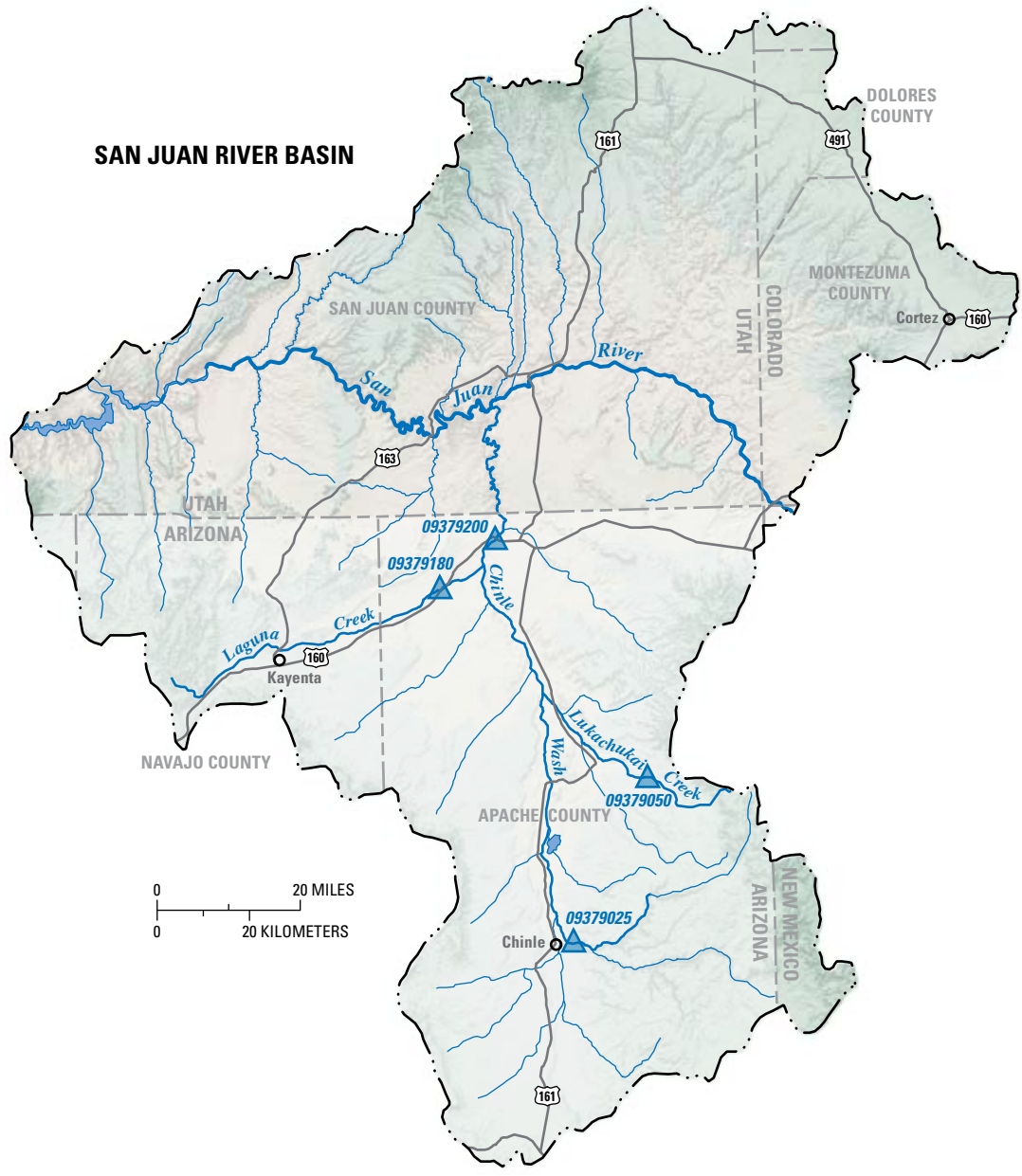


 Surface Water Gaging Stations

**Figure 4**—Continued.



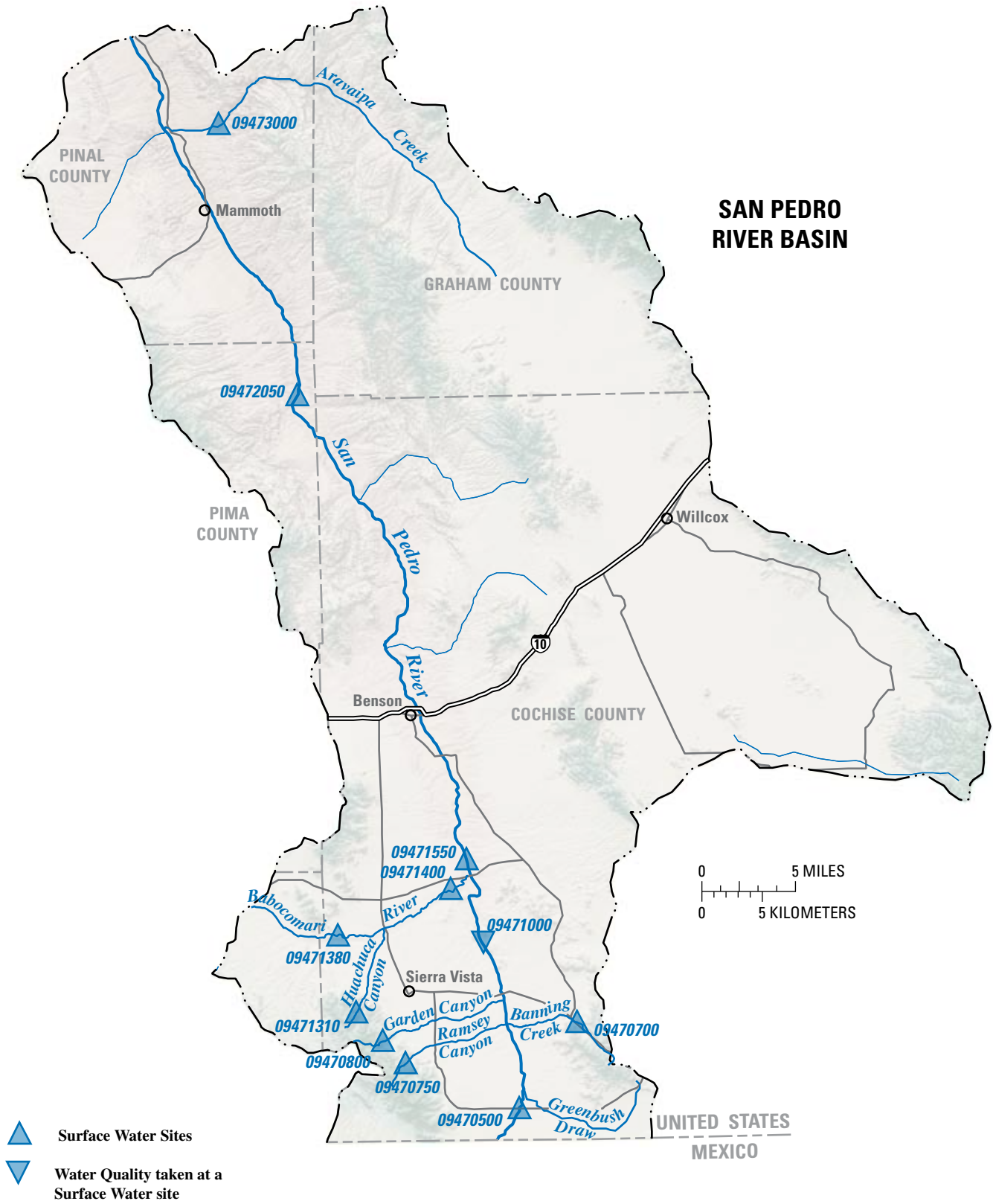
**Figure 4.**—Continued.



 Surface Water Gaging Stations

**Figure 4**—Continued.





**Figure 4**—Continued.

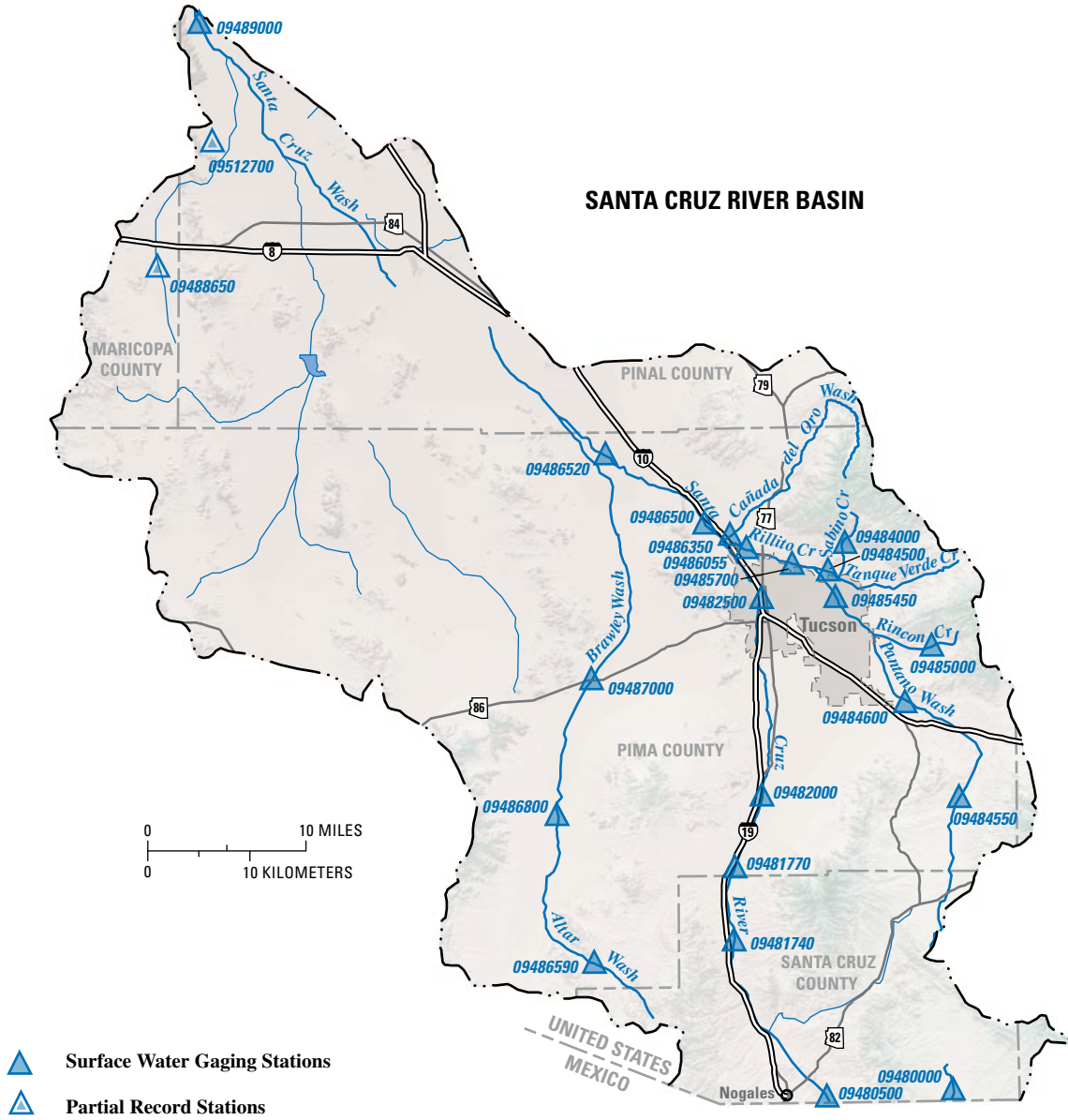
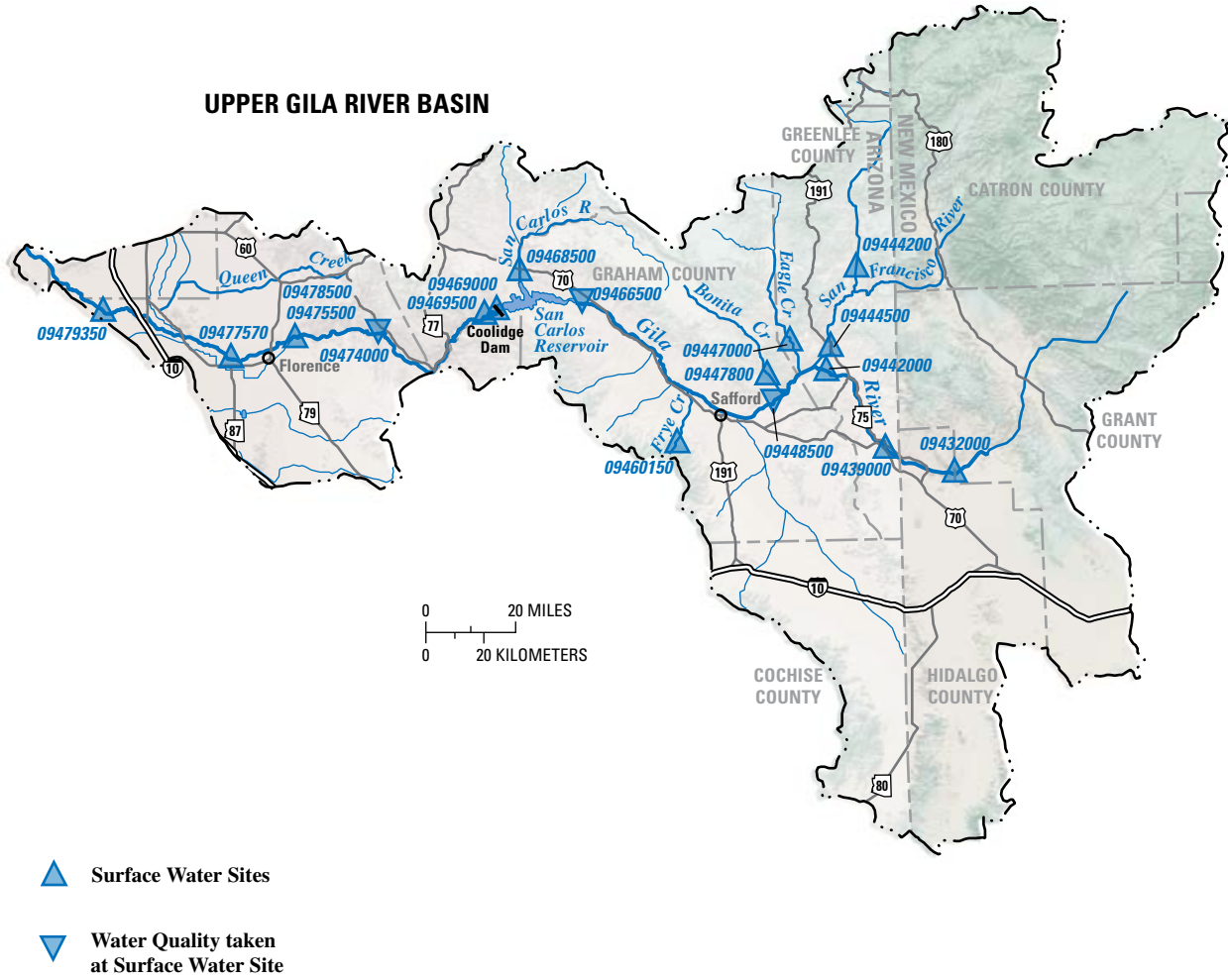


Figure 4—Continued.



**Figure 4**—Continued.

### VERDE RIVER BASIN

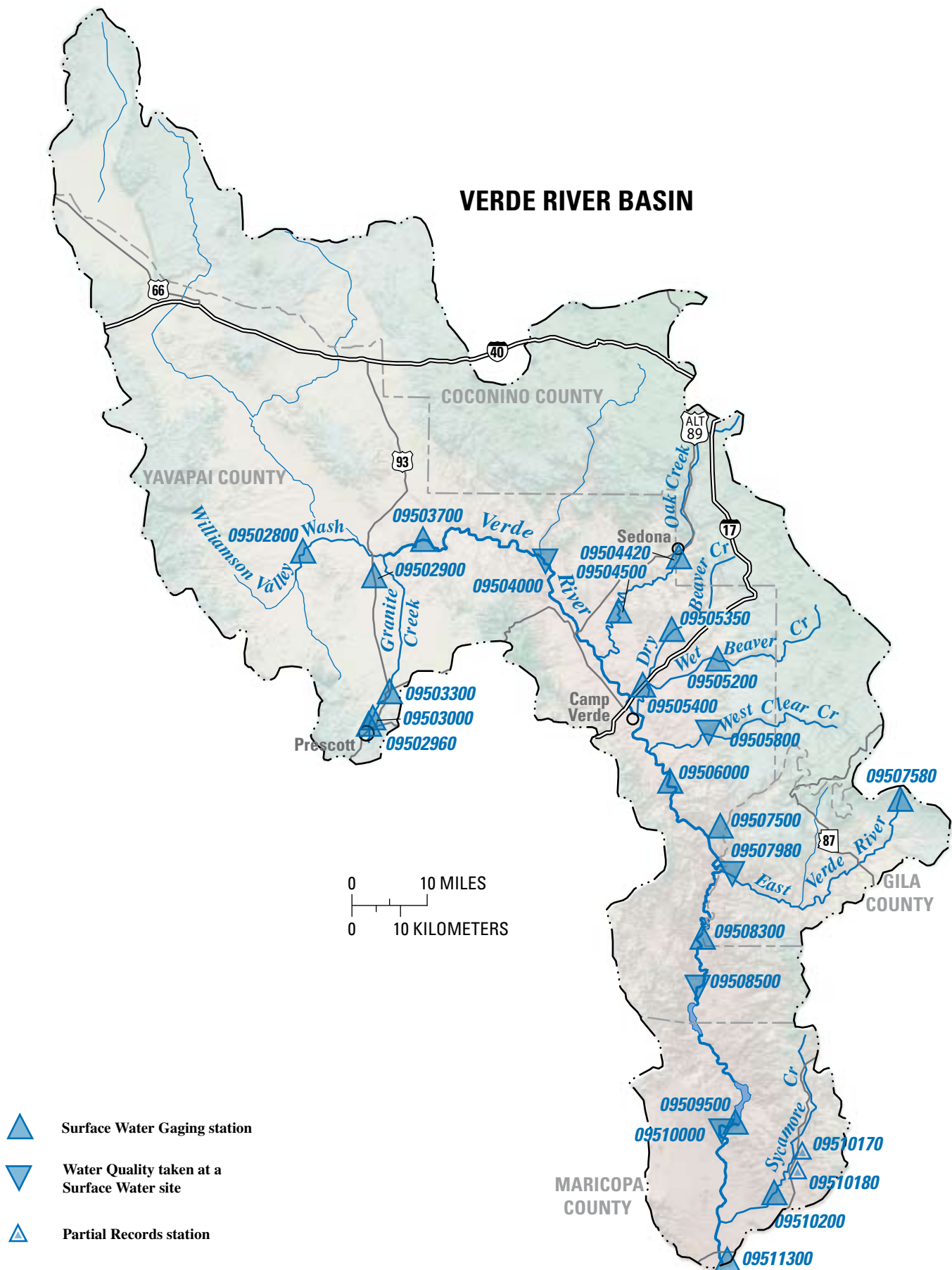
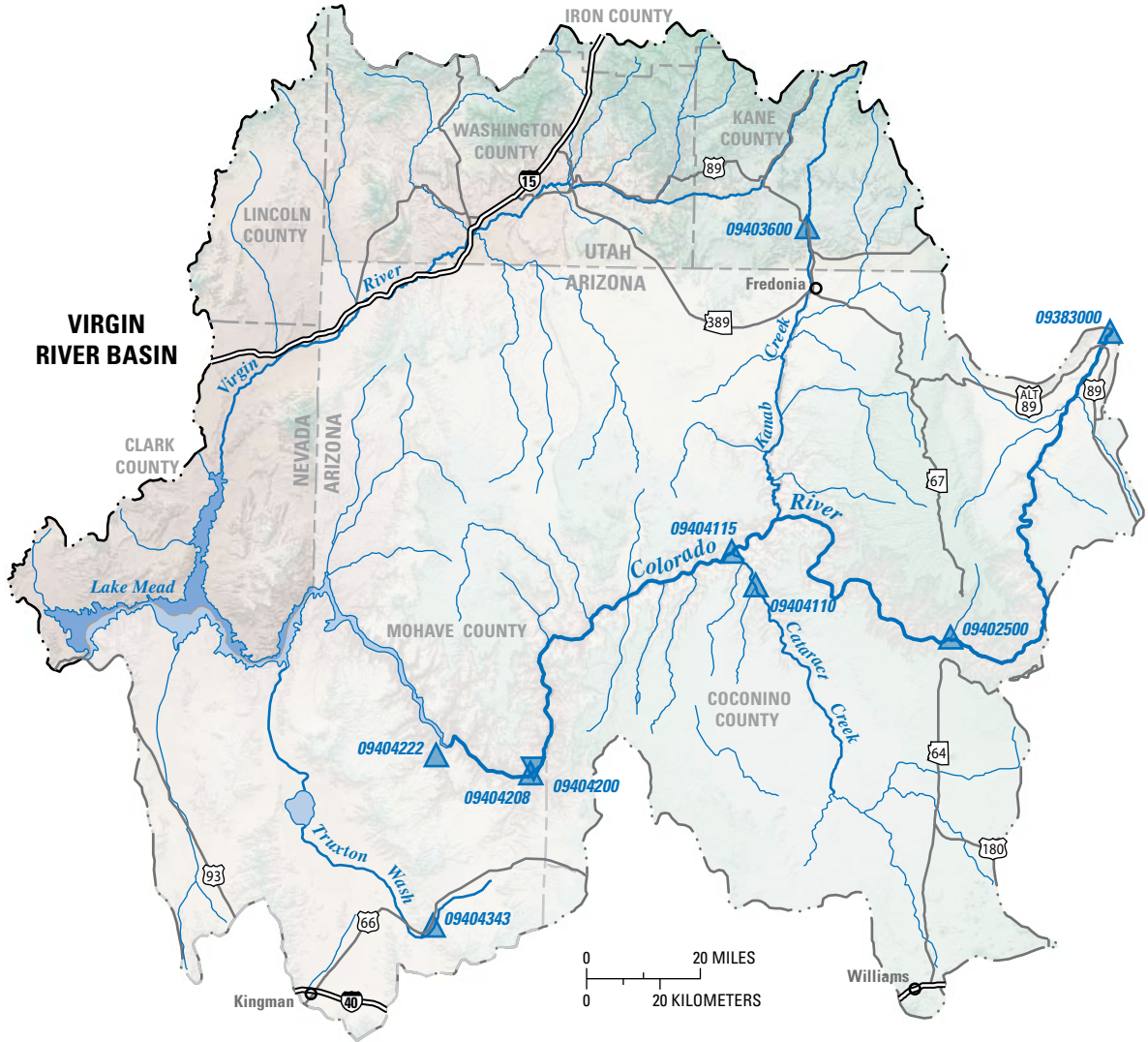
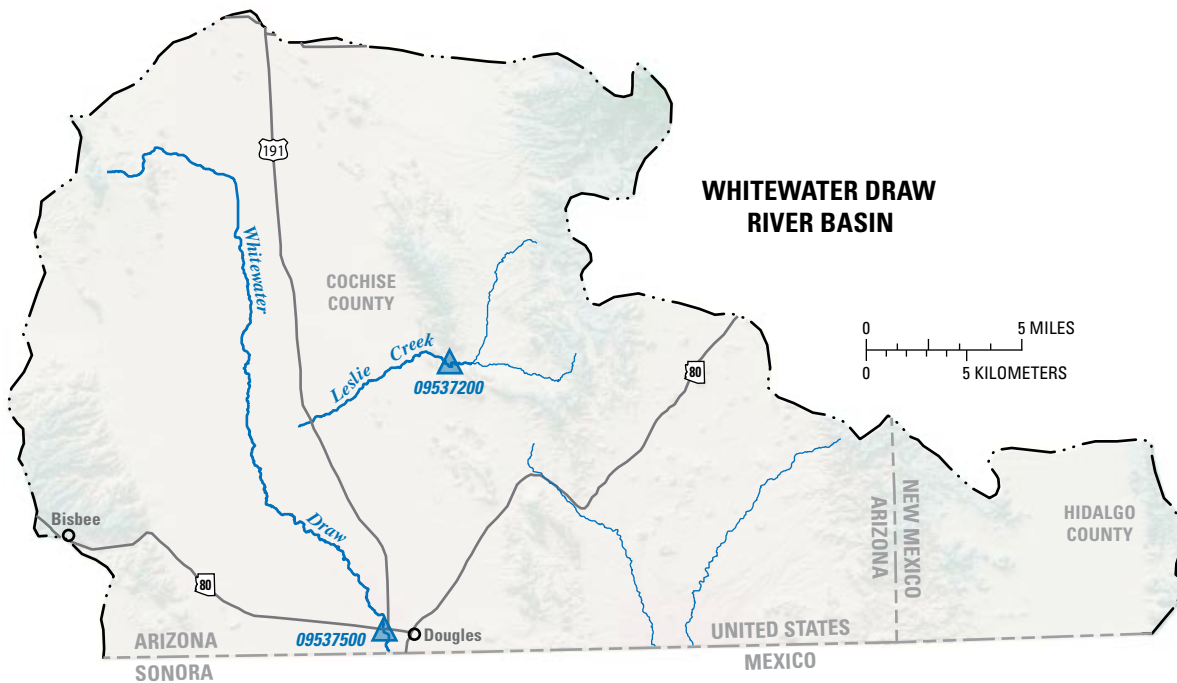


Figure 4—Continued.



- ▲ Surface Water Gaging Stations
- ▼ Water Quality taken at a Surface Water site

Figure 4—Continued.



▲ Surface Water Gaging Stations

Figure 4—Continued.

## HYDROLOGIC-DATA STATION RECORDS

## SAN JUAN RIVER BASIN

## 09379025 CHINLE CREEK AT CHINLE, AZ

**LOCATION**--Lat 36°09'18", long 109°32'15" (unsurveyed), Apache County, Hydrologic Unit 14080204, in Navajo Indian Reservation, in Canyon De Chelly National Park, 0.5 mi from park entrance on the right bank 300 ft downstream of State Highway 64 bridge.

**DRAINAGE AREA**--639 mi<sup>2</sup>.

**PERIOD OF RECORD**--Nov. 1999 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 5,540 ft above sea level, from topographic map.

**REMARKS**--Records poor. Flow regulated by Wheatfields and Tsaille Lakes. Some diversions upstream for irrigation, livestock tanks, and domestic use.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 2,490 ft<sup>3</sup>/s Sept. 8, 2005, gage height, 3.90 ft, maximum gage height 4.01 ft., Aug. 13, 2001. Minimum daily discharge, no flow for many days.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12.....	2345	1,160	3.44	Apr. 24.....	1945	560	3.15
Feb. 19.....	0615	728	3.25	Aug. 12 .....	0430	1,110	3.42
Apr. 8 .....	1100	545	3.14	Sept. 8 .....	unk	*2,490	*3.84
Apr. 14.....	0945	503	3.11				

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	0.00	0.00	14	58	35	58	69	15	0.00	1.2	0.00
2	4.1	0.00	0.00	15	58	34	53	72	15	0.00	0.00	0.00
3	0.00	0.00	0.00	19	50	38	36	73	17	0.00	0.00	0.00
4	0.87	0.00	0.00	35	54	39	44	117	16	0.00	0.00	0.00
5	0.00	0.00	0.00	24	54	33	68	95	15	0.00	0.02	0.00
6	0.00	0.00	0.00	9.7	66	40	93	114	15	0.00	0.00	0.00
7	0.00	0.00	0.00	9.1	65	38	96	109	13	0.00	0.00	0.00
8	0.00	0.00	2.9	14	62	38	275	105	18	0.00	0.00	57
9	0.00	0.00	3.4	19	58	35	302	134	13	0.00	0.00	67
10	0.00	0.00	1.9	24	59	39	147	118	12	0.00	0.00	3.0
11	0.00	0.00	2.1	140	67	42	67	108	16	0.00	0.00	0.42
12	0.00	0.00	1.6	40	187	55	71	98	15	0.00	141	0.00
13	0.00	4.7	2.1	3.3	158	57	109	56	14	0.00	4.0	0.00
14	0.00	0.64	3.5	0.62	30	63	295	77	17	0.00	0.79	0.00
15	0.00	0.49	1.9	2.2	18	48	180	70	15	0.00	4.6	0.00
16	0.00	0.47	1.9	4.0	46	42	115	56	15	0.00	9.6	0.00
17	0.00	0.32	1.9	6.9	125	47	88	67	13	0.00	e2.6	0.00
18	0.00	0.34	1.7	9.8	39	52	95	57	16	0.00	e0.07	0.00
19	0.00	0.45	1.0	15	236	43	111	54	14	0.00	0.00	0.00
20	0.00	0.70	0.94	24	58	49	92	24	14	0.00	0.00	0.00
21	0.00	1.6	3.2	27	83	52	76	27	14	0.00	0.00	0.00
22	0.00	1.4	3.0	40	74	41	95	21	16	0.00	0.00	0.00
23	0.00	1.6	1.9	39	89	49	81	22	7.0	0.00	0.00	0.00
24	0.00	1.3	0.00	44	40	42	231	23	0.28	0.00	0.00	0.00
25	0.00	1.3	0.00	48	34	49	73	23	0.00	0.00	0.00	0.00
26	0.00	0.90	0.00	36	33	58	63	15	0.00	0.00	0.00	0.00
27	0.00	1.1	0.00	55	31	47	73	13	0.00	0.00	0.00	0.00
28	0.01	1.3	0.81	62	30	49	77	17	0.00	0.00	0.00	0.00
29	0.00	1.1	3.3	50	---	69	87	15	0.00	0.00	0.00	0.00
30	0.00	1.2	102	57	---	57	86	14	0.00	0.00	0.00	0.00
31	0.00	---	20	55	---	44	---	14	---	0.00	0.00	---
TOTAL	24.98	20.91	161.05	941.62	1962	1424	3337	1877	335.28	0.00	163.88	127.42
MEAN	0.81	0.70	5.20	30.4	70.1	45.9	111	60.5	11.2	0.00	5.29	4.25
MAX	20	4.7	102	140	236	69	302	134	18	0.00	141	67
MIN	0.00	0.00	0.00	0.62	18	33	36	13	0.00	0.00	0.00	0.00
MED	0.00	0.46	1.7	24	58	44	88	57	14	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2005, BY WATER YEAR (WY)

	MEAN	0.76	0.14	2.13	10.3	29.1	28.3	49.2	16.5	1.86	0.86	2.78	3.24
MAX	2.54	0.70	7.08	30.4	70.1	45.9	111	60.5	11.2	2.08	8.20	7.85	
(WY)	2004	2005	2000	2005	2005	2005	2005	2005	2005	2004	2001	2003	
MIN	0.00	0.00	0.00	0.10	3.21	8.67	0.04	0.00	0.00	0.00	0.00	0.00	
(WY)	2002	2001	2002	2002	2002	2002	2002	2000	2000	2005	2004	2000	

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 2000 - 2005
ANNUAL TOTAL	5495.74	10375.14	
ANNUAL MEAN	15.0	28.4	12.7
HIGHEST ANNUAL MEAN			28.4
LOWEST ANNUAL MEAN			1.25
HIGHEST DAILY MEAN	132	302	302
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
10 PERCENT EXCEEDS	52	79	46
50 PERCENT EXCEEDS	0.65	3.5	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

SAN JUAN RIVER BASIN

09379050 LUKACHUKAI CREEK NEAR LUKACHUKAI, AZ

LOCATION.--Lat 36°28'39", long 109°20'58" (unsurveyed), Apache County, Hydrologic Unit 14080204, in Navajo Indian Reservation, on left bank 8 mi northwest of Lukachukai, AZ.

DRAINAGE AREA.--Unknown.

PERIOD OF RECORD.--Nov. 1999 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,750 ft above sea level, from topographic map.

REMARKS.--Records poor. Many small diversions upstream for irrigation and livestock.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft<sup>3</sup>/s Sept. 10, 2002, at 1345, gage height, 8.17 ft, from an extension of the rating curve. Minimum daily discharge, no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 7.....	2145	*151	*3.29

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	1.1	e2.5	4.3	7.5	6.5	3.2	18	0.01	<0.01	7.6	0.01
2	0.14	0.54	e2.5	3.1	4.1	5.5	4.2	20	0.01	<0.01	1.8	0.01
3	0.02	0.76	e2.2	4.6	4.3	6.8	4.4	22	0.02	<0.01	0.00	0.03
4	0.02	1.5	e2.8	7.6	4.0	4.9	6.6	22	0.01	<0.01	3.6	0.01
5	0.02	1.4	e2.2	3.7	4.6	6.6	6.4	23	0.01	<0.01	7.0	0.01
6	0.02	0.90	e2.3	1.6	5.5	6.4	7.2	23	0.01	<0.01	3.8	0.76
7	0.02	0.77	e2.3	0.29	7.0	6.1	8.9	21	0.01	<0.01	14	0.51
8	0.02	0.95	e2.6	4.2	6.6	5.3	12	17	<0.01	<0.01	e10	3.9
9	0.02	12	e2.6	4.9	2.8	5.1	18	18	<0.01	<0.01	e1.0	5.9
10	0.02	5.6	e3.3	5.8	3.6	5.4	21	20	<0.01	<0.01	e0.60	e2.9
11	0.02	2.4	e3.3	8.0	8.1	5.3	20	18	<0.01	<0.01	0.99	e1.3
12	0.02	3.5	e3.6	6.6	57	5.5	17	14	<0.01	<0.01	1.7	e0.50
13	0.02	12	e3.6	e5.6	31	6.2	20	13	<0.01	<0.01	1.6	e0.26
14	0.02	5.0	e3.4	e4.5	17	6.1	42	13	<0.01	<0.01	6.9	e0.10
15	0.02	5.0	e3.8	3.4	12	3.2	62	11	<0.01	<0.01	0.25	e0.05
16	0.02	4.4	e4.3	3.6	35	2.9	56	9.6	<0.01	0.01	6.2	e0.01
17	0.04	3.7	e4.2	3.6	13	3.5	61	9.1	<0.01	0.00	0.08	e0.01
18	0.05	3.1	e4.7	3.4	16	3.8	45	8.9	<0.01	0.01	0.01	e0.01
19	0.05	2.7	e4.3	3.4	29	3.6	43	7.9	<0.01	0.00	0.01	e0.01
20	0.04	4.6	e4.0	3.7	15	6.2	33	7.3	<0.01	0.00	0.01	e0.01
21	0.04	35	e3.9	5.3	10	3.9	29	6.9	<0.01	0.01	0.01	0.04
22	0.05	18	e4.0	4.4	10	2.4	25	4.8	<0.01	0.00	0.01	0.83
23	0.20	11	e4.4	3.6	10	3.9	26	1.6	<0.01	0.01	0.01	1.2
24	0.14	7.2	e6.5	2.9	8.8	1.7	41	1.9	<0.01	0.62	0.01	0.10
25	0.19	6.1	e7.4	3.2	7.9	4.7	36	0.43	<0.01	2.0	0.01	0.02
26	0.25	e5.7	e7.4	4.1	7.4	8.6	36	0.07	<0.01	0.00	0.01	0.01
27	0.73	5.3	e8.1	4.5	7.1	5.5	31	<0.01	<0.01	0.00	0.01	0.01
28	13	e4.1	e13	4.4	5.8	6.2	22	0.14	<0.01	0.00	0.01	e0.61
29	14	e3.0	26	2.9	---	7.2	20	0.05	<0.01	0.00	0.01	e0.04
30	3.1	e2.7	7.8	5.3	---	6.6	19	<0.01	<0.01	0.00	0.01	e0.01
31	2.6	---	5.9	7.9	---	3.8	---	<0.01	---	8.6	0.01	---
TOTAL	37.00	170.02	158.9	134.39	350.1	159.4	775.9	331.72	0.31	11.41	67.26	19.17
MEAN	1.19	5.67	5.13	4.34	12.5	5.14	25.9	10.7	0.01	0.37	2.17	0.64
MAX	14	35	26	8.0	57	8.6	62	23	0.02	8.6	14	5.9
MIN	0.02	0.54	2.2	0.29	2.8	1.7	3.2	0.01	0.01	0.00	0.00	0.01
MED	0.04	3.9	3.9	4.2	8.0	5.4	22	9.6	0.01	0.01	0.08	0.04
AC-FT	73	337	315	267	694	316	1540	658	0.6	23	133	38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2005, BY WATER YEAR (WY)

MEAN	1.39	1.89	1.44	1.86	3.92	4.06	10.5	2.59	0.12	0.88	4.14	2.74
MAX	3.32	5.67	5.13	4.34	12.5	6.10	25.9	10.7	0.62	2.50	8.84	6.87
(WY)	2004	2005	2005	2005	2005	2003	2005	2005	2004	2001	2000	2004
MIN	0.02	0.05	0.08	0.79	1.47	1.01	0.38	0.03	0.01	0.01	0.27	0.02
(WY)	2002	2002	2002	2001	2001	2002	2002	2002	2005	2000	2002	2001

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2000 - 2005	
ANNUAL TOTAL	1070.37		2215.58			
ANNUAL MEAN	2.92		6.07		3.02	
HIGHEST ANNUAL MEAN					6.07 2005	
LOWEST ANNUAL MEAN					0.89 2002	
HIGHEST DAILY MEAN	123	Sep 29	62	Apr 15	142	Aug 7 2001
LOWEST DAILY MEAN	0.01	May 12	0.00	Jul 17	0.00	May 29 2000
ANNUAL SEVEN-DAY MINIMUM	0.01	May 12	0.00	Jul 16	0.00	Jul 17 2001
ANNUAL RUNOFF (AC-FT)	2120		4390		2190	
10 PERCENT EXCEEDS	7.3		18		7.2	
50 PERCENT EXCEEDS	0.75		3.2		0.60	
90 PERCENT EXCEEDS	0.01		0.01		0.01	

e Estimated

< Actual value is known to be less than the value shown



## SAN JUAN RIVER BASIN

## 09379180 LAGUNA CREEK AT DENNEHOTSO, AZ

**LOCATION**--Lat 36°51'14", long 109°50'43", in unsurveyed Apache County, Hydrologic Unit 14080204, on right bank about 50 ft upstream from bridge, at Dennehotso, AZ.

**DRAINAGE AREA**--414 mi<sup>2</sup>.

**PERIOD OF RECORD**--July 1996 to September 30, 2005.

**GAGE**--Water-stage recorder. Elevation of gage is 4,985 ft above sea level, from topographic map.

**REMARKS**--Records poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 1,690 ft<sup>3</sup>/s, Sept. 16, 1997, gage height, 11.39 ft. Minimum daily discharge, no flow for many days.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
July 26 .....	1445	585	6.95
Aug. 10 .....	unk	*820	*7.97 a

Minimum daily discharge, no flow for many days.

a-from floodmark

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	0.38	0.27	4.1	4.0	e7.8	e4.4	3.0	0.00	0.00	2.6	0.00
2	2.0	0.12	0.01	e3.4	2.3	6.0	0.63	0.81	0.00	0.00	48	0.00
3	0.44	0.02	0.00	e3.0	2.3	e5.3	0.50	12	0.00	0.00	44	0.00
4	0.06	0.00	0.00	e3.1	2.4	e5.4	e0.00	8.9	0.00	0.00	22	24
5	0.00	0.00	0.00	e2.8	2.5	5.8	e0.00	5.9	0.00	0.00	8.4	17
6	0.00	0.00	0.00	e2.9	5.5	e7.1	0.00	1.7	0.00	0.00	6.0	6.1
7	0.00	0.14	0.00	e2.5	9.8	e7.4	0.00	0.48	0.00	0.00	55	3.7
8	0.00	0.36	0.00	e2.1	9.5	4.1	0.00	0.18	0.00	0.00	25	1.9
9	0.00	0.57	0.00	1.5	13	3.8	0.00	0.13	0.00	0.00	5.7	7.7
10	0.00	1.3	0.00	e2.6	12	2.5	0.00	0.24	0.00	0.00	e130	68
11	0.00	0.59	e6.3	e4.0	5.1	1.8	0.00	0.08	0.00	0.00	e299	27
12	0.00	0.22	e4.8	e6.6	80	e2.7	0.17	0.00	0.00	0.00	e259	6.3
13	0.00	12	e5.6	e6.0	63	e2.3	0.01	0.00	0.00	0.00	34	0.86
14	1.3	5.6	e6.0	e4.1	16	1.9	0.00	0.00	0.00	0.00	7.6	0.05
15	0.38	2.8	e5.0	1.5	4.8	e0.89	0.00	0.00	0.00	0.00	1.6	0.00
16	0.04	2.5	e3.7	8.9	3.0	e0.89	0.00	0.00	0.00	0.00	0.37	0.00
17	0.00	0.93	e2.2	7.8	5.7	0.34	0.00	0.00	0.00	0.00	1.7	0.00
18	0.00	1.2	1.3	6.1	5.2	0.59	0.00	0.00	0.00	0.00	2.5	0.00
19	0.00	1.0	0.27	6.4	4.7	e0.81	0.00	0.00	0.00	0.00	0.13	0.00
20	0.00	1.1	0.36	3.3	14	0.21	0.00	0.00	0.00	0.00	3.1	0.00
21	0.00	2.9	0.13	4.3	9.7	0.16	0.00	0.00	0.00	0.00	0.94	0.00
22	0.00	28	0.00	4.7	5.5	6.0	0.00	0.00	0.00	0.00	0.02	0.00
23	0.00	16	0.00	3.5	e0.72	0.77	0.00	0.00	0.00	0.00	0.00	0.00
24	0.62	6.2	0.00	2.8	e3.1	0.37	0.00	0.00	0.00	0.00	0.00	0.02
25	0.35	4.3	0.00	3.0	e9.8	0.29	16	0.00	0.00	27	0.00	0.00
26	0.29	5.0	0.00	4.3	e15	0.82	12	0.00	0.00	111	0.00	0.00
27	0.27	4.0	0.00	11	12	e3.3	4.1	0.00	0.00	42	0.00	0.00
28	0.36	e2.1	0.25	e15	e9.0	e6.9	0.89	0.00	0.00	11	0.00	0.00
29	11	0.64	e3.6	e15	---	e3.9	1.8	0.00	0.00	3.5	0.00	0.00
30	3.6	0.07	43	e8.4	---	e10	3.1	0.00	0.00	2.1	0.00	0.00
31	1.1	---	e8.1	4.9	---	e6.3	---	0.00	---	1.1	0.00	---
TOTAL	27.61	100.04	90.89	159.6	329.62	106.44	43.60	33.42	0.00	197.70	956.66	162.63
MEAN	0.89	3.33	2.93	5.15	11.8	3.43	1.45	1.08	0.00	6.38	30.9	5.42
MAX	11	28	43	15	80	10	16	12	0.00	111	299	68
MIN	0.00	0.00	0.00	1.5	0.72	0.16	0.00	0.00	0.00	0.00	0.00	0.00
MED	0.00	1.1	0.13	4.1	5.6	2.7	0.00	0.00	0.00	0.00	2.5	0.00
AC-FT	55	198	180	317	654	211	86	66	0.00	392	1900	323
CFSM	0.00	0.01	0.01	0.01	0.03	0.01	0.00	0.00	0.00	0.02	0.07	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2005, BY WATER YEAR (WY)

MEAN	9.44	3.99	1.71	3.00	4.25	2.14	1.72	0.78	0.12	7.69	16.0	17.6
MAX	28.0	7.35	3.40	5.15	11.8	4.51	3.22	4.93	1.12	29.8	76.6	54.6
(WY)	2001	1999	1999	2005	2005	2001	1999	2001	1999	1999	1997	2002
MIN	0.10	1.60	0.73	1.07	0.67	0.85	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	2002	2000	2004	2004	2003	1999	2003	2000	1997	1996	2002	2001

SUMMARY STATISTICS

FOR 2005 WATER YEAR

WATER YEARS 1996 - 2005

ANNUAL TOTAL	2208.21		
ANNUAL MEAN	6.05		
HIGHEST ANNUAL MEAN		5.93	
LOWEST ANNUAL MEAN		1.22	1997
HIGHEST DAILY MEAN	299	Aug 11	651
LOWEST DAILY MEAN	0.00	Oct 5	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 5	0.00
ANNUAL RUNOFF (AC-FT)	4380		4290
ANNUAL RUNOFF (CFSM)	0.015		0.014
10 PERCENT EXCEEDS	10		6.8
50 PERCENT EXCEEDS	0.36		0.50
90 PERCENT EXCEEDS	0.00		0.00

e Estimated

SAN JUAN RIVER BASIN

09379200 CHINLE CREEK NEAR MEXICAN WATER, AZ

**LOCATION**--Lat 36°56'38", long 109°42'36" in sec. 19, T.41 N., R.25 E. (unsurveyed), Apache County, Hydrologic Unit 14080204, in Navajo Indian Reservation, on right bank 150 ft upstream from bridge on U.S. Highway 160, 3 mi upstream from Walker Creek, 4 mi southwest of Mexican Water, 5 mi downstream from confluence of Chinle Creek and Laguna Creek, and 6 mi upstream from Arizona-Utah State line.

**DRAINAGE AREA**--3,650 mi<sup>2</sup>.

**PERIOD OF RECORD**--Oct. 1964 to current year (monthly discharge only for 1979). Prior to Oct. 1970 published as Chinle Wash near Mexican Water.

**REVISED RECORDS**--WDR AZ--88--1: Drainage area.

**GAGE**--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 4,720 ft above sea level.

**REMARKS**--Records poor. Some diversions upstream for irrigation, livestock tanks, and domestic use. Many Farms Reservoir, about 25 mi upstream, was built in 1939 with an original capacity of 25,000 acre-ft. The reservoir provides off-channel storage for irrigation of about 1,600 acres.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 12,000 ft<sup>3</sup>/s Aug. 24, 1982, gage height, 13.87 ft, from rating curve extended above 3,100 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 12.50 ft; no flow at times each year.

**EXTREMES FOR CURRENT PERIOD**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30.....	0900	935	5.52	Aug. 12.....	1815	*1,250	*5.90
Feb. 13.....	0900	1,040	5.71	Aug. 17.....	0345	630	4.84
Feb. 20.....	2015	821	5.28				

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	16	0.52	e27	e9.2	e9.0	7.1	e65	0.00	0.00	e3.4	0.00
2	38	9.1	0.77	e17	e4.9	e6.7	3.7	56	0.00	0.00	e42	0.00
3	11	1.7	0.53	e13	e4.0	6.0	2.1	30	0.00	0.00	e50	0.00
4	0.70	0.45	0.25	e9.3	e2.6	5.8	1.4	12	0.00	0.00	e24	0.00
5	0.06	0.29	0.77	e9.3	e3.6	5.8	1.1	e8.7	0.00	0.00	e6.5	18
6	0.00	0.36	0.81	e7.1	e6.8	6.8	0.82	e5.4	0.00	0.00	e7.5	8.3
7	0.00	0.35	0.86	e7.5	e11	6.0	0.86	e3.8	0.00	0.00	e58	7.1
8	0.00	2.5	1.0	e5.7	e12	7.5	0.69	e3.0	0.00	0.00	e28	2.5
9	6.2	94	0.85	e6.4	e15	5.7	0.72	e2.0	0.00	0.00	e6.6	29
10	0.01	e12	0.81	e9.4	e12	4.0	1.1	e1.2	0.00	0.00	60	51
11	1.7	e7.0	0.73	e12	e9.6	3.4	0.84	e1.0	1.3	0.00	e316	58
12	0.01	e1.4	5.7	e16	35	3.2	0.78	e0.60	0.13	0.00	347	0.72
13	0.00	e13	5.3	e18	613	2.9	0.84	e0.42	0.00	0.00	114	0.01
14	0.00	e6.8	6.6	e20	161	2.2	0.78	1.2	0.00	0.00	1.3	0.00
15	0.00	e3.7	6.8	17	20	1.5	0.77	1.2	0.00	0.00	0.19	0.00
16	0.00	e2.9	4.8	8.1	31	1.3	44	0.86	0.00	0.00	0.10	0.00
17	0.00	e1.9	2.4	e11	109	1.5	124	0.34	0.00	0.00	e136	0.00
18	0.00	e3.0	1.4	e9.9	16	1.5	124	0.47	0.00	0.00	e6.6	0.00
19	0.00	e1.7	0.90	e7.5	12	1.5	184	0.63	0.00	0.00	3.0	0.00
20	0.00	e1.9	0.67	7.0	484	2.0	220	0.53	0.00	0.00	0.70	0.00
21	0.00	e4.7	0.86	4.8	183	1.9	108	0.27	0.00	0.00	1.4	0.00
22	0.00	e35	0.37	6.3	1.8	1.9	68	0.29	0.00	0.00	0.96	0.00
23	0.00	e20	0.26	6.2	0.13	3.5	120	0.17	0.00	0.00	0.07	0.00
24	e4.6	e8.0	0.39	5.0	e7.7	2.8	94	0.04	0.00	0.00	0.00	0.00
25	e0.73	e5.8	0.37	5.4	21	2.7	151	0.00	0.00	23	0.00	0.00
26	e0.53	e5.7	0.39	5.4	e18	2.5	145	0.00	0.00	e100	0.00	0.00
27	0.48	e5.5	0.51	6.9	e15	3.2	91	0.01	0.00	e45	0.00	0.00
28	1.4	e5.1	0.80	16	e11	7.2	105	0.00	0.00	e12	0.00	0.00
29	43	e1.7	2.8	16	---	e3.3	81	0.00	0.00	e4.9	0.00	0.18
30	47	0.81	298	14	---	5.5	63	0.00	0.00	e3.4	0.00	0.00
31	29	---	65	10	---	11	---	0.00	---	e3.4	0.00	---
TOTAL	338.42	272.36	412.22	334.2	1829.33	129.8	1745.60	195.13	1.43	191.70	1213.32	174.81
MEAN	10.9	9.08	13.3	10.8	65.3	4.19	58.2	6.29	0.05	6.18	39.1	5.83
MAX	154	94	298	27	613	11	220	65	1.3	100	347	58
MIN	0.00	0.29	0.25	4.8	0.13	1.3	0.69	0.00	0.00	0.00	0.00	0.00
AC-FT	671	540	818	663	3630	257	3460	387	2.8	380	2410	347

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	21.9	142	0.18	1973	14.0	144	0.41	1988	8.28	41.2	1.09	1978
	26.7	169	1.58	1988	16.3	151	1.60	1993	26.7	169	1.58	2003
	22.4	215	0.67	1985	16.3	169	0.67	1988	22.4	215	0.67	1996
	46.5	402	0.53	1980	46.5	402	0.53	1985	46.5	402	0.53	1996
	4.88	72.5	0.08	1973	4.88	72.5	0.08	1973	4.88	72.5	0.08	1975
	23.9	129	0.00	1975	23.9	129	0.00	1975	23.9	129	0.00	1979
	52.7	501	0.00	1982	52.7	501	0.00	1982	52.7	501	0.00	1974
	42.8	342	0.00	1982	42.8	342	0.00	1982	42.8	342	0.00	1979

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1965 - 2005

ANNUAL TOTAL		4317.95		6838.32			
ANNUAL MEAN		11.8		18.7		28.0	
HIGHEST ANNUAL MEAN						94.2	1982
LOWEST ANNUAL MEAN						4.47	1974
HIGHEST DAILY MEAN	880	Sep 30		613	Feb 13	6000	Aug 25 1982
LOWEST DAILY MEAN	0.00	May 1		0.00	Oct 6	0.00	Jul 4 1965
ANNUAL SEVEN-DAY MINIMUM	0.00	May 19		0.00	Oct 13	0.00	Jun 12 1966
ANNUAL RUNOFF (AC-FT)	8560			13560		20280	
10 PERCENT EXCEEDS		14		46		52	
50 PERCENT EXCEEDS		0.86		1.7		3.0	
90 PERCENT EXCEEDS		0.00		0.00		0.00	

e Estimated

## COLORADO RIVER MAIN STEM

## 09379900 LAKE POWELL AT GLEN CANYON DAM, AZ

**LOCATION.**--Lat 36°56'12", long 111°29'00", in sec. 24, T.41 N., R.8 E., Coconino County, Hydrologic Unit 14070006, at Glen Canyon Dam on Colorado River, 900 ft upstream from bridge on U.S. Highway 89, 1.4 mi downstream from Wahweap Creek, 2 mi northwest of Page, and 12 mi downstream from Utah-Arizona State line.

**DRAINAGE AREA.**--111,700 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

**PERIOD OF RECORD.**--Mar. 1963 to current year.

**GAGE.**--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 1, 1964, nonrecording gage at same site and datum.

**REMARKS.**--Reservoir is formed by concrete-arch gravity dam; storage began Mar. 13, 1963; dam completed Sept. 1963. Total capacity, (from capacity table computed by Bureau of Reclamations, based on a survey completed in 1985; used since Oct. 1, 1990) 26,215,000 acre-ft consisting of the following: dead storage, 1,893,000 acre-ft below elevation 3,370 ft-sill of outlet gates; usable contents, 24,322,000 acre-ft between elevations 3,370 ft and 3,700 ft-top of conservation pool. Reservoir is used for power development, to provide storage replacement for upstream irrigation development, and to meet downstream requirements under the Colorado River Compact of 1922. Figures given herein represent usable contents; prior to Oct. 1, 1968, figures of total contents were published (prior to sealing of diversion tunnel July 7, 1965, all storage was usable).

**COOPERATION.**--Records furnished by Bureau of Reclamation.

**EXTREMES (at 2400) FOR PERIOD OF RECORD.**--Maximum contents, 26,373,000 acre-ft July 14, 1983, elevation, 3,708.34 ft; minimum since power pool level was reached (Aug. 16, 1964), 4,166,000 acre-ft Mar. 18, 1965, elevation, 3,490.76 ft.

**EXTREMES (at 2400) FOR CURRENT YEAR.**--Maximum contents, 12,568,000 acre-ft July 12, 14, elevation, 3,608.38 ft; minimum, 7,956,000 acre-ft Apr. 8, elevation, 3,555.10 ft.

Capacity table (elevation, in feet, and usable contents, in acre-feet)

3,610	12,730,000	3,670	19,838,000
3,622	13,976,000	3,682	21,553,000
3,634	15,306,000	3,694	23,373,000
3,646	16,723,000	3,706	25,304,000
3,658	18,232,000		

RESERVOIR STORAGE, in K AC-FT, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9172	9150	8881	8668	8471	8257	8007	8569	10605	12393	12404	12004
2	9178	9147	8875	8674	8458	8245	7997	8603	10698	12425	12391	11997
3	9180	9150	8868	8668	8447	8239	8001	8634	10774	12458	12380	11989
4	9177	9150	8864	8664	8434	8229	7992	8662	10863	12482	12368	11991
5	9179	9148	8856	8655	8421	8217	7982	8689	10947	12501	12354	11981
6	9188	9148	8845	8645	8422	8218	7971	8713	11026	12520	12339	11972
7	9186	9151	8837	8631	8411	8207	7963	8746	11101	12535	12331	11967
8	9185	9145	8827	8615	8395	8195	7956	8777	11169	12545	12312	11964
9	9189	9151	8818	8617	8382	8182	7966	8807	11235	12556	12307	11955
10	9189	9152	8808	8607	8370	8171	7977	8843	11304	12562	12296	11969
11	9186	9153	8801	8609	8358	8161	7992	8872	11368	12565	12294	11968
12	9182	9155	8794	8607	8350	8150	8007	8908	11435	12568	12284	11969
13	9179	9157	8788	8607	8353	8155	8019	8951	11492	12567	12280	11971
14	9173	9156	8779	8607	8349	8143	8033	8996	11547	12568	12269	11972
15	9169	9156	8770	8604	8343	8128	8046	9043	11598	12558	12255	11974
16	9166	9155	8766	8610	8333	8118	8061	9084	11643	12552	12248	11967
17	9161	9154	8758	8602	8323	8110	8081	9131	11683	12552	12234	11964
18	9158	9154	8753	8593	8309	8102	8105	9180	11731	12548	12221	11961
19	9155	9154	8747	8583	8303	8092	8133	9234	11781	12537	12212	11958
20	9148	9152	8740	8572	8306	8098	8167	9292	11831	12525	12195	11952
21	9142	9114	8733	8563	8300	8092	8203	9357	11886	12514	12185	11949
22	9147	9048	8725	8548	8298	8082	8238	9436	11939	12496	12174	11945
23	9145	8979	8716	8551	8293	8074	8266	9531	11988	12484	12154	11942
24	9144	8915	8706	8535	8288	8065	8308	9642	12055	12481	12136	11944
25	9142	8900	8698	8526	8278	8052	8341	9756	12115	12472	12120	11940
26	9141	8899	8686	8515	8269	8045	8380	9884	12179	12461	12103	11935
27	9142	8899	8671	8507	8275	8050	8423	10017	12231	12452	12083	11938
28	9145	8895	8665	8498	8265	8043	8464	10147	12278	12443	12070	11934
29	9143	8891	8665	8487	---	8033	8504	10277	12321	12429	12054	11932
30	9142	8889	8665	8492	---	8023	8538	10399	12360	12424	12040	11939
31	9148	---	8664	8481	---	8015	---	10509	---	12418	12022	---
TOTAL	284081	272467	271769	266141	233804	251991	244121	286689	347183	387591	379115	358843
MEAN	9164	9082	8767	8585	8350	8129	8137	9248	11573	12503	12230	11961
MAX	9189	9157	8881	8674	8471	8257	8538	10509	12360	12568	12404	12004
MIN	9141	8889	8664	8481	8265	8015	7956	8569	10605	12393	12022	11932
(*)	3570.50	3567.28	3564.42	3562.07	3559.23	3555.90	3562.81	3586.53	3606.28	3606.87	3602.83	3601.97
(**)	-21000	-259000	-225000	-183000	-216000	-250000	+523000	+1971000	+1851000	+58000	-396000	-83000
CAL YR 2004	TOTAL 3640735	MEAN 9947	MAX 11472	MIN 8664	(**)	-2823000						
WTR YR 2005	TOTAL 3583795	MEAN 9819	MAX 12568	MIN 7956	(**)	+2770000						

(\*) Elevation, in feet, at end of month.

(\*\*) Change in contents, in acre-feet.

**COLORADO RIVER MAIN STEM**

**09380000 COLORADO RIVER AT LEES FERRY, AZ  
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK)**

**LOCATION.**--Lat 36°51'53", long 111°35'15", in NE1/4SE1/4 sec. 13, T.40 N., R.7 E., Coconino County, Hydrologic Unit 14070006, in Navajo Indian Reservation, on left bank at head of Marble Gorge at Lees Ferry, just upstream from Paria River, 16 mi downstream from Glen Canyon Dam, 28 mi downstream from Utah-Arizona State line, and 61.5 mi upstream from Little Colorado River.

**DRAINAGE AREA.**--111,800 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide Basin in southern Wyoming, which is noncontributing.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD.**--Jan. 1895 to current year. Estimates of monthly and annual discharge only for some periods, published in WSP 1313.

**REVISED RECORDS.**--WSP 859: 1921--23. WSP 1313: 1914--21.

**GAGE.**--Water-stage recorder. Datum of gage is 3,106.16 ft above sea level. Prior to Jan. 19, 1923, nonrecording gages or reference points within 400 ft of present gage, at different datums.

**REMARKS.**--No estimated daily discharge. Records good. Flow regulated since Mar. 13, 1963, by Lake Powell, 16 mi upstream. Many diversions above Lake Powell for irrigation, municipal, and industrial use. No diversions or inflow between Lake Powell and the gage.

**AVERAGE DISCHARGE.**--51 years (water years 1912--62), 17,850 ft<sup>3</sup>/s, 12,930,000 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD.**--1895--1962: Maximum discharge, 220,000 ft<sup>3</sup>/s June 18, 1921, gage height, 26.5 ft, from floodmarks, from rating curve extended above 120,000 ft<sup>3</sup>/s on basis of discharge computed for station near Grand Canyon; minimum, 750 ft<sup>3</sup>/s Dec. 27, 1924.

1963--2000: Maximum discharge, 97,300 ft<sup>3</sup>/s June 29, 1983, gage height, 18.14 ft; minimum daily, 700 ft<sup>3</sup>/s Jan. 23, 24, 1963, result of closing coffer dam at Glen Canyon Dam.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge since at least 1868, about 300,000 ft<sup>3</sup>/s July 7, 1884, gage height, 31.5 ft, present site and datum, from floodmark at mouth of Paria River, from rating curve extended above 120,000 ft<sup>3</sup>/s on basis of discharge computed for flood of June 18, 1921, for station near Grand Canyon.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 42,500 ft<sup>3</sup>/s, Nov. 22 at 1630, gage height, 13.55 ft. Minimum daily discharge, 6,850 ft<sup>3</sup>/s, Jan. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8280	8160	9890	7480	14200	14200	14300	8720	12700	14600	14700	12700
2	7410	8130	9870	6850	14200	14300	14400	10300	13600	13600	14900	11100
3	7610	7970	9170	13400	14200	14300	7770	10400	13900	13000	14900	8840
4	8010	8030	8010	14300	14200	14200	13400	10400	12800	13000	14900	8420
5	8290	8080	8380	14300	14200	14200	14400	10500	12600	14400	15000	8400
6	8260	7370	9920	14300	7760	7740	14300	10500	13800	14600	13800	8310
7	8300	7710	9850	14300	13200	13200	14300	10300	14000	14600	12700	8290
8	8260	8330	9850	14200	14000	14200	14300	9110	14000	14600	14700	8320
9	7360	8370	9860	7770	14300	14200	8310	10300	14000	13800	15000	8330
10	7490	8240	9910	13300	14300	14100	7350	10500	13900	12900	15000	8260
11	8210	8250	9720	14200	14300	14200	7380	10400	12800	14500	15000	8300
12	8280	8230	9570	14300	14300	14200	7330	10400	12500	14800	15000	8290
13	8290	8320	9850	14300	7820	7740	7310	10400	13800	14900	13900	8360
14	8290	8210	9900	14200	13300	13300	7350	10200	13900	14800	12700	8340
15	8260	8250	9890	14200	14100	14200	7360	9030	13900	14800	14400	8330
16	7480	8220	9900	7750	14200	14200	7340	10300	14000	13800	15000	8410
17	7590	7340	9880	13300	14200	14200	7310	10400	14500	13000	15000	8360
18	8260	7970	9720	14200	13800	14300	7280	10400	13200	14700	14900	8400
19	8250	8100	9580	14200	14200	14300	7320	10500	13000	14700	14900	8370
20	8310	8340	9840	14200	7760	7830	7340	10400	14500	14700	13800	8410
21	8290	25700	9880	14100	13200	13300	7380	10300	14700	14600	12700	8310
22	8260	41000	9860	14200	14200	14300	7340	9020	13400	14600	14600	8300
23	7470	41900	10100	7760	14200	14300	7340	10200	14300	13600	14900	8270
24	7530	40700	10000	13300	14100	14400	7390	10400	11600	13000	14900	8290
25	8290	17100	9630	14300	14200	14300	7300	10500	8820	14500	15500	8760
26	8340	7970	9700	14300	14300	14300	7560	9630	9860	14600	15600	8890
27	8310	7940	10000	14300	7800	7830	7360	7990	13400	14600	14800	8920
28	8260	7960	9900	14100	13300	13400	7410	7900	14300	14600	13200	8500
29	8230	7920	10000	14200	---	14300	7310	7910	14600	14400	15200	8320
30	7500	7880	9640	7750	---	14400	7330	7950	14600	13500	15400	8330
31	7530	---	9570	13200	---	14100	---	7870	---	12100	13500	---
TOTAL	248500	367690	300840	396560	367840	412040	269870	303130	400980	437900	450500	259430
MEAN	8016	12260	9705	12790	13140	13290	8996	9778	13370	14130	14530	8648
MAX	8340	41900	10100	14300	14300	14400	14400	10500	14700	14900	15600	12700
MIN	7360	7340	8010	6850	7760	7740	7280	7870	8820	12100	12700	8260
MED	8260	8180	9860	14200	14200	14200	7360	10300	13900	14600	14900	8350
AC-FT	492900	729300	596700	786600	729600	817300	535300	601300	795300	868600	893600	514600
CFSM	0.07	0.11	0.09	0.11	0.12	0.12	0.08	0.09	0.12	0.13	0.13	0.08
CAL YR 2004	TOTAL 4314840	MEAN 11790	MAX 41900	MIN 7340	MED 11400	AC-FT 8558000	CFSM 0.11					
WTR YR 2005	TOTAL 4215280	MEAN 11550	MAX 41900	MIN 6850	MED 10500	AC-FT 8361000	CFSM 0.10					

## COLORADO RIVER MAIN STEM

## 09380000 COLORADO RIVER AT LEES FERRY, AZ—CONTINUED

## WATER-QUALITY RECORDS

**PERIOD OF RECORD**--Jan. to July 1926, Oct. 1926 to June 1927, Aug. 1928 to Dec. 1933, Nov. 1942 to Oct. 1945, Oct. 1947 to current year.

**PERIOD OF DAILY RECORD**--

**SPECIFIC CONDUCTANCE**: Oct. 1964 to Sept. 1981, Feb. 1982 to Dec. 1987, Oct. 1989 to Mar. 2003., Feb. 2004 to current year.

**pH**: Aug. 1990 to Apr. 1993.

**WATER TEMPERATURE**: July 1949 to Sept. 1981, Feb. 1982 to Dec. 1987, Oct. 1989 to Mar. 2003, Feb. 2004 to current year.

**DISSOLVED OXYGEN**: Aug. 1990 to Apr. 1993.

**SUSPENDED-SEDIMENT DISCHARGE**: Oct. 1928 to Dec. 1933, Nov. 1942 to Sept. 1944, Oct. 1947 to Sept. 1965.

**TURBIDITY**: Oct. 1998 to Sept. 2000, minimum daily values.

**INSTRUMENTATION**--Specific conductance and water temperature recorder Mar. 1977 to Sept. 1981, Feb. 1982 to Dec. 1987, and Oct. 1990 to current year; pH, Aug. 1990 to Apr. 1993; dissolved-oxygen recorder Aug. 1990 to Apr. 1993.

**REMARKS**--Daily water temperature and specific conductance records good. Unpublished daily specific conductance measurements for period Nov. 1942 to Oct. 1945, Oct. 1947 to Sept. 1964 available from District Office in Tucson, AZ. Extreme value for the period of record include only those obtained after a normal flow release pattern from Glen Canyon Dam was started after July 31, 1965.

**EXTREMES FOR PERIOD OF RECORD**--

**SPECIFIC CONDUCTANCE** (Aug. 1965 to Sept. 1981, Feb. 1982 to Dec. 1987, Oct. 1990 to current year): Maximum, 1,260 microsiemens, Apr. 20, 21, 1967; minimum, 460 microsiemens, Aug. 10, 1965.

**pH**: Maximum, 8.3, on many days in Jan. to Apr. and June 1991; minimum, 7.6, on several days in Nov. and Dec. 1990, and Mar. 1991.

**WATER TEMPERATURE** (Aug. 1965 to Sept. 1981, Feb. 1982 to Dec. 1987, Oct. 1990 to current year): Maximum, 21.0°C on several days during Aug., Sept., and Oct. 1965, 1967, 1968; minimum, 2.0°C on Jan. 29, 30, 1970.

**DISSOLVED OXYGEN**: Maximum recorded, 11.2 mg/L, Apr. 29, 1991; minimum recorded, 6.4 mg/L, Sept. 18, 1991.

**TURBIDITY**: Minimum daily, less than 1.0 NTU on most days.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
NOV													
23...	0905	9	41800	<2.0	680	10.1	106	7.8	870	7.0	12.6	280	72.3
MAR													
01...	1010	9	11000	<2.0	683	8.1	77	7.6	894	9.2	8.2	310	79.1
JUN													
07...	0920	9	11100	<2.0	--	8.6	78	8.0	896	22.8	10.5	290	73.3
07...	0930	7	11100	<2.0	--	8.6	78	8.0	896	22.8	10.5	300	75.2
AUG													
23...	0815	9	11000	<2.0	680	6.1	67	7.8	760	25.6	14.3	270	69.5
Date	Calcium water unfltrd recover, mg/L (00916)	Magnesium water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recover, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
NOV													
23...	68.8	25.1	24.4	3.95	2	75.1	133	161	.0	56.5	.3	224	538
MAR													
01...	74.3	26.7	26.9	3.88	2	77.4	136	165	.0	57.9	.3	222	550
JUN													
07...	83.1	26.4	25.9	3.94	2	70.6	131	158	.0	54.9	.3	223	533
07...	81.6	27.0	25.9	4.08	2	72.4	134	162	.0	55.2	.3	224	541
AUG													
23...	68.8	22.4	22.2	3.33	2	58.5	139	168	.0	43.6	.3	179	463
Date	Residue water, fltrd, tons/acre-ft (70303)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd, ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water, unfltrd, ug/L (01002)	Barium, water, unfltrd recover, ug/L (01007)
NOV													
23...	.78	570	<10	.18	<.04	.36	E.01n	E2k	.45	.4	1.7	E1n	125
MAR													
01...	.77	563	<10	.18	<.04	.44	<.02	E2k	.37	.4	1.6	E1n	121
JUN													
07...	.80	585	<10	.20	<.04	.45	<.02	<1	.36	.5	1.3	<2	144
07...	.80	590	<10	.20	<.04	.45	<.02	--	.38	.4	1.4	<2	142
AUG													
23...	.67	493	<10	.21	<.04	.52r	<.02	E14k	.46	.5	1.6	1.8oc	119

09380000 COLORADO RIVER AT LEES FERRY, AZ—CONTINUED

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recover, ug/L (01012)	Boron, water, unfltrd recover, ug/L (01022)	Cadmium, water, fltrd, ug/L (01025)	Cadmium, water, unfltrd, ug/L (01027)	Chromium, water, unfltrd recover, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover, ug/L (01051)	Manganese, water, unfltrd recover, ug/L (01055)	Mercury, water, fltrd, ug/L (71890)	Mercury, water, unfltrd recover, ug/L (71900)
NOV 23...	<.06	<.06	83	E.03n	E.04n	E.7n	2.2p	9.7p	.31	.96	4	<.01	<.01
MAR 01...	<.06	<.06	91r	<.04	E.03n	<.8	3.5	3.8	.19	.42	1	E.01n	E.01n
JUN 07...	<.06	<.06	92	<.04	E.03n	<.8	1.4	5.8	.20	.51	1	<.01	<.01
JUN 07...	<.06	<.06	91	<.04	E.02n	<.8	1.4	5.8	.23	.42	<1	E.01n	<.01
AUG 23...	<.06	<.06	70	E.03n	<.04	<.8	1.5	1.2	.10	E.03n	<1	<.01	<.01

Date	Selenium, water, unfltrd, ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover, ug/L (01092)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV 23...	2.6	3.2	5	--	--
MAR 01...	3.0	20.2r	42r	10	297
JUN 07...	3.0	2.0	4	1	30
JUN 07...	2.7	2.1	4	--	--
AUG 23...	2.5	.7	<2	<1	--

Remark codes used in this table:

- < -- Less than.
- E -- Estimated.
- M -- Presence verified but not quantified.

Value qualifier codes used in this table:

- c -- See laboratory comment
- k -- Counts outside acceptable range
- n -- Below the LRL and above the LT-MDL
- o -- Result determined by alternate method
- p -- Value reported is preferred
- r -- Value verified by rerun, same method

**COLORADO RIVER MAIN STEM**  
**09380000 COLORADO RIVER AT LEES FERRY, AZ—CONTINUED**  
**WATER-QUALITY RECORDS**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Water-quality measurements in the following table were made as part of the ADEQ Fixed-Station Network Program. The following analyses are quality-assurance samples processed during the 2005 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

Date	Time	Sample type	Ammonia + org-N, water, unfltrd		Ammonia + nitrate, water, fltrd,		Phos-phorus, water, unfltrd	Beryllium, water, fltrd,	Cadmium, water, fltrd,	Copper, water, fltrd,	Lead, water, fltrd,	Mercury, water, fltrd,	Zinc, water, fltrd,
			mg/L as N (00625)	mg/L as N (00608)	mg/L as N (00631)	mg/L (00665)							
NOV 23...	0915	2	<.10	<.04	<.06	<.02	<.06	<.04	<.4	<.08	<.01	E.4n	

Remark codes used in this table:

< -- Less than.

E -- Estimated.

Value qualifier codes used in this table:

n -- Below the LRL and above the LT-MDL

COLORADO RIVER MAIN STEM

09380000 COLORADO RIVER AT LEES FERRY, AZ—CONTINUED

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM 25 DEG. C), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	854	852	854	855	850	852	842	838	840	836	833	834
2	855	853	854	850	846	848	840	834	838	842	834	837
3	856	853	854	852	846	849	837	828	835	850	840	844
4	857	854	856	852	849	850	838	835	836	853	845	849
5	857	853	855	854	852	853	837	835	836	854	837	846
6	857	853	855	854	853	853	840	837	838	861	840	851
7	857	854	856	855	853	854	843	838	842	861	842	852
8	857	852	855	856	854	855	847	843	844	849	832	843
9	858	854	856	856	854	855	847	844	846	848	842	845
10	855	852	854	857	854	855	846	843	844	853	824	838
11	856	854	855	858	854	855	848	844	846	863	850	857
12	856	852	854	859	854	858	848	844	846	904	863	880
13	854	852	854	857	852	855	850	845	847	904	873	889
14	854	851	853	857	854	855	848	841	843	887	864	875
15	855	853	854	854	851	852	843	839	841	867	859	864
16	856	853	854	854	852	853	842	837	840	867	853	862
17	855	852	854	854	853	853	840	836	838	855	847	853
18	856	852	854	854	853	854	844	836	839	857	839	852
19	858	851	855	855	854	854	843	839	841	857	842	852
20	857	851	855	855	854	854	842	838	841	854	840	850
21	856	847	852	868	854	859	843	833	840	852	839	848
22	853	849	851	873	868	871	845	840	841	855	840	850
23	854	850	853	872	868	870	845	840	843	855	843	850
24	857	850	854	874	870	872	841	836	839	858	845	851
25	856	852	854	870	846	854	838	834	835	860	849	857
26	856	853	855	847	845	846	838	833	836	857	844	854
27	854	851	854	847	844	845	838	834	836	855	840	851
28	854	850	853	854	846	849	838	834	837	857	844	853
29	854	850	852	862	852	857	838	826	832	857	845	853
30	853	850	852	855	842	848	839	834	836	858	847	853
31	855	853	854	---	---	---	837	834	835	862	850	854
MONTH	858	847	854	874	842	855	850	826	840	904	824	853

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM 25 DEG. C), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	862	852	859	880	869	876	934	917	922	912	900	906
2	864	843	856	879	867	873	925	899	913	907	896	901
3	868	851	862	887	866	878	912	905	910	903	896	898
4	862	848	858	891	869	883	924	901	910	902	890	898
5	864	844	857	893	870	886	939	920	927	891	883	888
6	859	844	854	894	875	888	925	915	920	897	888	892
7	855	843	850	886	875	880	925	908	917	903	887	895
8	859	845	855	888	876	885	927	901	909	900	883	893
9	867	848	859	886	872	881	932	897	921	897	886	890
10	869	851	864	886	869	879	919	896	906	898	888	892
11	870	854	864	887	874	883	916	896	904	902	893	898
12	870	858	864	890	878	885	912	899	903	910	880	897
13	870	856	865	893	883	890	908	897	904	906	886	894
14	862	851	857	896	883	888	907	897	902	901	891	897
15	854	840	850	893	871	882	908	903	906	896	884	891
16	856	836	850	892	872	882	905	897	901	890	883	886
17	865	846	857	903	890	895	907	902	905	889	881	885
18	876	854	865	906	892	901	906	903	904	e908	e883	e892
19	876	859	872	906	894	902	913	905	908	913	898	905
20	876	859	869	899	891	894	924	909	916	903	897	901
21	869	860	864	913	896	901	923	901	917	903	895	900
22	875	862	870	926	905	915	916	899	906	907	898	903
23	876	858	868	912	906	909	910	901	906	905	900	903
24	877	859	872	926	903	915	908	893	900	907	895	902
25	880	857	872	925	899	916	908	899	904	906	892	900
26	886	856	877	940	907	927	910	905	908	911	887	900
27	888	861	880	924	907	911	906	897	902	901	893	898
28	877	861	868	933	910	920	900	892	897	895	885	892
29	---	---	---	939	912	922	908	897	902	901	889	895
30	---	---	---	949	925	933	909	900	905	900	891	896
31	---	---	---	951	934	946	---	---	---	900	893	897
MONTH	888	836	863	951	866	898	939	892	908	913	880	896

e Estimated





COLORADO RIVER MAIN STEM

09380000 COLORADO RIVER AT LEES FERRY, AZ—CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.3	13.5	14.1	12.8	11.8	12.2	11.8	11.2	11.5	9.9	9.4	9.7
2	14.2	13.4	13.8	14.9	12.8	13.8	11.8	11.3	11.6	9.6	9.1	9.4
3	14.4	13.6	14.1	14.2	13.1	13.7	11.9	11.3	11.6	9.6	9.2	9.4
4	14.6	13.6	14.1	14.2	13.4	13.8	11.8	11.4	11.6	9.5	9.1	9.3
5	15.2	13.9	14.5	14.2	13.5	13.8	11.9	11.7	11.8	9.5	9.0	9.2
6	15.0	13.6	14.5	14.7	13.5	14.1	12.1	11.7	11.9	9.3	8.8	9.1
7	14.4	13.7	14.1	14.8	14.4	14.6	11.8	11.4	11.7	9.1	8.4	8.8
8	14.4	13.6	14.1	14.7	14.1	14.3	11.7	11.4	11.5	9.3	8.8	9.1
9	14.6	13.6	14.1	15.0	14.0	14.5	11.5	11.2	11.3	9.3	8.9	9.1
10	14.6	13.9	14.2	14.8	14.0	14.4	11.5	11.1	11.3	9.3	9.0	9.2
11	14.5	13.9	14.2	14.3	13.8	14.0	11.4	11.0	11.1	9.1	8.6	8.9
12	14.4	13.8	14.1	13.8	13.3	13.4	11.1	10.8	11.0	8.6	7.8	8.1
13	14.5	13.6	14.1	13.5	13.0	13.2	11.0	10.6	10.8	8.2	7.6	7.9
14	14.7	13.9	14.4	13.8	13.2	13.5	11.2	10.7	10.9	8.5	7.9	8.2
15	14.8	14.0	14.4	14.4	13.5	14.0	11.1	10.7	11.0	8.5	8.1	8.4
16	14.7	13.9	14.2	14.3	13.9	14.0	11.1	10.7	10.9	8.5	8.1	8.4
17	14.4	14.0	14.2	14.0	13.4	13.7	11.0	10.6	10.9	8.8	8.2	8.6
18	14.3	12.7	13.4	14.0	13.5	13.7	11.0	10.6	10.7	8.7	8.2	8.5
19	13.2	12.3	12.7	13.6	13.1	13.3	10.7	10.2	10.5	8.8	8.3	8.6
20	12.9	12.6	12.8	13.3	13.0	13.1	10.6	10.2	10.4	8.9	8.3	8.6
21	12.8	12.0	12.4	13.2	12.1	12.7	10.7	10.4	10.5	8.9	8.4	8.7
22	13.1	12.3	12.8	12.1	11.8	12.0	10.4	9.7	10.0	8.7	8.3	8.6
23	13.0	12.6	12.8	12.0	11.6	11.9	10.0	9.6	9.8	8.7	8.2	8.5
24	13.0	12.5	12.8	11.7	11.4	11.5	10.0	9.5	9.7	8.8	8.2	8.6
25	13.3	12.5	12.9	12.6	11.4	12.3	10.0	9.6	9.8	8.8	8.4	8.6
26	14.0	13.0	13.4	12.6	12.3	12.5	10.0	9.5	9.8	8.7	8.4	8.6
27	14.0	13.6	13.8	12.6	12.3	12.4	10.0	9.7	9.9	8.9	8.6	8.7
28	13.8	13.0	13.2	12.3	10.5	11.5	9.9	9.6	9.8	8.8	8.3	8.6
29	13.8	13.1	13.4	10.5	9.7	10	10.0	9.8	9.9	8.8	8.4	8.6
30	13.8	12.8	13.2	11.6	10.0	10.9	9.9	9.5	9.7	8.8	8.2	8.5
31	13.4	12.8	13.1	---	---	---	9.9	9.6	9.8	8.6	8.0	8.4
MONTH	15.2	12.0	13.7	15.0	9.7	13.1	12.1	9.5	10.7	9.9	7.6	8.7

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.6	8.0	8.3	8.8	8.1	8.4	9.1	7.7	8.3	9.7	9.0	9.4
2	8.7	8.1	8.4	8.7	8.2	8.4	9.1	8.2	8.6	10.2	8.8	9.5
3	8.6	7.8	8.2	8.8	8.2	8.4	9.4	8.3	8.8	10.2	9.1	9.7
4	8.6	8.0	8.3	8.7	8.0	8.3	9.3	8.3	8.9	10.4	9.1	9.8
5	8.7	7.9	8.3	8.6	8.1	8.3	8.6	7.8	8.2	10.4	9.4	9.9
6	8.6	8.0	8.3	8.9	8.0	8.4	9.0	7.9	8.4	9.8	9.3	9.5
7	8.8	8.3	8.6	8.8	8.3	8.6	9.4	8.4	8.8	10.0	8.9	9.4
8	8.7	8.1	8.4	8.8	8.0	8.4	9.3	8.3	8.8	10.6	9.0	9.8
9	8.6	7.9	8.3	9.0	8.1	8.5	8.9	7.9	8.2	10.5	9.3	9.9
10	8.5	7.9	8.3	9.0	8.2	8.5	9.4	8.4	8.8	10.1	9.2	9.6
11	8.4	8.1	8.3	8.9	8.1	8.5	9.7	8.6	9.1	10.0	8.6	9.3
12	8.5	8.2	8.3	8.9	8.1	8.5	9.8	9.0	9.4	10.5	8.7	9.5
13	8.7	8.0	8.3	8.6	8.1	8.4	9.8	9.1	9.5	10.6	9.0	9.8
14	8.8	8.2	8.5	8.6	8.0	8.2	9.9	9.0	9.6	10.2	9.0	9.6
15	8.9	8.3	8.6	9.1	8.0	8.5	9.8	9.1	9.5	10.7	9.3	10
16	9.0	8.5	8.7	9.0	8.2	8.6	10.1	9.0	9.7	10.6	9.5	10.1
17	8.8	8.3	8.5	8.6	8.2	8.4	10.1	9.2	9.7	10.5	9.6	10.0
18	8.7	8.3	8.5	8.8	7.8	8.3	10.1	9.4	9.8	11.1	9.5	10.2
19	8.8	8.2	8.4	8.4	8.1	8.3	10.0	9.3	9.6	10.8	9.4	10.1
20	8.8	8.2	8.5	8.6	8.3	8.4	9.7	8.6	9.0	11.2	9.6	10.3
21	8.7	8.3	8.6	8.7	8.1	8.4	10.0	8.5	9.0	11.0	9.8	10.4
22	8.7	8.3	8.5	8.6	7.8	8.2	10.0	9.0	9.3	11.1	9.7	10.4
23	8.6	8.3	8.4	8.7	8.1	8.3	10.0	8.8	9.4	11.3	9.8	10.6
24	8.8	8.2	8.4	8.5	7.7	8.1	10.0	9.4	9.6	11.3	9.8	10.6
25	8.7	8.2	8.4	8.6	8.0	8.2	9.8	9.1	9.5	11.3	9.8	10.6
26	8.7	7.9	8.3	8.4	7.6	8.0	10.2	9.2	9.7	11.5	9.7	10.6
27	8.7	7.9	8.3	8.7	7.9	8.3	10.2	9.5	9.9	11.2	10.1	10.6
28	8.7	8.2	8.5	8.7	8.3	8.5	10.1	9.2	9.4	11.7	10.3	11.0
29	---	---	---	8.6	7.9	8.2	10.1	8.9	9.5	11.6	10.4	11.0
30	---	---	---	8.5	7.7	8.0	9.9	9.0	9.4	11.6	10.5	11.1
31	---	---	---	8.4	7.2	7.8	---	---	---	11.5	10.2	10.9
MONTH	9.0	7.8	8.4	9.1	7.2	8.3	10.2	7.7	9.2	11.7	8.6	10.1



09382000 PARIA RIVER AT LEES FERRY, AZ

**LOCATION**--Lat 36°52'20", long 111°35'38", in NW¼/4NE¼ sec. 13, T.40 N., R.7 E., Coconino County, Hydrologic Unit 14070007, on left bank 0.6 mi northwest of Lees Ferry, and 1.1 mi upstream from mouth.

**DRAINAGE AREA**--1,410 mi<sup>2</sup>.

**PERIOD OF RECORD**--Oct. 1923 to current year.

**REVISED RECORDS**--WSP 1925: 1958(M), drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 3,123.68 ft above sea level. Prior to Oct. 5, 1925, nonrecording gage at site 2,000 ft upstream at different datum. Oct. 13, 1925, to Sept. 11, 1929, nonrecording gage at present site and datum.

**REMARKS**--Records fair except for estimated daily discharges, which are poor. Diversions above station for irrigation of about 3,300 acres, mostly in southern Utah.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 16,100 ft<sup>3</sup>/s Oct. 5, 1925, gage height, 16.3 ft, from floodmark, from rating curve extended above 2,000 ft<sup>3</sup>/s on basis of float-area measurement of peak flow; maximum gage height, 16.65 ft Sept. 9, 1980; minimum daily discharge, 1 ft<sup>3</sup>/s in most years prior to 1931.

**CORRECTION**--The maximum discharge for water year 2001 is 3,220 ft<sup>3</sup>/s; the previous published figure was not the maximum.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 1,400 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 9.....	0045	1,650	8.62
Jan. 11.....	2250	*3,160	*11.30a

Minimum daily discharge, 2.6 ft<sup>3</sup>/s July 14.

a - from floodmark

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	35	11	39	e43	47	42	36	23	2.9	12	4.8
2	44	21	10	25	e35	47	39	42	22	2.8	8.7	5.0
3	22	19	12	24	25	47	40	64	21	2.7	121	4.7
4	8.1	18	16	39	23	52	42	52	24	2.6	28	4.8
5	33	17	13	73	22	49	44	43	24	3.0	29	4.9
6	23	16	15	35	22	44	37	38	21	3.4	15	12
7	10	16	19	20	22	50	36	61	19	3.3	14	11
8	6.6	265	21	15	22	58	40	49	e18	3.2	25	5.8
9	6.3	737	19	69	20	61	50	37	17	3.2	78	4.6
10	6.6	85	18	385	18	68	47	30	19	3.2	33	4.4
11	6.4	29	18	1290	21	91	34	37	e17	3.2	188	4.3
12	6.3	23	17	e1070	114	73	31	38	e21	3.2	59	4.3
13	6.7	102	18	109	189	79	37	36	17	2.8	21	4.7
14	6.3	47	17	59	93	73	39	35	14	2.6	134	4.5
15	6.2	35	16	44	100	56	52	34	11	2.9	44	4.2
16	6.6	25	16	42	80	46	50	32	9.8	3.0	66	4.0
17	6.8	19	15	41	74	41	44	29	12	3.1	35	3.7
18	6.4	17	12	41	68	42	52	28	11	3.0	14	3.8
19	6.9	16	14	43	119	41	55	22	10	3.0	31	3.8
20	8.2	15	13	38	151	43	50	21	11	3.0	36	3.7
21	512	24	14	50	123	80	39	22	11	3.0	13	3.9
22	559	39	17	50	76	50	36	22	11	2.9	9.2	3.8
23	82	34	11	48	103	49	34	24	12	3.0	7.3	3.5
24	42	24	8.8	46	90	79	64	24	10	2.9	6.0	3.5
25	21	24	15	45	72	62	99	27	e8.8	3.4	5.2	3.3
26	18	24	15	41	76	56	52	30	e5.4	14	6.1	3.3
27	16	24	7.4	e207	53	46	52	30	e4.5	9.6	20	3.4
28	138	24	9.3	e137	46	44	61	29	e3.8	5.6	20	3.8
29	127	32	110	e68	---	49	49	29	e3.4	5.3	13	3.6
30	58	20	469	e52	---	48	39	26	e3.3	4.6	8.2	3.3
31	56	---	58	e56	---	45	---	24	---	5.2	5.4	---
TOTAL	1881.4	1826	1044.5	4301	1900	1716	1386	1051	415.0	119.6	1105.1	138.4
MEAN	60.7	60.9	33.7	139	67.9	55.4	46.2	33.9	13.8	3.86	35.6	4.61
MAX	559	737	469	1290	189	91	99	64	24	14	188	12
MIN	6.2	15	7.4	15	18	41	31	21	3.3	2.6	5.2	3.3
AC-FT	3730	3620	2070	8530	3770	3400	2750	2080	823	237	2190	275

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2005, BY WATER YEAR (WY)

	30.4	23.7	21.0	23.7	37.5	38.4	20.9	10.6	7.19	23.6	52.7	51.7
MEAN	30.4	23.7	21.0	23.7	37.5	38.4	20.9	10.6	7.19	23.6	52.7	51.7
MAX	288	123	69.4	139	242	216	93.3	52.4	58.3	172	237	424
(WY)	1926	1958	1967	2005	1980	1979	1934	1972	1936	1932	1927	1927
MIN	5.99	10.1	8.81	8.03	14.3	8.86	4.75	2.03	1.97	2.32	4.51	4.18
(WY)	1956	1991	1931	1931	2002	1972	2002	1927	1926	1939	1976	1968

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1924 - 2005

ANNUAL TOTAL		9712.8		16884.0		
ANNUAL MEAN		26.5		46.3		28.4
HIGHEST ANNUAL MEAN						65.1
LOWEST ANNUAL MEAN						11.1
HIGHEST DAILY MEAN		737	Nov 9	1290	Jan 11	6750
LOWEST DAILY MEAN		3.2	Jul 6	2.6	Jul 4	1.0
ANNUAL SEVEN-DAY MINIMUM		3.4	Jul 3	2.9	Jul 13	1.0
ANNUAL RUNOFF (AC-FT)		19270		33490		20570
10 PERCENT EXCEEDS		44		77		42
50 PERCENT EXCEEDS		12		24		14
90 PERCENT EXCEEDS		3.7		3.8		3.7

e Estimated

## COLORADO RIVER MAIN STEM

## 09383000 COLORADO RIVER AT COMPACT POINT, NEAR LEES FERRY, AZ

**LOCATION.**--Lat 36°51'05", long 111°36'21", in NE<sub>1/4</sub>SE<sub>1/4</sub> sec. 23, T.40 N., R.7 E., Coconino County, Hydrologic Units 14070006, 15010001, (see REMARKS), 1 mi downstream from Paria River, 1.4 mi downstream from gage on Colorado River at Lees Ferry, and 29 mi downstream from Utah-Arizona State line.

**DRAINAGE AREA.**--112,000 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

**PERIOD OF RECORD.**--Oct. 1913 to current year (monthly discharge only). Prior to Oct. 1950, published in WSP 1313.

**DETERMINATION OF DISCHARGE.**--There is no gage. Monthly and yearly discharge computed as the sum of flow at stations on Colorado River and Paria River at Lees Ferry.

**REMARKS.**--This location on the Colorado River is the dividing point between the Upper Basin and Lower Basin, as defined in the Colorado River Compact of 1922. Flow substantially regulated by Lake Powell beginning Mar. 13, 1963. (See elsewhere in this report.)

**AVERAGE DISCHARGE.**--49 years (water years 1914--1962), 17,760 ft<sup>3</sup>/s, 12,870,000 acre-ft/yr; 41 years (water years 1965--2005), 13,950 ft<sup>3</sup>/s, 10,110,000 acre-ft/yr

## Monthly discharge, water year October 2004 to September 2005

Month	Mean, in cubic feet per second	Runoff, in acre-feet
October .....	8,077	496,600
November .....	12,320	732,900
December.....	9,738	598,800
Calendar year 2004.....	11,820	8,578,000
January.....	12,930	795,100
February.....	13,200	733,400
March.....	13,350	820,700
April.....	9,042	538,000
May.....	9,812	603,300
June.....	13,380	796,200
July .....	14,130	868,800
August .....	14,570	895,800
September .....	8,652	514,900
Water year 2005.....	11,590	8,394,000

NOTE.--Record shown is sum of flow at stations on Colorado River and Paria River at Lees Ferry.

LITTLE COLORADO RIVER BASIN

09384000 LITTLE COLORADO RIVER ABOVE LYMAN LAKE, NEAR ST. JOHNS, AZ

**LOCATION**--Lat 34°18'52", long 109°21'42", in SW1/4SE1/4 sec. 27, T.11 N., R.28 E., Apache County, Hydrologic Unit 15020001, on left bank 0.75 mi downstream from Coyote Creek, 6 mi upstream from Lyman Dam, and 15 mi south of St. Johns.

**DRAINAGE AREA**--706 mi<sup>2</sup>, of which 2.5 mi<sup>2</sup> is noncontributing.

**PERIOD OF RECORD**--Apr. 1940 to current year. Prior to Oct. 1975 published as "above Lyman Reservoir."

**REVISED RECORDS**--WDR AZ--88-1: Drainage area.

**GAGE**--Water-stage recorder and crest-stage gage. Elevation of gage is 6,010 ft above sea level, from topographic map. Prior to Dec. 7, 1976, water-stage recorder at site 0.4 mi downstream at datum approximately 20 ft lower, used as supplemental gage Mar. 21, 1980, to Apr. 21, 1987. See WSP 1313 for history of changes prior to 1950.

**REMARKS**--Records fair, except for estimated daily discharges, which are poor. Flow regulated by many small reservoirs--combined capacity, about 15,500 acre-ft. Diversions for irrigation of about 6,700 acres above station.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 16,000 ft<sup>3</sup>/s July 25, 1940, gage height, 17.1 ft, datum then in use, from floodmarks, by slope-area measurement of peak flow and reservoir inflow studies; maximum gage height, 18.6 ft, Sept. 12, 1975, at previous site (from graph recorded to 18.4 ft); no flow at times.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 10.....	2230	*1,110	*6.78

Minimum daily discharge, 0.95 ft<sup>3</sup>/s, July 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	9.8	e6.5	49	11	17	29	64	30	4.1	2.5	7.7
2	2.2	9.1	e5.8	42	9.3	17	18	61	28	6.6	5.8	8.4
3	2.1	8.1	5.7	38	9.2	16	13	58	26	5.3	5.5	19
4	1.8	7.0	e7.6	35	9.6	16	22	60	24	3.4	3.6	18
5	1.8	6.9	e7.7	23	11	15	37	59	22	3.1	5.8	19
6	1.8	6.6	7.4	e16	11	16	49	52	21	2.3	5.0	19
7	1.7	6.2	e7.1	e14	10	17	62	47	20	2.0	22	17
8	1.8	5.3	7.0	15	9.6	16	97	46	17	1.5	11	17
9	1.5	9.3	7.0	16	9.7	16	116	49	15	3.3	33	18
10	1.8	10	7.0	16	9.5	16	102	43	13	3.8	104	18
11	2.4	7.6	7.2	15	12	17	78	39	12	1.7	54	17
12	2.5	6.0	6.6	15	16	19	71	36	8.2	1.9	20	15
13	2.7	6.7	6.5	e12	22	23	86	31	6.5	2.2	21	13
14	3.3	6.5	6.3	12	20	30	131	30	6.7	1.9	20	12
15	3.0	5.9	5.3	e11	18	38	144	29	16	1.5	21	11
16	2.9	6.0	5.1	e11	17	35	138	28	14	1.3	19	10
17	3.2	6.3	e4.6	e11	16	38	136	25	11	2.2	36	9.2
18	2.8	6.5	e4.3	e11	16	36	128	24	8.9	3.6	46	6.8
19	3.3	6.8	e4.6	11	20	34	108	21	5.9	2.6	35	6.4
20	3.5	7.2	e4.9	10	33	33	85	18	7.1	2.6	28	6.5
21	3.8	7.3	5.0	11	31	33	72	19	7.2	1.9	23	6.0
22	4.5	6.9	5.1	11	27	31	71	21	6.9	0.95	20	5.7
23	7.8	7.2	e4.6	10	23	29	65	23	7.8	0.96	19	5.4
24	7.2	6.7	e4.1	11	21	30	89	23	12	1.8	24	5.4
25	6.9	6.5	e4.1	12	20	31	129	26	8.7	2.0	21	5.7
26	6.9	6.1	4.6	12	20	35	102	32	10	2.8	15	5.4
27	7.8	5.8	5.8	13	20	34	86	33	6.9	4.0	15	5.5
28	7.8	5.8	6.9	14	19	36	76	34	5.1	2.8	13	5.3
29	11	6.1	7.4	12	---	37	70	36	5.8	1.7	12	5.0
30	12	e6.7	95	12	---	38	67	34	4.8	2.1	9.3	5.1
31	11	---	63	12	---	32	---	31	---	2.6	7.7	---
TOTAL	134.9	208.9	329.8	513	470.9	831	2477	1132	387.5	80.51	677.2	322.5
MEAN	4.35	6.96	10.6	16.5	16.8	26.8	82.6	36.5	12.9	2.60	21.8	10.8
MAX	12	10	95	49	33	38	144	64	30	6.6	104	19
MIN	1.5	5.3	4.1	10	9.2	15	13	18	4.8	0.95	2.5	5.0
AC-FT	268	414	654	1020	934	1650	4910	2250	769	160	1340	640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)

	9.01	7.81	9.73	10.4	12.3	29.9	90.9	34.9	9.10	9.36	22.4	12.7
MEAN	9.01	7.81	9.73	10.4	12.3	29.9	90.9	34.9	9.10	9.36	22.4	12.7
MAX	213	37.8	46.6	38.9	43.3	182	397	374	95.4	40.3	143	105
(WY)	1984	1987	1979	1942	1962	1985	1979	1941	1973	1967	1955	1946
MIN	0.07	0.32	0.83	2.08	2.84	1.89	1.26	0.44	0.01	0.00	0.59	0.02
(WY)	1957	1957	1957	1957	1957	1990	1996	2000	1959	1963	2000	1960

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1941 - 2005
ANNUAL TOTAL	3945.25	7565.21	
ANNUAL MEAN	10.8	20.7	21.5
HIGHEST ANNUAL MEAN			71.6
LOWEST ANNUAL MEAN			2.94
HIGHEST DAILY MEAN	106	144	1660
LOWEST DAILY MEAN	0.08	0.95	0.00
ANNUAL SEVEN-DAY MINIMUM	0.09	1.7	0.00
ANNUAL RUNOFF (AC-FT)	7830	15010	15590
10 PERCENT EXCEEDS	40	49	42
50 PERCENT EXCEEDS	3.2	11	6.7
90 PERCENT EXCEEDS	0.15	2.8	1.0

e Estimated

## LITTLE COLORADO RIVER BASIN

## 09385700 LITTLE COLORADO RIVER BELOW SALADO SPRINGS, NEAR ST. JOHNS, AZ

**LOCATION**--Lat 34°27'04", long 109°21'46", in SE1/4NW1/4SE1/4 sec. 10, T.12 N., R.28 E., Apache County, Hydrologic Unit 15020002, 2.2 miles upstream from the State Highway 61 bridge in St. Johns.

**DRAINAGE AREA**--845 mi<sup>2</sup>.

**PERIOD OF RECORD**--Jan. 1985 to Dec. 1986, July 2002 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 5,785 ft above sea level, from topographic map.

**REMARKS**--Records good except for estimated daily discharges and those greater than 50 ft<sup>3</sup>/s, which are poor. Flow partially regulated by Lyman Lake. Many diversions for irrigation above station.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 694 ft<sup>3</sup>/s, August 7, 2005, gage height 11.09 ft. Minimum daily 0.52 ft<sup>3</sup>/s, July 14, 2003.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 120 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
July 25.....	1330	297	10.33	Aug. 10 .....	2245	156	9.39
Aug. 4.....	1545	193	9.67	Aug. 17 .....	1300	526	10.84
Aug. 7.....	2015	*694	*11.09				

Minimum daily discharge, 0.98 ft<sup>3</sup>/s, Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.6	e2.1	2.5	2.6	2.8	2.3	2.8	7.6	8.7	7.9	5.8
2	1.1	1.5	e2.1	2.5	2.5	2.8	2.4	5.1	7.8	8.7	9.9	6.2
3	1.1	1.5	e2.1	2.6	e2.4	2.5	2.4	7.5	7.8	8.8	10	6.1
4	1.2	1.6	e2.1	3.4	2.4	2.4	2.3	7.5	7.9	8.9	21	5.0
5	1.1	1.7	e2.1	3.3	2.5	2.6	2.1	6.9	8.2	8.9	8.1	4.8
6	1.1	1.7	e2.1	e2.8	2.5	2.8	2.1	6.5	8.1	8.7	9.1	5.5
7	0.99	1.7	e2.1	e2.7	2.5	3.0	2.2	6.4	8.1	8.7	52	5.8
8	0.98	1.7	e2.2	e2.8	2.6	2.7	2.1	6.7	8.1	8.9	33	5.3
9	1.0	1.7	2.3	2.7	2.5	2.4	1.9	6.5	8.2	9.1	7.0	5.3
10	1.0	1.7	2.2	2.7	2.4	2.4	2.1	7.1	8.4	8.8	17	5.5
11	1.2	1.8	2.2	2.7	2.9	2.4	2.3	7.3	8.7	8.6	e4.0	5.2
12	1.2	1.8	2.2	e2.7	3.4	2.2	2.2	7.8	8.7	8.7	e4.0	4.9
13	1.1	1.9	2.2	e2.6	3.7	2.1	2.2	8.8	8.6	8.6	3.3	4.4
14	1.1	2.0	2.3	e2.5	2.9	2.1	2.2	9.4	8.8	8.7	6.4	4.5
15	1.2	1.9	2.2	e2.5	2.7	2.4	2.2	9.5	9.2	8.6	8.2	4.7
16	1.2	1.9	2.3	e2.5	2.6	2.6	2.2	9.4	8.5	8.6	3.1	4.8
17	1.1	1.9	e2.2	e2.5	2.6	2.4	2.3	9.3	8.7	8.6	56	3.3
18	1.2	1.9	e2.1	e2.5	2.6	2.2	2.3	9.5	8.8	8.2	30	2.1
19	1.2	1.9	e2.1	2.5	3.3	2.3	2.2	9.6	8.5	8.3	9.7	1.9
20	1.2	1.9	e2.1	2.5	3.5	2.7	2.1	9.5	7.8	8.4	7.6	2.0
21	1.2	1.9	e2.3	2.5	2.8	2.5	2.1	9.3	8.3	8.1	6.3	1.9
22	1.3	2.0	e2.4	2.5	2.3	2.3	2.4	9.3	9.0	8.1	6.1	1.9
23	1.3	2.5	e2.3	2.5	2.4	2.3	2.3	9.2	9.4	8.3	6.2	1.8
24	1.3	2.2	e2.4	2.5	2.4	2.3	3.1	9.3	9.6	8.6	6.1	1.6
25	1.3	2.0	e2.4	2.6	2.7	2.3	3.0	9.2	9.7	19	6.0	1.5
26	1.4	2.0	e2.3	2.7	2.9	2.7	2.8	8.4	9.6	9.4	5.9	1.5
27	1.4	2.0	e2.3	2.9	2.8	2.8	2.8	7.0	8.9	10	5.8	1.7
28	1.4	2.0	e2.4	2.6	2.5	2.6	2.7	7.0	8.9	9.9	5.8	1.6
29	1.6	2.1	3.2	2.5	---	2.4	2.8	7.5	8.7	8.8	5.8	1.6
30	1.5	e2.1	3.8	2.6	---	2.3	2.9	7.6	8.7	7.7	5.7	1.5
31	1.5	---	2.8	2.6	---	2.3	---	7.5	---	7.7	5.7	---
TOTAL	37.67	56.1	71.9	82.0	75.9	76.6	71.0	244.4	257.3	279.1	372.7	109.7
MEAN	1.22	1.87	2.32	2.65	2.71	2.47	2.37	7.88	8.58	9.00	12.0	3.66
MAX	1.6	2.5	3.8	3.4	3.7	3.0	3.1	9.6	9.7	19	56	6.2
MIN	0.98	1.5	2.1	2.5	2.3	2.1	1.9	2.8	7.6	7.7	3.1	1.5
MED	1.2	1.9	2.2	2.6	2.6	2.4	2.3	7.6	8.7	8.7	6.4	4.4
AC-FT	75	111	143	163	151	152	141	485	510	554	739	218
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00

CAL YR 2004 TOTAL 1094.58 MEAN 2.99 MAX 14 MIN 0.81 MED 2.3 AC-FT 2170 CFSM 0.00  
WTR YR 2005 TOTAL 1734.37 MEAN 4.75 MAX 56 MIN 0.98 MED 2.6 AC-FT 3440 CFSM 0.01

e Estimated

LITTLE COLORADO RIVER BASIN

09386030 LITTLE COLORADO RIVER ABOVE ZION RESERVOIR, NEAR ST. JOHNS, AZ

**LOCATION.**--Lat 34°35'01", long 109°24'23", in SE1/4SE1/4 sec. 30, T.14 N., R.28 E., Apache County, Hydrologic Unit 15020002, on downstream side of center pier of bridge on private road, 1.5 mi upstream from Carrizo Creek, 4 mi upstream from Zion Reservoir, and 5.8 mi northwest of St. Johns.

**DRAINAGE AREA.**--1,007 mi<sup>2</sup>, of which 2.5 mi<sup>2</sup> is noncontributing.

**PERIOD OF RECORD.**--Oct. 1975 to current year.

**REVISED RECORDS.**--WDR AZ--88--1: Drainage area.

**GAGE.**--Water-stage recorder. Elevation of gage is 5,560 ft above sea level, from topographic map.

**REMARKS.**--Records fair except for estimated daily discharges which are poor. Diversions above station for irrigation of about 10,200 acres, including 1,500 acres served by Lyman Canal. Regulation by many reservoirs above station (combined capacity, 46,900 acre-ft), the largest of which is Lyman Lake. Records do not include flow bypassing the station through an abandoned irrigation ditch during higher stages.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 590 ft<sup>3</sup>/s July 31, 1994, gage height, 4.16 ft; minimum daily, no flow at times in most years after 2001.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 28 ft<sup>3</sup>/s Aug. 18 at 0430, gage height, 1.74 ft. Minimum daily discharge, no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.02	0.27	0.03	0.35	0.69	0.32	0.00	e0.00	0.75	e0.13
2	0.00	0.00	0.02	0.19	0.03	0.38	0.69	0.30	0.00	e0.00	0.87	e0.13
3	0.00	0.00	0.02	0.13	0.03	0.38	0.70	0.32	0.00	e0.00	0.62	e0.14
4	0.00	0.00	0.02	0.13	0.03	0.38	0.64	0.37	0.00	e0.00	1.5	e0.14
5	0.00	0.00	0.02	0.14	0.02	0.42	0.56	0.32	0.00	e0.00	6.2	e0.15
6	0.00	0.00	0.02	0.14	0.02	0.45	0.57	0.22	0.00	0.00	1.9	e0.20
7	0.00	0.00	0.02	0.13	0.02	0.45	0.60	0.11	0.00	0.00	3.4	e0.16
8	0.00	0.00	0.02	0.10	0.02	0.45	0.50	0.08	0.00	0.00	e8.0	e0.16
9	0.00	0.01	0.02	0.09	0.02	0.45	0.40	0.06	0.00	0.00	e4.0	0.16
10	0.00	0.01	0.01	0.07	0.02	0.45	0.19	0.04	0.00	0.00	0.77	0.15
11	0.00	0.01	0.02	0.05	0.02	0.45	0.16	0.01	0.00	0.00	8.9	0.15
12	0.00	0.01	0.02	0.05	0.04	0.45	0.12	0.01	0.00	0.00	0.84	0.14
13	0.00	0.02	0.02	0.05	0.22	0.45	0.10	0.01	0.00	0.00	0.20	0.10
14	0.00	0.02	0.02	0.05	0.24	0.45	0.06	0.00	0.00	0.00	0.11	0.04
15	0.00	0.02	0.02	0.03	0.27	0.51	0.03	0.00	0.00	0.00	0.02	0.01
16	0.00	0.02	0.02	0.03	0.32	0.57	0.02	0.00	0.00	0.00	0.22	0.00
17	0.00	0.02	0.02	0.03	0.32	0.49	0.02	0.00	0.00	0.00	0.18	0.00
18	0.00	0.01	0.02	0.03	0.28	0.45	0.11	0.00	0.00	0.00	17	0.00
19	0.00	0.02	0.04	0.03	0.36	0.51	0.23	0.00	0.00	0.00	2.2	0.00
20	0.00	0.02	0.13	0.03	0.38	0.56	0.25	0.00	0.00	0.00	0.38	0.00
21	0.00	0.02	0.21	0.03	0.35	0.49	0.23	0.00	0.00	0.00	0.21	0.00
22	0.00	0.02	0.24	0.03	0.32	0.48	0.22	0.00	0.00	0.00	0.18	0.00
23	0.00	0.02	0.27	0.03	0.32	0.45	0.22	0.00	0.00	0.00	0.18	0.00
24	0.00	0.02	0.25	0.03	0.32	0.45	0.37	0.00	0.00	0.00	0.15	0.00
25	0.00	0.02	0.22	0.03	0.32	0.56	0.32	0.00	0.00	0.00	0.14	0.00
26	0.00	0.02	0.20	0.03	0.32	0.71	0.32	0.00	0.00	0.00	0.14	0.00
27	0.00	0.02	0.18	0.03	0.36	0.72	0.32	0.00	0.00	0.00	0.11	0.00
28	0.00	0.02	0.29	0.04	0.32	0.75	0.31	0.00	0.00	0.00	e0.11	0.00
29	0.00	0.02	0.61	0.05	---	0.77	0.32	0.00	0.00	0.00	e0.11	0.00
30	0.00	0.02	0.49	0.05	---	0.70	0.32	0.00	0.00	0.00	e0.12	0.00
31	0.00	---	0.35	0.04	---	0.69	---	0.00	---	0.35	e0.12	---
TOTAL	0.00	0.39	3.83	2.16	5.32	15.82	9.59	2.17	0.00	0.35	59.63	1.96
MEAN	0.00	0.01	0.12	0.07	0.19	0.51	0.32	0.07	0.00	0.01	1.92	0.07
MAX	0.00	0.02	0.61	0.27	0.38	0.77	0.70	0.37	0.00	0.35	17	0.20
MIN	0.00	0.00	0.01	0.03	0.02	0.35	0.02	0.00	0.00	0.00	0.02	0.00
AC-FT	0.00	0.8	7.6	4.3	11	31	19	4.3	0.00	0.7	118	3.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2005, BY WATER YEAR (WY)

MEAN	6.72	6.13	7.16	7.21	7.45	9.55	15.0	9.14	2.09	2.76	6.07	4.13
MAX	79.1	31.7	32.6	30.2	21.0	75.0	118	75.5	34.7	11.7	33.4	16.5
(WY)	1984	1984	1984	1984	1984	1985	1985	1979	1979	1979	1982	1984
MIN	0.00	0.01	0.01	0.07	0.19	0.02	0.03	0.01	0.00	0.00	0.08	0.00
(WY)	2005	2004	2004	2005	2005	2004	2003	2004	2004	2003	2004	2004

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1976 - 2005

ANNUAL TOTAL	47.77	101.22	
ANNUAL MEAN	0.13	0.28	6.95
HIGHEST ANNUAL MEAN			26.8 1985
LOWEST ANNUAL MEAN			0.12 2004
HIGHEST DAILY MEAN	1.7 Jul 15	17 Aug 18	270 Apr 28 1979
LOWEST DAILY MEAN	0.00 May 20	0.00 Oct 1	0.00 Sep 18 2001
ANNUAL SEVEN-DAY MINIMUM	0.00 May 30	0.00 Oct 1	0.00 Jun 24 2003
ANNUAL RUNOFF (AC-FT)	95	201	5030
10 PERCENT EXCEEDS	0.63	0.49	13
50 PERCENT EXCEEDS	0.01	0.02	2.6
90 PERCENT EXCEEDS	0.00	0.00	0.05

e Estimated



## LITTLE COLORADO RIVER BASIN

## 09386250 CARRIZO WASH NEAR ST. JOHNS, AZ

**LOCATION.**--Lat 34°36'53", long 109°19'04", T.14 N., R.28 E., unsurveyed, Apache County, Hydrologic Unit 1502002, on east side of Carrizo Wash bridge pier on U.S. Highway 666 (AZ Highway 61), 8.5 mi north of St. Johns.

**DRAINAGE AREA.**--Not determined.

**PERIOD OF RECORD.**--Aug. 1998 to current year.

**GAGE.**--Water-stage recorder and crest-stage gage. Datum of gage is 5,610.5 ft above sea level, from ADOT benchmark on highway bridge.

**REMARKS.**--Records good. Published under station number 09386020, from Aug. 1998 to Sept. 30, 2003.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 1,530 ft<sup>3</sup>/s, Aug. 11, 2005, gage height 10.65 ft. Minimum daily discharge, no flow most of each year.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 11.....	1430	*1,530	*10.65
Aug. 15.....	0645	453	9.24
Aug. 18.....	0100	287	8.81

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22	1.5
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.6	0.27
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	691	0.01
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.7	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	198	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	65	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	8.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1148.95	1.95
MEAN	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.1	0.07
MAX	7.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	691	1.5
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2280	3.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

MEAN	0.21	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	18.4	13.1
MAX	1.11	0.76	0.02	0.00	0.00	0.00	0.00	0.00	0.00	3.13	55.3	82.4
(WY)	2001	2003	2003	1999	1999	1999	1999	1999	2000	1999	2001	2002
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	2000	1999	1999	1999	1999	1999	1999	1999	2000	1998	1998	1998

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1998 - 2005

ANNUAL TOTAL	34.54	1159.55	
ANNUAL MEAN	0.09	3.18	2.87
HIGHEST ANNUAL MEAN			7.08
LOWEST ANNUAL MEAN			0.00
HIGHEST DAILY MEAN	19 Jul 15	691 Aug 11	733 Sep 12 2002
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 4	0.00 Aug 27 1998
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 4	0.00 Aug 27 1998
ANNUAL RUNOFF (AC-FT)	69	2300	2080
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

09386300 LITTLE COLORADO RIVER BELOW ZION RESERVOIR, NEAR ST. JOHNS, AZ

**LOCATION**--Lat 34°36'17", long 109°29'19", in SE1/4NW1/4 sec. 21, T.14 N., R.27 E., Apache County, Hydrologic Unit 15020002, on left bank 0.50 mi downstream from Zion Reservoir, 10 mi northwest of St. Johns.

**DRAINAGE AREA**--Undetermined.

**PERIOD OF RECORD**--Sept. 1998 to current year.

**GAGE**--Water-stage recorder and crest-stage gage. Elevation of gage is 5,530 ft above sea level, from topographic map.

**REMARKS**--Records fair. Flow regulated by many small reservoirs - combined capacity, about 15,500 acre-ft. Diversions for irrigation of about 6,700 acres above station. Published under station number 09386100, from Sept. 1998 to Sept. 30, 2003.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 2,470 ft<sup>3</sup>/s Sept. 11, 2002, gage height, 11.84 ft, from an extension of the rating curve based on the weir equation for submerged weir flow. Minimum daily discharge, no flow for many days.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 7 .....	2345	*284	*5.98

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.34	0.00
MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.20	0.00
MAX	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	136	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	0.46	0.04	0.22	0.32	0.13	0.07	0.02	0.00
MAX	3.07	0.26	0.86	0.79	0.43	0.25	0.16	0.00
(WY)	2002	2003	2003	2000	2003	2000	2000	1999
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1998 - 2005
ANNUAL TOTAL	58.72	68.39	
ANNUAL MEAN	0.16	0.19	3.21
HIGHEST ANNUAL MEAN			16.5
LOWEST ANNUAL MEAN			0.13
HIGHEST DAILY MEAN	39 Aug 15	29 Aug 8	2140 Sep 12 2002
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Sep 11 1998
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Sep 11 1998
ANNUAL RUNOFF (AC-FT)	116	136	2320
10 PERCENT EXCEEDS	0.00	0.00	0.35
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

## WATER-QUALITY RECORDS

**PERIOD OF RECORD**--September 1998 to current year.

**INSTRUMENTATION**-- Automatic pumping sampler installed September 1998.

**REMARKS**-- Suspended-sediment discharge computed from sample data and by interpretation of a sample based suspended-sediment and streamflow discharge curve.

SUSPENDED SEDIMENT DISCHARGE, TONS PER DAY, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0.00	---	---	0.00	---	---	0.00	---	---
2	0.00	---	---	0.00	---	---	0.00	---	---
3	0.00	---	---	0.00	---	---	0.00	---	---
4	0.00	---	---	0.00	---	---	0.00	---	---
5	0.00	---	---	0.00	---	---	0.00	---	---
6	0.00	---	---	0.00	---	---	0.00	---	---
7	0.00	---	---	0.00	---	---	0.00	---	---
8	0.00	---	---	0.00	---	---	0.00	---	---
9	0.00	---	---	0.00	---	---	0.00	---	---
10	0.00	---	---	0.00	---	---	0.00	---	---
11	0.00	---	---	0.00	---	---	0.00	---	---
12	0.00	---	---	0.00	---	---	0.00	---	---
13	0.00	---	---	0.00	---	---	0.00	---	---
14	0.00	---	---	0.00	---	---	0.00	---	---
15	0.00	---	---	0.00	---	---	0.00	---	---
16	0.00	---	---	0.00	---	---	0.00	---	---
17	0.00	---	---	0.00	---	---	0.00	---	---
18	0.00	---	---	0.00	---	---	0.00	---	---
19	0.00	---	---	0.00	---	---	0.00	---	---
20	0.00	---	---	0.00	---	---	0.00	---	---
21	0.00	---	---	0.00	---	---	0.00	---	---
22	0.00	---	---	0.00	---	---	0.00	---	---
23	0.00	---	---	0.00	---	---	0.00	---	---
24	0.00	---	---	0.00	---	---	0.00	---	---
25	0.00	---	---	0.05	2.0	<0.01	0.00	---	---
26	0.00	---	---	0.00	---	---	0.00	---	---
27	0.00	---	---	0.00	---	---	e0.00	---	---
28	0.00	---	---	0.00	---	---	e0.00	---	---
29	0.00	---	---	0.00	---	---	0.00	---	---
30	0.00	---	---	0.00	---	---	0.00	---	---
31	0.00	---	---	---	---	---	0.00	---	---
TOTAL	0.00	---	---	0.05	---	---	0.00	---	---

e Estimated  
< Actual value is known to be less than the value shown

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0.00	---	---	e0.00	---	---	0.00	---	---
2	0.00	---	---	e0.00	---	---	0.00	---	---
3	0.00	---	---	0.00	---	---	0.00	---	---
4	0.00	---	---	0.00	---	---	0.00	---	---
5	0.00	---	---	0.00	---	---	0.00	---	---
6	0.00	---	---	0.00	---	---	0.00	---	---
7	0.00	---	---	0.00	---	---	0.00	---	---
8	0.00	---	---	0.00	---	---	0.00	---	---
9	0.00	---	---	0.00	---	---	0.00	---	---
10	0.00	---	---	0.00	---	---	0.00	---	---
11	0.00	---	---	0.00	---	---	0.00	---	---
12	0.00	---	---	0.00	---	---	0.00	---	---
13	0.00	---	---	0.00	---	---	0.00	---	---
14	0.00	---	---	0.00	---	---	0.00	---	---
15	0.00	---	---	0.00	---	---	0.00	---	---
16	0.00	---	---	0.00	---	---	e0.00	---	---
17	0.00	---	---	0.00	---	---	0.00	---	---
18	0.00	---	---	0.00	---	---	0.00	---	---
19	0.00	---	---	0.00	---	---	0.00	---	---
20	0.00	---	---	e0.00	---	---	0.00	---	---
21	0.00	---	---	e0.00	---	---	0.00	---	---
22	0.00	---	---	e0.00	---	---	0.00	---	---
23	0.00	---	---	e0.00	---	---	0.00	---	---
24	0.00	---	---	e0.00	---	---	0.00	---	---
25	0.00	---	---	0.00	---	---	0.00	---	---
26	0.00	---	---	0.00	---	---	0.00	---	---
27	0.00	---	---	0.00	---	---	0.00	---	---
28	0.00	---	---	0.00	---	---	0.00	---	---
29	0.00	---	---	---	---	---	0.00	---	---
30	0.00	---	---	---	---	---	0.00	---	---
31	0.00	---	---	---	---	---	0.00	---	---
TOTAL	0.00	---	---	0.00	---	---	0.00	---	---

e Estimated

WATER-QUALITY RECORDS

SUSPENDED SEDIMENT DISCHARGE, TONS PER DAY, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0.00	---	---	0.00	---	---	0.00	---	---
2	0.00	---	---	0.00	---	---	0.00	---	---
3	0.00	---	---	0.00	---	---	0.00	---	---
4	0.00	---	---	0.00	---	---	0.00	---	---
5	0.00	---	---	0.00	---	---	0.00	---	---
6	0.00	---	---	0.00	---	---	0.00	---	---
7	0.00	---	---	0.00	---	---	0.00	---	---
8	0.00	---	---	0.00	---	---	0.00	---	---
9	0.00	---	---	0.00	---	---	0.00	---	---
10	0.00	---	---	0.00	---	---	0.00	---	---
11	0.00	---	---	0.00	---	---	0.00	---	---
12	0.00	---	---	0.00	---	---	0.00	---	---
13	0.00	---	---	0.00	---	---	0.00	---	---
14	0.00	---	---	0.00	---	---	0.00	---	---
15	0.00	---	---	0.00	---	---	0.00	---	---
16	0.00	---	---	0.00	---	---	0.00	---	---
17	0.00	---	---	0.00	---	---	0.00	---	---
18	0.00	---	---	0.00	---	---	0.00	---	---
19	0.00	---	---	0.00	---	---	0.00	---	---
20	0.00	---	---	0.00	---	---	0.00	---	---
21	0.00	---	---	0.00	---	---	0.00	---	---
22	0.00	---	---	0.00	---	---	0.00	---	---
23	0.00	---	---	0.00	---	---	0.00	---	---
24	0.00	---	---	0.00	---	---	0.00	---	---
25	0.00	---	---	0.00	---	---	0.00	---	---
26	0.00	---	---	0.00	---	---	0.00	---	---
27	0.00	---	---	0.00	---	---	0.00	---	---
28	0.00	---	---	0.00	---	---	0.00	---	---
29	0.00	---	---	0.00	---	---	0.00	---	---
30	0.00	---	---	0.00	---	---	0.00	---	---
31	---	---	---	0.00	---	---	---	---	---
TOTAL	0.00	---	---	0.00	---	---	0.00	---	---

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0.00	---	---	0.00	---	---	0.00	---	---
2	0.00	---	---	0.00	---	---	0.00	---	---
3	0.00	---	---	0.00	---	---	0.00	---	---
4	0.00	---	---	0.00	---	---	0.00	---	---
5	0.00	---	---	0.00	---	---	0.00	---	---
6	0.00	---	---	0.00	---	---	0.00	---	---
7	0.00	---	---	14	1230	808	0.00	---	---
8	0.00	---	---	29	3130	1020	0.00	---	---
9	0.00	---	---	0.07	217	0.05	0.00	---	---
10	0.00	---	---	0.01	107	<0.01	0.00	---	---
11	0.00	---	---	25	2450	500	0.00	---	---
12	0.00	---	---	0.22	269	0.20	0.00	---	---
13	0.00	---	---	0.03	130	0.01	0.00	---	---
14	0.00	---	---	0.01	81	<0.01	0.00	---	---
15	0.00	---	---	0.00	---	---	0.00	---	---
16	0.00	---	---	0.00	---	---	0.00	---	---
17	0.00	---	---	0.00	---	---	0.00	---	---
18	0.00	---	---	0.00	---	---	0.00	---	---
19	0.00	---	---	0.00	---	---	0.00	---	---
20	0.00	---	---	0.00	---	---	0.00	---	---
21	0.00	---	---	0.00	---	---	0.00	---	---
22	0.00	---	---	0.00	---	---	0.00	---	---
23	0.00	---	---	0.00	---	---	0.00	---	---
24	0.00	---	---	0.00	---	---	0.00	---	---
25	0.00	---	---	0.00	---	---	0.00	---	---
26	0.00	---	---	0.00	---	---	0.00	---	---
27	0.00	---	---	0.00	---	---	0.00	---	---
28	0.00	---	---	0.00	---	---	0.00	---	---
29	0.00	---	---	0.00	---	---	0.00	---	---
30	0.00	---	---	0.00	---	---	0.00	---	---
31	0.00	---	---	0.00	---	---	---	---	---
TOTAL	0.00	---	---	68.34	---	---	0.00	---	---

< Actual value is known to be less than the value shown

## LITTLE COLORADO RIVER BASIN

## 09390500 SHOW LOW CREEK NEAR LAKESIDE, AZ

**LOCATION**--Lat 34°10'46", long 109°59'14", in SW1/4NW1/4 sec. 14, T.9 N., R.22 E., Navajo County, Hydrologic Unit 15020005, on left bank 1 mi upstream from pumping plant on Show Low Lake, 1.9 mi northwest of Lakeside, 2.2 mi upstream from Jacques Dam, and 6 mi southeast of Show Low.

**DRAINAGE AREA**--68.6 mi<sup>2</sup>.

**PERIOD OF RECORD**--May 1953 to current year.

**REVISED RECORDS**--WSP 1513: 1954-56. WSP 1926: Drainage area. WDR AZ-71-1: 1970(M).

**GAGE**--Water-stage recorder and concrete-dam control with V-notch sharp-crested weir. Elevation of gage is 6,610 ft above sea level, from topographic map.

**REMARKS**--Records fair except for estimated daily discharges, which are poor. Record shows inflow to Show Low Lake. Flow partly regulated by several small reservoirs, largest of which are Rainbow Lake and Scott Reservoir, combined capacity, 2,400 acre-ft. Diversions for irrigation of about 250 acres above station.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 5,550 ft<sup>3</sup>/s Dec. 18, 1978, gage height, 9.16 ft, from rating curve extended above 2,500 ft<sup>3</sup>/s; maximum gage height, 9.53 ft Dec. 26, 1971; no flow Oct. 5, 6, Dec. 10-19, 1964, Jan. 4-15, 1970.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12.....	2015	*958	*4.89

Minimum daily discharge, 0.13 ft<sup>3</sup>/s, Dec. 3-4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	0.57	0.16	5.6	25	29	13	3.8	1.5	1.3	1.3	e1.5
2	3.1	0.49	0.15	2.7	19	21	11	3.7	1.3	1.3	1.5	e1.5
3	2.9	0.39	0.13	2.9	15	18	10	3.5	1.1	1.1	2.3	e1.5
4	2.6	0.36	0.13	111	13	16	9.5	3.5	1.1	0.95	3.9	e1.5
5	2.4	0.35	0.15	29	12	17	8.5	3.4	1.4	0.94	3.1	e1.5
6	2.3	0.42	0.20	21	12	33	7.0	3.4	1.1	0.92	2.3	e1.5
7	2.4	0.57	0.25	15	15	49	6.1	3.2	0.93	0.92	2.1	1.3
8	2.4	0.72	0.24	9.9	21	44	e5.5	2.7	0.88	0.86	2.6	1.5
9	2.4	0.62	0.21	15	22	34	e5.0	2.6	0.83	0.73	2.4	1.4
10	2.3	0.29	0.23	28	26	24	e4.5	2.1	0.82	0.72	2.1	4.9
11	2.4	0.18	0.24	42	326	19	e4.0	1.6	0.85	0.74	76	1.9
12	2.5	0.19	0.23	28	717	17	3.8	1.6	0.85	0.80	70	1.5
13	2.5	0.19	0.21	10	293	16	3.6	1.7	0.85	0.98	31	1.5
14	2.4	0.18	0.19	5.8	128	15	3.5	1.6	0.97	1.4	14	1.5
15	2.3	0.18	0.16	4.5	85	15	3.5	1.7	1.6	1.6	29	1.5
16	2.3	0.18	0.14	4.5	61	13	3.5	1.5	1.1	1.7	12	1.6
17	2.1	0.20	0.16	4.4	50	12	3.5	1.2	1.0	2.9	8.7	2.0
18	2.0	0.20	0.17	4.4	45	12	3.3	1.1	0.95	3.8	16	1.8
19	1.9	0.19	0.17	4.4	451	11	2.9	1.1	0.87	4.0	e8.0	1.5
20	2.0	0.17	0.17	6.7	259	11	3.1	1.0	0.85	3.9	e6.0	1.4
21	2.0	0.19	0.15	9.2	152	11	2.5	0.86	0.85	4.0	e5.0	1.4
22	2.9	0.27	0.15	9.3	203	11	1.9	0.80	0.88	4.5	e4.0	1.4
23	2.2	1.0	0.15	10	195	11	1.7	0.78	1.4	4.5	e4.0	1.6
24	2.2	1.2	e0.25	13	93	10	10	0.73	2.0	7.6	e3.0	1.8
25	2.1	0.64	e0.31	20	66	10	8.4	1.0	1.9	6.1	e3.0	1.6
26	2.2	0.41	e0.20	22	56	12	7.8	1.4	1.8	2.3	e2.0	1.5
27	2.6	0.34	e0.20	109	50	12	6.6	1.4	1.6	1.4	e2.0	1.6
28	3.1	0.29	e8.8	99	41	17	6.2	1.8	1.5	0.95	e2.0	1.6
29	2.4	0.24	e138	64	---	19	6.1	2.3	1.3	0.77	e2.0	1.9
30	0.97	0.19	e50	43	---	19	5.6	1.8	1.3	0.72	e2.0	2.0
31	0.63	---	12	34	---	16	---	1.6	---	1.2	e1.5	---
TOTAL	71.80	11.41	213.90	787.3	3451	574	171.6	60.47	35.38	65.60	324.8	50.7
MEAN	2.32	0.38	6.90	25.4	123	18.5	5.72	1.95	1.18	2.12	10.5	1.69
MAX	3.3	1.2	138	111	717	49	13	3.8	2.0	7.6	76	4.9
MIN	0.63	0.17	0.13	2.7	12	10	1.7	0.73	0.82	0.72	1.3	1.3
AC-FT	142	23	424	1560	6850	1140	340	120	70	130	644	101

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2005, BY WATER YEAR (WY)

MEAN	5.56	5.11	19.8	12.9	30.8	41.9	18.0	6.96	5.78	5.43	5.49	4.46
MAX	57.4	54.3	285	200	225	189	197	72.0	13.2	10.8	20.1	18.5
(WY)	1985	1979	1985	1993	1980	1978	1973	1973	1992	1987	1988	1988
MIN	0.58	0.20	0.20	0.10	0.19	0.63	0.80	0.37	0.50	1.07	1.17	0.59
(WY)	2003	2002	1965	1971	1964	2000	2004	2004	2004	1996	2001	2000

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1954 - 2005

ANNUAL TOTAL	855.75	5817.96	
ANNUAL MEAN	2.34	15.9	13.4
HIGHEST ANNUAL MEAN			56.8
LOWEST ANNUAL MEAN			1.19
HIGHEST DAILY MEAN	138	Dec 29	717
LOWEST DAILY MEAN	0.13	Dec 3	0.13
ANNUAL SEVEN-DAY MINIMUM	0.16	Nov 30	0.16
ANNUAL RUNOFF (AC-FT)	1700	11540	9740
10 PERCENT EXCEEDS	4.3	29	19
50 PERCENT EXCEEDS	0.67	2.3	4.1
90 PERCENT EXCEEDS	0.20	0.24	0.63

e Estimated

**09391000 SHOW LOW LAKE NEAR SHOW LOW, AZ**

**LOCATION**--Lat 34°11'35", long 110°00'15", in NW<sub>1/4</sub> sec. 10, T.9 N., R.22 E., Navajo County, Hydrologic Unit 15020005, on upstream side of right end of Jaques Dam on Show Low Creek, 3.4 mi northwest of Lakeside, and 4.5 mi southeast of Show Low.

**DRAINAGE AREA**--73.0 mi<sup>2</sup>.

**PERIOD OF RECORD**--June 1953 to September 30, 2005. Periodic readings of elevation and contents only, 1953--1985, published with record of Show Low Creek below Jaques Dam near Show Low, AZ (09392000).

**GAGE**--Water-stage recorder, with periodic supplemental lake elevation readings. Elevation of gage is 6,580.0 ft above sea level.

**REMARKS**--Records good. Lake is formed by an earthen-rock dam; storage began in spring of 1953. The spillway is a concrete, broad-crested Ogee weir. Total capacity to spillway, 6,180 acre-ft, consisting of 1,070 acre-ft dead storage below elevation 6,535.0 ft (sill of outlet structure) and 5,110 acre-ft usable storage between elevation 6,535.0 ft and 6,570.0 ft (sill of overflow spillway). Capacity table prepared by Leeds, Hill, and Jewett, consulting engineers, from surveys by the firm. Water cannot be pumped when lake elevation is below 6,538.5 ft (sill of intake to pumping plant), but can be released to stream channel down to elevation 6,535.0 ft. Figures given herein represent total contents.

**EXTREMES FOR PERIOD OF RECORD**--Maximum contents, 6,920 acre-ft Dec. 18, 1978, and Dec. 27, 1984; maximum elevation, 6,573.72 ft Dec. 27, 1984; minimum contents, not determined.

**EXTREMES FOR CURRENT YEAR**--Maximum contents, 6,430 acre-ft Feb. 12 at 2015, maximum elevation 6,571.27 ft, Feb. 12; minimum contents 2,350 acre-ft Oct. 23--26; minimum elevation 6,546.49 ft., Oct. 24.

Capacity table (elevation, in feet, and contents, in acre-feet)

6,535	1,070	6,565	5,240
6,545	2,160	6,575	7,180
6,555	3,560		

RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2420	2390	2420	2770	4650	6210	6200	6190	5930	5560	5250	5690
2	2430	2390	2420	2780	4690	6200	6200	6190	5920	5540	5240	5680
3	2430	2390	2420	2790	4720	6200	6190	6190	5900	5530	5230	5670
4	2430	2390	2420	3100	4750	6200	6190	6190	5890	5510	5230	5660
5	2430	2390	2420	3160	4780	6210	6190	6180	5880	5500	5220	5650
6	2420	2390	2430	3200	4800	6220	6190	6170	5870	5480	5220	5640
7	2420	2390	2430	3240	4850	6220	6190	6170	5850	5470	5210	5640
8	2410	2400	2430	3260	4900	6210	6180	6160	5840	5460	5200	5630
9	2410	2400	2430	3300	4950	6210	6180	6150	5820	5440	5200	5630
10	2410	2400	2430	3370	5010	6210	6190	6140	5810	5430	5190	5630
11	2400	2400	2430	3470	5840	6200	6190	6130	5800	5410	5420	5620
12	2400	2400	2430	3530	6420	6200	6190	6120	5790	5400	5590	5610
13	2400	2400	2430	3560	6280	6200	6180	6110	5780	5390	5640	5590
14	2390	2400	2430	3570	6240	6200	6190	6110	5770	5380	5650	5590
15	2390	2400	2430	3580	6230	6200	6190	6100	5750	5360	5700	5570
16	2380	2400	2430	3580	6220	6200	6180	6090	5740	5350	5730	5560
17	2380	2400	2430	3590	6210	6200	6180	6080	5730	5340	5740	5550
18	2370	2400	2430	3590	6220	6200	6180	6070	5710	5330	5760	5540
19	2370	2400	2430	3600	6390	6190	6160	6060	5700	5310	5780	5540
20	2360	2400	2430	3620	6320	6200	6160	6050	5680	5300	5780	5530
21	2360	2400	2430	3640	6250	6200	6160	6040	5670	5290	5780	5520
22	2360	2410	2430	3660	6360	6200	6150	6020	5660	5280	5780	5510
23	2350	2410	2430	3680	6260	6190	6150	6010	5650	5290	5780	5500
24	2350	2420	2430	3710	6230	6190	6170	6000	5650	5320	5770	5500
25	2350	2420	2430	3750	6220	6200	6180	5990	5640	5320	5760	5490
26	2360	2420	2430	3810	6220	6200	6180	5980	5620	5310	5750	5490
27	2370	2420	2430	4090	6220	6200	6190	5970	5610	5300	5740	5480
28	2380	2420	2430	4320	6210	6200	6180	5970	5600	5290	5740	5470
29	2390	2420	2570	4460	---	6210	6190	5960	5580	5280	5730	5460
30	2390	2420	2740	4540	---	6200	6190	5950	5570	5270	5710	5440
31	2390	---	2760	4600	---	6200	---	5940	---	5260	5700	---
MAX	2430	2420	2760	4600	6420	6220	6200	6190	5930	5560	5780	5690
MIN	2350	2390	2420	2770	4650	6190	6150	5940	5570	5260	5190	5440
(*)	6546.81	6547.04	6549.58	6561.42	6570.17	6570.12	6570.05	6568.78	6566.81	6565.12	6567.52	6566.11
(**)	-30	+30	+340	+1840	+1610	-10	-10	-250	-370	-310	+440	-260

CAL YR 2004 MAX 3550 MIN 2350 (\*\*)-350  
WTR YR 2005 MAX 6420 MIN 2350 (\*\*)+3020

(\*) Elevation, in feet, at end of month  
(\*\*) change in contents, in acre-feet

## LITTLE COLORADO RIVER BASIN

## 09392000 SHOW LOW CREEK BELOW JAQUES DAM, NEAR SHOW LOW, AZ

**LOCATION.**--Lat 34°11'47", long 110°00'13", in NW<sub>1/4</sub> sec. 10, T.9 N., R.22 E., Navajo County, Hydrologic Unit 15020005, on right bank just downstream from Jaques Dam, 3.5 mi northwest of Lakeside, and 4.5 mi southeast of Show Low.

**DRAINAGE AREA.**--73.0 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Nov. 1941 to Jan. 1945, June 1953 to Sept. 1955 (monthly discharge only), Oct. 1955 to September 30, 2005. Monthly discharge only Nov. 1941 to Jan. 1945, published in WSP 1313. Published as "at Jaques damsite, near Lakeside" 1941-45.

**REVISED RECORDS.**--WSP 1926: Drainage area. WDR AZ-81-1: 1979 (M).

**GAGE.**--Water-stage recorder and sharp-crested weir, with supplementary water-stage recorder on lake for recording flow over concrete spillway. Elevation of gage is 6,530 ft above sea level, from topographic map. Nov. 1941 to Jan. 1945 nonrecording gage at site 100 ft upstream at different datum.

**REMARKS.**--Records good. Discharge record is the sum of the diversions from Show Low Lake into Show Low Creek (09392000) and flows over the Show Low Lake spillway, which enters Show Low Creek about 0.25 mi downstream of station 09392000. Flow over the spillway occurred from Mar. 15 to Apr. 2 and Apr. 7 to 15 this year. Record since 1953 shows release from Show Low Lake. Flow regulated by several reservoirs, largest of which are Show Low Lake, completed in 1953; Rainbow Lake, completed prior to 1941; and Scott Reservoir, completed in 1946 (combined capacity, 8,800 acre-ft). Diversions for irrigation of about 250 acres above Show Low Lake and diversion by pumping of floodwater stored in Show Low Lake to Forestdale Creek in Salt River basin (see record for Forestdale Creek diversion from Show Low Creek, near Show Low, elsewhere in this report).

**AVERAGE DISCHARGE.**--52 years (water years 1954-2005), 8.70 ft<sup>3</sup>/s, 6,300 acre-ft/yr; median of yearly mean discharges, 3.94 ft<sup>3</sup>/s, 2,850 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 4,800 ft<sup>3</sup>/s, spillway flow entering 0.2 mi downstream from station, Dec. 27, 1984, lake elevation, 6,573.72 ft, from rating curve extended above 270 ft<sup>3</sup>/s; no flow at times.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Flood of Jan. 18, 1952, discharge, 6,250 ft<sup>3</sup>/s at site 5 mi downstream at Show Low, is the largest since at least 1940.

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 503 ft<sup>3</sup>/s, Feb. 12. Minimum daily discharge, no flow for Dec. 11-12, 22, 24, 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	0.22	0.02	0.10	0.11	30	18	7.0	5.4	5.6	5.8	5.6
2	1.7	0.22	0.01	0.11	0.11	26	16	6.5	5.4	5.6	5.8	5.6
3	1.7	0.22	0.01	0.11	0.11	22	12	6.5	5.4	5.7	5.8	5.6
4	1.7	0.22	0.04	0.10	0.11	20	8.2	6.6	5.4	5.8	5.8	5.6
5	2.8	0.22	0.06	0.11	0.11	23	9.0	4.0	5.4	5.8	5.8	5.6
6	3.9	0.22	0.05	0.10	0.11	38	10	0.27	5.4	5.7	5.8	5.6
7	4.4	0.22	0.08	0.11	0.11	58	9.1	3.0	5.4	5.7	5.8	5.6
8	4.4	0.22	0.11	0.10	0.11	47	5.2	4.7	5.3	5.6	5.8	5.6
9	4.4	0.22	0.07	0.11	0.11	34	2.6	4.7	5.3	5.6	5.8	5.6
10	4.4	0.22	0.02	0.11	0.11	28	5.1	4.7	5.5	5.6	5.8	5.6
11	4.4	0.22	0.00	0.10	0.11	24	7.5	4.7	5.6	5.6	5.8	5.5
12	4.4	0.22	0.00	0.11	503	23	8.1	4.7	5.6	5.6	5.8	5.4
13	4.4	0.22	0.02	0.11	444	20	6.8	4.7	5.6	5.8	5.9	5.4
14	4.4	0.22	0.06	0.11	170	19	6.2	4.7	5.6	5.8	6.0	5.4
15	4.4	0.22	0.10	0.11	90	18	6.8	4.7	5.6	5.8	3.9	5.4
16	4.4	0.22	0.09	0.11	59	16	7.6	4.7	5.6	5.8	2.0	5.4
17	4.4	0.22	0.08	0.11	44	16	6.5	4.7	5.6	5.8	2.0	5.4
18	4.4	0.19	0.10	0.11	42	14	4.6	4.7	5.6	5.8	2.0	5.4
19	4.4	0.10	0.11	0.11	490	12	0.70	4.7	5.6	5.8	2.0	5.4
20	4.4	0.07	0.03	0.11	422	14	0.50	4.7	5.6	5.8	2.0	5.4
21	4.4	0.08	0.01	0.11	235	15	3.1	4.7	5.6	5.8	1.8	5.4
22	4.4	0.04	0.00	0.11	248	14	4.0	4.7	5.6	5.8	3.3	5.4
23	4.4	0.01	0.01	0.11	324	12	4.0	4.7	5.6	5.8	4.6	4.7
24	3.9	0.03	0.00	0.11	121	11	4.0	4.7	5.6	5.8	4.6	1.2
25	0.25	0.02	0.04	0.11	73	15	5.0	4.7	5.6	5.8	4.6	4.0
26	0.22	0.06	0.00	0.11	59	17	8.2	4.7	5.6	5.8	4.6	4.3
27	0.22	0.09	0.02	0.11	51	16	6.5	4.7	5.6	5.8	4.6	5.6
28	0.22	0.09	0.05	0.11	40	18	5.7	4.7	5.6	5.8	4.6	5.6
29	0.22	0.11	0.06	0.11	---	24	6.8	4.7	5.6	5.8	4.8	5.6
30	0.22	0.11	0.04	0.11	---	25	7.6	4.9	5.6	5.8	5.6	5.6
31	0.22	---	0.10	0.11	---	23	---	5.3	---	5.8	5.6	---
TOTAL	93.77	4.74	1.39	3.36	3416.21	692	205.40	147.47	165.9	178.1	144.1	157.5
MEAN	3.02	0.16	0.04	0.11	122	22.3	6.85	4.76	5.53	5.75	4.65	5.25
MAX	4.4	0.22	0.11	0.11	503	58	18	7.0	5.6	5.8	6.0	5.6
MIN	0.22	0.01	0.00	0.10	0.11	11	0.50	0.27	5.3	5.6	1.8	1.2
AC-FT	186	9.4	2.8	6.7	6780	1370	407	293	329	353	286	312
CAL YR 2004	TOTAL	970.45	MEAN	2.65	MAX	5.4	MIN	0.00	AC-FT	1920		
WTR YR 2005	TOTAL	5209.94	MEAN	14.3	MAX	503	MIN	0.00	AC-FT	10330		

LITTLE COLORADO RIVER BASIN

09394500 LITTLE COLORADO RIVER AT WOODRUFF, AZ

**LOCATION**--Lat 34°46'58", long 110°02'37", in NE1/4SW1/4 sec. 17, T.16 N., R.22 E., Navajo County, Hydrologic Unit 15020002, on left bank at abandoned county road bridge in Woodruff, 3.7 mi downstream from Silver Creek.

**DRAINAGE AREA**--8,072 mi<sup>2</sup>, of which 297 mi<sup>2</sup> is noncontributing.

**PERIOD OF RECORD**--Mar. to May 1905; June to July 1905 (gage heights only); Aug. 1905 to May 1907; July 1907 to Apr. 1908, July to Oct. 1908, Dec. 1908, and Dec. 1915 to Sept. 1916 (gage heights only); Oct. 1916 to Aug. 1917 (monthly discharge only); Sept. 1917 to Mar. 1918, Dec. 1918 to Dec. 1919, Apr. 1929 to Dec. 1933, Sept. 1935 to current year. Published as "near Woodruff" 1916-19, 1929-48.

**REVISED RECORDS**--WSP 1049: 1917. WSP 1213: 1906, 1919(M). WDR AZ--88-1: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 5,130.3 ft above sea level. See WSP 1733 for history of changes prior to Sept. 22, 1949.

**REMARKS**--Records good except for estimated daily discharges, which are poor. Diversions above station for irrigation of about 22,000 acres, including a pump installation 1,000 ft upstream installed in spring of 1973. Some regulation by reservoirs above station; combined capacity, about 81,400 acre-ft.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge not determined, occurred Jan. 19, 1916; maximum discharge recorded, 25,000 ft<sup>3</sup>/s Dec. 5, 1919; maximum gage height, 22.9 ft from highwater mark in gage well, Dec. 19, 1978; minimum, no flow at times in most years prior to 1960, 1974, 1976, 1983, and post 1999.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 1,900 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12.....	2130	1,930	12.15
Feb. 20.....	0515	*2,260	*12.78

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	6.7	2.0	97	17	44	7.6	3.7	1.1	0.11	2.2	2.5
2	14	3.9	2.0	43	14	24	e6.2	3.2	0.86	0.03	11	39
3	8.2	3.2	1.6	23	16	18	e5.7	2.8	0.61	0.01	12	231
4	5.7	3.0	1.5	621	17	13	e5.5	1.8	0.35	0.01	33	218
5	4.6	3.1	1.5	562	12	11	e3.5	1.6	0.22	0.01	16	120
6	e3.4	3.2	1.6	198	7.7	25	1.8	1.4	0.58	0.00	12	e38
7	5.2	2.9	1.9	e107	5.1	132	0.71	1.4	0.37	0.00	117	e19
8	5.0	2.0	2.0	67	3.9	148	0.98	2.2	0.12	0.00	74	11
9	7.1	1.2	2.0	49	3.2	88	1.2	2.2	0.00	0.00	155	15
10	13	1.2	2.6	32	2.9	41	1.0	1.9	0.09	0.00	133	11
11	8.4	1.2	2.4	110	3.9	23	1.6	0.94	0.27	0.00	212	7.4
12	7.9	1.2	2.0	163	850	19	1.9	2.0	0.52	0.00	460	11
13	6.2	5.4	1.8	120	682	18	1.1	2.0	0.77	0.00	e129	5.5
14	4.0	3.8	1.5	64	184	57	0.95	1.6	0.71	0.00	e75	8.4
15	10	3.0	1.5	31	90	32	1.2	1.6	0.29	0.00	e102	7.6
16	11	2.7	1.6	20	50	19	1.8	1.3	0.28	0.00	31	8.1
17	6.6	2.7	2.5	e15	31	12	2.0	1.1	0.03	0.00	32	4.1
18	2.2	2.8	2.7	e12	29	6.7	2.4	0.74	0.00	0.00	31	3.2
19	2.1	3.0	2.8	e9.3	552	4.3	2.4	0.77	0.00	0.00	16	3.0
20	1.9	2.8	2.6	e5.8	1330	3.6	0.95	0.47	0.00	0.00	17	3.5
21	1.3	2.4	2.0	e4.2	477	3.5	1.3	0.66	0.00	0.00	17	4.2
22	1.1	2.2	2.3	3.8	230	3.3	2.1	0.91	0.00	32	17	4.2
23	2.2	3.6	2.7	3.8	475	3.2	2.5	1.1	0.25	11	119	2.6
24	2.2	3.3	2.0	5.0	273	2.8	9.0	0.74	0.70	17	e50	1.7
25	1.6	7.7	1.9	5.2	e200	2.8	3.0	0.09	0.32	26	e17	4.1
26	2.1	4.7	1.6	5.2	e145	73	2.8	0.05	0.40	21	13	4.3
27	1.9	3.0	1.5	4.4	e118	44	2.2	0.27	0.51	6.8	9.8	4.7
28	51	2.3	1.5	3.6	e89	19	3.0	0.13	0.51	8.1	5.4	4.3
29	161	2.2	1.6	20	---	19	3.4	0.56	0.48	9.1	2.5	1.8
30	19	2.1	525	24	---	19	5.4	2.6	0.29	2.9	2.1	2.3
31	11	---	292	19	---	12	---	2.3	---	2.5	2.4	---
TOTAL	400.9	92.5	874.2	2447.3	5907.7	940.2	85.19	44.13	10.63	136.57	1925.4	800.5
MEAN	12.9	3.08	28.2	78.9	211	30.3	2.84	1.42	0.35	4.41	62.1	26.7
MAX	161	7.7	525	621	1330	148	9.0	3.7	1.1	32	460	231
MIN	1.1	1.2	1.5	3.6	2.9	2.8	0.71	0.05	0.00	0.00	2.1	1.7
MED	5.7	3.0	2.0	23	69	19	2.2	1.4	0.31	0.00	17	5.1
AC-FT	795	183	1730	4850	11720	1860	169	88	21	271	3820	1590
CFSM	0.00	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2005, BY WATER YEAR (WY)

MEAN	37.5	22.8	32.6	40.1	57.5	72.6	52.4	19.8	6.02	68.9	137	88.2
MAX	301	543	382	599	827	610	789	488	87.8	810	951	630
(WY)	1973	1906	1920	1993	1932	1941	1905	1973	1955	1919	1955	1929
MIN	1.05	0.90	1.24	1.12	0.91	0.86	0.00	0.00	0.00	0.53	3.57	0.71
(WY)	1951	2000	2000	2000	2000	2002	1956	1929	1929	1942	1950	1956

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1905 - 2005	
ANNUAL TOTAL	4698.25		13665.22			
ANNUAL MEAN	12.8		37.4		47.7	
HIGHEST ANNUAL MEAN					161	
LOWEST ANNUAL MEAN					4.36	
HIGHEST DAILY MEAN	847 Jul 15		1330 Feb 20		10000 Nov 27 1905	
LOWEST DAILY MEAN	0.00 May 4		0.00 Jun 9		0.00 Jun 10 1919	
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 9		0.00 Jul 6		0.00 May 1 1929	
MAXIMUM PEAK STAGE					22.90 Dec 19 1978	
ANNUAL RUNOFF (AC-FT)	9320		27100		34570	
ANNUAL RUNOFF (CFSM)	0.002		0.005		0.006	
10 PERCENT EXCEEDS	9.5		93		87	
50 PERCENT EXCEEDS	1.9		3.3		6.4	
90 PERCENT EXCEEDS	0.00		0.27		0.90	

e Estimated





LITTLE COLORADO RIVER BASIN

09397000 LITTLE COLORADO RIVER AT HOLBROOK, AZ

**LOCATION**--Lat 34°53'52", long 110°09'45", in SW1/4SW1/4 sec. 6, T.17 N., R.21 E., Navajo County, Hydrologic Unit 15020008, on east side of Hwy. 77 bridge, and 2 miles below mouth of Puerco River.

**DRAINAGE AREA**--11,462 mi<sup>2</sup>.

**PERIOD OF RECORD**--Nov. 2003 to current year. Records for Mar. to Nov. 1905, Dec. 1905 to Aug. 1906 (monthly discharge only), Sept. 1906 to Apr. 1907, May 1907 to Dec. 1909 (gauge heights only), Sept. 1949 to Sept. 1973 at site 1/8 mile downstream.

**GAGE**--Water-stage recorder. Datum of gage is 5,062.87 ft above sea level. Mar. 1905 to Dec. 1909, non-recording gage.

**REMARKS**--Records fair. Diversions above station for irrigation of about 23,000 acres. Some regulation by reservoirs.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 24,200 ft<sup>3</sup>/s Oct. 4, 1968, gage height, 12.55 ft.; maximum gage height, 15.20 ft. Oct. 20, 1972; no flow at times.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Peak discharge of flood of Sept. 19, 1923, was computed as 60,000 ft<sup>3</sup>/s, from cross section and slope of water surface by Corps of Engineers, whose studies indicate that this was probably the greatest flood since 1870.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 12.....	1200	*3,560	*9.89

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	389	10	7.2	201	28	156	15	21	1.9	0.00	1.1	4.2
2	96	7.3	5.0	81	29	78	8.4	11	0.72	0.00	27	13
3	33	5.5	5.0	98	18	26	5.7	6.4	0.50	0.00	29	160
4	19	5.2	4.9	1080	27	12	3.9	5.6	0.85	0.00	319	257
5	8.1	5.2	5.8	1100	17	9.6	3.4	3.7	0.45	0.00	75	187
6	4.3	5.3	5.0	272	11	298	3.2	1.5	0.11	0.00	283	50
7	4.4	5.3	5.1	220	8.6	294	3.1	2.2	0.06	0.00	305	17
8	5.3	4.8	8.2	152	6.6	324	1.9	2.2	0.04	0.00	160	9.9
9	5.3	4.1	6.7	94	5.5	265	1.5	2.1	0.02	0.00	333	196
10	16	3.4	5.4	48	4.9	192	2.7	2.8	0.03	0.00	211	445
11	15	3.2	5.2	122	5.0	86	2.6	3.0	0.04	0.00	918	90
12	9.6	3.3	4.4	250	1550	36	2.9	1.7	0.16	0.00	1530	18
13	9.2	4.5	4.5	269	1110	16	3.5	2.2	0.05	0.00	1280	6.1
14	6.2	8.1	3.7	182	427	1070	2.9	2.3	0.05	0.00	244	4.7
15	13	5.2	3.2	94	247	528	2.3	1.9	0.00	0.00	377	4.1
16	12	4.4	3.2	53	140	281	2.9	1.8	0.01	0.00	131	4.8
17	7.8	3.8	4.0	24	124	73	3.9	1.7	0.00	0.00	90	4.7
18	3.7	3.9	5.2	13	103	60	3.9	1.1	0.00	0.00	119	3.4
19	2.2	5.1	5.3	9.7	204	21	4.4	0.77	0.00	0.00	23	3.5
20	2.3	5.0	5.2	7.6	2110	9.9	37	0.69	0.00	0.00	13	2.1
21	1.6	4.6	4.8	6.6	1650	6.4	54	0.40	0.00	0.00	13	3.1
22	1.3	4.7	4.3	5.5	619	6.2	48	0.31	0.00	0.00	44	3.4
23	1.4	915	4.3	4.9	858	4.7	36	0.55	0.00	16	78	3.1
24	2.6	125	3.9	5.7	573	6.8	203	0.88	0.00	1.8	96	1.6
25	2.6	25	5.9	7.4	453	9.0	169	0.24	0.00	15	21	1.2
26	2.6	12	7.0	8.3	348	103	113	0.43	0.00	48	13	3.9
27	3.5	6.9	6.2	6.6	319	177	161	0.33	0.00	118	12	3.8
28	44	5.7	4.3	5.4	243	66	75	0.55	0.00	23	8.4	4.3
29	627	5.6	4.6	18	---	24	45	0.53	0.00	10	5.9	3.0
30	104	5.8	518	52	---	33	34	0.22	0.00	2.9	4.2	1.7
31	24	---	417	35	---	20	---	2.1	---	1.2	3.8	---
TOTAL	1476.0	1212.9	1082.5	4525.7	11238.6	4291.6	1053.1	82.20	4.99	235.90	6767.4	1509.6
MEAN	47.6	40.4	34.9	146	401	138	35.1	2.65	0.17	7.61	218	50.3
MAX	627	915	518	1100	2110	1070	203	21	1.9	118	1530	445
MIN	1.3	3.2	3.2	4.9	4.9	4.7	1.5	0.22	0.00	0.00	1.1	1.2
MED	7.8	5.2	5.0	52	172	60	4.2	1.7	0.00	0.00	78	4.5
AC-FT	2930	2410	2150	8980	22290	8510	2090	163	9.9	468	13420	2990
CFSM	0.00	0.00	0.00	0.01	0.04	0.01	0.00	0.00	0.00	0.00	0.02	0.00
CAL YR 2004	TOTAL 12571.21	MEAN 34.3	MAX 1540	MIN 0.00	MED 2.7	AC-FT 24930	CFSM 0.00					
WTR YR 2005	TOTAL 33480.49	MEAN 91.7	MAX 2110	MIN 0.00	MED 5.6	AC-FT 66410	CFSM 0.01					

## LITTLE COLORADO RIVER BASIN

## 09397300 LITTLE COLORADO RIVER NEAR JOSEPH CITY, AZ

**LOCATION.**--Lat 34°54'04", long 110°15'17", in NE1/4SE1/4 sec. 6, T.17 N., R.20 E., Navajo County, Hydrologic Unit 15020008, on left bank just upstream from diversion dam, 5.4 mi west of Holbrook, 5.7 mi southeast of Joseph City, and 8.5 mi downstream from Puerco River.

**DRAINAGE AREA.**--12,384 mi<sup>2</sup>, of which 347 mi<sup>2</sup> are noncontributing.

**PERIOD OF RECORD.**--July 1973 to current year (daily discharge only for those days on which instantaneous discharge exceeds 500 ft<sup>3</sup>/s).

**REVISED RECORDS.**--WDR AZ-88-1: Drainage area.

**GAGE.**--Water-stage recorder, crest-stage gage, and concrete diversion dam. Datum of gage is 5,031.10 ft above sea level (U.S. Army Corps of Engineers benchmark). From Oct. 1, 1990, to Mar. 19, 1993, on right bank at same datum.

**REMARKS.**--Records fair except for estimated daily discharges, which are poor. Published record includes only those days when instantaneous discharge over the crest of the dam exceeds 500 ft<sup>3</sup>/s. Diversions above station for irrigation of about 23,000 acres, diversions at dam on right bank of most low flows for irrigation of about 1,500 acres in vicinity of Joseph City. Some regulation by reservoirs; combined capacity of principal reservoirs, about 91,400 acre-ft.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 25,400 ft<sup>3</sup>/s Dec. 19, 1978, gage height, 7.64 ft, from rating curve extended above 7,400 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 6.82 ft.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--A discharge of 60,000 ft<sup>3</sup>/s was determined for peak of Sept. 19, 1923, at Holbrook (see prior records for sta 09397000, Little Colorado River at Holbrook, for this peak and other peaks 1905-6, 1949-73).

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 5,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 19 .....	1845	*5,770	*5.57

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e421	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	e1010	---	---	---	---	---	---	e316	---
5	---	---	---	e1420	---	---	---	---	---	---	---	---
6	---	---	---	---	---	272	---	---	---	---	e347	---
7	---	---	---	---	---	---	---	---	---	---	e305	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	e409	---
10	---	---	---	---	---	---	---	---	---	---	---	e424
11	---	---	---	---	---	---	---	---	---	---	e782	---
12	---	---	---	---	1420	---	---	---	---	---	e1490	---
13	---	---	---	e1740	---	---	---	---	---	---	e1380	---
14	---	---	---	e526	e857	---	---	---	---	---	e256	---
15	---	---	---	---	---	e675	---	---	---	---	e416	---
16	---	---	---	---	---	e347	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	2980	---	---	---	---	---	---	---
20	---	---	---	---	e2610	---	---	---	---	---	---	---
21	---	---	---	---	e1030	---	---	---	---	---	---	---
22	---	---	---	---	e665	---	---	---	---	---	---	---
23	---	e1500	---	---	868	---	---	---	---	---	---	---
24	---	---	---	---	e654	---	193	---	---	---	---	---
25	---	---	---	---	e476	---	---	---	---	---	---	---
26	---	---	---	---	e377	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	e806	---	---	---	---	---	---	---	---	---	---	---
30	---	---	688	---	---	---	---	---	---	---	---	---
31	---	---	e471	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

LITTLE COLORADO RIVER BASIN

09397500 CHEVELON CREEK BELOW WILDCAT CANYON NEAR WINSLOW, AZ

**LOCATION**--Lat 34°38'11", long 110°42'49", in SW<sub>1/4</sub> sec. 36, T.15 N., R.15 E., Navajo County, Hydrologic Unit 15020010, Sitgreaves National Forest, on right bank 0.4 mi downstream from Wildcat Canyon and 25 mi south of Winslow.

**DRAINAGE AREA**--271 mi<sup>2</sup>.

**PERIOD OF RECORD**--May 1947 to Sept. 1970 (daily discharge), 1979, 1982-95 (annual maximum only), Oct. 1995 to current year.

**REVISED RECORDS**--WSP 1179: 1949(p), WSP 1283: 1951(m).

**GAGE**--Water-stage recorder. Datum of gage is 5,905.16 ft above sea level, from Bureau of Reclamation benchmark.

**REMARKS**--No estimated daily discharges. Records good. Storage and regulation by Chevelon Canyon Lake (capacity 6,193 acre-ft) 17 mi upstream.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 24,700 ft<sup>3</sup>/s Jan. 8, 1993, gage height, 20.78 ft; minimum daily discharge, no flow for many days.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 24.....	2215	201	4.01	Feb. 12.....	1100	4,110	10.18
Dec. 29.....	2300	*10,500	*14.59	Feb. 19.....	0800	2,820	8.94
Jan. 4.....	1915	542	5.38	Mar. 13.....	1330	382	4.78
Jan. 12.....	0615	331	4.56	Apr. 25.....	1215	216	3.98
Jan. 27.....	1645	761	6.05				

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	32	343	126	128	128	21	0.00	0.00	0.00	0.00
2	0.00	0.00	31	223	100	145	102	14	0.00	0.00	0.00	0.00
3	0.00	0.00	31	161	82	171	109	10	0.00	0.00	0.00	0.00
4	0.00	0.00	31	348	70	178	139	6.9	0.00	0.00	0.00	0.00
5	0.00	0.00	31	366	68	167	132	4.9	0.00	0.00	0.00	0.00
6	0.00	0.00	29	263	62	192	102	3.4	0.00	0.00	0.00	0.00
7	0.00	0.00	25	214	62	208	86	2.5	0.00	0.00	0.00	0.00
8	0.00	0.00	12	184	59	226	89	1.9	0.00	0.00	0.00	0.00
9	0.00	0.00	3.2	153	55	258	95	1.4	0.00	0.00	0.00	0.00
10	0.00	0.00	2.4	132	55	298	81	0.90	0.00	0.00	0.00	0.00
11	0.00	0.00	2.0	197	61	337	61	0.51	0.00	0.00	0.00	0.00
12	0.00	0.00	1.9	298	2580	330	47	0.23	0.00	0.00	0.00	0.00
13	0.00	0.00	16	225	1610	340	41	0.10	0.00	0.00	0.00	0.00
14	0.00	0.00	64	180	693	345	42	0.04	0.00	0.00	0.00	0.00
15	0.00	0.00	85	132	423	261	43	0.02	0.00	0.00	0.00	0.00
16	0.00	0.00	86	109	335	172	39	0.01	0.00	0.00	0.00	0.00
17	0.00	0.00	67	99	340	127	33	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	51	95	474	106	28	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	37	94	1970	95	23	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	29	104	757	92	18	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	23	135	417	209	13	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	19	178	338	233	9.0	0.00	0.00	0.00	0.00	0.00
23	0.00	3.9	17	225	471	193	6.7	0.00	0.00	0.00	0.00	0.00
24	0.00	110	17	258	354	166	22	0.00	0.00	0.00	0.00	0.00
25	0.00	171	17	251	254	129	194	0.00	0.00	0.00	0.00	0.00
26	0.00	112	17	231	202	116	152	0.00	0.00	0.00	0.00	0.00
27	0.00	79	14	506	165	104	90	0.00	0.00	0.00	0.00	0.00
28	0.00	61	6.7	539	137	136	59	0.00	0.00	0.00	0.00	0.00
29	0.00	49	2610	312	---	203	42	0.00	0.00	0.00	0.00	0.00
30	0.00	40	3270	220	---	195	29	0.00	0.00	0.00	0.00	0.00
31	0.00	---	720	166	---	162	---	0.00	---	0.00	0.00	---
TOTAL	0.00	625.90	7397.2	6941	12320	6022	2054.7	67.81	0.00	0.00	0.00	0.00
MEAN	0.00	20.9	239	224	440	194	68.5	2.19	0.00	0.00	0.00	0.00
MAX	0.00	171	3270	539	2580	345	194	21	0.00	0.00	0.00	0.00
MIN	0.00	0.00	1.9	94	55	92	6.7	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	1240	14670	13770	24440	11940	4080	135	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	2.60	45.9	0.00	1959	9.41	108	0.00	1960	39.6	320	0.00	1966
	73.5	523	0.00	1952	61.1	440	0.00	2005	152	473	0.00	1960
	134	658	0.00	1952	8.10	47.4	0.00	1955	0.06	1.70	0.00	1964
	132	205	0.00	1964	0.20	205	0.00	1951	12.0	4.45	0.00	1951
	13.2	210	0.00	1970	13.2	210	0.00	1970	13.2	210	0.00	1970
	1949	1949	1951	1951	1954	1996	1996	1947	1947	1947	1948	1948

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1947 - 2005

ANNUAL TOTAL	11603.36	35428.61	
ANNUAL MEAN	31.7	97.1	42.1
HIGHEST ANNUAL MEAN			132
LOWEST ANNUAL MEAN			0.00
HIGHEST DAILY MEAN	3270	Dec 30	6860
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	23020	70270	30510
10 PERCENT EXCEEDS	31	228	90
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## LITTLE COLORADO RIVER BASIN

## 09398300 BLUE RIDGE RESERVOIR NEAR PINE, AZ

**LOCATION.**--Lat 34°33'19", long 111°11'00", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec. 33, T.14 N., R.11 E., Coconino County, Hydrologic Unit 15020008, in Coconino National Forest, on upstream side of left end of spillway structure of Blue Ridge Dam on East Clear Creek, at mouth of General Springs Canyon, 7.3 mi east of Clints Well, and 20 mi northeast of Pine.

**DRAINAGE AREA.**--71.1 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Dec. 1964 to Mar. 1965 (periodic elevations only), Apr. 1965 to current year.

**GAGE.**--Water-stage recorder. Datum of gage is 6,620 ft above sea level; gage readings have been reduced to elevations NGVD. Prior to Apr. 2, 1965, nonrecording-gage readings (at intervals of 3 to 8 days) at NGVD.

**REMARKS.**--Records good. Reservoir is formed by a concrete arch dam. Dam completed and storage began in Dec. 1964. Total capacity is 19,500 acre-ft at elevation 6,735 ft, of which 15,000 acre-ft is usable storage below 6,720 ft, the spillway crest. Drawdown below 6,646.3 ft, 2,620 acre-ft restricted by sill at mouth of diversion tunnel since Nov. 1981. Reservoir serves as a basin from which water is pumped to the East Verde River. (See records for East Verde River diversion from East Clear Creek, near Pine.) Release is possible through valve in base of dam. Figures given herein represent total contents.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum contents, 17,360 acre-ft Dec. 29, 2004; elevation, 6,728.01 ft; minimum contents since reservoir filled (Apr. 1965), 1,450 acre-ft Nov. 18--27, 1981; minimum elevation, 6,630.75 ft Nov. 26, 1981.

**EXTREMES FOR CURRENT YEAR.**--Maximum contents, 17,360 acre-ft Dec. 29 at 1530; elevation, 6,728.01 ft; minimum daily contents, 12,070 acre-ft, Oct. 26--27; minimum elevation 6,708.20 ft Oct. 27.

RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12470	12880	e14730	15180	15120	15140	15180	15050	14590	14050	13580	13510
2	12460	12880	14740	15140	15100	15140	15190	15050	14560	14020	13570	13500
3	12450	12890	14740	e15210	15090	15150	15240	15040	14540	14010	13560	13490
4	12430	12880	14750	15220	15080	15150	15230	15030	14530	13990	13560	13480
5	12390	12870	14760	15200	15080	15180	15190	15030	14510	13970	13550	13470
6	12330	12870	14770	15160	15070	15180	15180	15020	14490	13950	13530	13450
7	12300	12870	14770	15130	15070	15180	15190	15020	14470	e13920	13530	13440
8	12280	12870	14770	15110	15070	15200	15230	15010	14450	13900	13520	13420
9	12270	12870	14760	15110	15060	15240	15210	15000	14430	13880	13510	13410
10	12260	12870	14760	15140	15060	15270	15160	14990	14420	13860	13510	13400
11	12240	12870	14770	15210	15830	15290	15130	14980	14400	13850	13510	13380
12	12230	12860	14800	15180	15780	15290	15120	14970	14380	13830	13510	13370
13	12210	12860	14840	15150	15470	15290	15140	14960	14370	13810	13530	13350
14	12200	12850	14900	15120	15330	15260	15150	14950	14350	13790	13560	13330
15	12190	12840	14950	15110	15280	15200	15150	14940	14330	13780	13580	13310
16	12170	12840	14990	15100	15300	15160	15140	14920	14310	13760	13580	13300
17	12160	12830	15020	15090	15260	15140	15130	14910	14300	13750	13570	13280
18	12140	12830	15020	15090	15860	15120	15120	14890	14270	13730	13560	13270
19	12130	12820	15030	15090	15480	15130	15110	14880	14250	13720	13560	13250
20	12120	12810	15020	15100	15330	15230	15110	14860	14240	13700	13550	13240
21	12130	12920	15020	15120	15280	15210	15090	14840	14220	13690	13540	13230
22	12120	13640	15020	15140	15380	15180	15080	14830	14200	13680	13530	13220
23	12110	14040	15010	15170	15300	15180	15080	14800	14190	13680	13560	13200
24	12100	14270	15000	15170	15230	15160	15330	14780	14170	13670	e13590	13190
25	12080	14410	14990	15170	15200	15160	15210	14750	14160	13660	13590	13170
26	12070	14510	14990	15400	15170	15150	15150	14730	14130	13650	13590	13160
27	12070	14580	14980	15430	15150	15150	15110	14710	14110	13640	13580	13140
28	12450	e14620	14990	15270	15140	15180	15100	14700	14100	13630	13560	13130
29	12690	e14650	16400	15210	---	15190	15080	14690	14080	13620	13550	13110
30	12810	e14690	15470	15170	---	15190	15070	14670	14060	13600	13530	13100
31	12860	---	15260	15140	---	15180	---	14630	---	13590	13520	---
TOTAL	380920	399490	464020	470230	427570	470870	454600	461630	429610	427380	420070	399300
MEAN	12290	13320	14970	15170	15270	15190	15150	14890	14320	13790	13550	13310
MAX	12860	14690	16400	15430	15860	15290	15330	15050	14590	14050	13590	13510
MIN	12070	12810	14730	15090	15060	15120	15070	14630	14060	13590	13510	13100
CAL YR 2004	TOTAL 4758050	MEAN 13000	MAX 16400	MIN 10590	(**) +610							
WTR YR 2005	TOTAL 5205690	MEAN 14260	MAX 16400	MIN 12070	(**) +4220							

(\*) Elevation, in feet, at end of month.

(\*\*) Change in contents, in acre-feet.

e Estimated

LITTLE COLORADO RIVER BASIN

09400350 LITTLE COLORADO RIVER NEAR WINSLOW, AZ

**LOCATION**--Lat 35°00'42", long 110°39'02", in SW1/4SE1/4 sec. 28, T.19 N., R.16 E., Navajo County, Hydrologic Unit 15020008, about 4 mi east of Winslow, in the median of I-40, on the east side of the bridge, about 0.5 mi east of exit 257.

**DRAINAGE AREA**--Unknown.

**PERIOD OF RECORD**--Dec. 2001 to current year. Records for May 1954 to Sept.1956 at site 1 mi upstream, a major tributary enters between the two sties, records are not equivalent.

**GAGE**--Water-stage recorder and crest-stage gage. Datum of gage is 4,863 ft above sea level, from Navajo County survey marker.

**REMARKS**--Records fair except for estimated daily discharges, which are poor. Flow is regulated by reservoirs upstream. Many diversions for irrigation above gage.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 20,000 ft<sup>3</sup>/s Dec. 30, 2004, gage height, 20.23 ft; minimum daily discharge, 1.0 ft<sup>3</sup>/s Aug. 18--19, 2002.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 8,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30 .....	1100	*20,000	*20.23
Feb. 13 .....	0145	13,400	18.30
Feb. 20 .....	0130	12,700	18.06

Minimum daily discharge, 3.7 ft<sup>3</sup>/s, July 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	359	44	96	2820	588	687	543	238	14	7.4	37	4.9
2	177	24	86	1470	497	600	491	190	13	7.2	28	5.0
3	137	13	68	877	448	550	e422	e151	12	6.6	43	20
4	139	8.1	54	1510	369	557	e408	e105	12	6.7	67	120
5	e46	7.0	54	3390	e266	607	688	e88	e11	6.4	102	161
6	e61	6.0	57	1480	e204	625	762	e78	8.4	5.9	243	99
7	e21	5.7	75	1030	e179	1110	581	e69	9.7	5.9	334	45
8	e13	6.3	63	811	e173	1020	523	e62	9.3	5.9	e303	31
9	11	6.4	28	694	e171	1080	666	e56	8.0	5.4	285	27
10	10	6.2	24	580	e167	1050	778	e53	9.5	5.3	424	244
11	11	6.1	21	713	165	1140	613	e53	e11	5.3	e683	140
12	20	6.1	19	1160	2410	1310	441	e48	11	5.2	922	50
13	15	6.2	17	1250	10800	1300	e272	e38	9.9	5.0	1210	30
14	12	6.4	16	819	4430	1840	e260	31	10	4.9	503	18
15	12	5.5	15	609	2730	1770	e316	30	8.8	4.6	346	12
16	9.8	5.5	14	487	2030	1110	466	22	8.3	4.6	298	11
17	14	5.5	14	399	1780	e705	429	18	7.6	4.2	e196	9.7
18	14	5.4	86	337	1640	570	375	20	7.9	4.1	110	9.5
19	10	5.0	109	299	4970	554	337	20	8.0	4.0	69	9.3
20	9.0	4.9	91	268	8490	454	294	18	8.5	4.2	28	8.7
21	9.1	5.8	75	259	3800	386	e235	17	9.6	4.4	17	7.8
22	7.6	6.8	65	312	2090	673	e225	16	12	5.4	12	7.4
23	7.0	1480	54	491	2110	850	e220	16	12	4.3	20	6.5
24	7.8	433	46	801	2150	711	e240	15	15	3.9	45	5.8
25	8.1	146	50	1040	1510	677	668	16	16	3.9	41	6.0
26	7.9	196	36	1050	1140	555	1020	15	13	4.0	15	5.7
27	8.6	170	30	933	990	530	884	15	9.7	3.7	9.1	5.2
28	9.7	127	22	2410	802	460	616	14	9.0	59	7.4	5.3
29	448	100	25	1760	---	390	414	14	10	32	6.4	5.8
30	135	94	15200	1070	---	512	301	14	8.2	15	e6.0	6.0
31	73	---	7940	752	---	566	---	14	---	8.7	5.5	---
TOTAL	1822.6	2941.9	24550	31881	57099	24949	14488	1554	312.4	253.1	6415.4	1116.6
MEAN	58.8	98.1	792	1028	2039	805	483	50.1	10.4	8.16	207	37.2
MAX	448	1480	15200	3390	10800	1840	1020	238	16	59	1210	244
MIN	7.0	4.9	14	259	165	386	220	14	7.6	3.7	5.5	4.9
MED	12	6.4	54	819	1320	673	435	22	9.8	5.3	67	9.6
AC-FT	3620	5840	48690	63240	113300	49490	28740	3080	620	502	12720	2210
CFSM	0.00	0.01	0.05	0.06	0.13	0.05	0.03	0.00	0.00	0.00	0.01	0.00
CAL YR 2004	TOTAL 49807.63	MEAN 136	MAX 15200	MIN 0.58	MED 7.8	AC-FT 98790	CFSM 0.01					
WTR YR 2005	TOTAL 167383.0	MEAN 459	MAX 15200	MIN 3.7	MED 54	AC-FT 332000	CFSM 0.03					

e Estimated

## LITTLE COLORADO RIVER BASIN

## 09400562 ORAIBI WASH NEAR TOLANI LAKE, AZ

**LOCATION.**--Lat 35°34'47", long 110°46'24", NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec. 7, T.25 N., R.15 E., Navajo County, Hydrologic Unit 15020012, on right bank, about 27 mi northeast of Leupp, AZ.

**DRAINAGE AREA.**--635 mi<sup>2</sup>.

**PERIOD OF RECORD.**--July 1995 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 5,025 ft above sea level, from topographic map.

**REMARKS.**--Records poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 799 ft<sup>3</sup>/s, Aug. 6, 1997, gage height 11.66 ft. Minimum daily discharge, no flow for many days.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30.....	unknown	*403	*9.02a

Minimum daily discharge, no flow for many days.

a-from floodmark

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e130	0.00	0.00	9.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	e0.50	0.00	0.00	2.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	e0.00	0.00	0.00	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	e0.00	0.00	0.00	71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	e0.00	0.00	0.00	131	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00
6	0.00	0.00	0.00	40	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00
7	0.00	0.00	0.00	6.9	0.00	0.00	0.00	0.00	0.00	0.00	e40	0.00
8	0.00	0.00	0.00	5.6	0.00	0.00	0.00	0.00	0.00	0.00	e40	0.00
9	0.00	0.00	0.00	5.7	0.00	0.00	0.00	0.00	0.00	0.00	e10	0.00
10	0.00	0.00	0.00	2.1	0.00	0.00	0.00	0.00	0.00	0.00	35	0.00
11	0.00	0.00	0.00	92	0.00	0.00	0.00	0.00	0.00	0.00	84	0.00
12	0.00	0.00	0.00	208	1.8	0.00	0.00	0.00	0.00	0.00	22	0.00
13	0.00	0.00	0.00	79	36	0.00	0.00	0.00	0.00	0.00	20	0.00
14	0.00	0.00	0.00	17	28	0.00	0.00	0.00	0.00	0.00	4.8	0.00
15	0.00	0.00	0.00	17	14	0.00	0.00	0.00	0.00	0.00	0.74	0.00
16	0.00	0.00	0.00	5.4	9.9	0.00	0.00	0.00	0.00	0.00	39	0.00
17	0.00	0.00	0.00	3.8	5.5	0.00	0.00	0.00	0.00	0.00	27	0.00
18	0.00	0.00	0.00	1.2	2.7	0.00	0.00	0.00	0.00	0.00	6.6	0.00
19	0.00	0.00	0.00	0.02	0.23	0.00	0.00	0.00	0.00	0.00	1.1	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	2.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	1.0	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	e42	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	e123	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	130.50	31.73	166.00	709.12	98.13	0.00	0.00	0.00	0.00	0.00	330.93	0.00
MEAN	4.21	1.06	5.35	22.9	3.50	0.00	0.00	0.00	0.00	0.00	10.7	0.00
MAX	130	18	123	208	36	0.00	0.00	0.00	0.00	0.00	84	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	259	63	329	1410	195	0.00	0.00	0.00	0.00	0.00	656	0.00
CFSM	0.01	0.00	0.01	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2005, BY WATER YEAR (WY)

MEAN	5.53	0.14	0.54	2.29	0.35	0.18	0.09	0.00	0.05	1.77	10.9	10.4
MAX	19.5	1.06	5.35	22.9	3.50	1.41	0.94	0.05	0.49	5.74	29.4	28.8
(WY)	2004	2005	2005	2005	2005	1998	2000	2001	2000	1999	1999	2004
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1996	2000	1996	1996	1996	1996	1996	1996	1996	1996	1996	2001

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1995 - 2005

ANNUAL TOTAL	1565.70	1466.41	
ANNUAL MEAN	4.28	4.02	2.77
HIGHEST ANNUAL MEAN			5.03
LOWEST ANNUAL MEAN			0.50
HIGHEST DAILY MEAN	387	Sep 21	208
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	3110	2910	2010
ANNUAL RUNOFF (CFSM)	0.007	0.006	0.004
10 PERCENT EXCEEDS	0.90	3.1	0.03
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

LITTLE COLORADO RIVER BASIN

09400568 POLACCA WASH NEAR SECOND MESA, AZ

**LOCATION**--Lat 35°39'21", long 110°33'41", SE<sub>1/4</sub>NE<sub>1/4</sub>SW<sub>1/4</sub> sec. 18, T.26 N., R.17 E., Navajo County, Hydrologic Unit 15020013 on the right bank, about 10 mi southwest of Second Mesa.

**DRAINAGE AREA**--905 mi<sup>2</sup>.

**PERIOD OF RECORD**--Apr. 1994 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 5,240 ft above sea level, from topographic map.

**REMARKS**--No estimated daily discharge. Records fair.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 1,020 ft<sup>3</sup>/s, Aug. 5, 1997, gage height 8.00 ft. Minimum daily discharge, no flow for many days.

**CORRECTION**--The maximum discharge for water year 2000 was 463 ft<sup>3</sup>/s, the previous published figure was not the maximum.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s, and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 1.....	0030	*177	*6.14

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	0.09	0.16	1.0	0.20	0.18	0.13	0.13	0.04	0.00	0.00	0.00
2	3.8	0.10	0.15	0.44	0.18	0.16	0.14	0.13	0.03	0.00	0.00	0.00
3	0.31	0.10	0.15	1.5	0.17	0.30	0.13	0.12	0.02	0.00	0.03	0.00
4	0.06	0.11	0.09	18	0.17	0.19	0.12	0.12	0.02	0.00	0.00	0.00
5	0.03	0.12	0.23	17	0.18	0.21	0.12	0.11	0.04	0.00	0.00	0.00
6	0.03	0.13	0.30	4.7	0.17	0.21	0.12	0.11	0.03	0.00	0.00	0.00
7	0.04	0.17	0.25	1.2	0.26	0.19	0.13	0.10	0.01	0.00	0.00	0.00
8	0.05	0.31	0.24	0.80	0.22	0.16	0.13	0.11	0.01	0.00	0.00	0.00
9	0.05	0.15	0.18	0.55	0.17	0.15	0.17	0.11	0.01	0.00	0.00	0.00
10	0.10	0.15	0.17	0.42	0.18	0.15	0.18	0.10	0.03	0.00	13	0.00
11	0.08	0.14	0.17	31	0.36	0.15	0.16	0.10	0.06	0.00	24	0.00
12	0.07	0.15	0.17	41	15	0.15	0.16	0.10	0.10	0.00	16	0.00
13	0.06	0.14	0.18	15	43	0.14	0.15	0.10	0.06	0.00	6.4	0.00
14	0.06	0.14	0.18	3.5	14	0.41	0.14	0.11	0.03	0.00	1.5	0.00
15	0.07	0.15	0.18	0.93	2.4	0.23	0.14	0.10	0.02	0.00	0.72	0.00
16	0.07	0.16	0.17	0.42	0.70	0.18	0.14	0.10	0.01	0.00	0.59	0.00
17	0.07	0.15	0.16	0.22	0.39	0.17	0.13	0.08	0.01	0.00	3.5	0.00
18	0.07	0.16	0.16	0.17	0.57	0.17	0.12	0.08	0.01	0.00	2.2	0.00
19	0.08	0.15	0.16	0.17	1.0	0.16	0.13	0.08	0.01	0.00	0.85	0.00
20	0.08	0.19	0.17	0.17	1.8	0.17	0.11	0.08	0.01	0.00	0.42	0.00
21	0.09	0.68	0.17	0.18	0.81	0.14	0.12	0.07	0.01	0.00	0.08	0.00
22	0.08	0.39	0.15	0.17	0.26	0.14	0.12	0.06	0.02	0.00	0.03	0.00
23	0.08	0.20	0.11	0.16	0.22	0.15	0.14	0.05	0.03	0.00	0.01	0.00
24	0.08	0.17	0.10	0.21	0.20	0.13	0.60	0.05	0.02	0.00	0.00	0.00
25	0.09	0.17	0.14	0.18	0.19	0.24	0.21	0.04	0.02	0.00	0.00	0.00
26	0.08	0.17	0.17	0.22	0.19	0.16	0.16	0.05	0.01	0.00	0.00	0.00
27	0.09	0.17	0.19	0.28	0.18	0.15	0.14	0.06	0.00	0.00	0.00	0.00
28	0.33	0.16	0.22	0.20	0.17	0.16	0.14	0.07	0.01	0.00	0.00	0.00
29	0.15	0.14	0.77	0.22	---	0.14	0.15	0.09	0.00	0.00	0.00	0.00
30	0.11	0.12	39	0.38	---	0.13	0.13	0.06	0.01	0.00	0.00	0.00
31	0.10	---	2.9	0.22	---	0.12	---	0.03	---	0.00	0.00	---
TOTAL	62.46	5.33	47.54	140.61	83.34	5.49	4.66	2.70	0.69	0.00	69.33	0.00
MEAN	2.01	0.18	1.53	4.54	2.98	0.18	0.16	0.09	0.02	0.00	2.24	0.00
MAX	56	0.68	39	41	43	0.41	0.60	0.13	0.10	0.00	24	0.00
MIN	0.03	0.09	0.09	0.16	0.17	0.12	0.11	0.03	0.00	0.00	0.00	0.00
MED	0.08	0.15	0.17	0.42	0.22	0.16	0.14	0.10	0.02	0.00	0.00	0.00
AC-FT	124	11	94	279	165	11	9.2	5.4	1.4	0.00	138	0.00
CFSM	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2005, BY WATER YEAR (WY)

MEAN	6.09	0.27	0.29	0.60	0.48	0.24	0.19	0.12	0.05	3.22	11.0	7.91
MAX	33.9	0.96	1.53	4.54	2.98	0.42	0.29	0.25	0.09	14.6	32.4	21.5
(WY)	2001	1999	2005	2005	2005	2001	1999	1995	1998	2001	2003	1997
MIN	0.02	0.07	0.06	0.10	0.10	0.07	0.09	0.04	0.00	0.00	0.00	0.00
(WY)	2002	2002	2001	2003	2002	2002	2002	2002	2003	2005	2002	2005

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1994 - 2005

ANNUAL TOTAL	818.29	422.15	
ANNUAL MEAN	2.24	1.16	2.72
HIGHEST ANNUAL MEAN			6.71 2001
LOWEST ANNUAL MEAN			0.27 1995
HIGHEST DAILY MEAN	254 Sep 20	56 Oct 1	365 Oct 24 2000
LOWEST DAILY MEAN	0.00 Jun 10	0.00 Jun 27	0.00 Nov 6 1999
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 20	0.00 Jul 1	0.00 Jul 21 2000
ANNUAL RUNOFF (AC-FT)	1620	837	1970
ANNUAL RUNOFF (CFSM)	0.002	0.001	0.003
10 PERCENT EXCEEDS	0.26	0.59	0.39
50 PERCENT EXCEEDS	0.12	0.12	0.12
90 PERCENT EXCEEDS	0.00	0.00	0.01



## LITTLE COLORADO RIVER BASIN

## 09400583 JEDDITO WASH NEAR JEDDITO, AZ

**LOCATION**--Lat 35°34'39", long 110°27'42", NE<sub>1/4</sub>NW<sub>1/4</sub>NW<sub>1/4</sub> sec. 18, T.25 N., R.18 E., Navajo County, Hydrologic Unit 15020014, on right upstream side of State Highway 87 bridge, about 20 mi southwest of Second Mesa, AZ.

**DRAINAGE AREA**--147 mi<sup>2</sup>.

**PERIOD OF RECORD**--Sept. 1993 to Sept. 2005 (discontinued).

**GAGE**--Water-stage recorder. Elevation of gage is 5,440 ft above sea level, from topographic map.

**REMARKS**--Records poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 1,320 ft<sup>3</sup>/s, Sept. 9, 2003, gage height 9.83 ft. Minimum daily discharge, no flow for many days.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 16 .....	0630	*394	*4.58

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e8.8	0.00
5	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e2.2	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
8	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e2.6	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e32	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
20	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
21	0.00	e0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
22	0.00	e0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
23	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.60	0.00
MEAN	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47	0.00
MAX	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90	0.00
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2005, BY WATER YEAR (WY)

MEAN	0.45	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.47	1.73	2.10
MAX	2.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	2.48	6.86	17.6
(WY)	1994	2004	1994	1994	1994	1994	1994	1994	2003	1999	1999	2003
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1995	1994	1994	1994	1994	1994	1994	1994	1994	1996	1998	1995

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1994 - 2005

ANNUAL TOTAL	73.26	46.60		
ANNUAL MEAN	0.20	0.13	0.41	
HIGHEST ANNUAL MEAN			1.76	2003
LOWEST ANNUAL MEAN			0.00	1998
HIGHEST DAILY MEAN	44	Aug 17	32	Aug 16
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1
ANNUAL RUNOFF (AC-FT)	145		295	
ANNUAL RUNOFF (CFSM)	0.001		0.003	
10 PERCENT EXCEEDS	0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00	

e Estimated

LITTLE COLORADO RIVER BASIN

09401110 DINNEBITO WASH NEAR SAND SPRINGS, AZ

**LOCATION**--Lat 35°46'52", long 110°55'57", in SW1/4SE1/4SE1/4 sec. 34, T.28 N., R.13 E., Navajo County, Hydrologic Unit 15020017, on the right bank, about 15 mi west of Old Oraibi.

**DRAINAGE AREA**--473 mi<sup>2</sup>.

**PERIOD OF RECORD**--June 1993 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 5,160 ft above sea level, from topographic map.

**REMARKS**--Records fair except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 3,970 ft<sup>3</sup>/s, Sept. 20, 2004, gage height 16.20 ft, from floodmark, minimum daily discharge, 0.05 ft<sup>3</sup>/s, Aug. 16, 23, and Oct. 1-6, 2002.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30.....	0500	*1,260	*8.94 a
Aug. 6 .....	0300	1,050	8.27
Aug. 10 .....	1100	668	7.06

Minimum daily discharge, 0.09 ft<sup>3</sup>/s, July 28.  
a-from floodmark

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e39	0.35	0.42	6.2	0.56	0.45	0.34	0.29	0.20	0.14	0.11	0.17
2	e3.0	0.36	0.37	1.7	0.43	0.44	0.34	0.28	0.18	0.13	0.11	0.17
3	e0.50	0.40	0.38	3.8	0.41	0.58	0.33	0.27	0.19	0.12	15	0.18
4	e0.40	0.40	0.34	28	0.42	0.45	0.31	0.27	0.20	0.13	46	7.5
5	e0.40	0.40	0.54	17	e0.40	0.47	0.31	0.25	0.19	0.12	26	1.3
6	e0.40	0.41	0.55	3.5	e0.40	0.45	0.32	0.25	0.18	0.12	181	0.26
7	e0.40	0.49	0.50	0.85	e0.50	0.43	0.31	0.27	0.16	0.12	35	0.20
8	e0.40	0.77	0.54	0.74	e0.40	0.40	0.28	0.26	0.15	0.12	17	0.20
9	e0.40	0.46	0.51	0.60	0.41	0.40	0.44	0.66	0.21	0.12	44	0.19
10	e0.40	0.44	0.49	0.62	0.44	0.39	0.50	0.28	0.26	0.12	126	0.16
11	e0.40	0.44	0.49	142	0.74	0.39	0.34	0.29	0.29	0.11	27	0.15
12	e0.40	0.44	0.49	74	1.4	0.37	0.34	0.22	0.30	0.11	39	0.15
13	e0.40	0.38	0.52	17	30	0.36	0.33	0.22	0.19	0.11	12	0.16
14	0.38	0.30	0.51	2.6	13	0.45	0.33	0.42	0.18	0.11	2.4	0.16
15	0.41	0.30	0.50	0.84	4.0	0.37	0.33	0.29	0.18	0.11	0.37	0.16
16	0.40	0.31	0.47	0.55	1.3	0.38	0.32	0.26	0.15	0.11	25	0.15
17	0.38	0.31	0.45	0.50	0.53	0.39	0.31	0.26	0.15	0.11	13	0.16
18	0.37	0.66	0.45	e0.50	0.63	0.38	0.29	0.26	0.14	0.10	7.7	0.16
19	0.38	1.0	0.44	e0.50	1.3	0.42	0.27	0.27	0.14	0.10	1.9	0.16
20	0.37	0.55	0.46	0.50	0.53	0.42	0.28	0.26	0.15	0.10	0.31	0.17
21	0.38	3.7	0.48	0.50	0.48	0.40	0.27	0.25	0.15	0.10	0.26	0.18
22	0.50	16	0.40	0.47	0.50	0.39	0.29	0.24	0.16	0.10	0.24	0.17
23	0.40	1.1	0.34	0.46	0.47	0.37	0.30	0.23	0.17	0.11	0.24	0.16
24	0.40	0.48	0.32	0.69	0.59	0.40	2.2	0.22	0.18	0.11	0.23	0.15
25	0.39	0.45	0.37	0.51	0.52	0.46	0.41	0.22	0.15	0.12	0.23	0.16
26	0.38	0.44	0.39	0.59	0.39	0.36	0.35	0.22	0.13	0.12	0.22	0.16
27	0.38	0.41	0.43	0.57	0.50	0.37	0.34	0.23	0.12	0.11	0.21	0.17
28	0.89	0.31	0.53	0.46	0.44	0.37	0.33	0.25	0.12	0.09	0.20	0.17
29	0.51	0.28	23	0.48	---	0.35	0.45	0.24	0.13	0.12	0.20	0.17
30	0.42	0.52	e294	0.57	---	0.45	0.30	0.20	0.14	0.11	0.19	0.17
31	0.42	---	19	0.52	---	0.32	---	0.20	---	0.10	0.17	---
TOTAL	54.26	32.86	348.68	307.82	61.69	12.63	11.86	8.33	5.24	3.50	621.29	13.57
MEAN	1.75	1.10	11.2	9.93	2.20	0.41	0.40	0.27	0.17	0.11	20.0	0.45
MAX	39	16	294	142	30	0.58	2.2	0.66	0.30	0.14	181	7.5
MIN	0.37	0.28	0.32	0.46	0.39	0.32	0.27	0.20	0.12	0.09	0.11	0.15
MED	0.40	0.44	0.48	0.60	0.50	0.40	0.33	0.26	0.17	0.11	1.9	0.17
AC-FT	108	65	692	611	122	25	24	17	10	6.9	1230	27
CFSM	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2005, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	4.86	0.89	1.29	1.22	0.56	0.73	0.37	0.29	0.31	4.33	11.9	14.5	
MAX	19.2	5.26	11.2	9.93	2.20	2.69	0.50	0.44	0.98	13.8	36.8	69.3	
(WY)	1998	2004	2005	2005	2005	1998	1994	1999	1999	2001	2004	2004	
MIN	0.09	0.16	0.21	0.21	0.27	0.30	0.24	0.16	0.09	0.11	0.29	0.18	
(WY)	2003	2003	2002	2002	2002	2003	2003	2004	2003	2005	1994	2000	

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1993 - 2005

ANNUAL TOTAL	3379.48	1481.73	
ANNUAL MEAN	9.23	4.06	3.65
HIGHEST ANNUAL MEAN			9.99
LOWEST ANNUAL MEAN			0.45
HIGHEST DAILY MEAN	783	Sep 20	294
LOWEST DAILY MEAN	0.08	Jul 31	0.09
ANNUAL SEVEN-DAY MINIMUM	0.09	Sep 8	0.10
ANNUAL RUNOFF (AC-FT)	6700	2940	2650
ANNUAL RUNOFF (CFSM)	0.020	0.009	0.008
10 PERCENT EXCEEDS	3.7	2.0	0.68
50 PERCENT EXCEEDS	0.35	0.38	0.34
90 PERCENT EXCEEDS	0.10	0.14	0.15

e Estimated

## LITTLE COLORADO RIVER BASIN

## 09401260 MOENKOPI WASH AT MOENKOPI, AZ

**LOCATION.**--Lat 36°06'18", long 111°12'04", in NW1/4NE1/4 sec. 3, T.31 N., R.11 E. (unsurveyed), Coconino County, Hydrologic Unit 15020018, in Hopi Indian Reservation on right bank, 100 ft upstream from bridge on State Highway 264, 1.3 mi southeast of Moenkopi, 2.5 mi downstream from former gaging station 09401250, and 12.5 mi downstream from Begashibito Wash.

**DRAINAGE AREA.**--1,629 mi<sup>2</sup>.

**PERIOD OF RECORD.**--July 1976 to current year. Records for Oct. 1973 to July 1976, at site 2.5 mi upstream, not equivalent below 1.5 ft<sup>3</sup>/s due to channel losses.

**REVISED RECORDS.**--WDR AZ--88--1: Drainage area.

**GAGE.**--Water-stage recorder and crest-stage gages. Elevation of gage is 4,610 ft above sea level, from topographic map.

**REMARKS.**--Records poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 10,100 ft<sup>3</sup>/s Sept. 30, 1983, gage height, 15.10 ft, from rating curve extended above 220 ft<sup>3</sup>/s on basis of step-backwater computation at gage heights 12.2 ft, 15.0 ft, and 17.8 ft; maximum gage height, 18.94 ft Sept. 10, 2003, from floodmark. No flow at times each year.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--A discharge of 15,100 ft<sup>3</sup>/s occurred Aug. 4, 1929, at former streamflow-gaging station site 3.5 mi downstream.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 1,200 ft<sup>3</sup>/s and (or) maximum (\*)

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 10.....	1300	*1,490	*13.03

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	1.5	e2.5	10	2.3	3.1	1.7	2.4	0.00	0.00	0.46	0.00
2	e6.4	1.3	e3.1	5.7	2.2	3.0	1.9	2.8	0.00	0.00	0.45	0.00
3	e3.3	1.3	e3.3	11	2.2	3.1	2.1	4.2	0.00	0.00	6.8	9.2
4	e2.4	1.4	e3.8	87	2.4	3.1	2.2	3.2	0.00	0.00	21	19
5	1.6	1.6	e5.1	41	2.7	2.9	2.5	2.4	0.00	0.00	98	8.4
6	1.3	1.5	e4.7	8.1	2.9	3.0	2.3	2.4	0.00	0.00	208	3.4
7	e1.9	1.8	e3.9	4.7	3.0	3.0	2.5	2.8	0.00	0.00	50	0.13
8	e1.8	2.4	3.7	3.7	3.3	3.0	2.5	3.0	0.00	0.00	21	0.00
9	e1.3	5.4	3.2	2.8	3.3	2.9	2.8	2.7	0.00	0.00	112	0.00
10	e1.1	2.9	3.0	2.5	3.9	2.8	4.2	2.2	0.00	0.00	456	0.00
11	e0.96	2.3	2.9	3.3	4.1	2.6	3.5	2.3	0.00	0.00	63	0.00
12	e1.1	2.2	3.0	e4.6	8.9	2.6	2.6	2.5	0.10	0.00	77	0.00
13	1.6	3.0	3.0	e5.3	26	2.6	2.1	2.5	0.17	0.00	40	0.00
14	1.3	2.6	3.0	e3.5	14	2.6	2.0	2.9	0.01	0.00	28	0.00
15	1.3	2.0	2.9	e3.0	4.9	2.5	2.0	3.2	0.00	0.00	20	0.00
16	1.3	1.9	2.9	e2.5	3.6	2.4	2.0	3.4	0.00	0.00	59	0.00
17	1.3	1.9	e2.8	e2.5	4.5	2.5	1.9	1.5	0.00	0.00	e40	0.00
18	1.3	1.4	e3.0	e2.4	6.3	2.4	1.9	0.97	0.00	0.00	e40	0.00
19	1.3	1.3	e3.1	2.4	5.2	2.6	1.9	0.92	0.00	0.00	51	0.00
20	1.3	2.6	e3.2	2.7	5.0	2.8	1.9	0.88	0.00	0.00	35	0.00
21	1.4	3.6	e3.5	2.9	4.0	2.9	1.9	0.70	0.00	0.00	17	0.00
22	1.9	23	e3.3	2.8	4.1	2.5	2.0	0.55	0.00	0.00	7.7	0.00
23	1.5	28	e1.9	2.6	4.0	2.4	2.2	0.13	0.00	0.00	2.2	0.00
24	1.4	7.0	e4.0	2.5	3.8	2.4	25	0.48	0.00	0.00	0.65	0.00
25	1.3	3.6	e3.0	2.5	5.5	2.1	21	0.16	0.00	0.47	0.00	0.00
26	1.4	3.2	6.3	2.6	5.1	2.0	7.5	0.19	0.00	220	0.00	0.00
27	1.3	3.1	e7.2	3.1	4.3	1.9	3.6	0.19	0.00	38	0.00	0.00
28	2.6	3.0	6.8	3.0	3.3	2.0	3.0	0.20	0.00	2.6	0.00	0.00
29	6.9	e2.9	23	2.1	---	2.3	3.6	0.15	0.00	1.2	0.00	0.00
30	3.3	e2.5	41	2.5	---	2.2	2.9	0.02	0.00	0.45	0.00	0.00
31	2.1	---	14	2.4	---	1.9	---	0.00	---	0.45	0.00	---
TOTAL	77.96	122.2	180.1	237.7	144.8	80.1	119.2	51.94	0.28	263.17	1454.26	40.13
MEAN	2.51	4.07	5.81	7.67	5.17	2.58	3.97	1.68	0.01	8.49	46.9	1.34
MAX	19	28	41	87	26	3.1	25	4.2	0.17	220	456	19
MIN	0.96	1.3	1.9	2.1	2.2	1.9	1.7	0.00	0.00	0.00	0.00	0.00
MED	1.4	2.5	3.2	2.9	4.0	2.6	2.3	2.2	0.00	0.00	21	0.00
AC-FT	155	242	357	471	287	159	236	103	0.6	522	2880	80
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2005, BY WATER YEAR (WY)

MEAN	11.7	6.21	3.47	4.67	6.78	3.65	2.47	2.01	0.54	12.6	31.2	30.7
MAX	81.8	70.6	13.5	28.1	47.6	10.5	8.54	15.5	10.6	91.6	180	134
(WY)	1982	1988	1979	1993	1993	1993	1988	1992	1988	1977	2001	1983
MIN	0.24	1.14	0.62	1.20	1.90	1.68	1.01	0.31	0.00	0.00	0.00	0.00
(WY)	1992	1981	1981	2001	2001	1997	1979	1984	1984	1979	1978	1979

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1977 - 2005
ANNUAL TOTAL	3693.84	2771.84	
ANNUAL MEAN	10.1	7.59	9.69
HIGHEST ANNUAL MEAN			21.7
LOWEST ANNUAL MEAN			2.14
HIGHEST DAILY MEAN	720	Sep 19	456
LOWEST DAILY MEAN	0.00	May 29	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	May 29	0.00
ANNUAL RUNOFF (AC-FT)	7330		5500
ANNUAL RUNOFF (CFSM)	0.006		0.005
10 PERCENT EXCEEDS	5.5		9.0
50 PERCENT EXCEEDS	1.8		2.4
90 PERCENT EXCEEDS	0.00		0.00

e Estimated



**LITTLE COLORADO RIVER BASIN**  
**09401265 PASTURE CANYON SPRINGS NEAR TUBA CITY, AZ--CONTINUED**

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.32	0.36	0.38	e0.40	0.40	0.38	0.34	0.33	0.28	0.31	0.36	0.33
2	0.32	0.36	0.38	e0.40	0.38	0.38	0.34	0.33	0.28	0.31	0.33	0.33
3	0.32	0.36	0.38	e0.40	0.38	0.40	0.34	0.34	0.28	0.31	0.33	0.32
4	0.32	0.35	0.37	e0.50	0.38	0.38	0.34	0.33	0.28	0.31	0.39	0.33
5	0.32	0.34	0.37	e0.50	0.38	0.38	0.35	0.30	0.28	0.31	e0.33	e0.32
6	0.32	0.34	0.38	e0.40	0.38	0.38	0.35	0.31	0.28	0.31	0.35	e0.30
7	0.32	0.34	0.38	e0.40	0.38	0.38	0.34	0.32	0.28	0.30	0.36	e0.30
8	0.33	0.39	0.38	e0.40	0.38	0.38	0.34	0.32	0.28	0.30	0.33	e0.30
9	0.34	0.42	0.37	e0.40	0.38	0.38	0.34	0.32	0.28	0.29	0.32	e0.30
10	0.34	0.41	0.36	e0.40	0.38	0.36	e0.36	0.32	0.28	0.29	0.32	e0.30
11	0.34	0.40	0.36	e0.40	0.52	0.38	e0.36	0.32	0.30	0.30	0.32	e0.30
12	0.34	0.39	0.36	e0.40	0.55	0.38	0.37	0.32	0.31	0.29	0.32	e0.30
13	0.34	0.38	0.36	e0.40	0.48	0.38	0.36	0.32	0.27	0.29	0.32	e0.30
14	0.34	0.38	0.36	e0.40	0.46	0.38	0.36	0.32	0.28	0.29	0.32	e0.30
15	0.34	0.38	0.36	e0.40	0.46	0.35	0.36	0.31	0.28	0.29	0.35	0.30
16	0.34	0.38	0.36	e0.40	0.48	0.35	0.36	0.31	0.28	0.29	0.36	0.30
17	0.34	0.38	0.36	e0.40	0.47	0.35	0.36	0.31	0.28	0.29	0.35	0.30
18	0.34	0.38	0.36	e0.40	0.46	0.34	0.36	0.31	0.28	0.29	0.33	0.30
19	0.34	0.37	0.36	e0.40	0.47	0.34	0.35	0.31	0.28	0.30	0.34	0.30
20	0.34	0.36	0.36	0.41	0.47	0.35	0.34	0.30	0.28	0.30	0.33	0.30
21	0.36	0.46	0.36	0.41	0.45	0.36	0.34	0.30	0.28	0.30	0.32	0.30
22	0.40	0.44	0.36	0.41	0.45	0.36	0.34	0.30	0.28	0.31	0.32	0.30
23	0.38	0.42	0.36	0.40	0.44	0.36	0.34	0.29	0.28	0.31	0.32	0.30
24	0.37	0.40	0.36	0.38	0.43	0.36	0.46	0.28	0.29	0.31	0.32	0.30
25	0.36	0.39	0.35	0.38	0.39	0.36	0.41	0.29	0.29	0.32	0.32	0.30
26	0.36	0.38	0.34	0.41	0.38	0.36	0.41	0.30	0.30	0.35	0.32	0.30
27	0.36	0.38	0.34	0.46	0.38	0.36	0.38	0.28	0.30	0.32	0.32	0.30
28	0.41	0.38	0.34	0.40	0.38	0.36	0.34	0.30	0.27	0.32	0.34	0.30
29	0.38	0.38	e0.60	0.39	---	0.36	0.34	0.30	0.30	0.32	0.33	0.30
30	0.38	0.38	e0.50	0.43	---	0.36	0.33	0.30	0.30	0.32	0.32	0.30
31	0.37	---	e0.40	0.41	---	0.35	---	0.29	---	0.33	0.31	---
TOTAL	10.78	11.48	11.66	12.69	11.94	11.35	10.71	9.58	8.53	9.48	10.30	9.13
MEAN	0.35	0.38	0.38	0.41	0.43	0.37	0.36	0.31	0.28	0.31	0.33	0.30
MAX	0.41	0.46	0.60	0.50	0.55	0.40	0.46	0.34	0.31	0.35	0.39	0.33
MIN	0.32	0.34	0.34	0.38	0.38	0.34	0.33	0.28	0.27	0.29	0.31	0.30
MED	0.34	0.38	0.36	0.40	0.42	0.36	0.35	0.31	0.28	0.31	0.33	0.30
AC-FT	21	23	23	25	24	23	21	19	17	19	20	18

WTR YR 2005 TOTAL 127.63 MEAN 0.35 MAX 0.60 MIN 0.27 MED 0.34 AC-FT 253

e Estimated

LITTLE COLORADO RIVER BASIN

09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ

**LOCATION**--Lat 35°55'35", long 111°34'00", in NW1/4 sec. 5, T.29 N., R.8 E. (unsurveyed), Coconino County, Hydrologic Unit 15020016, in Navajo Indian Reservation, on left bank 3 mi downstream from Coconino damsite, 9.5 mi downstream from Moenkopi Wash, 9.5 mi northwest of Cameron, and 45 mi upstream from mouth.

**DRAINAGE AREA**--26,459 mi<sup>2</sup>, of which 368 mi<sup>2</sup> are noncontributing.

**PERIOD OF RECORD**--June 1947 to current year.

**REVISED RECORDS**--WDR AZ-88-1: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 3,979.2 ft above sea level.

**REMARKS**--Records fair. Diversions above station for irrigation of about 32,000 acres. Some regulation by reservoirs above station (combined capacity of principal reservoirs, about 135,000 acre-ft).

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 24,900 ft<sup>3</sup>/s Jan. 21, 1952, gage height, 20.7 ft; no flow at times in each year.

**CORRECTION**--The maximum discharge for water year 2002 is 11,500 ft<sup>3</sup>/s; the previous published figure was not the maximum.

**EXTREMES OUTSIDE PERIOD OF RECORD**--A discharge of about 120,000 ft<sup>3</sup>/s occurred on Sept. 19 or 20, 1923, based on discharge at Grand Falls.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and (or) maximum (\*)

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 4.....	0315	5,070	9.37
Feb. 17.....	0945	5,110	9.41
Feb. 24.....	0145	*6,540	*10.60

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1660	166	85	1620	1310	1080	375	340	0.00	0.00	0.17	0.27
2	1090	88	73	2520	875	807	426	254	0.00	0.00	0.14	0.07
3	628	54	74	4020	596	617	417	197	0.00	0.00	35	0.04
4	251	38	83	3860	445	509	376	159	0.00	0.00	5.2	0.02
5	170	27	42	1790	353	459	313	130	0.00	0.00	20	0.01
6	149	19	53	1770	278	453	302	100	0.00	0.00	140	0.00
7	61	11	59	2140	217	477	507	77	0.00	0.00	236	0.00
8	42	9.1	54	2380	184	551	559	63	0.00	0.00	356	8.4
9	28	31	47	1200	162	825	469	51	0.00	0.00	766	37
10	18	13	31	735	138	810	414	40	0.00	0.00	480	22
11	9.4	5.0	19	579	142	800	498	e33	0.00	0.00	569	12
12	4.4	16	13	598	598	781	575	e27	0.00	0.00	309	15
13	2.0	9.1	7.9	1040	188	855	463	e20	2.0	0.00	554	149
14	0.67	1.5	5.6	1460	1200	1040	350	e14	0.07	0.00	979	76
15	0.30	1.0	3.9	1420	2530	1230	277	e9.1	0.00	0.00	917	42
16	0.11	1.2	2.6	971	4330	1800	226	e6.7	0.00	0.00	626	27
17	0.05	0.82	1.6	635	4880	2050	237	e4.8	0.00	0.00	366	14
18	0.03	0.50	0.77	420	3300	1360	328	e2.8	0.00	0.00	278	6.3
19	0.01	0.31	0.45	311	1880	797	327	e1.3	0.00	0.00	770	3.5
20	0.00	0.33	0.13	256	1620	545	284	e0.42	0.00	0.00	301	1.8
21	0.00	14	0.09	220	2120	424	273	0.07	0.00	0.00	75	0.88
22	0.00	109	13	189	3700	355	251	0.03	0.00	0.00	54	0.36
23	0.00	16	54	177	5720	300	220	0.00	0.00	0.00	60	0.69
24	0.00	17	46	198	5560	527	216	0.00	0.00	0.00	21	0.15
25	0.00	1160	17	348	3330	622	281	0.00	0.69	0.00	8.2	0.07
26	0.00	396	19	603	2690	525	181	0.00	0.02	20	4.2	0.04
27	0.00	307	19	758	2280	498	639	0.00	0.00	60	1.4	0.02
28	0.00	253	33	719	1480	412	731	0.00	0.00	2.9	8.9	0.00
29	0.50	170	208	1020	---	383	663	0.00	0.00	0.61	17	0.00
30	1.6	115	134	1730	---	364	474	0.00	0.00	0.33	5.3	0.00
31	365	---	932	1990	---	315	---	0.00	---	0.22	1.4	---
TOTAL	4481.07	3048.86	2131.04	37677	52106	22571	11652	1530.22	2.78	84.06	7963.91	416.62
MEAN	145	102	68.7	1215	1861	728	388	49.4	0.09	2.71	257	13.9
MAX	1660	1160	932	4020	5720	2050	731	340	2.0	60	979	149
MIN	0.00	0.31	0.09	177	138	300	181	0.00	0.00	0.00	0.14	0.00
AC-FT	8890	6050	4230	74730	103400	44770	23110	3040	5.5	167	15800	826

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2005, BY WATER YEAR (WY)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
MEAN	199	71.6	93.0	234	270	457	538	123	14.9	103	350	234
MAX	4192	753	1689	4692	2723	1873	3970	2882	595	616	2264	1164
(WY)	1973	1988	1979	1993	1993	1973	1973	1955	1954	1955	2002	2002
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1951	1956	1957	1964	1964	1951	1971	1950	1950	1960	1960	1979

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1948 - 2005

ANNUAL TOTAL	29639.68	143664.56	
ANNUAL MEAN	81.0	394	224
HIGHEST ANNUAL MEAN			1127
LOWEST ANNUAL MEAN			14.1
HIGHEST DAILY MEAN	2160	Sep 21	5720
LOWEST DAILY MEAN	0.00	Jan 10	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 29	0.00
ANNUAL RUNOFF (AC-FT)	58790		285000
10 PERCENT EXCEEDS	195		1080
50 PERCENT EXCEEDS	0.91		42
90 PERCENT EXCEEDS	0.00		0.00

e Estimated

## LITTLE COLORADO RIVER BASIN

## 09402300 LITTLE COLORADO RIVER ABOVE THE MOUTH NEAR DESERT VIEW, AZ

**LOCATION**-- Lat 36°11'29", long 111°45'18", Coconino County, Hydrological Unit 15020016, in the Grand Canyon National Park, on the left bank about 1.0 mi upstream of the mouth, 62 mi west-southwest of Lees Ferry, about 55 mi downstream of Cameron, and about 11 mi east-northeast from Desert View.

**DRAINAGE AREA**-- 26,946 mi<sup>2</sup>, of which 368 mi<sup>2</sup> are noncontributing.

**PERIOD OF RECORD**-- May 1990 to July 1990, at a site about 2,500 ft downstream, August 1990 to January 1993, May 24, 2003 to current year.

**GAGE**-- Water-stage recorder. Elevation of gage is 2,700 ft above sea level, from topographic map. Prior to August 1, 1990, on the right bank about 2,500 ft downstream, datum 2,720 ft above sea level, from topographic map, August 1990 to January 1993, datum 2,745 ft above sea level.

**REMARKS**-- Records fair except for estimated daily discharges, which are poor. Diversions above the station for irrigation of about 32,000 acres. Some regulation by reservoirs, combined capacity of the principal reservoirs, about 135,000 acre-ft.

**EXTREMES FOR PERIOD OF RECORD**-- Maximum recorded peak discharge, 7,860 ft<sup>3</sup>/s, Jan. 8, 1993, gage height, 55.14 ft. Maximum discharge 18,200 ft<sup>3</sup>/s, Jan. 12, 1993 based on records at 09402000, Little Colorado River near Cameron, gage height unknown, minimum recorded daily discharge 194 ft<sup>3</sup>/s, Mar. 3, 1991.

**EXTREMES OUTSIDE PERIOD OF RECORD**--About 120,000 ft<sup>3</sup>/s, Sept. 20 or 21, 1923, gage height unknown, based on discharge at 09401000, Little Colorado River at Grand Falls.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 4 .....	1015	4,890	10.19
Feb. 12.....	2230	5,050	10.10
Feb. 24.....	0315	*6,320	*10.82

Minimum daily discharge, 213 ft<sup>3</sup>/s, June 17–18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1420	535	357	e2010	1810	1680	563	655	e227	218	226	235
2	1520	380	328	e2870	1300	1350	671	543	e227	216	259	231
3	1110	327	306	3380	989	1020	685	468	219	217	226	232
4	674	e299	287	4180	785	880	644	415	220	216	237	231
5	446	279	294	2330	658	790	595	379	216	216	231	231
6	433	265	272	1860	576	758	532	350	217	217	226	231
7	370	258	280	2130	513	764	566	321	215	217	327	230
8	310	256	e278	2580	464	767	823	300	219	216	413	230
9	287	250	e271	1850	431	1040	754	283	221	217	974	223
10	270	259	e260	1220	413	1110	688	266	221	217	686	228
11	258	259	e248	974	401	1120	655	258	222	218	887	246
12	253	250	e239	835	502	1100	793	249	221	218	645	242
13	246	245	e235	1100	747	1120	780	245	220	217	633	237
14	243	257	e233	1560	657	1250	652	242	218	217	995	358
15	236	240	e232	1710	2110	1380	541	238	e217	217	1300	307
16	233	238	e229	1430	3680	1770	480	224	217	217	967	272
17	224	238	e230	1090	4800	2270	433	230	213	217	710	255
18	230	238	e228	820	4150	1870	476	230	213	217	617	245
19	231	238	e226	632	2490	1280	545	228	218	216	465	239
20	231	238	e226	554	2030	944	535	224	218	217	1080	234
21	230	244	e226	511	2170	765	496	221	219	218	458	232
22	231	258	e239	475	3260	670	486	219	219	217	324	231
23	234	325	e279	449	5160	604	460	216	221	219	298	230
24	235	258	e271	437	5970	571	444	218	220	220	306	228
25	234	744	e239	479	4140	934	493	218	219	222	346	231
26	234	1010	e248	720	3200	853	427	218	216	222	252	231
27	232	556	e248	968	2960	796	406	218	218	222	242	229
28	232	575	e256	1020	2220	725	1040	216	216	237	239	231
29	235	474	e457	971	---	648	951	e228	219	230	233	231
30	236	404	e337	1760	---	643	829	217	218	225	233	232
31	235	---	e1210	2160	---	581	---	219	---	223	241	---
TOTAL	11793	10397	9269	45065	58586	32053	18443	8756	6564	6793	15276	7243
MEAN	380	347	299	1454	2092	1034	615	282	219	219	493	241
MAX	1520	1010	1210	4180	5970	2270	1040	655	227	237	1300	358
MIN	224	238	226	437	401	571	406	216	213	216	226	223
MED	236	258	256	1100	1920	934	564	230	219	217	327	231
AC-FT	23390	20620	18390	89390	116200	63580	36580	17370	13020	13470	30300	14370

CAL YR 2004 TOTAL 113476 MEAN 310 MAX 1840 MIN 218 MED 235 AC-FT 225100  
WTR YR 2005 TOTAL 230238 MEAN 631 MAX 5970 MIN 213 MED 272 AC-FT 456700

e Estimated

**COLORADO RIVER MAIN STEM**

**09402500 COLORADO RIVER NEAR GRAND CANYON, AZ**

**LOCATION**--Lat 36°06'05", long 112°05'08", in sec. 5, T.31 N., R.3 E. (unsurveyed), Coconino County, Hydrologic Unit 15010001, in Grand Canyon National Park, on left bank 0.2 mi upstream from Kaibab Bridge, 0.4 mi upstream from Bright Angel Creek, 4.5 mi northeast of village of Grand Canyon, 26 mi downstream from Little Colorado River, and 267 mi upstream from Hoover Dam.

**DRAINAGE AREA**--141,600 mi<sup>2</sup> approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD**--Oct. 1922 to current year. Prior to 1944, published as "Colorado River at Bright Angel Creek, near Grand Canyon." Gage-height records collected 1.5 mi downstream 1908-13, published in reports of U.S. Weather Bureau.

**GAGE**--Water-stage recorder. Datum of gage is 2,418.7 ft above sea level.

**REMARKS**--No estimated daily discharges. Records good. Flow completely regulated by Lake Powell, 104 mi upstream, since Mar. 13, 1963. (See elsewhere in this report.) Many diversions above station for irrigation, municipal, and industrial uses.

**EXTREMES FOR PERIOD OF RECORD**--1922--62: Maximum discharge, 127,000 ft<sup>3</sup>/s July 2, 1927, gage height, 29.25 ft; minimum, 700 ft<sup>3</sup>/s Dec. 28, 1924, gage height, -0.70 ft.

1963--2001: Maximum discharge, 96,200 ft<sup>3</sup>/s June 29, 1983, gage height, 26.26 ft; minimum, 850 ft<sup>3</sup>/s Jan. 26, 1963, gage height, -0.55 ft, result of closing coffer dam at Glen Canyon Dam.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Maximum discharge since at least 1884, 300,000 ft<sup>3</sup>/s about July 8, 1884 (computed on basis of flood studies at Lees Ferry). Crest discharge of flood of June 19, 1921, was 220,000 ft<sup>3</sup>/s, gage height, 37.5 ft from floodmarks, from rating curve extended above 120,000 ft<sup>3</sup>/s.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, 43,400 ft<sup>3</sup>/s Nov. 23 at 0115, gage height, 18.22 ft. Minimum daily discharge, 7,790 ft<sup>3</sup>/s Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9760	8230	8350	11000	15800	15400	14600	9070	8880	14900	12500	13500
2	10200	8810	10400	9340	15700	15600	15000	10400	13700	14900	15100	12900
3	8770	8640	10200	10200	15400	15400	15000	11700	14000	13900	15100	11300
4	8540	8540	9420	17800	15200	15200	8340	11700	14300	13400	15200	9260
5	8700	8550	8420	16400	15100	15100	14400	11600	13300	13300	15200	9040
6	8910	8650	8950	15600	15000	15100	15000	11700	13100	14600	15100	8960
7	8860	7800	10200	15700	8300	8470	14900	11600	14300	14900	14100	8880
8	8830	8620	10200	16300	14300	14500	15200	11400	14300	14800	13200	8850
9	8740	9430	10200	15800	14700	15200	15300	10200	14300	14800	15800	8860
10	7790	9440	10200	10500	14900	15400	9170	11400	14300	14000	15700	8810
11	7940	8860	10300	17100	15000	15400	8450	11500	14300	13300	16000	8770
12	8670	8820	10100	17900	15100	15400	8540	11400	13300	14800	15900	8800
13	8730	8930	9870	16400	15500	15400	8540	11400	13000	15000	15600	8780
14	8710	8920	10200	16100	8480	9030	8470	11400	14200	15100	14800	8960
15	8720	8720	10200	16100	15800	15200	8550	11200	14300	15100	14200	8910
16	8700	8750	10200	15900	17700	15900	8710	10100	14300	15000	15500	8870
17	7870	8710	10200	8970	19100	16400	8820	11400	14300	14000	15900	8900
18	8000	7900	10200	14900	18500	16200	8980	11500	14800	13400	15500	8820
19	8700	8490	10000	15100	16500	15700	9300	11500	13400	15000	15400	8850
20	8670	8730	9860	15100	16200	15300	9300	11500	13400	15000	15900	8820
21	8850	11400	10100	15100	9820	8580	9020	11500	14800	14900	14200	8910
22	9300	35600	10200	14900	16600	14500	8980	11300	14900	14800	13100	8770
23	9160	42200	10100	14900	19100	15000	8880	10000	13800	14800	15000	8820
24	7960	41800	10300	8250	20400	15000	9030	11300	14600	13900	15100	8750
25	8030	33100	10300	14500	18500	15300	9130	11400	11400	13400	15200	8790
26	8750	12900	9930	15200	17300	15200	9020	11400	9720	14800	15700	9300
27	8800	8940	9970	15600	17200	15100	9080	10500	10400	14800	15700	9400
28	8910	8800	10300	15600	9950	8500	9330	9070	14200	14800	14900	9410
29	8860	8640	10600	15400	---	14500	9460	8950	14600	14800	13300	8940
30	8810	8500	10700	16000	---	15000	9200	8940	14800	14600	15500	8840
31	7970	---	10300	9870	---	14900	---	8950	---	13700	15400	---
TOTAL	269210	385420	310470	447530	431150	446880	315700	336980	407000	448500	464800	278770
MEAN	8684	12850	10020	14440	15400	14420	10520	10870	13570	14470	14990	9292
MAX	10200	42200	10700	17900	20400	16400	15300	11700	14900	15100	16000	13500
MIN	7790	7800	8350	8250	8300	8470	8340	8940	8880	13300	12500	8750
AC-FT	534000	764500	615800	887700	855200	886400	626200	668400	807300	889600	921900	552900

CAL YR 2004	TOTAL	4526670	MEAN	12370	MAX	42200	MIN	7790	AC-FT	8979000
WTR YR 2005	TOTAL	4542410	MEAN	12440	MAX	42200	MIN	7790	AC-FT	9010000



## HAVASU CREEK BASIN

## 09404110 HAVASU CREEK AT SUPAI, AZ

**LOCATION.**--Lat 36°13'37", long 112°41'15" (unsurveyed), in Coconino County, Hydrologic Unit 15010004, on the Havasupai Indian Reservation on the right bank, about 1.5 mi upstream from Supai.

**DRAINAGE AREA.**--2,809 mi<sup>2</sup>, including 209 mi<sup>2</sup>, which are non-contributing.

**PERIOD OF RECORD.**--Sept. 1995 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 3,240 ft above sea level from topographic map.

**REMARKS.**--Records good except for estimated daily discharges and daily discharges greater than 100 ft<sup>3</sup>/s, which are poor. Several diversions and small impoundments upstream for irrigation and public supply.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, unknown, Aug. 10, 1997, gage height, 20.8 ft (estimated from highwater mark); minimum daily 56 ft<sup>3</sup>/s, Dec. 15, 1998.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Jan. 2, 1910, maximum discharge unknown, flood wave reported as about 20 ft high through Supai Village. Sept. 3, 1990, 20,300 ft<sup>3</sup>/s, based on slope-area computation for site 12 mi downstream at the mouth. Flood wave through Supai Village reported as about 14 ft for this event; minimum discharge unknown.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, unknown, Feb. 13, gage height, 19.70 ft.; minimum daily discharge, 61 ft<sup>3</sup>/s on Oct. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e64	e65	e66	95	70	78	65	68	70	69	68	66
2	65	e65	65	80	69	77	65	68	69	68	72	66
3	65	e65	65	69	69	77	65	68	68	68	e69	66
4	66	e65	67	71	69	74	66	68	67	68	e67	67
5	66	e65	67	70	70	70	66	68	67	68	e67	66
6	67	e65	67	69	70	72	66	69	67	68	e66	65
7	67	e65	66	69	70	72	66	69	66	68	e66	65
8	66	91	66	69	69	71	66	69	66	68	e67	65
9	67	e69	65	69	69	70	66	68	66	68	e66	66
10	68	e66	65	69	69	68	66	67	65	67	e99	66
11	68	e66	65	77	81	67	66	68	65	66	e78	66
12	67	e66	66	e796	94	67	66	68	65	67	e71	66
13	66	e66	65	e486	e398	66	66	66	65	67	e73	65
14	64	e66	65	e293	e848	67	e68	65	65	66	e71	65
15	63	e66	66	e137	e265	66	e67	64	65	66	e76	65
16	63	e66	64	e104	e167	66	e68	64	64	66	e67	65
17	64	e66	65	e78	e116	66	e67	65	65	66	e67	65
18	64	e66	64	e72	e204	65	e67	65	65	66	e67	66
19	64	e66	65	e71	e162	65	e67	64	65	66	e67	65
20	64	e66	66	e71	e397	65	e67	65	65	66	66	65
21	102	e89	67	e71	e383	65	e67	e66	65	69	66	65
22	80	e72	66	e72	e219	65	e66	e66	65	70	66	65
23	97	e68	66	e71	e149	65	66	e67	67	69	66	65
24	86	e68	66	e69	e158	65	68	e68	67	68	68	66
25	64	e67	66	e68	e158	65	68	e69	67	e96	67	66
26	61	e66	66	e96	110	65	68	e69	68	e86	66	65
27	63	66	66	e86	90	65	68	e70	67	e69	66	65
28	73	e66	67	e72	80	65	68	70	68	e68	66	66
29	70	e66	74	71	---	65	68	71	68	68	66	66
30	66	e66	69	70	---	65	68	70	69	67	66	65
31	e65	---	76	70	---	65	---	70	---	68	65	---
TOTAL	2135	2035	2059	3731	4773	2104	2001	2092	1991	2140	2138	1965
MEAN	68.9	67.8	66.4	120	170	67.9	66.7	67.5	66.4	69.0	69.0	65.5
MAX	102	91	76	796	848	78	68	71	70	96	99	67
MIN	61	65	64	68	69	65	65	64	64	66	65	65
AC-FT	4230	4040	4080	7400	9470	4170	3970	4150	3950	4240	4240	3900
CFSM	0.02	0.02	0.02	0.04	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.02

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2005, BY WATER YEAR (WY)

MEAN	65.5	63.9	65.2	70.4	75.0	65.4	66.1	65.2	65.5	67.3	71.3	68.7
MAX	69.6	67.8	67.1	120	170	67.9	69.4	69.4	68.9	70.5	94.0	82.7
(WY)	2001	2005	1998	2005	2005	2003	1999	2000	1996	1998	2003	1998
MIN	59.7	60.7	63.4	63.3	62.3	63.3	63.0	61.6	62.4	63.6	63.3	64.0
(WY)	2000	2000	2000	1999	1998	2001	1996	1997	1997	2000	2002	2001

## SUMMARY STATISTICS

## FOR 2004 CALENDAR YEAR

## FOR 2005 WATER YEAR

## WATER YEARS 1995 - 2005

ANNUAL TOTAL	24404	29164		
ANNUAL MEAN	66.7	79.9	67.4	
HIGHEST ANNUAL MEAN			79.9	2005
LOWEST ANNUAL MEAN			65.0	1996
HIGHEST DAILY MEAN	132	Sep 21	848	Feb 14 2005
LOWEST DAILY MEAN	61	Oct 26	61	Oct 26 1998
ANNUAL SEVEN-DAY MINIMUM	63	May 30	64	Oct 14 1998
ANNUAL RUNOFF (AC-FT)	48410	57850	48830	
ANNUAL RUNOFF (CFSM)	0.024	0.028	0.024	
10 PERCENT EXCEEDS	69	79	69	
50 PERCENT EXCEEDS	66	67	65	
90 PERCENT EXCEEDS	64	65	62	

e Estimated

09404115 HAVASU CREEK ABOVE THE MOUTH, NEAR SUPAI, AZ

**LOCATION**--Lat 36°18'24", long 112°45'39", unsurveyed, Coconino County, Hydrologic Unit 15010004, in Grand Canyon National Park, 8.0 mi downstream from Supai, 69 mi downstream from Phantom Ranch, 173 mi downstream from Glen Canyon Dam, and 199 mi upstream from Hoover Dam.

**DRAINAGE AREA**--3,020 mi<sup>2</sup>, including 209 mi<sup>2</sup>, which are noncontributing.

**PERIOD OF RECORD**--Nov. 1990 to Sept. 1997, June 2000 to current year.

**GAGE**--Water-stage recorder. Datum of gage is 1,793.81 ft above sea level.

**REMARKS**--Records good, except for estimated daily discharges greater than 100 ft<sup>3</sup>/s, which are poor. Several diversions and small impoundments upstream for irrigation and public supply.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 17,700 ft<sup>3</sup>/s Aug. 15, 2003, gage height, 25.22 ft, from flood mark, minimum daily 63 ft<sup>3</sup>/s on many days in 1997.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Maximum discharge unknown, Jan. 2, 1910, flood wave reported as about 20 ft high through Supai Village. Sept. 3, 1990, 26.3 ft, 20,300 ft<sup>3</sup>/s, based on slope-area computation, flood wave through Supai Village reported as about 14 ft for this event. Minimum discharge unknown.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, unknown. Minimum daily discharge, 70 ft<sup>3</sup>/s Oct. 9, Aug. 27--28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	73	75	111	76	81	78	78	76	74	75	71
2	71	73	75	84	75	80	78	78	75	73	82	72
3	71	73	74	76	75	87	78	78	75	74	81	71
4	71	74	75	76	75	80	78	77	74	73	77	76
5	71	74	75	74	76	80	78	77	74	73	77	74
6	71	74	75	74	76	80	78	78	73	73	77	74
7	71	75	75	74	78	80	78	78	73	73	78	74
8	71	126	75	74	79	80	78	76	73	73	79	74
9	70	80	74	75	77	80	79	76	73	73	79	73
10	71	76	74	79	77	80	78	77	74	73	103	73
11	71	76	74	84	111	80	77	77	85	73	84	74
12	72	76	75	e800	176	81	77	76	75	73	83	74
13	71	76	74	e501	138	81	77	76	74	74	83	74
14	71	75	74	e314	e892	81	77	76	74	74	82	74
15	71	75	75	165	e342	81	77	76	74	73	88	75
16	71	75	74	110	184	81	77	75	73	72	81	75
17	72	75	74	84	123	83	77	76	73	72	83	75
18	72	75	74	77	219	83	76	75	73	73	80	75
19	72	75	74	76	138	82	77	75	73	73	125	76
20	73	75	74	76	e418	79	77	75	73	73	76	77
21	129	114	74	77	e402	79	76	75	74	73	75	78
22	89	91	73	77	254	79	76	75	74	73	74	77
23	99	81	73	77	170	80	77	75	75	74	74	77
24	111	77	73	76	211	79	80	75	76	77	75	77
25	79	77	73	76	196	79	78	74	75	107	77	76
26	75	77	73	86	118	79	77	75	74	96	72	76
27	75	76	73	103	90	79	78	75	73	77	70	76
28	94	77	74	86	82	80	79	75	73	75	70	76
29	82	75	79	88	---	80	78	74	74	75	71	76
30	75	75	75	86	---	79	77	75	74	75	71	77
31	74	---	76	78	---	78	---	75	---	76	71	---
TOTAL	2407	2371	2305	3994	5028	2491	2326	2353	2229	2340	2473	2247
MEAN	77.6	79.0	74.4	129	180	80.4	77.5	75.9	74.3	75.5	79.8	74.9
MAX	129	126	79	800	892	87	80	78	85	107	125	78
MIN	70	73	73	74	75	78	76	74	73	72	70	71
AC-FT	4770	4700	4570	7920	9970	4940	4610	4670	4420	4640	4910	4460

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2005, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	71.9	70.6	71.1	78.3	81.6	73.5	70.5	71.1	70.4	73.0	81.6	76.3	76.3	76.3	76.3
MAX	77.6	79.0	74.9	129	180	80.4	77.5	83.1	76.1	86.6	107	87.7	87.7	87.7	87.7
(WY)	2005	2005	1995	2005	2005	2005	2005	1992	1992	1992	2003	1992	1992	1992	1992
MIN	68.9	66.6	67.7	67.4	67.1	68.1	65.2	65.4	65.5	66.6	67.3	67.6	67.6	67.6	67.6
(WY)	2003	1998	1993	2002	2002	1997	1995	1993	1993	1993	1994	2000	2000	2000	2000

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1991 - 2005

ANNUAL TOTAL	26579	32564		
ANNUAL MEAN	72.6	89.2		75.0
HIGHEST ANNUAL MEAN				89.2
LOWEST ANNUAL MEAN				69.5
HIGHEST DAILY MEAN	176	Sep 21	892	Feb 14
LOWEST DAILY MEAN	66	Jul 24	70	Oct 9
ANNUAL SEVEN-DAY MINIMUM	67	Jul 20	71	Oct 3
ANNUAL RUNOFF (AC-FT)	52720	64590		54350
10 PERCENT EXCEEDS	75		88	77
50 PERCENT EXCEEDS	70		76	71
90 PERCENT EXCEEDS	68		73	68

e Estimated

## COLORADO RIVER MAIN STEM

## 09404200 COLORADO RIVER ABOVE DIAMOND CREEK NEAR PEACH SPRINGS, AZ

**LOCATION.**--Lat 35°46'25", long 113°21'46", sec. 33, T.28 N., R.10 W., unsurveyed, Mohave County, Hydrologic Unit 15010002, in Lake Mead National Recreation Area, on the right bank, 0.6 mi upstream from Diamond Creek, 138 mi downstream from Phantom Ranch, 25 mi north of Peach Springs, 242 mi downstream from Glen Canyon Dam, and 130 mi upstream from Hoover Dam.

**DRAINAGE AREA.**--149,316 mi<sup>2</sup>, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, and 697 mi<sup>2</sup> on the Colorado Plateau, which are noncontributing.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--June 1983 to Dec. 1983, Sept. 1985 to Feb. 1986, Oct. 1989 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 1,340 ft above sea level, from topographic map.

**REMARKS.**--Records good except for estimated daily discharges, which are fair. Flow regulated since Mar. 13, 1963, by Lake Powell 242 mi upstream. Many diversions above Lake Powell for irrigation, municipal, and industrial use. Several unregulated tributaries below Glen Canyon Dam.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge 97,000 ft<sup>3</sup>/s, June 30, 1983, gage height, unknown; minimum 3,710 ft<sup>3</sup>/s, Mar. 21, 1990, gage height, 43.89 ft.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge since at least 1868, about 300,000 ft<sup>3</sup>/s, about July 8, 1884, based on flow studies at Lees Ferry.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 44,300 ft<sup>3</sup>/s Nov. 23 at 2200, gage height, 57.73 ft. Minimum daily discharge, 7,940 ft<sup>3</sup>/s Oct. 12

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10100	8390	9000	10800	10300	11000	15500	9460	9340	15200	14200	15800
2	10100	8450	8880	11400	15900	16500	15200	9270	9240	15300	12900	13900
3	10700	9050	10700	9890	16100	16900	15500	10500	14000	15200	15600	13200
4	9300	8980	10700	10500	15700	16400	15500	12000	14700	14200	15700	11600
5	9000	8800	10100	18800	15500	15900	9130	12200	15000	13600	15700	9570
6	9110	8830	8900	17400	15400	15700	14900	12300	13700	13600	15700	9170
7	9270	8890	9200	16500	15500	15700	16000	12500	13500	15000	15500	9090
8	9260	8560	10700	16700	9040	9230	16000	12400	14700	15200	14400	9010
9	9230	9950	10700	17500	14300	14700	16100	12100	14800	15200	14000	8960
10	8830	9760	10700	19000	15000	15700	16100	10800	14800	15200	17100	8940
11	7970	10200	10700	13300	15400	16000	10000	12000	14800	14300	16200	8890
12	7940	9340	10700	19100	17400	16000	9070	12200	15000	13600	16500	8840
13	8330	9230	10500	20900	16500	16100	9090	12100	13700	15100	16400	8870
14	8200	9280	10300	18400	16900	16100	9090	12100	13300	15400	16100	8860
15	8700	9290	10600	16900	9880	9780	9030	12100	14600	15500	15300	9010
16	8690	9070	10600	16800	16300	15500	9100	12000	14700	15500	14600	9000
17	e8750	9060	10600	16400	18600	16600	9180	11000	14600	15400	15900	8940
18	e8110	9030	10600	9590	20800	17100	9230	12200	14700	14400	16300	8970
19	e8220	8290	10600	14900	20500	17000	9300	12400	15200	13700	16200	8930
20	e9150	8760	10400	15700	18300	16400	9470	12300	13800	15300	16200	8950
21	9540	9020	10300	15600	17700	15900	9510	12400	13700	15300	16400	8930
22	10500	13000	10500	15400	11200	9330	9370	12300	15200	15300	14500	8970
23	10000	40100	10600	15200	17800	14700	9310	12100	15400	15200	13400	8890
24	9840	43700	10500	15300	20500	15500	9340	10900	14200	15300	15400	8800
25	8530	43600	10700	8930	21900	15500	9560	12000	15400	14300	15500	8760
26	8360	30400	10700	14400	19700	15900	9600	12200	12100	14400	15600	8780
27	9140	13800	10300	15800	18400	15800	9500	12100	9640	15300	16200	9230
28	10100	9600	10400	16200	18400	15700	9470	11300	10600	15200	16200	9410
29	10100	9280	10900	16300	---	9320	9640	9710	14200	15300	15200	9440
30	9470	9130	11400	15900	---	14800	9730	9430	14900	15300	13600	9040
31	9220	---	11200	16400	---	15500	---	9350	---	15100	15900	---
TOTAL	283760	402840	322680	475910	458920	462260	337520	357720	413520	461900	478400	288750
MEAN	9154	13430	10410	15350	16390	14910	11250	11540	13780	14900	15430	9625
MAX	10700	43700	11400	20900	21900	17100	16100	12500	15400	15500	17100	15800
MIN	7940	8290	8880	8930	9040	9230	9030	9270	9240	13600	12900	8760
AC-FT	562800	799000	640000	944000	910300	916900	669500	709500	820200	916200	948900	572700
CAL YR 2004	TOTAL	4658190	MEAN	12730	MAX	43700	MIN	7940	AC-FT	9240000		
WTR YR 2005	TOTAL	4744180	MEAN	13000	MAX	43700	MIN	7940	AC-FT	9410000		

e Estimated

09404200 COLORADO RIVER ABOVE DIAMOND CREEK NEAR PEACH SPRINGS, AZ—CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD--June 1983 to Dec. 1983, Sept. 1985 to Feb. 1985, Sept. 1989 to Apr. 1993, and Nov. 1996 to current year.

PERIOD OF DAILY RECORD--

SPECIFIC CONDUCTANCE: Aug. 1990 to Apr. 1993.

pH: Aug. 1990 to Apr. 1993.

WATER TEMPERATURE: Aug. 1990 to Apr. 1993.

DISSOLVED-OXYGEN CONCENTRATION: Aug. 1990 to Apr. 1993.

SUSPENDED-SEDIMENT DISCHARGE: Aug. 1990 to Apr. 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, units (00400)	Specific conductance, wat unf std uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	
NOV														
03...	1130	8670	64	.052	.035	735	11.7	114	7.8	972	10.0	12.5	300	
22...	1230	9510	29	.050	.033	729	9.3	93	8.2	972	11.6	13.2	300	
23...	1420	42900	810d	.064	.045	729	9.2	92	7.7	973	15.8	13.2	280	
DEC														
01...	1150	9000	1300d	.056	.039	733	10.2	95	7.5	983	6.0	10.3	280	
JAN														
26...	1445	17100	62	.059	.042	728	10.4	97	7.7	930	14.0	10.3	290	
APR														
21...	1145	8840	86	.043	.033	732	8.7	89	7.9	949	25.0	14.5	290	
SEP														
07...	1030	8630	19	.072	.050	722	8.5	100	7.9	832	34.0	20.2	280	
Date	Time	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
NOV														
03...	160	78.2	26.1	4.20	2	90.9	148	181	<1	.02	84.6	.3	6.91	
22...	160	74.4	27.2	4.08	2	91.3	143	174	<1	<.20d	87.6	.3	6.68	
23...	130	71.0	25.1	4.28	2	86.1	149	180	<1	<.20d	77.7	.3	6.33	
DEC														
01...	120	72.7	23.0	4.10	3	95.9	157	190	<1	<.04d	85.8	.3	7.19	
JAN														
26...	150	74.3	25.8	4.09	2	79.6	146	176	<1	E.02n	69.0	.3	6.80	
APR														
21...	130	76.0	24.7	3.70	2	83.8	165	200	<1	--	83.2	.3	7.11	
SEP														
07...	130	70.4	23.9	3.41	2	70.0	146	175	2	.22	68.2	.3	6.70	
Date	Time	Sulfate water, fltrd, mg/L (00945)	Residue sum of constituents, mg/L (70301)	Residue evap. at 180degC, wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd, mg/L (00600)	Orthophosphate, water, fltrd, mg/L as P (00671)	
NOV														
03...	224	607	.85	625	.18	.26	E.005n	.398	.002	.10	.58	.66	E.003n	
22...	218	597	.85	622	.15	.20	<.010	.312	E.001n	.06	.46	.51	<.006	
23...	224	586	.84	618	.27	1.6	.098	.333	.002	1.21	.60	1.9	<.006	
DEC														
01...	215	600	.83	610p	.20	.79	E.005n	.362	E.001n	.49	.56	1.1	E.004n	
JAN														
26...	214	563	.80	588	.18	.26	E.005n	.399	E.001n	.13	.58	.66	<.006	
APR														
21...	197	577	.80	585d	.16	.26	<.010	.400	E.001n	.16	.56	.66	<.006	
SEP														
07...	172	505	.72	532	.25	.20	<.010	.488	<.002	.06	.74	.69	<.006	

**COLORADO RIVER MAIN STEM**  
**09404200 COLORADO RIVER ABOVE DIAMOND CREEK NEAR PEACH SPRINGS, AZ—CONTINUED**

**WATER-QUALITY RECORDS**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd, mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Alum- inum, water, fltrd, ug/L (01106)	Anti- mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll- ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)
NOV													
03...	E.002n	.058	2.4	.5	2.0	3.1	2	.40	2.1	127	<.06	109	E.03n
22...	<.004	.042	2.9	.6	2.3	3.1	2	.41	1.6	120	<.06	100	<.04
23...	.005	1.40oc	57.6r	53.8r	3.8	3.7	3	.40	1.0	179r	<.06	101	<.04
DEC													
01...	.007	.79oc	10.4r	4.1	6.3	3.4	4	.21	1.3	167	<.06	64	E.03n
JAN													
26...	E.003n	.162	4.6	3.6	1.0	3.0	E1n	.38	2.0	120	<.06	103	<.04
APR													
21...	.007	E.067	5.6	1.9	3.8	3.2	2	.35	1.8	112	<.06	109	<.04
SEP													
07...	E.003n	.024	1.0	<.1	.9	3.3	3	.45	1.7oc	119	<.06	97	<.04

Date	Chrom- ium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Mangan- ese, water, fltrd, ug/L (01056)	Molyb- denum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Stront- ium, water, fltrd, ug/L (01080)	Vanad- ium, water, fltrd, ug/L (01085)
NOV													
03...	<.8	.187	2.1	<6	E.05n	40.9	.3	5.0	1.00p	2.4	<.2	916p	1.8
22...	<.8	.202	1.7	<6c	<.08	47.7p	.4	4.9	2.14	1.7	<.2	619	1.6
23...	<.8	.369	1.6	<6	<.08	41.9	9.9p	5.4	2.46	2.2	<.2	955	1.3
DEC													
01...	<.8	.190	1.5p	<6	<.08p	23.4	.4	3.0	2.10	1.4	<.2	651	2.0
JAN													
26...	<.8	.247	1.9	<6	<.08	42.4	1.4	5.6	2.67	2.5	<.2	927	1.7
APR													
21...	<.8	.146	1.2	<6	<.08	36.3	.5	4.5	4.53cr	2.0	<.2	819	1.7
SEP													
07...	.05oc	.05oc	1.0oc	<6	<.08	41.4	.8	4.6	1.1oc	1.7oc	<.2	738	1.4oc

Date	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
NOV					
03...	3.8p	4.07	93	146	3420
22...	1.0	4.20	89	99	2540
23...	1.0	4.76	64	3770	436000
DEC					
01...	1.1p	2.89	96	1560	37800
JAN					
26...	1.0	4.08	62	455	21000
APR					
21...	1.6r	3.87	91	154	3680
SEP					
07...	.94oc	3.33	75	60	1400

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

c -- See laboratory comment  
d -- Diluted sample: method hi range exceeded  
n -- Below the LRL and above the LT-MDL  
o -- Result determined by alternate method  
p -- Value reported is preferred  
r -- Value verified by rerun, same method

09404200 COLORADO RIVER ABOVE DIAMOND CREEK NEAR PEACH SPRINGS, AZ—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Water-quality measurements in the following table were made as part of the National Stream-Quality Accounting Network. The following analyses are quality-assurance samples processed during the 2005 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

Date	Time	Sample type	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Silica, water, fltrd, mg/L (00955)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 03...	1138	2	<.004	<.004	E.01n	<.008	<.20	.07	<.010	<.016	<.002	<.02	E.004n
Date	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, fltrd, mg/L (00681)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)
NOV 03...	<.1	<.1	<.1	.7r	<2	<.20	<.2	.2	<.06	<8	<.04	<.8	<.014
Date	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium, water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)
NOV 03...	<.4	<6	<.08	<.6	<.2	<.4	<.06p	<.4	<.2	<.40	<.04	<.1	.7
Date	Uranium natural water, fltrd, ug/L (22703)												
NOV 03...	<.04												

Remark codes used in this table:  
 < -- Less than.  
 E -- Estimated.  
 M -- Presence verified but not quantified.  
 Value qualifier codes used in this table:  
 n -- Below the LRL and above the LT-MDL  
 p -- Value reported is preferred  
 r -- Value verified by rerun, same method

## COLORADO RIVER BASIN

## 09404208 DIAMOND CREEK NEAR PEACH SPRINGS, AZ

**LOCATION.**--Lat 35°45'54", long 113°22'03", sec. 32, T.28 N., R.10 W., unsurveyed, Mohave County, Hydrologic Unit 15010002, on the Hualapai Reservation, on the right bank, 0.25 mi upstream from mouth, and 20.4 mi north of Peach Springs by dirt road.

**DRAINAGE AREA.**--279.5 mi<sup>2</sup>.

**PERIOD OF RECORD.**--May 1993 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 1,400 ft above sea level, from topographic map.

**REMARKS.**--Records fair except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 10,500 ft<sup>3</sup>/s Aug. 29, 2000, gage height 15.32 ft from floodmark; minimum daily discharge, 0.64 ft<sup>3</sup>/s, Aug. 9, 1993.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 600 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 13.....	1730	*1,810	*11.28
Sept. 3.....	1530	911	10.55

Minimum daily discharge, 1.1 ft<sup>3</sup>/s, Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	e4.1	e5.0	2.2	6.5	e12	6.6	4.6	5.0	3.0	21	4.0
2	1.6	e4.1	4.4	2.2	6.5	e11	6.6	4.5	5.0	3.2	e11	4.1
3	1.8	e4.0	3.6	2.3	15	e12	6.6	4.5	5.1	3.2	8.2	57
4	1.6	4.0	e3.0	2.2	6.3	11	6.6	4.5	4.7	3.3	5.9	e4.2
5	1.6	3.9	e2.5	2.2	5.0	12	6.6	4.5	3.9	3.2	27	e4.0
6	1.6	4.0	e2.5	2.0	4.6	12	6.6	4.6	2.8	3.2	4.5	e4.0
7	1.4	4.8	e2.2	1.9	5.9	10	6.6	4.5	3.5	3.2	4.1	4.9
8	1.1	7.0	e2.2	1.9	15	9.5	6.6	4.5	4.0	3.2	18	4.7
9	1.3	3.7	e2.2	1.9	6.4	8.1	6.4	4.5	3.4	3.2	5.1	4.9
10	1.4	3.3	e2.8	e50	6.6	7.6	6.0	4.5	3.1	3.3	6.4	5.4
11	1.6	3.2	2.5	e14	86	7.2	6.0	4.5	2.5	3.6	4.1	5.0
12	1.6	3.3	e2.2	e9.5	214	7.0	6.1	4.5	2.2	3.6	4.0	5.3
13	1.6	3.4	e2.2	e7.9	e83	6.6	6.0	4.5	2.3	3.7	91	5.5
14	1.6	3.5	e2.3	e7.2	e61	6.4	5.9	4.4	2.3	4.0	21	5.4
15	1.6	3.4	e2.6	e7.4	e37	6.0	5.8	4.0	2.3	3.6	9.3	5.5
16	1.6	3.3	e2.2	e7.2	e20	5.9	6.0	4.0	2.3	3.7	7.0	5.3
17	1.6	3.2	e4.9	e7.0	e16	5.5	6.0	4.2	2.3	4.0	4.6	5.3
18	1.6	3.2	e2.3	e6.8	e40	5.4	6.0	4.2	2.4	4.3	5.3	5.4
19	1.6	3.2	2.2	e6.5	e28	5.0	5.8	4.2	2.6	4.5	3.5	5.0
20	2.2	3.2	2.2	e6.1	e43	4.6	5.5	4.2	2.8	4.5	3.3	5.1
21	2.5	e6.8	2.2	e5.9	e32	4.5	5.5	4.2	2.8	4.5	2.8	5.0
22	2.2	e6.2	2.2	e5.5	e47	4.5	5.1	4.3	2.9	4.5	2.8	4.7
23	1.9	e5.9	7.5	e5.4	e31	5.5	4.9	4.5	3.9	6.4	3.0	4.9
24	1.9	e5.5	4.7	e5.2	e24	5.5	6.2	4.8	2.8	8.7	3.1	4.5
25	1.9	e5.4	2.4	e5.0	e20	5.7	5.0	4.8	2.8	4.0	3.1	4.4
26	1.9	e5.4	2.2	12	e18	6.0	5.0	5.1	2.9	4.4	4.1	4.3
27	e5.0	e5.3	2.2	13	e15	6.0	5.0	5.1	2.8	4.1	4.5	3.7
28	e4.2	e5.2	2.2	8.4	e13	6.5	5.4	5.3	3.0	4.0	4.1	3.8
29	e4.1	e5.2	4.3	8.6	---	6.7	5.4	5.6	3.2	5.5	4.2	4.1
30	e4.1	e5.1	2.2	6.5	---	6.6	5.3	5.5	3.1	8.9	4.2	3.8
31	e4.1	---	2.2	7.2	---	6.6	---	5.3	---	14	4.1	---
TOTAL	65.4	131.8	90.3	231.1	905.8	228.9	177.1	142.4	94.7	140.5	304.3	193.2
MEAN	2.11	4.39	2.91	7.45	32.4	7.38	5.90	4.59	3.16	4.53	9.82	6.44
MAX	5.0	7.0	7.5	50	214	12	6.6	5.6	5.1	14	91	57
MIN	1.1	3.2	2.2	1.9	4.6	4.5	4.9	4.0	2.2	3.0	2.8	3.7
AC-FT	130	261	179	458	1800	454	351	282	188	279	604	383

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2005, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	3.19	3.66	3.88	4.64	6.71	5.11	3.82	2.87	2.38	5.50	4.96	4.69	
MAX	5.74	4.56	4.79	7.45	32.4	11.3	5.90	4.59	3.81	25.8	19.2	18.6	
(WY)	2004	1999	1999	2005	2005	1995	2005	2005	2000	1999	2000	1999	
MIN	2.11	3.05	2.91	3.29	3.49	3.06	2.14	1.94	1.19	1.09	1.61	2.26	
(WY)	2005	1996	2005	1995	2004	2004	2004	2002	2004	1993	2002	1995	

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

WATER YEARS 1993 - 2005

ANNUAL TOTAL	970.73	2705.5		
ANNUAL MEAN	2.65	7.41	4.34	
HIGHEST ANNUAL MEAN			7.41	2005
LOWEST ANNUAL MEAN			2.87	2002
HIGHEST DAILY MEAN	8.9	Sep 19	214	Feb 12
LOWEST DAILY MEAN	0.69	Jun 26	1.1	Oct 8
ANNUAL SEVEN-DAY MINIMUM	0.91	Jun 22	1.4	Oct 4
ANNUAL RUNOFF (AC-FT)	1930		5370	
10 PERCENT EXCEEDS	4.1		11	4.9
50 PERCENT EXCEEDS	2.3		4.5	3.3
90 PERCENT EXCEEDS	1.5		2.2	1.9

e Estimated

09404222 SPENCER CREEK NEAR PEACH SPRINGS, AZ

**LOCATION**--Lat 35°48'03", long 113°39'29", in NE1/4SW1/4NE1/4 sec. 22, T.13 W. , R.28 N. , Mohave County, Hydrologic Unit 15010005, on the Hualapai Reservation, on the left bank, about 2 mi upstream from the mouth.

**DRAINAGE AREA**--Undetermined.

**PERIOD OF RECORD**--Mar. 1998 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 1,620 ft above sea level, from topographic map.

**REMARKS**--Records poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 2,250 ft<sup>3</sup>/s, Aug. 30, 1999, gage height, 10.74 ft, from highwater mark; minimum daily discharge, 0.43 ft<sup>3</sup>/s, July 14, 2004.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 28 .....	0000	681	9.46	Feb. 12.....	0915	690	9.48
Nov. 8.....	0615	*1,150	*10.28	Feb. 20.....	0000	746	9.59

Minimum daily discharge, 0.58 ft<sup>3</sup>/s, Oct. 1–19, 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.58	1.1	0.93	1.6	e21	e60	49	44	39	27	17	17
2	0.58	0.99	0.80	1.6	e21	e59	49	44	39	26	16	17
3	0.58	0.98	0.76	1.6	20	59	49	44	38	26	16	16
4	0.58	0.92	0.88	e1.6	21	57	49	44	38	26	17	16
5	0.58	0.87	0.93	e1.6	22	58	49	43	38	26	17	16
6	0.58	0.84	0.98	e1.6	22	60	49	43	38	25	17	15
7	0.58	1.8	1.4	e1.8	22	58	49	43	37	25	17	15
8	0.58	183	2.7	e3.0	23	58	47	43	37	25	18	15
9	0.58	6.7	3.0	38	23	57	47	44	36	24	18	15
10	0.58	5.7	2.7	102	24	56	46	44	35	24	18	14
11	0.58	4.6	2.8	e57	139	58	46	44	35	24	18	14
12	0.58	3.6	2.5	e31	363	59	46	43	34	24	19	13
13	0.58	2.8	2.2	e24	85	59	46	43	34	24	21	14
14	0.58	2.2	1.8	e21	64	59	46	44	34	24	20	15
15	0.58	1.8	1.4	e21	63	57	46	43	33	24	20	15
16	0.58	1.5	1.2	e20	e61	57	46	43	33	23	20	15
17	0.58	1.3	1.8	e21	e60	58	46	43	33	23	19	15
18	0.58	1.2	2.2	e21	e100	57	45	43	33	23	19	15
19	0.58	1.2	1.7	e21	78	57	45	43	32	23	19	15
20	0.74	1.2	1.4	e21	207	57	44	44	32	21	19	15
21	12	0.91	1.2	e21	78	55	44	44	31	20	19	15
22	24	0.88	1.2	e21	104	54	44	44	31	21	18	15
23	0.94	0.80	1.2	e21	97	55	45	44	31	23	18	15
24	0.75	0.87	1.3	e21	69	54	45	44	31	23	18	15
25	0.62	0.91	1.4	e21	63	52	45	44	29	23	18	15
26	0.58	1.0	1.3	e21	e61	51	45	43	29	25	18	15
27	46	0.92	1.2	e21	e60	50	44	43	28	32	18	15
28	106	0.75	1.2	e21	e60	50	45	43	28	28	18	16
29	1.2	0.87	1.7	e21	---	50	44	42	28	29	18	15
30	1.2	1.2	1.4	e21	---	50	44	40	27	23	17	15
31	1.1	---	1.6	e21	---	49	---	40	---	17	17	---
TOTAL	206.15	233.41	48.78	643.4	2031	1730	1384	1340	1001	751	562	453
MEAN	6.65	7.78	1.57	20.8	72.5	55.8	46.1	43.2	33.4	24.2	18.1	15.1
MAX	106	183	3.0	102	363	60	49	44	39	32	21	17
MIN	0.58	0.75	0.76	1.6	20	49	44	40	27	17	16	13
MED	0.58	1.1	1.4	21	61	57	46	43	33	24	18	15
AC-FT	409	463	97	1280	4030	3430	2750	2660	1990	1490	1110	899

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
MEAN	2.79	2.88	1.95	4.61	11.8	9.44	7.80	7.51	6.28	5.13	5.75	3.75
MAX	6.65	7.78	3.62	20.8	72.5	55.8	46.1	43.2	33.4	24.2	18.1	15.1
(WY)	2005	2005	1999	2005	2005	2005	2005	2005	2005	2005	2005	2005
MIN	0.98	0.85	0.75	0.69	0.74	0.78	0.65	0.65	0.64	0.67	1.01	0.59
(WY)	2003	2003	2003	2003	2003	2003	2004	2004	2004	2004	2004	2004

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1998 - 2005
ANNUAL TOTAL	743.48	10383.74	
ANNUAL MEAN	2.03	28.4	5.74
HIGHEST ANNUAL MEAN			28.4 2005
LOWEST ANNUAL MEAN			1.10 2002
HIGHEST DAILY MEAN	183 Nov 8	363 Feb 12	363 Feb 12 2005
LOWEST DAILY MEAN	0.43 Jul 14	0.58 Oct 1	0.43 Jul 14 2004
ANNUAL SEVEN-DAY MINIMUM	0.54 Aug 5	0.58 Oct 1	0.54 Aug 5 2004
ANNUAL RUNOFF (AC-FT)	1470	20600	4160
10 PERCENT EXCEEDS	1.9	57	15
50 PERCENT EXCEEDS	0.70	21	1.9
90 PERCENT EXCEEDS	0.58	0.92	0.71

e Estimated



## COLORADO RIVER BASIN

## 09404343 TRUXTON WASH NEAR VALENTINE, AZ

**LOCATION.**--Lat 35°23'03", long 113°39'25", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>, sec. 15, T.23 N., R.13 W., Mohave County, Hydrologic Unit 15010007, on the Hualapai Reservation, just southwest of Valentine, south of old Route 66, 29 mi east of Kingman and 20 mi west of Peach Springs.

**DRAINAGE AREA.**--380.3 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Mar. 1993 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 3,770 ft above sea level, from topographic map.

**REMARKS.**--Records poor. Numerous small stock ponds located upstream with a combined capacity of less than 1,500 acre-ft. Several minor diversions.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 7,430 ft<sup>3</sup>/s, Sept. 11, 1999, gage height, 14.07 ft, from floodmark; minimum daily discharge, no flow for many days.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge July or Aug. 1904, 49,000 ft<sup>3</sup>/s estimated in Truxton Canyon approximately 12 mi upstream, see WSP 147.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 21 .....	0030	425	4.83	Jan. 27 .....	0245	377	4.74
Oct. 27 .....	2015	1,300	7.44	Feb. 11 .....	2330	*1,770	*8.53
Nov. 8 .....	0430	845	6.22	Feb. 20 .....	0015	907	6.40
Dec. 29 .....	515	337	3.92	Aug. 3 .....	0300	507	4.82
Jan. 10 .....	0500	474	4.66	Aug. 5 .....	1515	1,500	7.92

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	e0.13	e0.30	3.0	e16	3.1	2.3	1.8	1.5	3.6	0.97
2	0.00	0.00	e0.12	e0.20	1.5	e14	3.2	2.4	1.8	1.5	11	1.1
3	0.00	0.00	e0.12	106	1.3	e13	3.1	2.3	1.8	1.5	114	1.1
4	0.00	0.00	e0.12	140	1.3	e13	2.9	2.2	1.8	1.4	2.6	1.1
5	0.00	0.00	e0.12	e10	0.95	12	2.7	2.4	1.8	1.3	81	1.1
6	0.00	0.00	e0.11	e2.0	0.72	13	2.8	2.5	1.8	1.2	6.0	1.1
7	0.00	0.00	e0.11	e1.0	6.7	11	2.9	2.5	1.8	1.2	6.0	1.1
8	0.00	159	e0.11	93	5.7	8.4	2.9	2.4	1.8	1.2	6.3	1.2
9	0.00	0.49	e0.11	187	1.5	6.3	2.9	2.3	1.8	1.3	6.3	1.3
10	0.00	0.00	e0.11	166	0.87	6.0	2.7	2.3	1.8	1.2	6.4	1.4
11	0.00	0.00	e0.11	e50	319	5.2	2.8	2.3	1.8	1.2	7.1	1.5
12	0.00	0.00	e0.11	e22	290	5.0	2.8	2.3	1.8	1.2	7.8	1.5
13	0.00	0.00	e0.10	e11	48	4.7	2.7	2.5	1.8	1.2	6.4	1.5
14	0.00	0.00	e0.10	e3.0	39	4.4	2.7	2.5	1.8	1.2	6.5	1.6
15	0.00	0.00	e0.10	e2.3	e28	4.1	2.7	2.5	1.8	1.2	6.5	1.9
16	0.00	0.00	e0.10	e1.5	e22	4.0	2.7	2.5	1.8	1.0	5.7	1.7
17	0.00	0.00	0.18	e1.0	e18	3.8	2.7	2.4	1.8	1.1	4.6	1.5
18	0.00	0.00	0.15	e1.0	85	3.5	2.7	2.4	1.5	1.0	2.8	1.5
19	0.00	0.00	0.01	e0.75	124	3.1	2.7	2.3	1.5	0.90	1.5	1.4
20	15	0.00	0.00	e0.60	117	2.9	2.6	2.3	1.5	0.93	1.3	1.5
21	175	0.00	0.00	e0.60	61	2.8	2.6	2.3	1.5	0.91	1.3	1.4
22	74	2.2	0.00	e0.60	159	2.9	2.7	2.0	1.5	0.95	1.3	1.6
23	0.00	9.6	0.06	e0.60	104	2.9	2.9	2.1	1.5	0.98	1.2	1.5
24	0.00	2.1	0.44	e0.60	54	3.0	2.9	2.0	1.5	0.95	1.2	1.2
25	0.00	e0.10	0.25	e0.60	38	3.0	2.6	2.2	1.5	1.0	1.3	1.0
26	0.00	e0.10	0.31	e0.68	27	3.0	2.5	2.1	1.5	1.0	1.3	0.98
27	187	e0.10	0.39	36	20	3.1	2.5	2.0	1.5	0.90	1.2	0.90
28	101	e0.15	1.0	2.3	e19	3.2	2.5	2.0	1.5	0.90	1.1	0.90
29	0.14	e0.14	106	16	---	3.2	2.3	1.9	1.5	1.9	1.0	0.93
30	0.00	e0.13	e5.0	22	---	3.0	2.3	1.8	1.5	1.8	1.0	0.90
31	0.00	---	e0.50	6.9	---	3.0	---	1.8	---	6.7	0.96	---
TOTAL	552.14	174.11	116.07	885.53	1595.54	186.5	82.1	69.8	50.1	42.22	306.26	38.38
MEAN	17.8	5.80	3.74	28.6	57.0	6.02	2.74	2.25	1.67	1.36	9.88	1.28
MAX	187	159	106	187	319	16	3.2	2.5	1.8	6.7	114	1.9
MIN	0.00	0.00	0.00	0.20	0.72	2.8	2.3	1.8	1.5	0.90	0.96	0.90
AC-FT	1100	345	230	1760	3160	370	163	138	99	84	607	76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2005, BY WATER YEAR (WY)

	MEAN	1.70	0.69	0.58	3.21	5.82	2.06	0.54	0.46	0.66	2.43	4.53	2.35
MAX	17.8	5.80	3.74	28.6	57.0	16.1	2.74	2.25	3.17	14.3	28.2	21.6	
(WY)	2005	2005	2005	2005	2005	1995	2005	2005	2000	1999	2003	1999	
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2004	2002	2001	

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

WATER YEARS 1993 - 2005

ANNUAL TOTAL		864.83		4098.75								
ANNUAL MEAN		2.36		11.2						2.11		
HIGHEST ANNUAL MEAN										11.2		2005
LOWEST ANNUAL MEAN										0.03		2002
HIGHEST DAILY MEAN		187		Oct 27		319		Feb 11		319		Aug 16 2003
LOWEST DAILY MEAN		0.00		Jan 1		0.00		Oct 1		0.00		Jun 13 2000
ANNUAL SEVEN-DAY MINIMUM		0.00		Jan 1		0.00		Oct 1		0.00		Jun 13 2000
ANNUAL RUNOFF (AC-FT)		1720				8130				1530		
10 PERCENT EXCEEDS		0.11				16				1.1		
50 PERCENT EXCEEDS		0.00				1.6				0.14		
90 PERCENT EXCEEDS		0.00				0.00				0.00		

e Estimated

**COLORADO RIVER MAIN STEM**

**09422500 LAKE MOHAVE AT DAVIS DAM, AZ-NV**

**LOCATION**--Lat 35°11'50", long 114°34'07", in SW1/4SW1/4 sec. 18, T.21 N., R.21 W., Gila and Salt River meridian, Mohave County, AZ, Hydrologic Unit 15030101, on forebay structure on Arizona side of Davis Dam on Colorado River, 29 mi west of Kingman, AZ, and 67 mi downstream from Hoover Dam.

**DRAINAGE AREA**--173,300 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

**PERIOD OF RECORD**--Jan. 1950 to current year.

**GAGE**--Water-stage recorder. Datum of gage is sea level.

**REMARKS**--Reservoir is formed by earthfill and rockfill dam; dam completed in Apr. 1949 and storage began Jan. 17, 1950. Usable capacity, 1,810,000 acre-ft between elevations 533.39 ft (lowest point of penstock outlet) - and 647.0 ft (top of spillway gates). A small amount of additional storage is available through use of splashboards on the spillway gates. Dead storage, 8,530 acre-ft below elevation 533.39 ft. Lake is used for power development, regulation for irrigation demand, and to satisfy requirements of the Treaty of 1944 with Mexico. Figures given herein represent usable contents.

**EXTREMES FOR PERIOD OF RECORD**--Maximum contents, 1,811,000 acre-ft May 24, 1958, May 29, 1963, May 29, 1982; maximum elevation, 647.04 ft May 29, 1963, May 29, 1982; minimum contents (since 1952), 1,168,000 acre-ft Sept. 8, 1953, elevation, 622.15 ft.

**EXTREMES FOR CURRENT YEAR**--Maximum contents, 1,758,000 acre-ft May 16, elevation, 645.16 ft; minimum, 1,423,000 acre-ft Nov. 21, elevation, 632.56 ft.

Capacity table (elevation, in feet, and usable contents, in acre-feet)

628	1,309,000	641	1,644,000
632	1,409,000	644	1,726,000
635	1,486,000	647	1,810,000
638	1,564,000		

RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1597000	1498000	1505000	1636000	1658000	1685000	1679000	1698000	1728000	1688000	1662000	1721000
2	1591000	1498000	1498000	1637000	1654000	1726000	1671000	1703000	1733000	1680000	1665000	1722000
3	1580000	1499000	1501000	1645000	1651000	1732000	1672000	1709000	1746000	1674000	1659000	1706000
4	1574000	1496000	1506000	---	1645000	1733000	1686000	1712000	1747000	1669000	1667000	1696000
5	1568000	1494000	1516000	---	1637000	1736000	1691000	1716000	1740000	1664000	1673000	1686000
6	1562000	1486000	1523000	---	1637000	1738000	1698000	1702000	1738000	1667000	1682000	1680000
7	1561000	1482000	1532000	---	1635000	1741000	1702000	1703000	1744000	1674000	1680000	1680000
8	1561000	1487000	1536000	---	1639000	1745000	1696000	1698000	1747000	1676000	1680000	1679000
9	1551000	1486000	1541000	---	1635000	1739000	1683000	1705000	1755000	1672000	1688000	1672000
10	1538000	1485000	1544000	---	1634000	1738000	1673000	1704000	1754000	1660000	1700000	1655000
11	1532000	1483000	1542000	---	1638000	1733000	1670000	1707000	1740000	1667000	1720000	1646000
12	1532000	1482000	1543000	---	1638000	1730000	1675000	1720000	1731000	1673000	1737000	1640000
13	1526000	1481000	1550000	---	1644000	1733000	1670000	1732000	1738000	1676000	1742000	1637000
14	1524000	1473000	1552000	---	1645000	1728000	1674000	1740000	1735000	1673000	1738000	1631000
15	1520000	1465000	1557000	---	1647000	1726000	1665000	1755000	1735000	1676000	1739000	1630000
16	1515000	1456000	1555000	---	1654000	1725000	1656000	1749000	1735000	1673000	1734000	1631000
17	1517000	1447000	1557000	---	1660000	1723000	1646000	1737000	1733000	1671000	1734000	1627000
18	1510000	1442000	1555000	---	1667000	1719000	1640000	1737000	1726000	1672000	1738000	1620000
19	1502000	1439000	1552000	---	1674000	1712000	1652000	1748000	1720000	1670000	1738000	1619000
20	1494000	1432000	1551000	---	1677000	1703000	1666000	1754000	1719000	1672000	1733000	1618000
21	1494000	1426000	1554000	---	1681000	1695000	1682000	1751000	1726000	1669000	1722000	1621000
22	1492000	1432000	1560000	---	1684000	1692000	1678000	1739000	1726000	1657000	1719000	1627000
23	1490000	1443000	1563000	---	---	1691000	1680000	1729000	1714000	1651000	1717000	1612000
24	1488000	1454000	1563000	---	---	1686000	1679000	1739000	1705000	1643000	1726000	1607000
25	1490000	1461000	1564000	---	---	1685000	1685000	1744000	1690000	1645000	1734000	1594000
26	1489000	1466000	1564000	---	---	1682000	1695000	1744000	1682000	1648000	1744000	1591000
27	1493000	1470000	1571000	1667000	---	1679000	1702000	1736000	1672000	1653000	1744000	1589000
28	1503000	1491000	1589000	1663000	---	1684000	1709000	1732000	1663000	1662000	1744000	1588000
29	1504000	1502000	1599000	1664000	---	1690000	1712000	1727000	1676000	1670000	1741000	1577000
30	1498000	1501000	1616000	1660000	---	1692000	1703000	1719000	1683000	1670000	1736000	1575000
31	1497000	---	1630000	1656000	---	1686000	---	1726000	---	1672000	1731000	---
MAX	1597000	1502000	1630000	---	1685000	1745000	1712000	1755000	1755000	1688000	1744000	1722000
MIN	1488000	1426000	1498000	---	1634000	1679000	1640000	1698000	1663000	1643000	1659000	1575000
(*)	635.43	635.59	640.48	641.42	642.49	642.49	643.15	644.00	642.43	642.02	644.19	638.40
(**)	-95000	+4000	+131600	+23400	+64200	-34200	+17000	+23000	-43000	-11000	+59000	-156000
CAL YR 2004	MAX 1737000	MIN 1426000	(**)	+41000								
WTR YR 2005	MAX 1755000	MIN 1426000	(**)	-26000								

(\*) Elevation, in feet, at end of month.  
(\*\*) Change in contents, in acre-feet.

## COLORADO RIVER MAIN STEM

## 09423000 COLORADO RIVER BELOW DAVIS DAM, AZ-NV

**LOCATION**--Lat 35°11'30", long 114°34'17", in SE $\frac{1}{4}$ /NE $\frac{1}{4}$  sec. 1, T.32 S., R.66 E., Mount Diablo meridian, in Clark County, Nevada, Hydrologic Unit 15030101, on right bank 0.5 mi downstream from Davis Dam, 29 mi west of Kingman, AZ, and 68 mi downstream from Hoover Dam.

**DRAINAGE AREA**--173,300 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

**PERIOD OF RECORD**--June 1905 to Sept. 1907 (published as "at Hardyville"), Mar. 1949 to current year.

**REVISED RECORDS**--WDR AZ-86-1:1981.

**GAGE**--Water-stage recorder. Datum of gage is 490.00 ft, sea level; gage readings have been reduced to elevations above sea level since Oct. 1, 1967. 1905-7, nonrecording gage at site 4.8 mi downstream at datum about 3.4 ft lower. Mar. 16 to May 3, 1949, water-stage recorder at site 0.5 mi downstream at datum 10.00 ft higher. May 4, 1949, to Feb. 24, 1956, water-stage recorder at site 400 ft upstream at datum 10.00 ft higher. Feb. 25, 1956, to Sept. 30, 1967, water-stage recorder at present site at datum 10.00 ft higher.

**REMARKS**--Record is rated good except for estimated days from August 15 to August 31 which is fair. Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950. Many diversions upstream for irrigation, industrial, and municipal uses.

**EXTREMES FOR PERIOD OF RECORD**--1905-7: Maximum daily discharge, 116,000 ft<sup>3</sup>/s June 20, 1906; minimum daily, 2,850 ft<sup>3</sup>/s Jan. 5, 1906.

1949-2002: Maximum discharge, 46,200 ft<sup>3</sup>/s July 2, 1983, elevation, 509.48 ft; maximum elevation, 513.91 ft Apr. 22, 1952; no flow at Davis Dam parts of several days July to Sept. 1950 and Dec. 27, 1950, when gates in dam were closed; minimum daily discharge, 285 ft<sup>3</sup>/s Aug. 3, 1950.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, 26,900 ft<sup>3</sup>/s July 8 at 1945, elevation, 505.48 ft. Minimum daily discharge, 1,220 ft<sup>3</sup>/s Feb. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10200	5860	10700	6910	5900	1890	19400	15900	16200	16000	17400	14100
2	10700	7080	14400	6870	9710	1930	17000	16500	16100	17200	17200	13500
3	10700	7540	7770	6510	9780	1920	14000	16600	15900	16900	14600	14000
4	10400	8190	6790	5930	9820	1940	11500	16600	15700	17300	12300	14100
5	10300	8830	6730	4210	8060	2010	17500	16500	17300	18000	11700	14000
6	9520	9600	6740	4190	8040	2000	18300	16400	16100	18100	11000	13700
7	7050	9700	6750	2010	8130	1960	19500	16100	16100	17500	13700	13500
8	7020	9520	6750	1910	8110	1310	19600	16100	16500	17700	12300	13600
9	10500	9590	7720	1890	8990	5060	19000	17600	16500	16200	12500	13400
10	9560	9650	6670	1890	9830	5020	19100	17600	16700	16300	11700	13500
11	8410	8090	6740	1920	9280	5060	19100	17500	17700	17300	10300	14500
12	8640	8080	6730	1890	6560	5090	19000	17100	17600	17900	9760	14100
13	9250	8060	8190	1880	5970	5080	18800	16500	16000	18100	10200	13500
14	8370	8890	7450	1900	6040	5440	17900	15600	15900	17500	11400	14900
15	7540	12000	7370	1980	2060	5500	19500	16300	15700	18500	e13300	15100
16	7560	11900	8660	4920	1880	5570	16800	15900	15500	17100	e13400	14600
17	7580	12200	8450	5050	1860	5690	16700	16400	15700	17900	e13400	15300
18	8740	11700	8500	5170	1850	5860	17500	16400	16400	18200	e13300	15100
19	10500	10400	8570	6640	1950	9430	17200	16400	17200	19000	e13300	15100
20	10500	12000	9210	7350	1900	12100	17200	17600	16900	15900	e13400	14800
21	8100	10900	9240	7330	1940	13300	17200	18800	15800	18500	e13400	14800
22	7780	8280	9290	6690	1890	13200	18200	17900	15900	18400	e13200	13200
23	7410	6330	9360	6670	1580	13000	16000	16900	17100	17600	e12800	14200
24	7370	3510	9330	7010	1220	13100	15500	16900	17900	17600	e12900	13500
25	7090	3600	7920	6180	1240	13000	18000	16700	15800	15700	e12800	13900
26	4860	3460	8610	5730	1230	13100	17600	16800	16800	15500	e12900	14100
27	4810	4300	7750	5330	1260	13200	17800	16900	18000	15500	e12700	14000
28	4800	4300	6840	5370	1310	12800	16000	16100	17100	15500	e13300	14000
29	4770	8990	6870	4900	---	12800	16900	16300	16000	16300	e14000	15100
30	4790	9050	6800	4910	---	14800	15900	17300	16000	16000	e14200	15100
31	4770	---	6810	5830	---	16100	---	17400	---	15500	e12800	---
TOTAL	249590	251600	249710	146970	137390	238260	523700	519600	494100	530100	401160	426300
MEAN	8051	8387	8055	4741	4907	7686	17460	16760	16470	17100	12940	14210
MAX	10700	12200	14400	7350	9830	16100	19600	18800	18000	19000	17400	15300
MIN	4770	3460	6670	1880	1220	1310	11500	15600	15500	15400	9760	13200
AC-FT	495100	499000	495300	291500	272500	472600	1039000	1031000	980000	1051000	795700	845600

CAL YR 2004 TOTAL 4998050 MEAN 13660 MAX 21700 MIN 3460 AC-FT 9914000  
WTR YR 2005 TOTAL 4168480 MEAN 11420 MAX 19600 MIN 1220 AC-FT 8268000

e Estimated

COLORADO RIVER MAIN STEM

09423500 COLORADO RIVER AT NEEDLES, CA

**LOCATION.**--Lat 34°51'06", long 114°36'33", in SE1/4SE1/4 sec. 19, T.9 N., R.23 E., San Bernardino meridian, San Bernardino County, Hydrologic Unit 15030101, on right bank at Needles, 15 mi upstream from Bureau of Reclamation gaging station near Topock, AZ, 30 mi downstream from Davis Dam, and 97 mi downstream from Hoover Dam.

**DRAINAGE AREA.**--174,500 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

**PERIOD OF RECORD.**--Apr. 1931 to current year (mean elevations through Sept. 1987; maximum elevations thereafter).

**REVISED RECORDS.**--WSP 1119:1931-47. WDR AZ-89-1:1983--88.

**GAGE.**--Water-stage recorder. Datum of gage is sea level. Prior to May 15, 1942, at site 550 ft downstream and May 15, 1942 to Feb. 16, 1969, at site 200 ft upstream.

**REMARKS.**--Elevation of river below bottom of gage (elevation 459.52 ft) Oct. 12, Jan. 16-21, 25-31, Feb. 2, 3, 5-11. Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum elevation, 475.77 ft Nov. 30, 1944; minimum recorded, 457.84 ft Feb. 26, 1973.

**EXTREMES FOR CURRENT YEAR.**--Maximum recorded elevation, 463.33, June 16.

ELEVATION, in FT (NGVD), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	460.23	455.67	458.24	456.53	456.01	<455.42	461.44	462.65	462.94	462.49	462.87	460.30
2	460.06	456.52	460.32	456.53	457.08	<455.42	461.45	462.50	462.58	462.60	462.97	460.47
3	460.06	456.61	459.74	456.51	457.38	<455.42	461.33	462.61	462.42	462.83	462.92	460.66
4	459.98	457.54	457.25	456.47	457.61	<455.42	459.77	462.57	462.38	462.93	461.47	460.86
5	459.72	457.70	456.70	455.97	457.68	<455.42	461.04	462.71	462.85	463.02	459.70	460.96
6	459.04	457.87	456.67	<455.42	456.64	<455.42	462.54	462.54	462.99	463.19	459.05	460.94
7	458.53	457.77	456.64	<455.42	456.62	<455.42	462.84	462.63	462.74	463.18	461.26	461.16
8	456.67	457.59	456.63	<455.42	456.65	<455.42	462.97	462.57	462.72	463.17	461.28	461.25
9	458.59	457.61	457.52	<455.42	456.81	<455.42	463.03	462.69	462.75	463.18	461.00	461.23
10	459.35	458.05	457.55	<455.42	457.41	<455.42	463.10	462.96	462.41	462.66	460.98	461.13
11	458.76	457.57	456.61	<455.42	457.60	<455.42	463.16	463.01	462.82	462.80	459.78	461.51
12	457.97	456.93	456.63	<455.42	457.05	455.58	463.16	462.97	462.83	462.86	458.55	461.83
13	458.17	456.91	457.86	<455.42	456.42	455.62	463.08	462.77	462.88	463.13	458.43	461.63
14	458.32	457.49	458.01	<455.42	456.23	455.57	463.03	462.21	462.67	462.99	458.54	461.56
15	457.56	458.87	457.41	<455.42	456.25	455.63	463.01	462.56	462.62	463.26	460.30	462.12
16	456.72	459.74	457.35	<455.42	<455.42	455.69	463.17	462.65	462.49	463.33	460.44	462.14
17	456.69	459.62	457.90	<455.42	<455.42	455.74	462.60	462.37	462.34	462.85	460.61	461.90
18	457.64	459.78	457.80	<455.42	<455.42	455.80	462.40	462.54	462.43	463.16	460.57	461.95
19	458.86	460.03	457.83	456.14	<455.42	456.72	462.56	462.71	462.86	462.98	460.56	461.91
20	459.07	458.92	457.80	456.55	<455.42	457.89	462.68	462.74	463.00	462.76	460.56	461.84
21	458.99	459.79	457.94	456.87	<455.42	458.99	462.55	463.16	462.68	462.84	460.53	461.67
22	457.62	458.74	457.94	456.94	<455.42	459.05	462.69	463.24	462.41	462.96	460.51	461.64
23	456.88	457.23	458.03	456.31	<455.42	459.06	462.81	463.03	462.61	462.97	460.57	461.31
24	456.78	456.59	458.06	456.27	<455.42	459.06	462.56	462.76	462.77	462.97	460.45	461.65
25	456.74	<455.44	458.10	456.35	<455.42	459.01	462.65	462.64	462.97	462.90	460.50	460.80
26	456.66	<455.44	456.98	456.05	<455.42	458.99	463.05	462.80	462.54	462.42	460.38	461.35
27	<455.46	<455.44	457.71	455.94	<455.42	459.01	463.14	462.82	463.12	462.26	460.41	461.54
28	<455.46	455.45	456.85	455.81	<455.42	459.08	463.03	462.90	463.01	462.20	460.31	461.48
29	<455.46	457.04	456.76	456.00	---	458.94	462.65	462.59	462.48	462.45	460.59	462.05
30	<455.46	458.00	456.63	455.81	---	460.19	462.49	462.81	462.55	462.69	460.72	462.06
31	<455.46	---	456.51	455.88	---	461.02	---	462.95	---	462.47	460.74	---
MAX	460.23	460.03	460.32	456.94	457.68	461.02	463.17	463.24	463.12	463.33	462.97	462.14
MIN	455.46	455.44	456.51	455.42	455.42	455.42	459.77	462.21	462.34	462.20	458.43	460.30

WTR YR 2005 MAX 463.33 MIN 455.42

< Actual value is known to be less than the value shown

## DIVERSIONS AND RETURN FLOWS BETWEEN DAVIS DAM AND PARKER DAM

## 09423550 TOPOCK MARSH INLET NEAR NEEDLES, CA

**LOCATION.**--Lat 34°50'10", long 114°35'03", in NE<sub>1/4</sub>NW<sub>1/4</sub> sec. 33, T.9 N., R.23 E., San Bernardino meridian, in Mohave County, AZ, Hydrologic Unit 15030101, on left bank of Colorado River on north side of intake structure, 1.3 mi east of Needles.

**PERIOD OF RECORD.**--Jan. 1967 to current year.

**GAGE.**--Water-stage recorders above and below intake gates and on intake gates to record head and gate openings. Datum of gages is 400.00 ft above sea level.

**REMARKS.**--Record is rated poor with estimated days also rated poor. Topock Marsh inlet diverts water from the Colorado River into Topock Marsh, an area of 4,260 acres. This water flows through the marsh and returns to the Colorado River through the Topock Marsh outlet. The U.S. Fish and Wildlife Service operate the gate settings that control the flow into marsh. Monthly total return flows through the outlet, sta 09423650, Topock Marsh Outlet near Topock, AZ, are shown in the table below. Prior to June 1978, daily flows for this station were published separately.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 286 ft<sup>3</sup>/s Mar. 31, 1995; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	0.00	46	0.00	0.00	0.00	143	94	102	77	102	e59
2	51	0.00	77	0.00	7.9	0.00	112	101	92	92	100	e14
3	53	0.00	53	0.00	30	0.00	108	105	91	89	88	e42
4	57	0.00	44	0.00	35	0.00	14	99	77	93	43	e47
5	51	29	44	0.00	22	0.00	56	111	113	104	29	e49
6	47	44	44	0.00	0.91	0.00	123	94	95	107	15	e48
7	46	44	44	0.00	0.00	0.00	133	95	94	97	44	e43
8	44	44	30	0.00	0.00	0.00	153	95	105	107	50	e42
9	43	46	0.00	0.00	0.00	0.00	132	105	102	91	46	e42
10	49	44	40	0.00	31	0.00	139	116	78	90	e26	e44
11	46	46	4.7	0.00	43	0.00	141	108	122	97	e7.0	e45
12	44	43	0.00	0.00	21	0.00	139	112	115	e98	11	e61
13	44	44	0.00	0.00	0.00	0.00	137	105	99	e95	7.1	e43
14	46	43	43	0.00	0.00	0.00	153	77	91	e105	12	e40
15	44	44	46	0.00	0.00	0.00	134	98	90	e105	35	e63
16	46	52	31	0.00	0.00	0.00	112	98	84	e96	53	78
17	44	53	46	0.00	0.00	0.00	108	99	87	e98	53	78
18	44	52	46	0.00	0.00	0.00	125	98	88	e98	52	88
19	46	55	47	0.00	0.00	0.00	109	95	106	e96	51	80
20	48	46	44	0.00	0.00	1.7	116	101	111	76	e40	80
21	47	55	47	0.00	0.00	9.1	115	129	92	115	e43	76
22	46	47	46	4.8	0.00	25	129	119	90	115	e45	70
23	46	44	47	0.00	0.00	23	105	102	105	98	e36	59
24	44	44	46	0.00	0.00	20	90	102	104	101	e35	66
25	46	44	47	0.00	0.00	16	132	99	95	102	e35	63
26	44	30	44	0.00	0.00	25	116	98	85	56	47	67
27	44	0.00	46	0.00	0.00	30	120	105	125	78	46	69
28	22	0.00	44	0.00	0.00	27	104	95	125	75	45	67
29	0.00	0.00	29	0.00	---	17	113	97	71	86	62	77
30	0.00	38	0.00	0.00	---	31	91	108	94	81	53	82
31	0.00	---	0.00	0.00	---	77	---	115	---	79	58	---
TOTAL	1289.00	1031.00	1125.70	4.80	190.81	301.80	3502	3175	2928	2897	1369.1	1782
MEAN	41.6	34.4	36.3	0.15	6.81	9.74	117	102	97.6	93.5	44.2	59.4
MAX	57	55	77	4.8	43	77	153	129	125	115	102	88
MIN	0.00	0.00	0.00	0.00	0.00	0.00	14	77	71	56	7.0	14
AC-FT	2560	2040	2230	9.5	378	599	6950	6300	5810	5750	2720	3530
(*)	0	0	0	0	0	0	0	0	0	0	30	12
CAL YR 2004	TOTAL 25251.68	MEAN 69.0	MAX 179	MIN 0.00	AC-FT 50090	(*) 2470						
WTR YR 2005	TOTAL 19596.21	MEAN 53.7	MAX 153	MIN 0.00	AC-FT 38870	(*) 42						

(\*) Return surface flow, in acre-feet, to the Colorado river.

e Estimated

DIVERSIONS FROM LAKE HAVASU

09424150 COLORADO RIVER AQUEDUCT NEAR PARKER DAM, AZ-CA

**LOCATION**--Lat 34°18'58", long 114°09'23", in NW1/4SW1/4 sec. 28, T.3 N., R.27 E., San Bernardino meridian, in San Bernardino County, CA, Hydrologic Unit 15030101, at intake pumping plant of Metropolitan Water District of Southern California on Lake Havasu, 1.8 mi upstream from Parker Dam and 149 mi downstream from Hoover Dam.

**PERIOD OF RECORD**--Jan. 1939 to current year (monthly diversions only, Oct. 1942 to Sept. 1991. Published as a supplement to records for Colorado River below Parker Dam, 1942--50. Percolation return flow (monthly flow only) Oct. 1964 to Sept. 1973; prior to Oct. 1964 miscellaneous measurements only. Prior to 1992, published as monthly discharges.

**GAGE**--Flow obtained from acoustical flowmeters. Prior to Aug. 1990, flow obtained from Venturi meters in pressure lines at intake pumping plant.

**REMARKS**--Pumping began Jan. 7, 1939. Figures of daily streamflow shown represent water pumped from Lake Havasu less return surface flow from Gene and Copper Basin Reservoirs. No water returned as surface flow from these reservoirs this year. Percolation return flow from Gene and Copper Basin Reservoirs is estimated by the Bureau of Reclamation as 10 acre-ft/day for a yearly total of 3,650 acre-ft, which is used for accounting purposes.

**COOPERATION**--Diversion records furnished by Metropolitan Water District of Southern California.

**EXTREMES FOR PERIOD OF RECORD**--Maximum daily streamflow, 4,351 acre-ft, Sept. 1, 1998; no diversion at times.

STREAMFLOW, DAILY, in ACRE FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	467	702	2528	1040	0.0	2453	0.00	1400	3476	3555	3208	3399
2	472	1998	3801	512	1303	2444	0.00	1444	3541	3415	2851	3009
3	487	2448	3798	520	1490	2455	0.00	1387	3516	3475	2867	2933
4	475	2464	3665	524	2211	2973	0.00	1443	3526	3475	2872	2932
5	1003	3696	2868	514	2423	2947	1315	2408	3465	3482	2865	2942
6	998	3804	2885	157	1663	2930	2054	2372	3499	3469	2848	2968
7	983	3703	2897	0.00	1464	2925	1907	2417	3779	3484	2866	2991
8	998	3516	3357	0.00	1498	2905	1909	2469	3318	3510	2858	3455
9	992	2712	3234	0.00	1435	2475	1896	2326	3414	3475	3151	3431
10	994	3349	3919	0.00	1464	2020	1898	2473	3479	3439	3222	3407
11	1451	3355	3803	0.00	1474	2061	3623	2331	3511	3530	3416	3383
12	1486	3366	3660	0.00	1450	2050	3813	2419	3469	3420	3429	3360
13	1410	3824	3322	0.00	984	2040	3769	2432	3498	3516	3396	3552
14	1457	3792	3347	0.00	975	1983	3768	2424	3688	3441	3372	3160
15	1052	3661	3356	0.00	990	0.00	3388	2432	3293	3547	2942	2924
16	1768	2543	3351	0.00	1484	0.00	3376	2874	3503	3308	2881	2978
17	2019	2939	3341	0.00	1487	0.00	3399	3245	3448	3294	3065	3361
18	1530	3687	3329	0.00	1493	0.00	3380	3293	3523	3321	3044	3379
19	1538	3801	3327	0.00	1495	0.00	3319	3330	3518	3373	2897	3364
20	1036	3724	3321	0.00	1513	0.00	3355	3332	3492	3302	2963	3368
21	1049	3599	3337	0.00	1329	0.00	3370	3330	3396	3329	2950	1977
22	1399	3458	3365	0.00	1537	0.00	3348	3349	3414	2710	2964	2929
23	1551	2809	3814	0.00	1013	0.00	3375	3353	3561	3200	2964	2972
24	1544	2855	3805	0.00	2175	0.00	3386	3493	3406	2993	2978	3415
25	1534	3351	3765	0.00	2950	0.00	3388	3245	3471	2978	2727	3369
26	1829	3790	3688	0.00	2941	0.00	3850	3825	3471	2844	3436	3388
27	1877	3563	3392	0.00	2372	0.00	3863	3732	3466	3510	3449	3461
28	1429	3761	3938	0.00	2547	0.00	3802	3499	3512	3200	3435	3255
29	1449	3546	3336	0.00	---	0.00	3746	3521	3467	3342	3395	2934
30	1954	3397	3484	0.00	---	0.00	1595	3503	3501	3295	3394	2962
31	1801	---	3458	0.00	---	0.00	---	3537	---	3347	3379	---
TOTAL	40032	97213	106491	3267.00	45160.0	34661.00	79892.00	86638	104621	103579	96084	94958
MEAN	1291	3240	3435	105	1613	1118	2663	2795	3487	3341	3099	3165
MAX	2019	3824	3938	1040	2950	2973	3863	3825	3779	3555	3449	3552
MIN	467	702	2528	0.00	0.00	0.00	0.00	1387	3293	2710	2727	1977
(*)	264	255	213	264	238	264	255	264	255	264	264	255
CAL YR 2004	TOTAL	763470	MEAN	2086	MAX	3938	MIN	467	(*)	3063		
WTR YR 2005	TOTAL	892596.00	MEAN	2445	MAX	3938	MIN	0.00	(*)	3055		

(\*) Return flows, in acre-feet, to the Colorado River.

## 09424447 BURRO CREEK @ OLD U.S. 93 BRIDGE, NEAR BAGDAD

**LOCATION.**--Lat 34°32'30", long 113°26'40", in SW $\frac{1}{4}$  sec. 19, T.14 N., R.11 W., Mohave County, Hydrologic Unit 15030202, on left bank 15 mi. upstream from confluence with Big Sandy River, and 15 mi. southwest of Bagdad, AZ.

**DRAINAGE AREA.**--611 mi<sup>2</sup>, of which 10 mi<sup>2</sup> is noncontributing.

**PERIOD OF RECORD.**--Aug. 1980--Oct. 1994; Mar. 2003 to current year.

**REVISED RECORDS.**--WDR AZ--88--1: Drainage area.

**GAGE.**--Water-stage recorder. Elevation of gage is 1,880 ft, above sea level.

**REMARKS.**--Records fair, except estimated discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 55,300 ft<sup>3</sup>/s Feb. 8, 1980, gage height 16.30 ft.; no flow at times during some years.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge 47,400 ft<sup>3</sup>/s Feb. 14, 1980, from slope area measurement of peak flow at previous site and datum.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 21.....	0815	18,600	13.07	Jan. 11.....	2045	20,600	12.47
Oct. 28.....	0300	37,000	16.22	Jan. 27.....	1030	4,900	8.49
Nov. 8.....	0630	16,500	12.64	Feb. 11.....	2330	*44,600	*16.48
Nov. 22.....	1000	13,400	11.90	Feb. 19.....	1445	12,000	10.80
Dec. 29.....	1300	9,990e	10.46e	Aug. 12.....	1545	3,390	7.99
Jan. 4.....	1045	5,370	8.97				

Minimum daily discharge, 0.38 ft<sup>3</sup>/s (estimated) Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.79	222	98	242	344	315	53	51	10	3.5	3.2	26
2	e0.74	132	80	159	159	271	54	54	9.4	3.2	33	16
3	e0.67	83	67	121	83	237	54	48	9.0	3.1	42	18
4	e0.62	56	59	3320	49	211	51	45	9.2	3.1	42	20
5	e0.59	41	54	1780	36	195	51	40	8.5	2.9	119	18
6	e0.56	32	51	1120	29	179	51	36	7.8	2.7	101	17
7	e0.54	118	52	689	26	170	52	37	7.4	2.7	83	e16
8	e0.51	6840	50	494	66	152	53	37	e9.0	2.8	37	e13
9	e0.50	2030	47	3360	100	135	53	35	e11	2.8	383	e9.0
10	e0.48	661	44	6750	66	121	55	31	e13	2.8	590	e6.0
11	e0.47	333	51	9810	9600	105	54	29	14	2.8	276	e4.0
12	e0.46	242	49	3750	13700	95	53	28	6.7	2.9	e954	e3.5
13	e0.45	1060	47	1010	1610	89	52	27	7.3	2.9	e763	3.0
14	e0.39	319	43	507	795	82	49	26	7.1	2.9	e749	3.2
15	e0.38	210	40	335	525	76	46	24	6.9	3.0	e967	3.1
16	e0.55	153	37	233	416	74	45	20	6.2	2.9	177	2.8
17	0.55	68	34	175	377	71	44	17	5.9	2.8	73	2.9
18	0.55	51	32	138	1280	69	41	16	5.9	2.7	47	2.8
19	0.55	40	31	112	5920	71	37	15	6.2	2.8	28	2.8
20	0.65	32	29	95	3270	78	35	14	6.2	2.7	22	2.8
21	10200	496	28	82	1070	83	35	15	6.4	2.7	19	2.7
22	4300	7690	27	75	2180	77	36	15	5.6	2.7	22	2.6
23	656	2520	25	68	2340	72	39	14	5.2	2.4	19	2.4
24	e233	1640	25	63	1760	71	78	14	4.5	2.5	39	2.5
25	e108	733	24	57	978	69	54	14	4.3	2.6	60	2.5
26	e57	468	24	55	760	65	52	14	4.0	2.7	27	2.3
27	e48	332	e63	1800	519	67	47	14	3.7	2.8	19	2.2
28	e13400	246	e63	1020	389	64	43	13	3.6	2.6	19	2.4
29	2160	212	e3150	1880	---	62	50	12	3.7	2.5	20	2.2
30	738	138	e1560	1740	---	58	50	11	3.4	2.4	18	2.3
31	381	---	476	1220	---	56	---	12	---	2.5	19	---
TOTAL	32292.00	27198	6460	42260	48447	3540	1467	778	211.1	86.4	5770.2	214.0
MEAN	1042	907	208	1363	1730	114	48.9	25.1	7.04	2.79	186	7.13
MAX	13400	7690	3150	9810	13700	315	78	54	14	3.5	967	26
MIN	0.38	32	24	55	26	56	35	11	3.4	2.4	3.2	2.2
AC-FT	64050	53950	12810	83820	96090	7020	2910	1540	419	171	11450	424
CFSM	1.73	1.51	0.35	2.27	2.88	0.19	0.08	0.04	0.01	0.00	0.31	0.01
IN.	2.00	1.68	0.40	2.62	3.00	0.22	0.09	0.05	0.01	0.01	0.36	0.01

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2005, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	2000	2001	2002	2003	2004	2005
MEAN	112	115	142	207	329	241	21.7	4.86	1.23	1.80	44.0	67.4				
MAX	1042	907	710	1363	1730	1371	93.2	25.1	7.04	6.24	188	403				
(WY)	2005	2005	1985	2005	2005	1983	1988	2005	2005	1984	1988	1983				
MIN	0.21	0.50	7.93	9.25	10.5	4.95	0.00	0.00	0.00	0.00	0.00	0.01				
(WY)	1989	1989	1981	1986	1981	1989	2004	2004	2004	2004	2004	1989				

## SUMMARY STATISTICS

## FOR 2005 WATER YEAR

## WATER YEARS 1980 - 2005

ANNUAL TOTAL	168723.70															
ANNUAL MEAN	462									105						
HIGHEST ANNUAL MEAN										462						2005
LOWEST ANNUAL MEAN										5.55						1989
HIGHEST DAILY MEAN				13700		Feb 12				17500		Mar 3				1983
LOWEST DAILY MEAN				0.38		Oct 15				0.00		Aug 15				1987
ANNUAL SEVEN-DAY MINIMUM				0.45		Oct 9				0.00		Jul 13				1988
ANNUAL RUNOFF (AC-FT)	334700									76420						
ANNUAL RUNOFF (CFSM)	0.769									0.176						
ANNUAL RUNOFF (INCHES)	10.44									2.38						
10 PERCENT EXCEEDS	971									84						
50 PERCENT EXCEEDS	44									5.0						
90 PERCENT EXCEEDS	2.7									0.28						

e Estimated





## BILL WILLIAMS RIVER BASIN

## 09424900 SANTA MARIA RIVER NEAR BAGDAD, AZ

**LOCATION.**--Lat 34°18'21", long 113°20'47", in SE1/4 sec. 12, T.11 N., R.11 W., Mohave County, Hydrologic Unit 15030203, on right bank 4.0 mi east of Palmerita Ranch, 12 mi upstream from confluence with Big Sandy River, and 21 mi southwest of Bagdad.

**DRAINAGE AREA.**--1,129 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Apr. 1966 to Sept. 1985, Oct. 1988 to current year.

**REVISED RECORDS.**--WDR AZ--89--1: Drainage area.

**GAGE.**--Water-stage recorder. Elevation of gage is 1,360 ft above sea level, from topographic map.

**REMARKS.**--Records poor. Diversions above station for irrigation of about 5,300 acres, most of which is by pumping from ground water.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 24,600 ft<sup>3</sup>/s Mar. 1, 1978, gage height, 7.82 ft, from rating curve extended above 5,000 ft<sup>3</sup>/s on basis of step-backwater computations and slope-area measurements at gage heights 5.50 and 7.82 ft; no flow for many days in most years.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 22.....	0600	1,920	3.14	Jan. 11.....	2345	3,980	4.31
Oct. 28.....	1345	4,370	4.52	Jan. 27.....	1715	1,670	2.88
Nov. 8.....	1300	2,610	3.81	Feb. 12.....	0930	8,190	5.92
Nov. 22.....	1145	5,000	4.80	Feb. 19.....	0130	2,860	3.86
Dec. 29.....	1600	*8,900	*6.13	Aug. 13.....	0430	730	2.54
Jan. 4.....	0915	5,160	4.88				

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	244	e72	343	328	351	78	37	14	0.00	0.00	1.9
2	0.00	243	e70	339	259	332	77	34	13	0.00	0.00	1.6
3	0.00	238	e68	337	208	306	76	29	9.0	0.00	0.00	1.1
4	0.00	236	e67	1960	161	283	73	28	7.7	0.00	0.00	0.82
5	0.00	233	e63	982	146	288	60	26	5.5	0.00	0.00	0.82
6	0.00	233	e57	1060	119	284	59	24	4.9	0.00	0.00	0.59
7	0.00	254	e56	914	121	278	59	25	4.7	0.00	3.2	0.50
8	0.00	662	e53	890	118	241	59	26	3.7	0.00	0.60	0.27
9	0.00	540	e48	1260	136	205	58	25	3.7	0.00	0.00	0.20
10	0.00	220	e45	1370	124	191	54	25	3.7	0.00	22	0.00
11	0.00	166	e43	1640	1680	180	52	25	3.5	0.00	167	0.00
12	0.00	e147	e42	1300	4770	169	54	25	2.6	0.00	148	0.00
13	0.00	e105	e42	780	1010	166	49	23	1.5	0.00	390	0.00
14	0.00	e89	e41	621	819	162	46	24	0.86	0.00	169	0.00
15	0.00	e81	e41	575	656	139	47	24	0.00	0.00	246	0.00
16	0.00	e65	e40	528	611	135	44	22	0.00	0.00	e196	0.00
17	0.00	e60	e40	482	552	131	42	19	0.00	0.00	e102	0.00
18	0.00	46	e40	452	592	127	43	20	0.00	0.00	e39	0.00
19	0.00	46	e39	446	1600	131	46	21	0.00	0.00	28	0.00
20	0.00	41	e39	427	831	158	35	21	0.00	0.00	20	0.00
21	17	41	e39	424	518	219	40	22	0.00	0.00	9.8	0.00
22	1190	2290	e39	406	678	177	39	22	0.00	0.00	6.2	0.00
23	675	950	e39	399	986	143	40	21	0.00	0.00	45	0.00
24	360	502	e39	397	881	126	48	21	0.00	0.00	17	0.00
25	193	401	e39	397	683	125	58	21	0.00	0.00	5.5	0.00
26	53	368	e39	392	598	116	56	21	0.00	0.00	3.7	0.00
27	46	356	e38	770	473	122	46	21	0.00	0.00	3.0	0.00
28	1530	356	e39	895	391	114	39	21	0.00	0.00	2.7	0.00
29	1000	357	1430	446	---	101	38	21	0.00	0.00	2.5	0.00
30	367	356	632	934	---	100	38	19	0.00	0.00	2.1	0.00
31	265	---	348	480	---	86	---	16	---	0.00	1.9	---
TOTAL	5696.00	9926	3727	22646	20049	5686	1553	729	78.36	0.00	1630.20	7.80
MEAN	184	331	120	731	716	183	51.8	23.5	2.61	0.00	52.6	0.26
MAX	1530	2290	1430	1960	4770	351	78	37	14	0.00	390	1.9
MIN	0.00	41	38	337	118	86	35	16	0.00	0.00	0.00	0.00
AC-FT	11300	19690	7390	44920	39770	11280	3080	1450	155	0.00	3230	15
CFSM	0.16	0.29	0.11	0.65	0.63	0.16	0.05	0.02	0.00	0.00	0.05	0.00
IN.	0.19	0.33	0.12	0.75	0.66	0.19	0.05	0.02	0.00	0.00	0.05	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2005, BY WATER YEAR (WY)

	MEAN	25.0	27.0	65.7	122	202	199	32.6	6.64	1.59	2.61	14.7	17.6
MAX	505	392	461	936	1519	1035	204	36.7	16.6	53.4	198	355	
(WY)	1973	1979	1979	1980	1980	1973	1976	1995	1993	1999	1992	1983	
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
(WY)	1967	1967	1969	1970	1967	1967	1967	1966	1966	1966	1966	1966	

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1966 - 2005
ANNUAL TOTAL	20049.00	71728.36	
ANNUAL MEAN	54.8	197	59.1
HIGHEST ANNUAL MEAN			232
LOWEST ANNUAL MEAN			0.00
HIGHEST DAILY MEAN	2290	Nov 22	4770
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	39770		142300
ANNUAL RUNOFF (CFSM)	0.049		0.174
ANNUAL RUNOFF (INCHES)	0.66		2.36
10 PERCENT EXCEEDS	83		594
50 PERCENT EXCEEDS	0.00		40
90 PERCENT EXCEEDS	0.00		0.00
			0.052
			0.71
			72
			0.00
			0.00

09426000 BILL WILLIAMS RIVER BELOW ALAMO DAM, AZ

**LOCATION**--Lat 34°13'51", long 113°36'29", in SE<sub>1/4</sub>SE<sub>1/4</sub> sec. 4, T.10 N., R.13 W., La Paz County, Hydrologic Unit 15030204, on left bank 0.6 mi downstream from Alamo Dam, 3.7 mi downstream from Bullard Wash, and 8 mi downstream from confluence of Santa Maria and Big Sandy Rivers.

**DRAINAGE AREA**--4,633 mi<sup>2</sup>, of which 10 mi<sup>2</sup> probably is noncontributing.

**PERIOD OF RECORD**--Oct. 1939 to current year. Monthly discharge only for Oct. and Nov. 1939, published in WSP 1313. Prior to Oct. 1943, published as "Williams River near Alamo." Oct. 1943 to Sept. 1967, published as "Bill Williams River near Alamo."

**REVISED RECORDS**--WSP 1213: 1939(M). 1941(P). WDR AZ--89--1: Drainage area.

**GAGE**--Water-stage recorder. Elevation of gage is 967 ft above sea level, from construction data. Prior to Apr. 9, 1968, at site 1.7 mi upstream at datum 1,002.95 ft above sea level.

**REMARKS**--Records good. Diversions above station for irrigation of about 9,100 acres, mostly by pumping from ground water. Flow regulated by Alamo Lake, beginning Mar. 2, 1969. Temporary storage and slight regulation of releases through uncontrolled rectangular conduit through Alamo Dam June 23, 1968, to Mar. 27, 1969. Alamo Lake is formed by an earthfill and rockfill dam, completed in 1968. Total capacity of lake is 1,043,000 acre-ft. See table below for monthend contents.

**EXTREMES FOR PERIOD OF RECORD**--1940--68: Maximum discharge, 65,100 ft<sup>3</sup>/s Aug. 29, 1951, gage height, 30.8 ft, site and datum then in use; minimum daily, 1.1 ft<sup>3</sup>/s Sept. 4, 1958.

1969--2002: Maximum discharge, 6,980 ft<sup>3</sup>/s Mar. 16, 22, 1993, gage height, unknown as weir had washed out; no flow at times in most years.

**EXTREMES OUTSIDE PERIOD OF RECORD**--The history of floods that occurred prior to Oct. 1939 is published in WSP 1683. The peak discharges have been correlated with those for Bill Williams River at Planet. The peak discharge for Feb. 1937 has been determined as 105,000 ft<sup>3</sup>/s at a stage of 46 ft, site and datum then in use, from rating curve extended above 50,000 ft<sup>3</sup>/s on basis of slope-area measurement for flood of Sept. 6, 1939, at a stage of 39.6 ft, discharge of 86,000 ft<sup>3</sup>/s and known stable highwater control.

**EXTREMES FOR CURRENT YEAR**--Maximum daily discharge, 7,230 ft<sup>3</sup>/s Feb. 21. Minimum daily discharge, 4.1 ft<sup>3</sup>/s on July 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	15	509	2290	3260	6100	236	31	38	50	45	32
2	6.2	15	252	1670	2650	6380	220	33	41	4.1	94	31
3	7.8	16	250	1440	1110	5400	215	78	41	4.2	203	32
4	9.0	16	249	1890	511	1760	148	153	40	4.7	101	32
5	9.5	16	251	5670	357	1800	146	77	47	34	43	32
6	10	17	250	4960	357	1830	178	38	45	95	43	33
7	11	19	251	3590	411	2140	195	41	92	36	46	16
8	11	20	251	2400	533	2860	177	40	208	4.4	43	17
9	12	354	252	1950	451	3420	177	40	96	4.4	95	17
10	13	1360	253	2320	110	4720	174	76	32	4.5	208	17
11	14	1340	253	1750	108	4560	139	163	37	4.8	105	17
12	14	949	253	2140	301	4300	122	83	42	65	48	19
13	15	253	132	2860	787	4230	111	35	42	69	38	19
14	16	259	18	2420	747	2800	103	37	94	39	36	19
15	15	570	7.0	1160	1860	4080	93	37	214	4.5	37	71
16	16	714	36	749	3030	4010	52	37	102	4.2	36	82
17	17	266	66	675	2130	3930	47	77	36	4.9	36	83
18	17	258	6.2	280	2130	3850	82	168	35	4.9	35	82
19	18	252	5.6	278	2130	2300	77	79	36	65	34	83
20	18	256	75	279	3820	476	67	24	38	202	37	82
21	19	258	48	281	7230	462	93	22	92	103	35	84
22	21	539	46	281	7000	462	80	22	210	49	36	81
23	22	5470	65	280	6910	436	38	21	95	49	35	81
24	17	6990	5.6	281	7050	410	32	22	24	47	36	81
25	16	5330	5.1	197	7090	395	105	23	20	47	36	78
26	15	3250	5.1	113	7120	378	73	23	19	99	31	78
27	17	1850	67	112	6490	370	32	26	17	208	33	76
28	16	1180	48	391	6100	315	30	28	13	105	32	75
29	20	821	44	2190	---	312	68	32	38	48	31	202
30	16	820	1800	2190	---	280	31	37	80	44	34	202
31	15	---	3700	2690	---	261	---	38	---	45	32	---
TOTAL	449.6	33473	9453.6	49777	81783	75027	3341	1641	1964	1548.6	1734	1854
MEAN	14.5	1116	305	1606	2921	2420	111	52.9	65.5	50.0	55.9	61.8
MAX	22	6990	3700	5670	7230	6380	236	168	214	208	208	202
MIN	6.1	15	5.1	112	108	261	30	21	13	4.1	31	16
AC-FT	892	66390	18750	98730	162200	148800	6630	3250	3900	3070	3440	3680
(*)	139000	164300	174400	231800	341800	205600	207400	205800	200500	195100	201000	196200
(**)	+86300	+25300	+10100	+57400	+110000	-136200	+1800	-1600	-5300	-5400	+5900	-4800
CAL YR 2004	TOTAL	48355.2	MEAN	132	MAX	6990	MIN	5.1	AC-FT	95910	(**)	+119900
WTR YR 2005	TOTAL	262045.8	MEAN	718	MAX	7230	MIN	4.1	AC-FT	519800	(**)	+143500

(\*) Contents, in acre-feet, at end of month in Alamo Lake, furnished by Corp of Engineers.  
(\*\*) Change in contents, in acre-feet

**BILL WILLIAMS RIVER BASIN**  
**09426600 BILL WILLIAMS RIVER AT MINERAL WASH, NEAR PLANET, AZ**

**WATER-QUALITY RECORDS**

**LOCATION**--Lat 34°15'18", long 114°00'32", in SE1/4NE1/4 sec. 34, T.11 N., R.17 W., on boundary between Mohave and La Paz Counties, Hydrologic Unit 15030204, at convergence with Mineral Wash, 4 mi west of Planet Wash, 4 mi west of Planet Ranch, 6.1 mi upstream from waterline of Havasu Lake at elevation of 450 ft above sea level, and approximately 30 mi downstream from Alamo Lake.

**DRAINAGE AREA**--5,320 mi<sup>2</sup>, of which 686 mi<sup>2</sup> is below Alamo Dam, and 10 mi<sup>2</sup> is noncontributing.

**PERIOD OF RECORD**--Dec. 1928 to Sept. 1940, Nov. 1942 to Oct. 1946, Jan. 1970 to Jan. 1972, Oct. 1974 to current year.

**REVISED RECORDS**--WDR AZ-91-1: Drainage area.

**PERIOD OF DAILY RECORD**--

**SPECIFIC CONDUCTANCE**: Oct. 1974 to Sept. 1981.

**WATER TEMPERATURE**: Oct. 1974 to Sept. 1981.

**REMARKS**--Streamflow unaged.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
DEC 21...	0910	23	7.7	751	7.0	72	7.8	960	14.0	16.0	240	19	63.9
APR 27...	0915	101	14	750	11.1	122	8.0	635	20.0	19.0	190	12	50.1
JUL 26...	0845	19	6.4	749	8.3	108	8.0	901	30.0	28.0	230	50	61.0
26...	0846	19	8.0	749	8.3	108	8.0	901	30.0	28.0	240	54	62.2
Date	Calcium water unfltrd recover, mg/L (00916)	Magnesium water, fltrd, mg/L (00925)	Magnesium, unfltrd recover, mg/L (00927)	Potassium, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, fltrd, mg/L (00930)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)	Bicarbonate, wat flt Gran titr., field, mg/L (63786)	Carbonate, wat flt Gran titr., field, mg/L (63788)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)
DEC 21...	63.7	20.7	20.1	6.64	3	116	226	276	<1	123	1.3	--	82.3
APR 27...	--	16.6	--	5.79	2	73.6	181	221	<1	66.2	1.0	--	56.0
JUL 26...	63.0	19.3	19.1	6.56	3	95.6	182	222	<1	106	1.2	--	76.0
26...	--	19.4	--	6.72	3	95.8	182	222	<1	106	1.3	33.6	75.8
Date	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, water, unfltrd mg/L (00600)	Orthophosphate, water, fltrd, mg/L (00660)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
DEC 21...	551	.82	605	<10	.16	E.03n	.26	--	.42	--	--	--	.06
APR 27...	379	.57	420	--	.24	<.04	.34	--	.59	--	--	--	.12
JUL 26...	477	.73	539	<10	.14+c	<.04	.38	--	.52	--	--	--	.07+c
26...	512	.73	537	--	.16	<.04	.39	E.004n	.55	.104	.03	.05	.07
Date	E coli, m-TEC MF, water, col/100 mL (31633)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd, ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water, unfltrd, ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, recover, unfltrd, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, recover, unfltrd, ug/L (01012)	Boron, water, unfltrd recover, ug/L (01022)	Cadmium, water, fltrd, ug/L (01025)	Cadmium, water, unfltrd, ug/L (01027)
DEC 21...	54	--	E.12n	E.1n	6.9	6	--	100	<.06	E.04n	294	E.03n	.05
APR 27...	24k	--	E.18n	--	7.4	--	--	--	<.06	--	--	E.02n	--
JUL 26...	600k	--	<.20	E.2n	6.1	9	--	83	<.06	<.06	258d	E.03n	E.04n
26...	600k	13	--	--	7	--	90	--	--	--	--	E.03n	--

09426600 BILL WILLIAMS RIVER AT MINERAL WASH, NEAR PLANET, AZ

WATER-QUALITY RECORDS

Date	Chromium, water, unfltrd, recover-able, ug/L (01030)	Chromium, water, unfltrd, ug/L (01034)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd, recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd, recover-able, ug/L (01051)	Lithium, water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd, recover-able, ug/L (01055)	Mercury, water, fltrd, ug/L (71890)	Mercury, water, unfltrd, recover-able, ug/L (71900)
DEC 21...	--	.9	--	1.1	5.2	--	E.07n	2.08	--	--	182	.01	.02
APR 27...	--	--	--	2.1	--	--	.10	--	--	--	--	E.01n	--
JUL 26...	--	1.0	--	.9	1.7	--	<.08	1.05	--	--	48	E.01n	E.01n
26...	E.7n	--	.160	1.2	--	8	1.09	--	42.8	2.9	--	E.01n	--

Date	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd, ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd, recover-able, ug/L (01092)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC 21...	--	--	--	1.2	--	--	--	31.1	93	96	45	2.8
APR 27...	--	--	--	--	--	--	--	3.7	--	43	54	15
JUL 26...	--	--	--	1.3	--	--	--	5.0	4	79	21	1.1
26...	7.4	2.60	.7	--	<.2	755	8.6	--	--	79	21	1.1

Remark codes used in this table:  
 < -- Less than.  
 E -- Estimated.

Value qualifier codes used in this table:  
 + -- Improper preservation  
 c -- See laboratory comment  
 d -- Diluted sample: method hi range exceeded  
 k -- Counts outside acceptable range  
 n -- Below the LRL and above the LT-MDL

## BILL WILLIAMS RIVER BASIN

## 09426620 BILL WILLIAMS RIVER NEAR PARKER, AZ

**LOCATION.**--Lat 34°15'45", long 114°01'37", in NE1/4SE1/4SE1/4 sec. 28, T.11 N., R.17 W., La Paz County, Hydrologic Unit 15030204, on left bank 1.8 mi downstream from Mineral Wash and Havasu National Wildlife Refuge boundary, 5.3 mi upstream from mouth, 17 mi northeast of Parker, and approximately 31 mi downstream from Alamo Dam.

**DRAINAGE AREA.**--5,337 mi<sup>2</sup>, of which 703 mi<sup>2</sup> is below Alamo Dam and 10 mi<sup>2</sup> is noncontributing.

**PERIOD OF RECORD.**--Oct. 1988 to current year.

**REVISED RECORDS.**--WDR AZ-91-1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 500.00 ft above sea level (Bureau of Reclamation benchmark).

**REMARKS.**--Records poor. Diversions above station for irrigation, mostly by pumping from ground water. Flow regulated by Alamo Dam.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 7,330 ft<sup>3</sup>/s Mar. 1, 2005; no flow for many days most years.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--The history of floods that occurred at a former site located about 3 mi upstream is published in WSP 1683, Bill Williams River at Planet (sta 09426500).

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 7,330 ft<sup>3</sup>/s March 1. Minimum daily discharge, 0.57 ft<sup>3</sup>/s Oct. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.76	4.3	292	2340	2770	7330	430	76	e17	e50	e10	e15
2	0.73	4.3	216	1320	2940	7310	425	62	e17	e50	e10	e15
3	0.76	4.4	190	1330	1000	7100	425	57	e16	e20	e40	e15
4	0.73	4.6	184	830	372	2290	426	59	e16	e15	e130	e15
5	0.71	4.6	182	4070	175	1220	380	147	e16	e10	e45	e15
6	0.72	4.9	182	5030	153	1160	372	121	e16	e30	e20	e15
7	0.70	14	182	3220	147	1180	398	72	e15	e100	e15	e15
8	0.72	30	186	1800	158	2040	396	56	e25	e30	e10	e10
9	0.66	8.8	188	1000	184	2610	326	49	e100	e15	e10	e10
10	0.69	7.5	190	1760	175	4060	294	45	e40	e10	e30	e10
11	0.72	19	192	1360	127	4660	274	45	e20	e10	e115	e10
12	0.74	254	194	1430	120	6380	224	131	e15	e10	e40	e10
13	0.72	284	194	2090	139	6610	189	121	e14	e90	e20	e10
14	0.64	25	179	2430	290	5410	167	66	e14	e110	e15	e10
15	0.67	12	133	1240	336	4440	143	e55	e25	e70	e10	e10
16	0.69	66	122	548	2400	4710	135	e45	e90	e40	e10	e50
17	0.60	230	121	682	2250	4730	121	e40	e30	e20	e10	e70
18	0.57	36	121	265	1940	4820	109	e35	e20	e15	e10	e70
19	0.64	30	121	227	2000	6460	107	e120	e15	e10	e10	e80
20	0.71	33	121	221	2090	1390	109	e140	e12	e50	e10	e80
21	13	41	121	218	5280	832	107	e110	e12	e180	e10	e80
22	58	55	121	214	5650	702	124	e70	e20	e70	e10	e70
23	6.6	1620	121	214	6260	648	114	e50	e75	e50	e10	e70
24	4.8	5370	121	212	6020	582	106	e30	e20	e20	e10	e70
25	4.1	4680	121	213	5740	562	89	e20	e15	e10	e10	e70
26	3.8	2640	121	190	5190	536	116	e17	e11	e10	e10	e65
27	4.6	1230	122	168	6320	523	e126	e17	e11	e50	e15	e65
28	8.5	703	121	151	7200	524	92	e17	e10	e150	e15	e65
29	6.4	275	121	636	---	468	77	e17	e10	e50	e15	e60
30	5.2	273	121	1500	---	459	84	e17	e15	e30	e15	e150
31	4.6	---	1830	1690	---	426	---	e17	---	e15	e15	---
TOTAL	133.48	17963.4	6531	38599	67426	92172	6485	1924	732	1390	705	1300
MEAN	4.31	599	211	1245	2408	2973	216	62.1	24.4	44.8	22.7	43.3
MAX	58	5370	1830	5030	7200	7330	430	147	100	180	130	150
MIN	0.57	4.3	121	151	120	426	77	17	10	10	10	10
AC-FT	265	35630	12950	76560	133700	182800	12860	3820	1450	2760	1400	2580
CAL YR 2004	TOTAL	26155.43	MEAN	71.5	MAX	5370	MIN	0.00	AC-FT	51880		
WTR YR 2005	TOTAL	235360.88	MEAN	645	MAX	7330	MIN	0.57	AC-FT	466800		

e Estimated

DIVERSIONS ABOVE PARKER DAM

09426650 CENTRAL ARIZONA PROJECT CANAL AT HAVASU PUMPING PLANT, NEAR PARKER, AZ

**LOCATION.**--Lat 34°17'20", long 114°06'37", in NW1/4NW1/4 sec. 23, T.11 N., R.18 W., La Paz County, Hydrologic Unit 15030204, on left bank of Bill Williams River arm of Lake Havasu, 2 mi upstream from Parker Dam and 19 mi northeast of Parker.

**PERIOD OF RECORD.**--Oct. 1984 to current year. Prior to Oct. 1988, published as "CAP Canal Havasu pumping Plant near Parker."

**REMARKS.**--Figures of daily streamflow shown represent water pumped from Lake Havasu for delivery to the Central Arizona Project.

**COOPERATION.**--Diversion records furnished by Bureau of Reclamation.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily streamflow, 7,040 acre-ft, May 4, 2003; no diversion on many days each year.

STREAMFLOW, DAILY, in ACRE FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	3102	5272	5260	5867	0.00	5502	6115	4560	3836	2882	2354
2	0.0	4437	5264	6216	5637	54	5389	6115	4564	3263	2930	2483
3	0.0	5238	5310	4780	5284	0.00	5851	6115	4562	2860	2991	2682
4	0.0	5219	5290	6040	5762	0.00	5236	6117	4558	3330	1954	2846
5	0.0	5222	5286	6065	5919	0.00	4328	5718	4221	2410	1803	2888
6	0.0	5175	5314	6071	5431	54	4901	6117	3342	2886	1825	3152
7	0.0	4842	5284	6063	5603	0.00	5183	6113	3449	2888	1978	2987
8	0.0	5215	5714	6060	5576	0.00	5560	6107	3245	2886	2491	2446
9	0.0	4945	5689	6075	5514	0.00	5643	5611	3146	3043	2426	2432
10	0.0	6109	6280	6069	5455	54	5597	6107	3189	2886	1654	2432
11	0.0	6093	6266	6042	5574	0.00	5540	4610	3239	2884	1220	4358
12	0.0	6123	6262	6075	2912	0.00	4748	4590	3233	3035	1369	3792
13	0.0	6117	6288	5724	645	0.00	2791	4584	3187	3037	1367	3661
14	0.0	6095	6385	6032	1240	54	5550	4586	2930	2979	1367	3463
15	0.0	6087	6373	6044	1232	0.00	5403	4580	2757	3035	1728	3447
16	0.0	6115	6391	6058	0.0	0.00	5609	4963	3275	3035	1989	3592
17	0.0	6089	6365	6054	0.0	0.00	5655	4764	3110	2882	2231	3652
18	0.0	6079	6375	5641	0.0	52	5405	4869	3255	2884	2233	3953
19	0.0	6186	6383	5607	0.0	0.00	5504	4937	3257	2884	2233	3658
20	0.0	6109	6349	4163	0.0	0.00	5459	4957	3255	2888	2436	3820
21	0.0	6196	6363	4816	0.0	0.00	5611	4957	3257	2882	2235	4518
22	0.0	6063	6373	4871	52	52	5603	5167	3257	2884	2235	4776
23	0.0	6099	6371	5657	0.0	111	6109	5215	3277	2491	2277	4378
24	0.0	6117	6357	5080	0.0	538	5415	5213	3338	1444	2267	3886
25	0.0	6091	6357	5030	0.0	1240	5455	5318	3338	2539	2279	4378
26	0.0	6091	6371	5818	54	1436	6107	5401	3336	2888	2325	4237
27	0.0	6085	6373	5855	0.0	2037	6105	5413	3338	2885	2325	3519
28	0.0	5359	6357	5835	0.0	2291	6109	5474	3235	2390	2323	3661
29	0.0	5974	6357	5105	---	3880	6111	4518	1730	2989	2323	4221
30	962	6087	6944	5718	---	4782	6113	4514	3239	3039	2275	4441
31	2485	---	6835	5238	---	4784	---	4518	---	2882	2323	---
TOTAL	3447.0	170759	189198	175162	67757.0	21419.00	163592	163383	101679	89144	66294	106113
MEAN	111	5692	6103	5650	2420	691	5453	5270	3389	2876	2139	3537
MAX	2485	6196	6944	6216	5919	4784	6113	6117	4564	3836	2991	4776
MIN	0.00	3102	5264	4163	0.00	0.00	2791	4514	1730	1444	1220	2354
CAL YR 2004	TOTAL	1666327.0	MEAN	4553	MAX	7007	MIN	0.00				
WTR YR 2005	TOTAL	1317947.00	MEAN	3611	MAX	6944	MIN	0.00				

## COLORADO RIVER MAIN STEM

## 09427500 LAKE HAVASU NEAR PARKER DAM, AZ-CA

**LOCATION.**--Lat 34°18'58", long 114°09'23", in NW1/4SW1/4 sec. 28, T.3 N., R.27 E., San Bernardino meridian, in San Bernardino County, CA, Hydrologic Unit 15030101, at intake pumping plant for Colorado River aqueduct of Metropolitan Water District of Southern California, 1.8 mi upstream from Parker Dam on Colorado River, and 149 mi downstream from Hoover Dam.

**DRAINAGE AREA.**--182,700 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

**PERIOD OF RECORD.**--July 1938 to current year. Published as "Parker Reservoir near Parker Dam" 1938.

**REVISED RECORDS.**--WRD Ariz. 1975: 1974 (elevation).

**GAGE.**--Water-stage recorder. Datum of gage is sea level.

**REMARKS.**--Lake is formed by concrete-arch dam; dam was completed and storage began July 1, 1938. Usable capacity—based on Apr. 1957 re-survey by Bureau of Reclamation between elevations 430.54 ft and 450.54 ft—619,400 acre-ft between elevations 400.54 ft, sill of regulating gates, and 450.54 ft, top of regulating gates. Prior to Oct. 1, 1956, different capacity table used. Dead storage, 28,600 acre-ft below elevation 400.54 ft, based on original survey. About 0.07 ft fall indicated between gage and Parker Dam under normal operating conditions. Drawdown below elevation 440.54 ft not legally permissible except by consent of the Metropolitan Water District of Southern California or in an emergency affecting the safety of the dam. Lake is used for flood control, power development, regulation of river for irrigation demand, and as a basin from which water is pumped by Metropolitan Water District of Southern California to Colorado River aqueduct. Figures given herein represent usable contents. For record of diversion to Colorado River aqueduct, see record for Colorado River aqueduct near Parker Dam elsewhere in this report.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum storage, 693,000 acre-ft, by temporary use of flashboards, Apr. 18, 1943, June 4, 1953; maximum elevation, 451.23 ft May 27, 1988, affected by wind; minimum storage, 71,400 acre-ft June 25, 1942, elevation, 412.09 ft.

**EXTREMES FOR CURRENT YEAR.**--Maximum storage, 619,400 acre-ft March 4, elevation, 451.08 ft, affected by wind; minimum storage, 543,800 acre-ft Sept. 14, elevation, 447.14 ft.

RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	594600	607000	577000	565600	560000	615400	554300	590700	592300	585300	585700	576800
2	595200	601800	583000	567900	564100	614600	555100	591500	596800	581500	589500	574700
3	595200	594100	590300	576400	569600	616600	554000	590100	598000	579200	596400	570700
4	596000	592500	585300	584800	567100	614400	552600	588700	592700	576200	601600	569000
5	596200	589700	582700	592300	563700	606400	548100	593100	589300	575600	601000	567100
6	595000	588400	582500	602400	556600	597800	550600	589500	589100	577500	595400	566400
7	597400	589500	584200	608600	549400	589300	553600	584600	588600	587000	589300	564700
8	594600	588600	585300	610800	545900	577700	553200	577900	588700	587800	591700	567100
9	588600	587400	586600	611400	544700	565400	551000	577000	595400	584200	592900	565200
10	589100	586500	588400	611000	550800	563900	550800	579000	593900	578500	596600	561500
11	588200	586500	588700	611400	563400	561500	554100	585900	593700	573700	603600	553800
12	586500	584600	587400	607000	572400	560200	557500	594100	594800	570900	607000	548800
13	587000	581100	585300	598800	580800	558700	564100	598600	593700	570500	602400	547000
14	588400	575800	585700	593500	584600	557000	571300	598600	591900	574900	597800	544300
15	588000	568800	586100	587600	588900	550300	571100	597800	592700	574100	597800	551300
16	585300	565000	585100	579000	590500	549400	571400	595600	595400	572000	600200	554300
17	582700	564500	584400	575400	594800	555100	568100	591300	593900	570500	599200	554300
18	578900	568400	582300	570700	598400	557200	565400	589900	590100	571400	600200	555600
19	579600	572400	577900	566400	602600	554700	566200	594800	588900	573200	599200	557300
20	585700	571300	572400	567700	604400	550600	568100	597400	588600	573300	595400	560500
21	593900	574300	568200	566900	602200	547900	573500	596600	588900	577000	590900	562600
22	599000	579800	571800	564300	612400	550600	576200	596400	586300	578500	587800	565400
23	600200	582800	575800	559800	616600	555100	574700	593900	589900	578500	587200	564100
24	601800	591100	573200	557300	615800	563400	569700	591300	589100	582700	589700	559200
25	608400	595000	570900	559200	615400	562800	573700	591100	587600	587000	590500	555600
26	610000	595400	570300	564300	614400	560300	575100	592700	583800	588000	588000	552100
27	609600	591700	569700	566700	614400	557900	577900	593500	583600	589700	583200	550100
28	611800	587600	567500	565800	614400	559400	583600	590500	584200	590700	577700	547400
29	611400	581000	563400	561900	---	555100	586100	588000	583400	588400	575100	552500
30	610000	578100	560700	560000	---	549500	587600	586800	585500	583000	573200	554300
31	608600	---	562600	558500	---	552100	---	589300	---	576800	571400	---
MAX	611800	607000	590300	611400	616600	616600	587600	598600	598000	590700	607000	576800
MIN	578900	564500	560700	557300	544700	547900	548100	577000	583400	570500	571400	544300
(**)	+17500	-30500	-15500	-4100	+55900	-62300	+35500	+1700	-3800	-8700	-5400	-27100
CAL YR 2004	TOTAL 209186100	MEAN 571500	MAX 611800	MIN 505600	(**)	+44700						
WTR YR 2005	TOTAL 211948900	MEAN 580700	MAX 616600	MIN 544300	(**)	-36800						

(\*\*) Change in contents, in acre-feet.





## COLORADO RIVER MAIN STEM

## 09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA

**LOCATION.**--Lat 34°17'44", long 114°08'22", in NW<sub>1/4</sub>NW<sub>1/4</sub> sec. 3, T.2 N., R.27 E., San Bernardino meridian, in San Bernardino County, CA, Hydrologic Unit 15030104, on north end of powerplant at Parker Dam, 13 mi northeast of Parker, AZ, and 14 mi upstream from Headgate Rock Dam.

**DRAINAGE AREA.**--182,700 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--Feb. to Sept. 1934 (gauge heights and fragmentary discharge records), Oct. 1934 to current year. Prior to Oct. 1937, published as "near Parker, Ariz."

**REVISED RECORDS.**--WSP 1313: 1941(M).

**GAGE.**--Water-stage recorder. Datum of gage is 300.54 ft above sea level. Prior to Oct. 1, 1967, at site 3.8 mi downstream at datum 346.23 ft above sea level.

**REMARKS.**--No estimated daily discharges. Records good. Flow regulated by Lake Mead since Feb. 1, 1935, by Lake Mohave since Jan. 17, 1950, and by Lake Havasu since July 1, 1938. Many diversions above station. For record of diversion to Colorado River aqueduct and return flows, see record for Colorado River aqueduct near Parker Dam, elsewhere in this report.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 42,400 ft<sup>3</sup>/s Feb. 8, 1937; no flow at Parker Dam for parts of several days in 1942 when gates in dam were closed. An unregulated discharge of probably less than 1,350 ft<sup>3</sup>/s occurred Aug. 18, 1934 (lowest unregulated discharge since 1917 and probably since a much earlier date).

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 16,400 ft<sup>3</sup>/s July 30. Minimum daily discharge, 1,770 ft<sup>3</sup>/s Jan. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9150	3910	6520	5490	4950	6180	12700	9450	10600	11900	11000	7210
2	9690	4870	5210	4620	4610	7540	13000	11000	8700	14100	11500	9100
3	10200	7190	4350	2510	5180	5900	12900	12300	10800	14300	11400	10400
4	10200	4530	6330	1940	7480	5270	10800	11900	13100	14700	9680	10700
5	10100	4950	5250	1910	7130	6780	11200	8640	12600	14300	10800	10400
6	10100	5360	3380	1770	8010	6770	10900	12600	12600	13200	12900	9400
7	7490	5440	2670	1880	8030	6950	11600	13700	12300	9110	11900	9250
8	8090	6180	2690	1900	6350	8690	14100	13700	12100	13200	9510	7750
9	9870	6100	2580	1870	5440	8940	14900	11700	9780	15200	9510	8720
10	9650	5370	2420	2100	2800	7670	13900	11000	12600	15800	8700	10300
11	9100	4210	2410	2290	2120	8960	11900	8940	13100	15500	5920	11100
12	8670	4250	3250	3710	2130	9770	11600	8500	12800	15100	7020	11100
13	7510	5360	3700	6830	2130	10200	10800	9980	13800	14300	10200	9630
14	7340	6060	3560	5010	3840	10700	9790	11100	13500	11500	11000	9310
15	7910	7830	3300	5110	3170	12000	11900	11500	12000	14700	8740	6420
16	7620	9140	3180	5440	3090	11900	12500	12800	9930	15400	9430	8210
17	7990	7650	4250	5100	2240	8220	12600	12600	12400	14700	11000	8780
18	8720	4830	4950	5680	2250	10200	11900	11500	14000	13900	9490	9170
19	8130	4710	6030	5660	2220	12600	11600	8860	13500	14300	11000	8740
20	7610	6250	7060	4730	3030	13400	10300	10200	13500	14500	12000	8000
21	5470	4710	6890	5880	7140	13000	8830	12600	12500	11900	12600	8250
22	5520	3270	2370	6540	3630	10800	9790	13200	13200	14700	11500	7220
23	6540	2730	2620	6550	5840	10300	11600	12900	10800	15100	9230	8520
24	6030	2590	5080	5910	7800	7640	12800	12800	13200	13200	9200	10700
25	3440	3170	5140	3920	6750	12200	9710	11900	13900	12600	9170	9720
26	5080	3820	3590	2310	6920	12200	10100	10200	13900	12100	10700	10100
27	5170	4250	4020	2240	6240	12100	9480	10500	13900	12000	11200	9620
28	3690	5130	3630	3800	6350	10300	8400	12300	13800	12000	11600	9260
29	5070	4760	5880	5720	---	11600	9420	12400	13400	13700	10700	6150
30	4320	6270	3390	5400	---	12200	9670	12500	11000	16400	10900	8200
31	4080	---	2310	5320	---	9680	---	11000	---	15700	10300	---
TOTAL	229550	154890	128010	129140	136870	300660	340690	354270	373310	429110	319800	271430
MEAN	7405	5163	4129	4166	4888	9699	11360	11430	12440	13840	10320	9048
MAX	10200	9140	7060	6830	8030	13400	14900	13700	14000	16400	12900	11100
MIN	3440	2590	2310	1770	2120	5270	8400	8500	8700	9110	5920	6150
AC-FT	455300	307200	253900	256100	271500	596400	675800	702700	740500	851100	634300	538400
CAL YR 2004	TOTAL 3418050	MEAN 9339	MAX 17200	MIN 2310	AC-FT 6780000							
WTR YR 2005	TOTAL 3167730	MEAN 8679	MAX 16400	MIN 1770	AC-FT 6283000							

COLORADO RIVER MAIN STEM

09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA—CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Oct. 1963 to current year.

INSTRUMENTATION.--Water temperature recorder from Feb. 1954 to Aug. 1970. Specific conductance and water temperature recorder from Sept. 1982 to Sept. 2000.

REMARKS.--Prior to Oct. 1968, published as 09428000.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
DEC 21...	1130	5030	<2.0	751	9.1	88	8.3	1060	16.0	13.0	310	180	74.9
APR 27...	1145	15000	2.1	750	8.7	97	8.1	1050	25.0	19.5	330	200	81.7
JUL 26...	1145	17300	2.7	749	10.0	126	8.0	1070	42.0	26.0	340	220	83.5
AUG 31...	0940	14000	3.4	750	8.9	113	7.8	1080	31.5	26.5	330	210	81.4
Date	Calcium water unfltrd recover -able, mg/L (00916)	Magnesium, water, unfltrd, recover fltrd, mg/L (00925)	Magnesium, water, unfltrd -able, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)	Bicarbonate, wat flt Gran titr., field, mg/L (63786)	Carbonate, wat flt Gran titr., field, mg/L (63788)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
DEC 21...	71.3	29.5	27.0	4.72	3	101	124	151	<1	89.4	.4	256	632
APR 27...	87.2	29.8	30.4	4.92	2	101	122	149	<1	93.1	.4	260	645
JUL 26...	82.3	31.0	30.7	5.02	2	98.9	118	144	<1	92.6	.4	267	651
AUG 31...	83.3	31.4	32.8	5.29	2	98.5	123	150	<1	92.5	.4	265	650
Date	Residue water, fltrd, tons/acre-ft (70303)	Residue evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Total nitrogen, water, unfltrd mg/L (00600)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)	Arsenic, water, fltrd, ug/L (01000)	Arsenic, water, unfltrd ug/L (01002)
DEC 21...	.92	674	<10	.17	<.04	.21	.39	<.02	4k	.32	.3	2.6	2
APR 27...	.92	679	<10	.20	<.04	.32	.52	<.02	<1k	.39	.4	2.7	3
JUL 26...	.94	688	<10	.21	<.04	.32	.53	<.02	2k	.35	.4	2.6	E1n
AUG 31...	.95	700	<10	.32	E.02n	.28	.60	<.02	1k	.39	.4	2.7	2.5oc
Date	Barium, water, unfltrd recover -able, ug/L (01007)	Beryllium, water, unfltrd recover -able, ug/L (01010)	Beryllium, water, unfltrd recover -able, ug/L (01012)	Boron, water, unfltrd recover -able, ug/L (01022)	Cadmium, water, fltrd, ug/L (01025)	Cadmium, water, unfltrd ug/L (01027)	Chromium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, unfltrd recover -able, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, unfltrd recover -able, ug/L (01051)	Manganese, water, unfltrd recover -able, ug/L (01055)	Mercury, water, fltrd, ug/L (71890)
DEC 21...	155	<.06	<.06	132	<.04	<.04	<.8	1.3	9.4	<.08	.16	4	E.01n
APR 27...	151	<.06	<.06	128	<.04	E.02n	<.8	1.4	3.0	.26	.15	5	<.01
JUL 26...	163	<.06	<.06	131	E.02n	E.02n	<.8	2.1	1.3	<.08	.16	11	E.01n
AUG 31...	160	<.06	<.06	160d	E.02n	<.04	.17oc	1.4	1.5	E.05n	.16	21	E.01n

**COLORADO RIVER MAIN STEM**  
**09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA—CONTINUED**  
**WATER-QUALITY RECORDS**

Date	Mercury water, unfltrd recover -able, ug/L (71900)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
DEC 21...	E.01n	2.5	1.5	3
APR 27...	<.01	2.8	1.6	2
JUL 26...	E.01n	2.7	4.7	E1n
AUG 31...	E.01n	1.3	2.1	2

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

c -- See laboratory comment  
d -- Diluted sample: method hi range exceeded  
k -- Counts outside acceptable range  
n -- Below the LRL and above the LT-MDL  
o -- Result determined by alternate method

**DIVERSIONS AND RETURN FLOWS BETWEEN PARKER DAM AND PALO VERDE DAM**

**09428500 COLORADO RIVER INDIAN RESERVATION MAIN CANAL NEAR PARKER, AZ**

**LOCATION.**--Two gages, lat 34°10'04", long 114°16'33", in SE1/4NW1/4 sec. 31, T.10 N., R.19 W., Gila and Salt River meridian, La Paz County, Hydrologic Unit 15030104. Forebay gage, on left wall of canal intake, 90 ft upstream from diversion gates at Arizona end of Headgate Rock Dam. Tailrace gage, on right bank of canal 250 ft downstream from gates. Both gages are on Colorado River Indian Reservation 1.7 mi northeast of Parker and 14 mi downstream from Parker Dam.

**PERIOD OF RECORD.**--Jan. 1915 to current year (prior to Jan. 1937, fiscal year diversions only; Jan. 1937 to Sept. 1954, monthly diversions only).

**REVISED RECORDS.**--WSP 1513: 1915-36.

**GAGE.**--Water-stage recorders above and below intake gates to record head, and recorder to show gate openings (Oct. 1, 1972, Nov. 30, 1992), with supplementary tape gages read daily and at time of each gate change (prior to Oct. 1, 1972, tape gages only). Datum of gages is 350.00 ft, datum in use locally, or 350.51 ft above sea level. Normal operating level of forebay is 364.3 ft; prior to July 9, 1962, normal operating level of forebay was 362.9 ft, datum in use locally. Prior to Oct. 1954, discharge computed by various methods as described in WSP 1313.

**REMARKS.**--Records good except for estimated days which are fair. Daily diversions computed on basis of head on intake gates and gate openings. Records show water diverted to project and surface return flows to Colorado River through two wasteways and two drains, 09428505, 09428510, 09429030, and 09429060; three of these are equipped with water-stage recorders, one is partially furnished by BIA and partially computed by a water-stage recorder, the other is prorated.

**COOPERATION.**--Log of canal intake gate opening (supplementary record) furnished by Bureau of Indian Affairs.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 1,950 ft<sup>3</sup>/s July 24, 1992; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	890	148	175	90	136	78	1280	1050	1270	1260	1190	1210
2	888	147	189	0.00	134	80	1400	971	1330	1190	1160	1130
3	795	174	322	0.00	137	77	1390	1030	1320	1000	1090	1100
4	836	192	346	0.00	143	71	1430	1200	1240	1180	1200	1050
5	736	300	339	0.00	210	142	1400	1290	1170	1200	1280	1050
6	834	345	275	0.00	206	120	1440	1260	1260	1250	1220	1120
7	834	337	280	0.00	225	186	1460	1160	1390	1510	1220	1080
8	753	156	167	0.00	259	291	1420	1120	1490	1470	1280	1150
9	731	98	127	0.00	329	275	1410	1170	1440	1310	1300	1140
10	609	76	155	0.00	291	470	1400	1270	1220	1260	1280	1230
11	711	75	186	0.00	130	428	1330	1240	1080	1210	1200	1020
12	718	76	159	0.00	82	472	1400	1180	1170	1360	1100	994
13	720	79	136	0.00	78	537	1380	1180	1200	1360	1060	1060
14	757	63	165	0.00	76	568	1260	1100	1170	1350	1010	1000
15	812	110	176	0.00	76	743	1130	1060	1210	1320	916	906
16	763	68	229	0.00	74	813	1130	1070	1300	1310	874	883
17	667	149	e390	0.00	74	951	1100	1210	1440	1180	779	884
18	664	142	e390	0.00	73	973	1010	1340	1390	1210	960	939
19	650	138	e390	159	74	883	1020	1450	1240	1330	962	991
20	644	164	e390	344	74	862	1050	1330	1210	1430	1050	1060
21	380	155	e390	344	74	847	994	1160	1200	1280	1020	1110
22	220	101	640	323	74	895	1040	1080	1280	1210	1160	1070
23	224	99	324	242	73	1040	944	1170	1260	1010	1270	980
24	227	97	340	204	74	985	882	1090	1300	949	1350	896
25	227	93	214	235	74	1070	1040	1230	1380	1010	1420	842
26	217	93	403	200	74	876	1120	1420	1320	1200	1260	978
27	218	80	519	145	74	899	1210	1340	1300	1320	1070	1010
28	144	74	560	144	74	1040	1190	1320	1340	1390	1020	935
29	182	68	561	141	---	1170	1320	1280	1290	1360	1040	748
30	163	156	379	139	---	1260	1190	1230	1240	1300	1140	649
31	152	---	317	141	---	1270	---	1200	---	1290	1290	---
TOTAL	17366	4053	9633	2851.00	3472	20372	36770	37201	38450	39009	35171	30215
MEAN	560	135	311	92.0	124	657	1226	1200	1282	1258	1135	1007
MAX	890	345	640	344	329	1270	1460	1450	1490	1510	1420	1230
MIN	144	63	127	0.00	73	71	882	971	1080	949	779	649
AC-FT	34450	8040	19110	5650	6890	40410	72930	73790	76270	77370	69760	59930
(*)	20460	14560	14360	12130	10440	13590	19620	20850	20740	21560	21650	21140

CAL YR 2004 TOTAL 288254.00 MEAN 788 MAX 1420 MIN 0.00 AC-FT 571800 (\*) 226030  
WTR YR 2005 TOTAL 274563.00 MEAN 752 MAX 1510 MIN 0.00 AC-FT 544600 (\*) 211100

(\*) Surface return flow, in acre-feet, to the Colorado River.

e Estimated

## DIVERSIONS AND RETURN FLOWS BETWEEN PARKER DAM AND PALO VERDE DAM

## 09429000 PALO VERDE CANAL NEAR BLYTHE, CA

**LOCATION.**--Lat 33°43'55", long 114°30'40", in NW1/4NE1/4 sec. 19, T.5 S., R.24 E., San Bernardino meridian, Riverside County, Hydrologic Unit 15030104, at canal intake structure on west side of Palo Verde diversion dam, 10 mi northeast of Blythe and 44 mi downstream from Headgate Rock Dam.

**PERIOD OF RECORD.**--Jan. 1922 to Dec. 1923, Jan. 1925 to current year (prior to Oct. 1950, monthly discharge only).

**REVISED RECORD.**--WSP 1213: 1946-48.

**GAGE.**--Water-stage recorders above and below intakes to record head and, since May 18, 1964, recorder to show gate openings. Datum of gage is: Forebay gage, sea level; tailrace gage, 274.13 ft, sea level. Aug. 7, 1950, to Nov. 30, 1952, water-stage recorder on tailrace and auxiliary recorder 0.5 mi downstream and Dec. 1, 1952, to Oct. 28, 1957, recording gage above and below former intake structure 0.2 mi upstream, at different datums.

**REMARKS.**--Records good except for an estimated day on Sept. 20 which is fair. Daily diversions computed on basis of head on intake gates and gate openings. Records published herein represent flow diverted from Colorado River for irrigation. Return flows to Colorado River are measured by 10 wasteways and drains extending throughout the project: 09429130, 09429155, 09429160, 09429170, 09429180, 09429190, 09429200, 09429210, 09429220, 09429230, 5 of these are equipped with water-stage recorders and Parshall flumes, 3 are equipped with Sparling flowmeters. Return flows have not been subtracted; combined monthly return flows are given in table below.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 2,360 ft<sup>3</sup>/s July 30, 1981; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1270	432	764	0.00	512	368	1600	1160	1730	1790	1500	1840
2	1180	501	732	0.00	566	393	1500	1420	1850	1760	1560	1710
3	1070	631	760	0.00	684	418	1380	1430	1780	1710	1460	1590
4	1410	717	777	0.00	710	460	1460	1470	1660	1660	1580	1380
5	1360	687	610	0.00	625	505	1440	1430	1530	1650	1560	1480
6	1320	678	447	0.00	465	524	1480	1560	1580	1870	1510	1610
7	1220	463	473	0.00	712	700	1680	1440	1590	1890	1350	1680
8	1230	616	482	0.00	803	742	1690	1200	1750	1850	1130	1840
9	1370	697	391	0.00	829	703	1490	1450	1820	1820	826	1810
10	1110	829	371	0.00	785	796	1310	1450	1780	1540	612	1720
11	1180	822	316	0.00	275	899	1360	1450	1710	1590	592	1660
12	1000	816	344	150	252	928	1410	1540	1600	1540	646	1700
13	1080	635	466	296	232	1030	1350	1520	1730	1560	708	1520
14	1100	483	580	434	311	1110	1360	1510	1760	1640	740	1570
15	1030	671	490	494	353	1010	1420	1460	1760	1750	950	1660
16	1000	716	434	430	362	1030	1360	1610	1930	1770	1190	1670
17	929	820	551	562	358	1040	1100	1590	1840	1690	1420	1490
18	1130	875	590	491	310	1130	1450	1600	1710	1910	1620	1270
19	1220	874	535	570	250	1070	1470	1720	1470	1890	1510	1440
20	1140	697	797	657	230	978	1520	1710	1430	1830	1570	e1450
21	434	491	1020	728	254	1180	1430	1540	1540	1880	1520	1400
22	308	425	1060	670	259	1360	1440	1480	1660	1850	1550	1350
23	295	434	980	508	200	1380	1320	1530	1880	1720	1560	1300
24	336	427	607	627	250	1430	1180	1690	1870	1510	1560	1260
25	355	331	344	726	244	1420	1060	1900	1650	1730	1640	1120
26	324	351	592	532	252	1320	1210	1850	1590	1800	1490	1340
27	283	462	1140	382	209	1130	1390	1800	1690	1640	1460	1250
28	227	404	1300	338	291	1310	1320	1550	1830	1600	1410	1130
29	299	487	942	414	---	1430	1230	1430	1760	1580	1580	1250
30	291	670	555	340	---	1570	1240	1440	1800	1660	1620	1190
31	300	---	0.00	441	---	1590	---	1590	---	1450	1620	---
TOTAL	26801	18142	19450.00	9790.00	11583	30954	41650	47520	51280	53130	41044	44680
MEAN	865	605	627	316	414	999	1388	1533	1709	1714	1324	1489
MAX	1410	875	1300	728	829	1590	1690	1900	1930	1910	1640	1840
MIN	227	331	0.00	0.00	200	368	1060	1160	1430	1450	592	1120
MED	1070	633	580	382	310	1030	1400	1520	1730	1720	1500	1490
AC-FT	53160	35980	38580	19420	22970	61400	82610	94260	101700	105400	81410	88620
(*)	42970	35910	34330	28790	28030	31520	36580	36400	37850	41200	40840	40640

CAL YR 2004 TOTAL 488565.50 MEAN 1335 MAX 2190 MIN 0.00 MED 1410 AC-FT 969100 (\*) 502100  
WTR YR 2005 TOTAL 396024.00 MEAN 1085 MAX 1930 MIN 0.00 MED 1220 AC-FT 785500 (\*) 435100

(\*) Surface return flow, in acre-feet, to the Colorado River.

e Estimated

COLORADO RIVER MAIN STEM

09429100 COLORADO RIVER BELOW PALO VERDE DAM, AZ-CA

**LOCATION.**--Lat 33°43'10", long 114°29'50", in NE1/4 sec. 2, T.4 N., R.22 W., Gila and Salt River meridian, in Riverside County, CA, Hydrologic Unit 15030104 on right bank 1.2 mi downstream from Palo Verde Diversion Dam, 9.5 mi northeast of Blythe, CA and 11 mi upstream from Ehrenberg, AZ.

**DRAINAGE AREA.**--186,200 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

**PERIOD OF RECORD.**--Mar. 1956 to Mar. 1969, Oct. 1988 to current year. If records for the two Colorado River Indian Reservation drains entering below Palo Verde Dam are subtracted from records for this station, records equivalent to those published 1969--1988 as "Colorado River at Palo Verde Dam" can be obtained.

**GAGE.**--Water-stage recorder. Datum of gage is 260.00 ft above sea level. Mar. 1956 to Mar. 1969, at site 120 ft upstream at same datum.

**REMARKS.**--Records fair except for estimated days which are poor. Many diversions above station for irrigation, municipal, and industrial uses. Flow regulated by Lake Mead, Lake Mohave, and Lake Havasu.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 24,300 ft<sup>3</sup>/s Mar. 21, 1958; maximum gage height, 17.94 ft May 4, 1958; minimum daily discharge, 875 ft<sup>3</sup>/s Jan. 9, 1995.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum daily discharge, 42,300 ft<sup>3</sup>/s June 30, 1983.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 13,100 ft<sup>3</sup>/s April 4 at 0345, gage height, 8.59 ft. Minimum daily discharge, 1,530 ft<sup>3</sup>/s Dec. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6550	3500	4730	2560	4690	5940	8460	6670	6560	7020	9140	6590
2	7370	3160	5460	5470	4230	5900	9550	7510	6330	8100	6380	5210
3	7340	3930	3860	4790	3990	6960	9680	8340	5240	9180	7920	6290
4	7630	5780	3650	3720	4280	4950	9650	8760	7760	9440	6440	7720
5	7820	3790	5370	2560	6510	5520	7490	8230	8920	10200	5820	8050
6	7710	3930	4310	2390	6140	6110	8140	6520	8500	8930	6530	7820
7	7360	4600	2680	2320	6570	5920	7610	10200	8290	7560	8140	6930
8	5850	4740	1880	2270	6570	5760	9250	10300	7520	5750	7620	6330
9	6310	5770	2040	2320	5410	7990	10700	9410	6870	8670	5740	5760
10	7600	4890	1980	2300	4240	7020	11100	7820	7510	10500	6610	6480
11	7350	4460	1790	1930	2840	7090	10100	7300	8560	10700	5570	7780
12	7000	3680	1840	1950	2330	7660	8420	5780	8870	10200	3440	8710
13	6680	3640	2450	3380	2120	7880	8420	6620	8550	10000	4210	8640
14	5680	5150	2900	5750	1970	8290	7920	6970	8500	7790	6960	7510
15	5560	5310	2780	4490	3360	8690	8130	7700	8450	9520	7340	6790
16	5890	7030	2520	4700	2860	9400	9330	8260	6450	9500	5460	5110
17	5770	7520	2390	4820	2830	8220	9870	9470	6790	10300	6330	6450
18	6000	5960	3880	4690	2080	6670	10100	7950	8430	9690	6630	7090
19	6440	4050	3860	4560	2120	8450	8530	7420	9390	8700	6510	7350
20	6130	4510	4730	4290	2060	10300	9160	6010	e8780	9110	7540	6570
21	6450	5260	4980	3830	3450	10600	6410	7540	e8800	7770	8380	6160
22	5820	4330	4330	4980	6180	9670	6760	8920	8090	8200	8790	5890
23	4830	2610	1530	5610	3560	8370	8170	10000	8830	9880	7420	5990
24	5900	2180	2020	5460	5890	6770	9640	8770	6930	10200	5750	6890
25	5430	2070	4210	4550	6170	7210	9570	8040	9080	8350	5660	8670
26	3050	2930	4470	3350	6140	9030	6780	7680	8980	6880	6170	7750
27	4490	3120	2600	1990	5790	9390	7380	6610	9210	8200	7490	8020
28	5100	3850	2220	1980	5740	9210	7310	7210	8660	6230	8100	7950
29	3270	4350	2290	3710	---	7720	5960	8230	8950	7610	8210	7550
30	4600	4310	4300	5040	---	9470	7150	8400	8070	9160	7470	5790
31	3860	---	4210	4670	---	7760	---	8420	---	10500	7760	---
TOTAL	186840	130410	102260	116430	120120	239920	256740	247060	241870	273840	211530	209840
MEAN	6027	4347	3299	3756	4290	7739	8558	7970	8062	8834	6824	6995
MAX	7820	7520	5460	5750	6570	10600	11100	10300	9390	10700	9140	8710
MIN	3050	2070	1530	1930	1970	4950	5960	5780	5240	5750	3440	5110
AC-FT	370600	258700	202800	230900	238300	475900	509200	490000	479700	543200	419600	416200

CAL YR 2004 TOTAL 2561100 MEAN 6998 MAX 12500 MIN 1530 AC-FT 5080000  
WTR YR 2005 TOTAL 2336860 MEAN 6402 MAX 11100 MIN 1530 AC-FT 4635000

e Estimated

## COLORADO RIVER MAIN STEM

## 09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA

**LOCATION.**--Lat 32°52'59", long 114°27'55", at Imperial Dam. The Arizona end of the dam is in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec. 30, T.6 S., R.21 W., Gila and Salt River meridian, Yuma County, Hydrologic Unit 15030104; the California end is in NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec. 9, T.15 S., R.24 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030104. Imperial Dam is 5 mi upstream from Laguna Dam, 15 mi northeast of Yuma, AZ, 90 mi downstream from Palo Verde Dam, and 147 mi downstream from Parker Dam.

**DRAINAGE AREA.**--188,500 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--1903-34 (yearly discharge only, published in WSP 1313), July 1934 to current year (monthly discharge only Oct. 1942 to Sept. 1979). Prior to Oct. 1942 published as "near Picacho, Ca." Oct. 1942 to Sept. 1971 published as "at Imperial Dam" (monthly discharge shown as "flow reaching Imperial Dam," listed as supplement to "flow passing Imperial Dam").

**GAGE.**--None. This record is synthesized from records of several other stations (see REMARKS). July 13, 1934, to Sept. 30, 1942, water-stage recorder at site 14.5 mi upstream at datum 167.38 ft above sea level.

**REMARKS.**--Records show flow of Colorado River reaching Imperial Dam, and are based on combined daily total flow of Colorado River below Imperial Dam (sta 09429500), All-American Canal near Imperial Dam (sta 09523000), Gila Gravity Main Canal at Imperial Dam (sta 09522500), and diversions to Mittry Lake (sta 09522400). Records for 1903-34 and for Oct. 1942 to Sept. 1960 were computed as combined flow of Colorado River at Yuma (sta 09521000) and the canals diverting at Imperial and Laguna Dams, less the flow of Gila River near Dome (sta 09520500); for some of these periods drainage and waste return flows and channel losses between the gaging stations and Imperial Dam were considered, and for other periods they were neglected. Records for Oct. 1960 to Sept. 1979 are based on combined monthly total flow of same stations on which daily flows are currently based. Records for July 1934 to Sept. 1942 show daily discharge of Colorado River at gaging station near Picacho, CA, water withdrawals, and diversions for irrigation, municipal, and industrial uses, and return flows from irrigated areas. Diversions to Mittry Lake, which began June 23, 1970, are included in river records in table below. Additional regulation, beginning Jan. 31, 1966, to equalize supplies for downstream water users, is provided by pumped storage in reservoir on Senator Wash, about 2 mi upstream from Imperial Dam. Monthend contents of Senator Wash Reservoir—capacity, 13,840 acre-ft—is given in table below.

**COOPERATION.**--Records of Sparling meter readings of diversion to Mittry Lake furnished by Imperial Irrigation District and contents of Senator Wash Reservoir furnished by Bureau of Reclamation.

**EXTREMES FOR PERIOD OF RECORD-1934-2003.**--Maximum discharge, 40,800 ft<sup>3</sup>/s Sept. 5, 1939; minimum, 538 ft<sup>3</sup>/s Aug. 3, 1934; minimum daily since regulation of Hoover Dam began, 1,450 ft<sup>3</sup>/s Feb. 17, 1935.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7470	5020	5280	3460	5030	6850	9300	7320	8890	9810	8760	8050
2	8020	4820	5900	3870	5640	6550	8930	8670	9050	8940	9740	8290
3	6600	4810	5360	3670	5460	6550	8490	8870	8640	8400	10100	7230
4	7440	4810	5100	4840	5520	6590	10000	9290	7630	8920	8640	6500
5	7270	4920	4390	4950	5350	6850	10400	9740	7320	9390	8480	7090
6	7740	5080	4020	4150	4980	6100	10400	10000	8710	10000	7500	7850
7	7790	4400	5040	3730	6140	6830	10600	8530	8590	9930	6720	8480
8	7500	4920	4800	3140	6170	6660	10100	7930	9150	9870	7460	8180
9	7210	4960	4010	3160	6080	6990	9110	9660	9050	9060	7900	7920
10	6720	5240	3450	3220	5810	7290	8500	10200	8920	8680	9140	7640
11	7130	5540	3240	3350	5550	7740	10200	11000	8000	9710	8720	6910
12	7730	5260	3380	3180	5740	7600	10600	9530	7620	10200	7760	7630
13	7650	5070	3530	3680	4000	6740	11200	8730	9050	10100	6060	8320
14	7500	4690	3460	3640	3190	8140	10300	7600	9210	10900	4930	8210
15	7070	5380	3490	3750	3290	9260	9940	7230	9450	10600	6610	8260
16	6260	5750	3380	3700	3790	9330	8940	9020	9700	9340	6800	8150
17	6330	5890	3530	4950	3660	9550	8450	9430	9250	9020	7750	7510
18	6570	6260	3660	5180	3320	9270	10100	9410	8300	10100	7590	6790
19	6620	6440	3570	5280	3410	8240	10600	9530	7640	10400	7770	6700
20	6440	5730	4540	5290	3670	7110	10600	9340	8950	10500	7460	7120
21	6580	5140	4990	4980	3080	8960	10400	8130	9450	10200	7000	7600
22	6860	5380	5150	5050	3060	10300	9740	7780	9570	9960	8050	7760
23	6750	5300	5250	4520	4710	10800	8390	9530	9590	8480	7990	7770
24	5640	4380	3900	5390	5740	10400	7400	9800	9160	8320	8240	7440
25	5750	3450	2930	5420	4470	9280	9670	9810	8460	9270	8040	7210
26	6380	3420	3300	5510	5840	7840	10000	9580	7790	10200	7750	7820
27	5260	3420	4190	5310	6110	7670	9730	8960	9250	9400	6800	8060
28	4290	4160	4240	4220	6840	9620	9060	8170	9660	9280	6640	8090
29	4840	4080	3960	3920	---	10200	8600	7560	9900	8890	7540	8380
30	5180	4720	3880	3790	---	10200	7540	8420	9860	7990	7870	8260
31	4640	---	3170	4690	---	10200	---	8400	---	7780	7850	---
TOTAL	205230	148440	128090	132990	135650	255710	287290	277170	265810	293640	239660	231220
MEAN	6620	4948	4132	4290	4845	8249	9576	8941	8860	9472	7731	7707
MAX	8020	6440	5900	5510	6840	10800	11200	11000	9900	10900	10100	8480
MIN	4290	3420	2930	3140	3060	6100	7400	7230	7320	7780	4930	6500
AC-FT	407100	294400	254100	263800	269100	507200	569800	549800	527200	582400	475400	458600
(*)	8746	8536	2516	6375	9125	6381	8368	8813	7381	5550	8346	6985
(**)	799	536	624	600	625	738	716	776	839	853	676	655

CAL YR 2004 TOTAL 2787480 MEAN 7616 MAX 12200 MIN 2930 AC-FT 5529000 (\*\*) 9390  
WTR YR 2005 TOTAL 2600900 MEAN 7126 MAX 11200 MIN 2930 AC-FT 5159000 (\*\*) 8440

(\*) Monthend contents, in acre-feet, for Senator Wash Reservoir  
(\*\*) Diversions, in acre-feet, to Mittry Lake Diversion (09522400)

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA—CONTINUED

WATER-QUALITY RECORDS

LOCATION.--Water samples collected above trash racks at All-American Canal headworks at west end of Imperial Dam.

PERIOD OF RECORD.--Aug. 1969 to Sept. 1992, Aug. 1996 to Sept. 2000, Aug. 2001 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1969 to Sept. 2000.

WATER TEMPERATURE: Oct. 1974 to Sept. 2000.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum observed, 1,970 microsiemens, Aug. 23, 1977; minimum observed, 866 microsiemens, Sept. 12, 1986.

WATER TEMPERATURE: Maximum observed, 33.0°C, Aug. 20, 1977, Aug. 28, 29, 1981; minimum recorded, 6.5°C Dec. 25, 26, 1990.

INSTRUMENTATION.--Streamflow not gaged by USGS.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat fltrd field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
DEC 14...	0845	3030	3.1	769	6.2	62	8.2	1420	15.5	15.5	400	210	102
APR 26...	0830	8060	9.0	760	6.3	71	8.1	1160	21.0	21.0	340	200	87.3
JUL 27...	0800	6810	4.9	756	6.8	91	8.0	1230	27.0	30.0	360	230	90.8
AUG 30...	0820	6180	38	752	5.5	74	7.9	1220	27.0	30.0	360	220	89.7
Date	Calcium water, unfltrd recover, mg/L (00916)	Magnesium, unfltrd, mg/L (00925)	Magnesium, water, unfltrd recover, mg/L (00927)	Potassium, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltrd field, mg/L as CaCO3 (29802)	Bicarbonate, wat fltrd, titr., mg/L (63786)	Carbonate, wat fltrd, titr., mg/L (63788)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
DEC 14...	95.2	35.6	32.3	5.67	3	158	195	237	<1	147	.5	330d	898
APR 26...	90.9	30.0	30.9	5.05	3	116	137	167	<1	104	.4	281	706
JUL 27...	90.4	33.1	33.5	5.33	3	127	135	165	<1	113	.5	294	747
AUG 30...	86.9	33.6	34.3	5.18	3	118	141	172	<1	112	.4	295	740
Date	Residue water, fltrd, tons/acre-ft (70303)	Residue evap. at 180degC, mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Total nitrogen, water, unfltrd, mg/L (00600)	Phosphorus, water, unfltrd, mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd, ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water, unfltrd, ug/L (01002)
DEC 14...	1.30	953	<10	.23	E.02n	.21	.44	<.02	52k	.21	E.2n	2.5	2
APR 26...	1.01	741	17	.23	<.04	.33	.56	.02	5k	.35	.3	2.3	2
JUL 27...	1.08	797	<10	.24	<.04	.26	.51	E.02n	8k	.33	.4	2.5	E1n
AUG 30...	1.08	793	28	.26	<.04	.26	.52	.03	27	.37	.4	2.4	2.6oc
Date	Barium, water, unfltrd recover, ug/L (01007)	Beryllium, water, unfltrd recover, ug/L (01010)	Beryllium, water, unfltrd recover, ug/L (01012)	Boron, water, unfltrd recover, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd, ug/L (01027)	Chromium, water, unfltrd recover, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, unfltrd recover, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, unfltrd recover, ug/L (01051)	Manganese, water, unfltrd recover, ug/L (01055)	Mercury water, fltrd, ug/L (71890)
DEC 14...	128	<.06	<.06	202	E.03n	E.03n	<.8	1.7	7.0	<.08	.20	17	.02
APR 26...	141	<.06	<.06	150	E.02n	E.03n	<.8	1.3	3.3	<.08	.56	36	<.01
JUL 27...	159	<.06	<.06	166d	<.04	E.03n	<.8	2.1	1.6	<.08	.38	35	.01
AUG 30...	147	<.06	<.06	182d	E.02n	E.03n	.34oc	3.3	1.8	.10	.54	34	<.01



**COLORADO RIVER MAIN STEM**  
**09429490 COLORADO RIVER ABOVE IMPERIAL DAM, AZ-CA—CONTINUED**

**WATER-QUALITY RECORDS**

Date	Mercury water, unfltrd recover- -able, ug/L (71900)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, water, fltrd, ug/L (01090)	Zinc, water, recover- -able, ug/L (01092)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concentr- ation mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC 14...	.01	1.8	1.6	3	90	50	409
APR 26...	<.01	2.5	1.6	3	94	40	870
JUL 27...	<.01	2.3	8.6	2	90	24	441
AUG 30...	E.01n	1.4	26.0	5	97	73	1220

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

c -- See laboratory comment  
d -- Diluted sample: method hi range exceeded  
k -- Counts outside acceptable range  
n -- Below the LRL and above the LT-MDL  
o -- Result determined by alternate method

09429500 COLORADO RIVER BELOW IMPERIAL DAM, AZ-CA

**LOCATION**--Forebay gage: Lat 32°52'59", long 114°27'57", in NW1/4SW1/4 sec. 9, T.15 S., R.24 E., San Bernardino meridian, in Imperial County, CA, Hydrologic Unit 15030107, near All-American Canal headworks at east (revised) end of Imperial Dam, 5 mi upstream from Laguna Dam, 15 mi northeast of Yuma, AZ, 90 mi downstream from Palo Verde Dam, and 147 mi downstream from Parker Dam.

**DRAINAGE AREA**--188,500 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

**PERIOD OF RECORD**--Oct. 1960 to current year. Prior to Oct. 1971 published as "at Imperial Dam." Records of flow reaching Imperial Dam, formerly published with this station, are now published separately as sta 09429490, "Colorado River above Imperial Dam."

**GAGE**--Water-stage recorder in forebay, 12 calibrated gates on California sluiceway, 8 calibrated gates on Gila sluiceway, and calibrated manometer on each discharge pipe from desilting basin. Datum of forebay gage is 162.00 ft, U.S. Bureau of Reclamation datum. Prior to Aug. 21, 1991, forebay gage located at west end of Imperial Dam at same datum.

**REMARKS**--No estimated daily discharges. Records poor. Records of daily discharge show flow of Colorado River passing Imperial Dam, and include water released to river through California and Gila sluiceways, sludge from desilting basins returned to river, and leakage through dam. For records of flow reaching Imperial Dam see sta 09429490. Flow of Colorado Rivers regulated by many reservoirs, principally Lake Mead, since 1935. Many diversions from Colorado River and tributaries above station. Diversion to Mitty Lake and monthend contents of Senator Wash Reservoir also are published with sta 09429490.

**COOPERATION**--Records of gate openings and sludge return flow from desilting basins furnished by Imperial Irrigation District.

**EXTREMES FOR PERIOD OF RECORD**--Maximum daily discharge, 30,200 ft<sup>3</sup>/s Aug. 18 and 19, 1983. Minimum daily discharge, 27 ft<sup>3</sup>/s Dec. 15 and 18, 1969.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	241	241	435	241	474	361	882	890	360	648	370
2	1250	241	241	641	241	251	361	351	625	360	722	370
3	472	241	241	277	241	251	369	350	370	360	1740	370
4	478	241	241	2070	241	272	547	350	370	360	370	370
5	240	291	241	2450	241	1060	449	350	370	360	370	370
6	240	674	426	1610	241	638	386	350	360	408	370	563
7	265	407	1660	1370	251	251	361	369	360	504	371	1210
8	393	241	1670	857	251	251	361	350	360	504	370	667
9	454	241	1210	818	396	251	361	560	360	360	1560	395
10	412	241	417	750	508	251	564	664	360	360	3100	370
11	240	241	523	883	1900	361	587	1760	360	370	2970	370
12	445	304	375	338	1920	361	568	400	540	370	1410	360
13	529	316	241	241	948	361	1480	350	360	563	614	360
14	399	241	241	241	251	361	407	350	360	514	370	360
15	257	241	241	241	251	361	351	496	360	372	370	396
16	244	241	241	352	251	361	351	350	360	370	375	857
17	604	241	241	241	251	361	351	350	360	488	370	1230
18	257	307	241	241	251	361	351	350	360	370	370	842
19	240	775	241	241	564	361	351	350	394	514	370	360
20	282	466	241	241	978	461	351	350	360	514	370	360
21	2080	810	241	241	251	361	351	350	360	370	370	363
22	2900	1670	241	241	251	1270	351	350	564	371	370	360
23	2860	2110	241	241	1500	1180	351	350	563	372	382	360
24	1970	1280	241	241	2330	403	364	350	360	816	594	360
25	1650	795	241	241	906	361	351	350	361	1200	370	360
26	2150	605	241	1040	1720	361	430	350	360	1520	370	362
27	240	367	241	1620	1700	907	1220	535	360	749	370	503
28	273	1160	241	598	1410	1170	414	350	505	370	468	260
29	1070	262	241	241	---	640	502	350	360	370	395	260
30	857	241	241	241	---	361	355	350	360	372	370	260
31	240	---	241	241	---	361	---	350	---	370	370	---
TOTAL	24231	15732	12065	19724	20485	15035	13957	13717	12392	15261	21639	13998
MEAN	782	524	389	636	732	485	465	442	413	492	698	467
MAX	2900	2110	1670	2450	2330	1270	1480	1760	890	1520	3100	1230
MIN	240	241	241	241	241	251	351	350	360	360	370	260
AC-FT	48060	31200	23930	39120	40630	29820	27680	27210	24580	30270	42920	27770
CAL YR 2004	TOTAL 192151	MEAN 525	MAX 3320	MIN 240	AC-FT 381100							
WTR YR 2005	TOTAL 198236	MEAN 543	MAX 3100	MIN 240	AC-FT 393200							

## COLORADO RIVER MAIN STEM

## 09429600 COLORADO RIVER BELOW LAGUNA DAM, AZ-CA

**LOCATION.**--Lat 32°48'44", long 114°30'51", in SE<sub>1/4</sub>NE<sub>1/4</sub> sec. 35, T.15 S., R.24 E., San Bernardino meridian, in Imperial County, CA, Hydrologic Unit 15030107, on right bank 1.4 mi downstream from Laguna Dam, 2.8 mi northeast of Bard, CA, and 10 mi northeast of Yuma, AZ.

**DRAINAGE AREA.**--188,600 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing.

**PERIOD OF RECORD.**--Dec. 1971 to current year.

**GAGE.**--Water-stage recorder. Datum of gage is 120.81 ft above sea level (Bureau of Reclamation benchmark).

**REMARKS.**--No estimated daily discharges. Records fair. Natural flow of Colorado River at this point is affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation, municipal, and industrial uses, and return flows from irrigated areas. Flow past station consists mainly of water released through Imperial Dam, sludge from the desilting basins at Imperial Dam, seepage through Imperial Dam, and seepage from the All-American Canal and the Gila Gravity Main Canal.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 30,900 ft<sup>3</sup>/s Aug. 19, 1983; minimum daily, 71 ft<sup>3</sup>/s May 29, 1973.

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 3,050 ft<sup>3</sup>/s Oct. 23 and Feb. 24. Minimum daily discharge, 273 ft<sup>3</sup>/s October 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	313	313	429	288	311	788	690	704	405	434	457	405
2	401	308	406	282	307	350	541	788	521	433	608	405
3	479	416	386	290	407	309	489	435	474	427	1060	406
4	490	642	364	922	583	300	510	399	462	427	532	405
5	353	424	347	2330	339	767	609	401	451	426	431	406
6	287	519	373	2180	323	727	461	398	443	432	426	414
7	277	383	870	1540	316	332	431	393	431	502	425	477
8	273	389	1220	1010	336	443	457	393	426	545	425	532
9	342	373	938	901	330	653	466	458	423	495	917	496
10	369	364	572	767	505	346	508	765	422	429	1860	441
11	340	359	462	855	1220	323	663	1860	423	411	2280	415
12	318	355	493	517	2410	468	637	591	434	411	1080	411
13	457	379	442	568	1460	438	1060	383	473	509	648	410
14	373	371	386	633	355	418	887	368	461	554	413	407
15	332	449	322	326	309	421	505	522	456	461	406	406
16	291	405	305	282	301	428	441	410	447	435	404	466
17	394	355	300	305	294	431	441	359	442	435	403	808
18	390	344	300	303	292	406	444	361	438	470	440	606
19	285	485	298	300	291	375	441	367	436	476	503	442
20	289	542	295	301	826	398	438	362	447	500	414	365
21	1060	677	287	300	311	418	436	363	443	499	407	358
22	2720	986	287	300	304	731	431	364	458	479	406	353
23	3050	2110	283	300	942	1780	441	426	501	469	406	349
24	2870	1410	282	298	3050	582	437	459	569	458	402	348
25	1290	904	281	296	1400	482	437	520	591	956	398	345
26	1890	619	278	522	2170	473	434	563	457	1750	404	346
27	899	573	276	1540	2420	608	998	589	444	1090	419	356
28	336	742	278	638	2060	1460	741	517	484	512	410	354
29	662	549	277	347	---	785	492	427	471	529	415	337
30	820	455	390	323	---	582	495	387	440	698	408	331
31	411	---	416	315	---	663	---	378	---	473	406	---
TOTAL	23061	17200	12843	20079	24172	17685	16461	15710	13773	17125	18613	12600
MEAN	744	573	414	648	863	570	549	507	459	552	600	420
MAX	3050	2110	1220	2330	3050	1780	1060	1860	591	1750	2280	808
MIN	273	308	276	282	291	300	431	359	405	411	398	331
AC-FT	45740	34120	25470	39830	47950	35080	32650	31160	27320	33970	36920	24990
CAL YR 2004	TOTAL	222548	MEAN	608	MAX	4200	MIN	273	AC-FT	441400		
WTR YR 2005	TOTAL	209322	MEAN	573	MAX	3050	MIN	273	AC-FT	415200		

09432000 GILA RIVER BELOW BLUE CREEK, NEAR VIRDEN, NM

**LOCATION.**--Lat 32°38'53", long 108°50'43", in SE1/4SW1/4 sec. 18, T.19 S., R.19 W., Grant County, Hydrologic Unit 15040002, on left bank at head of canyon, 1.4 mi downstream from Blue Creek, 10 mi east of Virden, and 16 mi upstream from New Mexico-Arizona State line.

**DRAINAGE AREA.**--3,203 mi<sup>2</sup>, excluding Animas River basin.

**PERIOD OF RECORD.**--May to Nov. 1914, Mar. to Sept. 1915, July 1927 to current year. July 1927 to May 1931 monthly discharge only, published in WSP 1313, computed as sum of flow at Virden Bridge, 9 mi downstream, and in Sunset Canal. Published as "Gila River near Duncan, Ariz.," 1914-15 and as "Gila River at Fuller's Ranch, near Duncan, Ariz.," 1931-38.

**REVISED RECORDS.**--WSP 1283: Drainage area. WSP 1313: 1929, 1931-32(M).

**GAGE.**--Water-stage recorder. Elevation of gage is 3,875 ft above sea level, from river-profile map. May 11, 1914, to Sept. 30, 1915, at site 6 mi downstream, 1,000 ft upstream from intake of Sunset Canal. June 1 to July 7, 1931, nonrecording gage at present site and datum. Since Apr. 18, 1980, supplementary gage on left bank 800 ft downstream at same datum. Since June 1980, crest-stage gages at supplementary gage site. Since Nov. 1990, water-stage recorder at supplementary gage.

**REMARKS.**--Records fair except for estimated daily discharges, which are poor. Station is above all Duncan Valley diversions. Diversions for irrigation of about 6,200 acres above station.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 58,700 ft<sup>3</sup>/s Dec. 19, 1978, gage height, 29.00 ft, from rating curve extended above 38,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 1 ft<sup>3</sup>/s July 14, 1934.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 1,900 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5.....	1545	11,700	11.76
Feb. 12.....	2215	*32,700	21.14
Feb. 25.....	0730	8,400	10.16

Minimum daily discharge, 19 ft<sup>3</sup>/s July 8, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	133	123	536	591	1240	336	294	183	31	69	43
2	81	129	120	502	514	1090	321	282	158	32	57	45
3	80	124	116	404	446	985	312	262	141	27	46	50
4	77	120	115	921	393	879	300	251	130	24	47	56
5	64	116	117	8110	368	794	279	242	e112	23	54	68
6	63	113	120	6440	348	761	270	236	e100	21	54	178
7	60	111	122	2680	352	831	271	236	e93	20	56	204
8	52	109	125	1580	378	945	275	243	95	19	53	199
9	45	105	123	1280	371	966	291	246	89	20	64	116
10	39	106	121	1120	354	944	311	234	82	21	71	112
11	37	106	120	958	1070	e897	333	223	79	20	73	108
12	66	105	120	813	17600	e881	321	217	74	19	75	104
13	77	103	119	692	21800	e872	305	215	72	20	123	95
14	86	106	119	591	9940	e864	285	211	72	20	165	87
15	86	111	119	502	4460	835	282	207	69	21	241	82
16	86	111	119	442	2450	807	296	202	68	21	158	75
17	86	110	119	413	1740	758	325	195	65	24	140	63
18	85	110	119	387	1520	689	360	197	61	26	127	54
19	83	111	119	367	2400	630	382	199	57	23	97	48
20	71	110	118	358	4980	576	382	191	56	23	106	39
21	65	111	117	350	7500	538	380	177	56	24	185	35
22	66	116	115	341	4330	504	367	163	52	24	96	33
23	68	120	115	335	2650	483	338	159	48	23	92	35
24	85	123	115	331	2100	431	338	156	46	25	94	35
25	88	125	113	325	2040	413	356	153	46	25	86	33
26	94	126	111	333	1900	399	391	154	40	24	75	32
27	226	126	110	382	1660	385	384	148	38	38	63	29
28	164	125	110	631	1440	371	357	181	39	37	55	27
29	155	123	111	931	---	351	326	225	36	31	51	27
30	147	123	128	825	---	341	308	267	35	35	46	27
31	141	---	300	680	---	347	---	212	---	48	45	---
TOTAL	2708	3467	3838	34560	95695	21807	9782	6578	2292	789	2764	2139
MEAN	87.4	116	124	1115	3418	703	326	212	76.4	25.5	89.2	71.3
MAX	226	133	300	8110	21800	1240	391	294	183	48	241	204
MIN	37	103	110	325	348	341	270	148	35	19	45	27
AC-FT	5370	6880	7610	68550	189800	43250	19400	13050	4550	1560	5480	4240
CFSM	0.03	0.04	0.04	0.35	1.07	0.22	0.10	0.07	0.02	0.01	0.03	0.02
IN.	0.03	0.04	0.04	0.40	1.11	0.25	0.11	0.08	0.03	0.01	0.03	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2005, BY WATER YEAR (WY)

MEAN	158	137	240	310	385	423	272	148	49.6	72.8	197	197
MAX	1667	1040	2485	4158	3418	1464	1138	977	298	366	1164	1507
(WY)	1973	1995	1979	1993	2005	1973	1973	1992	1992	1986	1988	1975
MIN	5.39	34.9	47.6	64.0	61.1	45.1	27.7	13.5	4.43	4.85	9.35	4.89
(WY)	1957	1957	1957	1981	1971	1971	1955	1956	1956	1951	1951	1953

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1932 - 2005

ANNUAL TOTAL	62014.9			186419														
ANNUAL MEAN	169			511			211											
HIGHEST ANNUAL MEAN							746											
LOWEST ANNUAL MEAN							43.1											
HIGHEST DAILY MEAN	1910			Sep 25			21800			Feb 13			33100			Dec 19 1978		
LOWEST DAILY MEAN	8.2			Jul 8			19			Jul 8			1.7			Jul 11 1956		
ANNUAL SEVEN-DAY MINIMUM	8.6			Jul 5			20			Jul 7			2.0			Sep 26 1956		
ANNUAL RUNOFF (AC-FT)	123000			369800			152500											
ANNUAL RUNOFF (CFSM)	0.053			0.159			0.066											
ANNUAL RUNOFF (INCHES)	0.72			2.17			0.89											
10 PERCENT EXCEEDS	378			875			441											
50 PERCENT EXCEEDS	94			123			92											
90 PERCENT EXCEEDS	21			35			22											

## GILA RIVER BASIN

## 09439000 GILA RIVER AT DUNCAN, AZ

**LOCATION**--Lat 32°43'29.3", long 109°05'54", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ , sec. 20, T.08 S., R.32 E., Greenlee County, Hydrologic Units 15040001, 15040002.

**DRAINAGE AREA**--3,586 mi<sup>2</sup>.

**PERIOD OF RECORD**--Nov. 2002 to current year.

**REVISED RECORDS** WDR AZ-04-1: 2004.

**GAGE**--Water-stage recorder. Elevation of gage is 3,640 ft. above sea level, from topographic map.

**REMARKS**--Records fair except for estimated daily discharges, which are poor.

**EXTREMES FOR CURRENT YEAR**--No valid base discharge has been determined.

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 6 .....	0130	8,190	17.36
Feb. 13 .....	0345	*38,900	*23.28

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	60	123	656	688	e1530	280	248	156	0.00	3.1	27
2	56	61	120	749	579	e1280	273	233	124	0.30	5.9	21
3	51	60	114	617	507	e1040	267	216	106	1.2	5.1	21
4	49	56	109	683	454	e824	260	199	94	1.7	4.9	28
5	43	54	111	2440	413	e720	246	185	85	1.9	8.5	58
6	38	51	113	5300	386	e731	229	176	82	2.4	5.5	141
7	38	49	117	2580	375	e855	232	172	80	1.4	0.17	154
8	33	49	122	1690	422	e943	241	177	78	0.00	4.0	240
9	27	46	122	1260	437	e986	250	180	72	0.00	0.00	109
10	23	47	126	1000	425	e1030	266	176	67	0.00	3.7	85
11	19	49	126	861	609	1010	286	164	61	0.00	9.8	73
12	24	48	127	733	8960	969	287	157	56	0.00	156	66
13	41	45	123	657	e25800	931	268	151	54	0.03	68	e63
14	48	49	124	605	e8220	917	250	151	49	0.00	105	e48
15	47	53	119	544	e3520	885	239	148	41	0.00	147	e47
16	46	56	114	474	e2450	844	244	146	29	0.00	124	44
17	46	57	114	427	e2030	801	268	137	22	0.13	82	40
18	45	58	116	395	e1730	738	312	130	17	0.07	72	33
19	42	60	116	361	e2110	670	348	132	12	0.00	62	29
20	34	65	118	344	e3070	622	359	123	8.0	0.00	57	25
21	26	60	114	322	e5480	576	345	117	2.9	0.00	130	18
22	24	95	112	295	e5230	529	318	108	0.84	0.07	87	15
23	12	86	113	280	e3510	496	299	93	3.4	9.3	61	13
24	10	90	118	266	e2830	464	294	86	2.9	40	57	8.8
25	12	101	119	263	e2580	422	300	84	1.6	18	55	6.0
26	27	106	117	271	e2370	383	338	85	1.5	5.7	50	4.3
27	118	109	114	324	e1990	378	351	87	2.9	48	47	4.2
28	117	112	110	474	e1770	357	327	96	0.96	2.2	45	5.6
29	77	112	106	886	---	327	293	145	0.88	0.00	38	3.3
30	71	116	109	943	---	303	266	216	0.34	0.00	33	2.6
31	66	---	319	801	---	288	---	198	---	7.3	27	---
TOTAL	1371	2060	3825	27501	88945	22849	8536	4716	1311.22	139.70	1553.67	1432.8
MEAN	44.2	68.7	123	887	3177	737	285	152	43.7	4.51	50.1	47.8
MAX	118	116	319	5300	25800	1530	359	248	156	48	156	240
MIN	10	45	106	263	375	288	229	84	0.34	0.00	0.00	2.6
MED	42	59	117	617	2010	738	276	151	35	0.07	47	28
AC-FT	2720	4090	7590	54550	176400	45320	16930	9350	2600	277	3080	2840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

MEAN	40.5	69.0	103	357	1096	400	284	92.2	22.3	27.8	45.2	50.0
MAX	44.2	69.4	123	887	3177	737	424	152	43.7	77.5	80.7	100
(WY)	2005	2004	2005	2005	2005	2005	2004	2005	2005	2004	2004	2004
MIN	36.8	68.7	93.2	90.0	73.9	115	142	30.9	0.98	1.35	4.93	1.73
(WY)	2004	2005	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 2003 - 2005
ANNUAL TOTAL	47287.9	164240.39	
ANNUAL MEAN	129	450	288
HIGHEST ANNUAL MEAN			450
LOWEST ANNUAL MEAN			126
HIGHEST DAILY MEAN	820	Sep 26	25800
LOWEST DAILY MEAN	5.2	Jun 9	0.00
ANNUAL SEVEN-DAY MINIMUM	10	Jun 3	0.00
ANNUAL RUNOFF (AC-FT)	93800	325800	208500
10 PERCENT EXCEEDS	328	871	561
50 PERCENT EXCEEDS	82	112	87
90 PERCENT EXCEEDS	24	2.9	14

e Estimated

09442000 GILA RIVER NEAR CLIFTON, AZ

**LOCATION** --Lat 32°57'57", long 109°18'35", in NE1/4SE1/4 sec. 25, T.5 S., R.29 E., Greenlee County, Hydrologic Unit 15040002, on right bank 60 ft upstream from bridge on county road, 6 mi upstream from San Francisco River, and 6 mi south of Clifton.

**DRAINAGE AREA** --4,010 mi<sup>2</sup>.

**PERIOD OF RECORD** --Nov. 1910 to July 1918 (published as "at Guthrie"), Oct. 1927 to Sept. 1989, Oct. 1989 to current year, operated as a crest-stage partial-record station, Oct. 1995 to Sept. 1996. Monthly discharge only for some periods, published in WSP 1313.

**REVISED RECORDS** --WSP 1059: 1911-12, 1915, 1917. WSP 1179: 1929(M), 1934(M). WSP 1283: Drainage area.

**GAGE** --Water-stage recorder. Datum of gage is 3,336.38 ft above sea level. Nov. 6, 1910, to July 11, 1918, nonrecording gage or water-stage recorder at two sites about 6 mi upstream at Guthrie at different datums. Mar. 1928 to June 1948 water-stage recorder at present site at datum 0.91 ft lower. June 1948 to Oct. 17, 1967, water-stage recorder at site 0.2 mi upstream at datum 3.12 ft higher. Oct. 18, 1967, to June 23, 1974, Apr. 10, 1978, to Feb. 6, 1979, at site 500 ft downstream at datum 0.44 ft higher. June 24, 1974, to Apr. 9, 1978, at present site and datum.

**REMARKS** --Records fair except for estimated daily discharges, which are poor. Diversions for irrigation of about 14,300 acres above station. Station is below all Duncan Valley diversions.

**EXTREMES FOR PERIOD OF RECORD** --Maximum discharge, 57,000 ft<sup>3</sup>/s Dec. 19, 1978, gage height, 23.80 ft, from rating curve extended above 28,000 ft<sup>3</sup>/s; minimum daily, 0.27 ft<sup>3</sup>/s July 27, 1987.

**EXTREMES FOR CURRENT YEAR** --Peak discharges greater than base discharge of 2,500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 6 .....	1245	5,940	11.50
Feb. 13 .....	1130	*30,700	*23.61
Feb. 21 .....	1915	5,170	9.70

Minimum daily discharge, 26 ft<sup>3</sup>/s Sept. 27-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	105	139	313	500	1550	349	240	158	34	88	32
2	70	99	142	436	438	1350	346	234	139	33	58	31
3	65	104	138	425	392	1200	344	e226	121	34	e51	30
4	60	100	133	430	362	1050	336	e219	107	35	e45	30
5	e57	98	133	632	344	961	328	e210	97	37	e41	30
6	e51	93	135	3760	328	928	308	e200	89	37	e38	74
7	e48	89	132	2750	316	907	298	e194	85	37	e34	143
8	e47	87	135	1510	323	957	299	e190	82	37	e33	130
9	e43	85	136	987	342	1000	299	e185	e76	37	e32	113
10	e38	82	137	738	344	1000	302	e180	e71	37	e32	89
11	e36	82	137	603	444	936	314	e173	e69	37	31	76
12	e32	84	137	513	2520	895	324	172	e66	37	37	67
13	e31	83	133	e455	20600	869	317	168	e63	38	154	60
14	e42	81	131	e406	9840	857	304	164	e60	61	76	55
15	e48	86	130	e374	5050	841	289	163	e57	e44	122	50
16	e49	91	123	e351	3300	814	283	157	e52	e38	154	49
17	e49	93	121	e331	2460	e801	284	154	e47	e37	131	45
18	e50	93	122	e312	2010	e752	305	146	e43	e37	108	41
19	e49	93	123	e295	1950	e704	324	142	e40	e39	94	36
20	e46	95	124	e282	3190	e672	333	141	e37	e40	88	34
21	e40	96	124	e272	4620	e641	329	135	e35	e39	106	32
22	e34	143	121	e262	4370	e600	309	130	34	e39	179	30
23	e32	173	121	e254	3120	e556	298	e125	36	e40	263	29
24	e29	125	122	e246	2540	e511	289	e119	36	e40	62	28
25	e29	129	126	239	2270	e466	278	e112	35	e61	56	28
26	e94	133	126	238	2180	418	285	e104	34	e57	52	27
27	240	133	124	265	1980	412	298	100	35	e45	47	26
28	170	135	121	295	1750	404	290	124	35	e115	43	26
29	122	134	122	445	---	385	268	155	34	e49	40	26
30	113	134	120	614	---	367	254	142	34	39	36	26
31	110	---	144	576	---	355	---	173	---	48	34	---
TOTAL	2002	3158	4012	19609	77883	24159	9184	5077	1907	1338	2365	1493
MEAN	64.6	105	129	633	2782	779	306	164	63.6	43.2	76.3	49.8
MAX	240	173	144	3760	20600	1550	349	240	158	115	263	143
MIN	29	81	120	238	316	355	254	100	34	33	31	26
AC-FT	3970	6260	7960	38890	154500	47920	18220	10070	3780	2650	4690	2960

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2005, BY WATER YEAR (WY)

	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	178	118	216	241	325	380	236	111	40.1	118	221	194																																																																																			
MAX	1754	806	2389	1355	2782	1765	1688	874	171	934	898	1208																																																																																			
(WY)	1973	2001	1915	1916	2005	1915	1915	1973	1973	1914	1988	1975																																																																																			
MIN	8.66	10.7	17.3	42.5	24.0	20.5	12.3	11.7	9.37	12.9	16.8	8.24																																																																																			
(WY)	1957	1957	1957	1954	1957	1957	1957	1954	1959	1963	1960	1956																																																																																			

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1911 - 2005

ANNUAL TOTAL	53451	152187	
ANNUAL MEAN	146	417	202
HIGHEST ANNUAL MEAN			930
LOWEST ANNUAL MEAN			42.5
HIGHEST DAILY MEAN	1560	Sep 26	20600
LOWEST DAILY MEAN	13	Sep 22	26
ANNUAL SEVEN-DAY MINIMUM	15	Sep 17	27
ANNUAL RUNOFF (AC-FT)	106000		301900
10 PERCENT EXCEEDS	334		825
50 PERCENT EXCEEDS	95		125
90 PERCENT EXCEEDS	29		35

GILA RIVER BASIN

09444200 BLUE RIVER NEAR CLIFTON, AZ

**LOCATION.**--Lat 33°17'27", long 109°11'44", in sec. 6, T.2 S., R.31 E. (unsurveyed), Greenlee County, Hydrologic Unit 15040004, in Apache National Forest, on right bank 0.1 mi downstream from county road crossing, 0.9 mi upstream from Clear Creek, 8 mi upstream from mouth, and 17 mi northeast of Clifton.

**DRAINAGE AREA.**--506 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Nov. 1967 to Sept. 1991, Oct. 1992 to Sept. 1995 (annual maximum only), Oct. 1995 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 4,160 ft above sea level, from topographic map.

**REMARKS.**--Records fair except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 38,900 ft<sup>3</sup>/s Feb. 13, 2005, gage height, 23.28 ft. Minimum daily discharge, no flow at times in most years.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30 .....	0930	3,180	10.47	Feb. 20 .....	0515	4,080	11.32
Jan. 4 .....	0430	*10,900	*15.71	Aug. 10 .....	1730	3,180	10.47
Feb. 12 .....	0815	8,430	14.37				

Minimum daily discharge, 2.8 ft<sup>3</sup>/s Oct. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	8.6	e23	e358	179	399	112	84	13	4.3	7.0	3.2
2	3.5	8.7	e23	e356	157	295	111	78	12	4.2	6.4	10
3	3.2	8.8	e22	e794	139	206	115	74	11	4.2	5.7	45
4	3.0	8.8	22	4490	125	181	122	71	10	4.1	5.1	9.8
5	2.9	8.8	24	1300	119	167	131	67	9.5	4.0	4.7	6.9
6	2.8	8.9	45	763	112	227	132	65	8.6	e3.9	4.6	12
7	2.8	9.0	35	566	113	202	135	63	8.3	e3.8	4.4	12
8	2.8	9.0	27	356	114	192	148	60	8.0	e3.7	5.5	14
9	2.9	9.0	24	308	106	173	161	55	7.5	e3.7	26	8.6
10	3.1	9.2	23	262	108	170	160	51	7.4	e3.6	136	48
11	3.4	9.4	23	241	2110	169	149	49	7.1	e3.5	40	30
12	3.4	9.8	23	259	5260	171	136	47	6.8	e3.5	73	20
13	3.4	57	22	204	1770	173	134	44	6.6	3.5	64	14
14	3.5	22	23	173	1040	171	144	40	6.3	3.6	52	11
15	3.5	16	23	150	743	163	156	37	6.0	3.4	90	8.5
16	3.4	18	23	131	600	150	168	34	5.7	3.4	46	7.0
17	3.5	18	23	116	469	138	175	33	5.5	3.8	34	6.0
18	3.7	16	23	107	1170	124	180	31	5.2	4.2	30	5.1
19	3.8	15	23	98	2560	111	176	29	5.0	4.2	26	4.6
20	3.8	15	23	94	2870	105	164	26	4.8	4.1	22	4.3
21	4.1	16	22	94	1720	97	144	24	5.0	3.8	18	3.7
22	4.5	53	22	95	1020	87	127	22	5.0	3.8	21	3.4
23	4.3	102	22	94	908	81	119	20	4.7	3.8	15	3.3
24	4.4	59	20	99	730	75	160	18	4.6	4.0	13	3.2
25	4.4	44	19	111	725	72	174	17	4.4	5.6	10	3.0
26	4.9	36	19	122	726	70	152	16	4.2	5.1	8.6	2.9
27	13	32	19	300	628	66	132	15	4.0	15	6.8	2.8
28	12	30	19	368	501	62	115	16	3.9	23	5.4	2.8
29	8.5	29	59	294	---	60	103	16	3.7	12	4.6	3.0
30	8.0	e26	1420	242	---	59	95	18	3.6	10	3.9	2.9
31	7.9	---	e627	205	---	101	---	16	---	9.3	3.5	---
TOTAL	142.1	712.0	2765	13150	26822	4517	4230	1236	197.4	172.1	792.2	311.0
MEAN	4.58	23.7	89.2	424	958	146	141	39.9	6.58	5.55	25.6	10.4
MAX	13	102	1420	4490	5260	399	180	84	13	23	136	48
MIN	2.8	8.6	19	94	106	59	95	15	3.6	3.4	3.5	2.8
AC-FT	282	1410	5480	26080	53200	8960	8390	2450	392	341	1570	617

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

MEAN	84.3	50.6	71.8	80.7	134	151	116	53.5	14.4	25.6	44.9	43.7
MAX	1027	443	616	569	958	584	488	338	136	136	265	366
(WY)	1973	1979	1979	1979	2005	1983	1983	1973	1994	1994	1999	1975
MIN	2.58	3.63	3.69	5.35	8.04	8.94	6.69	3.85	1.56	2.42	8.73	2.94
(WY)	1983	2002	1977	1977	1971	1971	1971	2000	2002	2000	1975	2000

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1968 - 2005

ANNUAL TOTAL	10566.0	55046.8	
ANNUAL MEAN	28.9	151	68.1
HIGHEST ANNUAL MEAN			243
LOWEST ANNUAL MEAN			10.1
HIGHEST DAILY MEAN	1420	5260	12400
LOWEST DAILY MEAN	1.4	2.8	0.00
ANNUAL SEVEN-DAY MINIMUM	1.7	2.9	0.00
ANNUAL RUNOFF (AC-FT)	20960	109200	49340
10 PERCENT EXCEEDS	79	249	147
50 PERCENT EXCEEDS	12	23	18
90 PERCENT EXCEEDS	2.6	3.7	4.3

e Estimated

09444500 SAN FRANCISCO RIVER AT CLIFTON, AZ

**LOCATION**--Lat 33°02'58", long 109°17'43", in SW1/4SE1/4 sec. 30, T.4 S., R.30 E., Greenlee County, Hydrologic Unit 15040004, on downstream side of right pier at Railroad Boulevard Bridge (U.S. Highway 191), at Clifton, 9.9 mi upstream from mouth.

**DRAINAGE AREA**--2,766 mi<sup>2</sup>, of which 2 mi<sup>2</sup> is noncontributing.

**PERIOD OF RECORD**--Oct. 1910 to Mar. 1911, July 1911 to June 1912, Sept. 1912, Nov. 1912 to Mar. 1913, May 1913 to July 1918, July 1927 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "San Francisco River at dam above Clifton" in 1911 and under both names in 1912.

**REVISED RECORDS**--WSP 1049: 1911, 1913--15, 1917. WSP 1283: Drainage area. WSP 1313: 1927--30(M), 1932(M), 1934(M). WRD Ariz. 1972: 1917(M).

**GAGE**--Water-stage recorder. Datum of gage is 3,436.16 ft above sea level. See WSP 1713 or 1733 for history of changes prior to Apr. 7, 1959. Apr. 7, 1959, to Mar. 23, 1961, at site 1,140 ft downstream at datum 5.37 ft lower. July 18, 1980 to July 28, 1983, supplementary water-stage recorder 0.4 mi upstream on right bank at same datum and June 15, 1981, to Sept. 30, 1983, crest-stage gages at site. Aug. 4, 1983, to Mar. 1, 1985, supplementary water-stage recorder on right bank at main gage site at same datum, Oct. 1, 1992, at main gage site, at datum 10.00 ft higher.

**REMARKS**--Records fair, except for estimated daily discharges, which are poor. Diversions for mining, municipal use, and for irrigation of about 2,700 acres above station.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 90,900 ft<sup>3</sup>/s Oct. 2, 1983, gage height, 19.72 ft, from highwater mark, from rating curve extended above 30,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 17.0 ft; minimum daily, 6.1 ft<sup>3</sup>/s June 21, 1971.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30 .....	1600	2,180	14.78	Feb. 12.....	1230	*21,800	*23.52
Jan. 4.....	1115	11,100	21.82	Feb. 20.....	2105	7,110e	18.03e

Minimum daily discharge, 19 ft<sup>3</sup>/s July 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	57	84	633	381	1080	302	242	97	30	55	40
2	62	56	78	391	332	946	292	e229	86	31	48	40
3	55	56	75	492	303	827	287	e217	74	30	45	e101
4	50	55	74	e7240	279	723	285	e208	e71	30	42	e96
5	45	55	79	5330	271	665	289	e199	e73	29	41	e87
6	35	53	98	2300	269	e753	296	e194	e70	27	46	e83
7	34	52	132	1180	271	e829	306	e192	e66	23	51	74
8	38	53	109	796	290	e774	319	e188	63	21	51	99
9	38	52	98	622	286	e740	346	e182	60	25	58	84
10	35	49	92	518	259	e706	373	e176	50	27	88	83
11	41	45	88	456	3170	e676	367	e170	46	25	150	100
12	43	47	85	463	16200	e681	337	166	47	25	103	77
13	42	76	82	423	9330	e692	308	158	51	25	181	64
14	40	97	80	370	4340	e705	298	144	50	23	142	58
15	40	74	80	334	2610	689	311	135	48	19	179	51
16	40	70	80	298	1960	657	340	132	46	23	152	46
17	40	73	80	275	1590	610	368	132	45	26	114	45
18	39	70	80	262	2000	565	397	142	44	42	105	41
19	35	66	79	239	4270	522	413	141	42	46	94	35
20	33	63	82	227	6120	491	391	134	39	39	92	39
21	38	62	82	225	5530	462	357	131	33	35	89	39
22	43	67	81	223	3280	425	325	131	33	32	71	38
23	44	263	79	215	2400	398	293	131	37	31	78	34
24	44	194	79	225	2020	379	309	124	39	31	145	37
25	45	146	70	234	1800	362	392	117	39	31	106	37
26	54	123	70	241	1630	355	375	113	38	28	76	36
27	54	110	71	441	1480	344	335	107	37	27	65	36
28	65	103	76	653	1270	331	299	121	e30	101	52	35
29	65	97	82	550	---	327	273	123	28	101	46	35
30	61	92	1100	489	---	319	256	113	31	74	41	36
31	57	---	1170	432	---	313	---	105	---	62	39	---
TOTAL	1417	2476	4695	26777	73941	18346	9839	4797	1513	1119	2645	1706
MEAN	45.7	82.5	151	864	2641	592	328	155	50.4	36.1	85.3	56.9
MAX	65	263	1170	7240	16200	1080	413	242	97	101	181	101
MIN	33	45	70	215	259	313	256	105	28	19	39	34
AC-FT	2810	4910	9310	53110	146700	36390	19520	9510	3000	2220	5250	3380
CFSM	0.02	0.03	0.05	0.31	0.96	0.21	0.12	0.06	0.02	0.01	0.03	0.02
IN.	0.02	0.03	0.06	0.36	1.00	0.25	0.13	0.06	0.02	0.02	0.04	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2005, BY WATER YEAR (WY)

	MEAN	224	131	244	297	373	439	323	158	55.4	97.2	193	150
MAX	4285	1450	2445	4204	2641	2136	2252	1244	310	657	1360	816	
(WY)	1984	1979	1979	1993	2005	1915	1915	1973	1992	1915	1967	1975	
MIN	23.3	28.2	33.5	37.0	38.8	43.9	36.3	23.7	11.0	20.6	33.4	21.5	
(WY)	1954	1957	1954	1954	1954	1951	1955	1956	1956	2003	2003	1956	

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1914 - 2005

ANNUAL TOTAL		36815.5		149271								
ANNUAL MEAN		101		409						221		
HIGHEST ANNUAL MEAN										937		1915
LOWEST ANNUAL MEAN										42.0		1951
HIGHEST DAILY MEAN			1170	Dec 31		16200	Feb 12		52200	Oct 2	1983	
LOWEST DAILY MEAN			9.5	Jul 22		19	Jul 15		6.1	Jun 21	1971	
ANNUAL SEVEN-DAY MINIMUM			16	Jul 18		24	Jul 11		8.1	Jun 19	1956	
ANNUAL RUNOFF (AC-FT)			73020			296100			160200			
ANNUAL RUNOFF (CFSM)			0.036			0.148			0.080			
ANNUAL RUNOFF (INCHES)			0.50			2.01			1.09			
10 PERCENT EXCEEDS			258			690			424			
50 PERCENT EXCEEDS			64			94			74			
90 PERCENT EXCEEDS			26			35			34			

e Estimated



## 09447000 EAGLE CREEK ABOVE PUMPING PLANT, NEAR MORENCI, AZ

**LOCATION.**--Lat 33°03'52", long 109°26'30", in SW1/4SE1/4 sec. 23, T.4 S., R.28 E., Greenlee County, Hydrologic Unit 15040005, on right bank 2 mi upstream from Phelps Dodge Corp. pumping plant, 5 mi west of Morenci, and 12 mi upstream from mouth.

**DRAINAGE AREA.**--622 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Apr. 1944 to current year.

**REVISED RECORDS.**--WSP 1850-C: 1966. WDR AZ-88-1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 3,673.5 ft above sea level. Oct. 25, 1984, to Mar. 6, 1986, at site 1 mi upstream at datum 24.1 ft higher. Prior to Oct. 25, 1984, at various sites within 1 mi upstream from present site at different datums. Aug. 23, 1950, to Aug. 1, 1981, and since Mar. 6, 1984, supplementary gages at various sites within 1 mi upstream from present site at different datums. Feb. 7, 1993, to July 2, 1993, on right bank at different datum.

**REMARKS.**--Records good, except estimated daily discharges, which are poor. Diversions above station for irrigation of about 500 acres, mostly above Willow Creek. Water from Black River was pumped into Eagle Creek basin, 52 mi upstream from this station, and water was pumped from wells into Eagle Creek near Double Circle Ranch below Willow Creek. The monthly quantities pumped are shown in the table below. Diversion by pumping for industrial and municipal use in and near Morenci and Clifton are made from Eagle Creek, 3 mi downstream from this station and from San Francisco River near Clifton. Monthly quantities diverted are shown in the table below.

**AVERAGE DISCHARGE** (unadjusted).--59 years, 66.3 ft<sup>3</sup>/s, 48,000 acre-ft/yr; median of yearly mean discharges, 31 ft<sup>3</sup>/s, 25,751 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 36,800 ft<sup>3</sup>/s Jan. 18, 1993, on basis of slope-area measurement; minimum, 2.9 ft<sup>3</sup>/s June 25, 1982.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 4.....	1030	1,130	5.42
Feb. 12.....	1553	*11,500	*10.78a
Feb. 20.....	1200	2,690	6.61

Minimum daily discharge, 14 ft<sup>3</sup>/s, July 4-6.

a-from floodmark

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	18	19	19	45	75	114	35	33	23	16	24	16		
2	18	19	18	37	69	103	34	31	22	16	20	18		
3	18	19	17	41	65	97	36	31	21	15	21	23		
4	17	19	18	583	61	93	38	29	21	14	29	27		
5	17	19	21	307	58	89	38	28	20	14	31	35		
6	17	19	27	162	54	87	35	27	20	14	29	27		
7	17	20	29	114	50	87	35	27	20	16	27	24		
8	17	25	25	94	49	85	35	27	19	17	38	29		
9	16	23	23	85	51	82	34	26	19	17	37	25		
10	17	21	21	77	50	79	36	27	19	17	32	23		
11	18	18	20	71	475	76	35	25	19	16	28	34		
12	18	17	20	71	e6940	74	34	25	19	16	24	26		
13	18	17	19	72	2570	72	33	26	19	16	28	20		
14	17	17	19	65	545	71	33	25	18	17	26	17		
15	18	16	19	59	236	69	32	24	18	18	77	15		
16	17	17	19	48	174	66	32	24	17	18	57	15		
17	17	17	18	42	148	64	33	23	16	18	33	17		
18	18	17	18	41	141	63	31	23	16	20	26	17		
19	18	16	19	39	506	62	31	23	17	24	23	17		
20	18	16	19	35	1620	62	31	21	17	22	22	17		
21	18	16	19	34	747	63	29	21	16	21	24	16		
22	20	22	19	33	278	62	29	20	16	21	23	16		
23	20	34	19	31	206	60	29	19	17	25	25	17		
24	20	31	19	31	174	59	37	19	19	29	28	18		
25	19	28	18	30	158	57	41	18	22	38	23	18		
26	21	24	17	31	162	56	40	18	20	36	21	17		
27	24	21	17	35	157	54	36	18	19	35	19	17		
28	21	20	18	109	133	52	35	20	19	33	17	17		
29	20	19	19	101	---	50	35	31	18	29	16	17		
30	19	19	24	88	---	49	37	30	17	24	16	18		
31	19	---	51	80	---	41	---	26	---	25	15	---		
TOTAL	570	605	648	2691	15952	2198	1029	765	563	657	859	613		
MEAN	18.4	20.2	20.9	86.8	570	70.9	34.3	24.7	18.8	21.2	27.7	20.4		
MAX	24	34	51	583	6940	114	41	33	23	38	77	35		
MIN	16	16	17	30	49	41	29	18	16	14	15	15		
AC-FT	1130	1200	1290	5340	31640	4360	2040	1520	1120	1300	1700	1220		
CFSM	0.03	0.03	0.03	0.14	0.92	0.11	0.06	0.04	0.03	0.03	0.04	0.03		
IN.	0.03	0.04	0.04	0.16	0.95	0.13	0.06	0.05	0.03	0.04	0.05	0.04		
(*)		194	0	0	0	0	0	0	110	243	488	1130	728	504
(**)		780		512	430	570	730	761	757	784	798	980	1072	765
CAL YR 2004	TOTAL 8487.8	MEAN 23.2	MAX 74	MIN 8.8	AC-FT 16840	CFSM 0.04	IN. 0.51							
WTR YR 2005	TOTAL 27150	MEAN 74.4	MAX 6940	MIN 14	AC-FT 53850	CFSM 0.12	IN. 1.62							

(\*) Pumpage, in acre-feet, into Eagle Creek from Eagle Creek wells.

(\*\*) Pumpage, in acre-feet, into Clifton-Morenci, from San Francisco River and Eagle Creek

e Estimated

09447800 BONITA CREEK NEAR MORENCI, AZ

**LOCATION**--Lat 32°57'20", long 109°31'50", in SE1/4NW1/4 sec. 36, T.5 S., R.27 E., Graham County, Hydrologic Unit 15040005, on left bank 2 mi upstream from intake of city of Safford water supply, 6.3 mi upstream from mouth, and 12.8 mi southwest of Morenci.

**DRAINAGE AREA**--302 mi<sup>2</sup>.

**PERIOD OF RECORD**--Aug. 1981 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 3,500 ft above sea level, from topographic map. Two crest-stage gages 440 ft upstream on right and left banks.

**REMARKS**--Records fair except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 19,500 ft<sup>3</sup>/s Jan. 18, 1993, gage height, 16.5 ft, from slope-area measurement of peak flow; minimum daily, 0.66 ft<sup>3</sup>/s Aug. 31, 1988.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Flood of Dec. 20, 1972, 10,000 ft<sup>3</sup>/s, from slope-area measurement made by city of Safford at site about 2 mi downstream. Flood of June 27, 1981, 1,340 ft<sup>3</sup>/s, from slope-area measurement at present site, gage height, 5.6 ft, from floodmark.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12.....	1452	*1,720	*8.47a

Minimum daily discharge, 1.3 ft<sup>3</sup>/s, Aug. 18 to 25.

a-from floodmark

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.3	2.5	3.3	4.9	9.3	3.6	2.8	1.9	1.7	1.7	1.5
2	2.3	2.3	2.5	3.4	4.8	8.6	3.6	2.8	1.9	1.7	1.6	1.6
3	2.4	2.3	2.5	3.4	4.8	8.0	3.5	2.7	1.9	1.7	1.6	1.7
4	2.3	2.3	2.6	8.6	4.9	7.8	3.5	2.6	1.9	1.7	1.6	1.7
5	2.3	2.3	2.6	15	5.7	7.4	3.5	2.5	1.8	1.7	1.6	1.7
6	2.4	2.3	2.7	8.8	6.4	7.5	3.4	2.5	1.8	1.7	1.6	1.8
7	2.4	2.4	2.7	6.4	6.4	7.3	3.3	2.5	1.8	1.7	1.5	1.9
8	2.4	2.4	2.6	5.4	6.4	7.0	3.3	2.4	1.8	1.7	1.5	2.0
9	2.4	2.4	2.7	5.0	6.3	6.7	3.2	2.4	1.8	1.7	1.6	2.0
10	2.4	2.4	2.7	4.7	7.9	6.5	3.3	2.3	1.8	1.7	1.5	2.0
11	2.5	2.4	2.8	4.6	9.0	6.2	3.3	2.3	1.7	1.7	1.5	1.9
12	2.4	2.4	2.7	4.7	926	6.0	3.3	2.3	1.7	1.7	1.5	2.0
13	2.5	2.4	2.7	4.6	481	5.9	3.2	2.3	1.7	1.7	1.5	2.0
14	2.5	2.4	2.7	4.5	e98	5.8	3.1	2.3	1.7	1.7	1.5	2.0
15	2.4	2.4	2.8	5.3	e39	5.8	3.1	2.3	1.7	1.7	1.4	2.0
16	2.4	2.4	2.8	5.3	e24	5.7	3.0	2.3	1.8	1.7	1.4	2.0
17	2.4	2.4	2.8	5.3	e18	5.6	2.9	2.3	1.8	1.6	1.4	2.0
18	2.4	2.4	2.8	5.1	14	5.5	3.0	2.2	1.8	1.7	1.3	1.9
19	2.4	2.3	2.8	5.1	18	5.3	3.0	2.2	1.7	1.6	1.3	1.9
20	2.3	2.3	2.9	5.0	113	5.3	2.9	2.2	1.6	1.6	1.3	1.9
21	2.4	2.3	3.0	5.0	142	5.1	2.9	2.2	1.7	1.7	1.3	1.9
22	2.4	2.9	3.0	4.9	47	5.0	2.9	2.1	1.6	1.7	1.3	1.9
23	2.4	2.5	3.0	4.8	24	4.8	2.9	2.1	1.6	1.6	1.3	1.9
24	2.3	2.4	3.0	4.8	16	4.6	3.1	2.1	1.7	1.7	1.3	1.9
25	2.3	2.4	3.0	4.8	13	4.7	3.0	2.1	1.7	1.6	1.3	1.9
26	2.3	2.4	3.1	4.9	12	4.8	3.0	2.1	1.7	1.7	1.4	1.9
27	2.3	2.4	3.1	5.2	11	4.7	2.9	2.0	1.7	1.7	1.4	1.9
28	2.3	2.4	3.1	5.1	9.8	4.5	2.9	2.0	1.7	1.7	1.5	2.0
29	2.3	2.4	3.1	4.9	---	4.3	2.9	2.0	1.7	1.7	1.5	1.9
30	2.3	2.4	3.2	4.8	---	4.0	2.9	2.0	1.7	1.7	1.5	2.0
31	2.3	---	3.2	5.0	---	3.7	---	2.0	---	1.7	1.5	---
TOTAL	73.4	71.7	87.7	167.7	2073.3	183.4	94.4	70.9	52.4	52.2	45.2	56.7
MEAN	2.37	2.39	2.83	5.41	74.0	5.92	3.15	2.29	1.75	1.68	1.46	1.89
MAX	2.5	2.9	3.2	15	926	9.3	3.6	2.8	1.9	1.7	1.7	2.0
MIN	2.3	2.3	2.5	3.3	4.8	3.7	2.9	2.0	1.6	1.6	1.3	1.5
AC-FT	146	142	174	333	4110	364	187	141	104	104	90	112
CFSM	0.01	0.01	0.01	0.02	0.25	0.02	0.01	0.01	0.01	0.01	0.00	0.01
IN.	0.01	0.01	0.01	0.02	0.26	0.02	0.01	0.01	0.01	0.01	0.01	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2005, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
MEAN	13.0	6.22	8.89	46.2	26.9	12.8	4.86	3.80	3.07	6.44	7.15	7.04													
MAX	176	21.7	29.6	769	165	53.6	10.7	6.33	5.86	44.5	14.6	28.6													
(WY)	1984	1995	1983	1993	1993	1995	1998	1993	1995	1999	2000	1996													
MIN	1.52	1.86	2.26	2.43	2.71	2.74	2.00	2.10	1.32	1.68	1.46	1.20													
(WY)	1992	1992	2004	2004	2004	2001	1991	1991	1982	2005	2005	2003													

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1982 - 2005
ANNUAL TOTAL	984.5	3029.0	
ANNUAL MEAN	2.69	8.30	12.2
HIGHEST ANNUAL MEAN			83.7
LOWEST ANNUAL MEAN			2.54
HIGHEST DAILY MEAN	7.0 Aug 18	926 Feb 12	10200 Jan 19 1993
LOWEST DAILY MEAN	1.4 Aug 7	1.3 Aug 18	0.7 Dec 21 1982
ANNUAL SEVEN-DAY MINIMUM	1.5 Aug 1	1.3 Aug 18	0.77 Aug 26 1988
ANNUAL RUNOFF (AC-FT)	1950	6010	8810
ANNUAL RUNOFF (CFSM)	0.009	0.027	0.040
ANNUAL RUNOFF (INCHES)	0.12	0.37	0.55
10 PERCENT EXCEEDS	3.8	6.3	8.5
50 PERCENT EXCEEDS	2.4	2.4	4.3
90 PERCENT EXCEEDS	2.0	1.6	2.2

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, AZ

**LOCATION.**--Lat 32°52'06", long 109°30'38", in SE1/4NE1/4 sec. 31, T.6 S., R.28 E., Graham County, Hydrologic Unit 15040005, on left bank 0.6 mi downstream from intake of Brown Canal, 8 mi northeast of Solomon, and 17 mi downstream from San Francisco River. Records include flow of Brown Canal, which is measured 2,000 ft downstream from intake.

**DRAINAGE AREA.**--7,896 mi<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD.**--Apr. 1914 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to Oct. 1932 and Oct. 1940 to Sept. 1949 published as "near Solomonsville" and Oct. 1932 to Oct. 1933 and May 1935 to Sept. 1940 as "below Bonita Creek near Solomonsville."

**REVISED RECORDS.**--WSP 1059: 1914, 1916--17, 1923(M), 1924--25, 1927, 1929--31(M). WSP 1179: 1915, 1918--19(M). WSP 1313: 1934. WSP 1733: 1923.

**GAGE.**--Water-stage recorder. Datum of gage is 3,059.92 ft above sea level. Prior to July 8, 1980, at datum 4.96 ft higher. See WSP 1733 for history of changes prior to Jan. 1, 1941. Supplementary water-stage recorder and Parshall flume on Brown Canal.

**REMARKS.**--Records good, except estimated daily discharges, which are poor. Records show water reaching head of Safford Valley and include water diverted to Brown Canal. Diversions above station for mining, municipal use, and for irrigation of about 17,500 acres, much of it by pumping from ground water.

**COOPERATION.**--Record for Brown Canal furnished by Gila Water Commissioner.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 132,000 ft<sup>3</sup>/s Oct. 2, 1983, gage height, 20.8 ft, from rating curve extended above 52,000 ft<sup>3</sup>/s on basis of slope-area measurements at 14.40 ft and 20.8 ft; minimum, 11 ft<sup>3</sup>/s June 25, 1956.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 4.....	1745	12,600	13.56	Feb. 20.....	2300	10,800	13.00
Feb. 13.....	1400	*39,000	*18.44				

Minimum daily discharge, 49 ft<sup>3</sup>/s July 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	180	242	1030	1050	2940	655	565	280	67	147	78
2	156	175	241	874	906	2620	641	537	244	66	118	77
3	146	175	237	799	798	2330	631	513	211	66	96	76
4	134	176	229	5920	723	2100	623	488	188	65	83	113
5	126	171	232	8180	684	1940	618	458	176	66	83	129
6	116	167	242	6260	649	1850	610	409	164	67	75	147
7	104	165	270	5640	632	1910	600	407	153	63	82	252
8	102	164	276	3460	636	1870	604	407	145	57	92	230
9	101	161	260	2350	648	1870	617	399	136	54	96	269
10	98	158	254	1830	647	1840	645	389	131	55	124	208
11	95	155	249	1490	1500	1790	658	373	120	56	188	196
12	95	155	245	1310	22200	1730	656	360	110	54	181	179
13	92	162	243	1200	31000	1710	640	354	107	54	254	157
14	97	193	238	1060	17300	1700	619	336	104	59	265	136
15	106	188	235	935	9190	1670	612	320	99	71	258	122
16	107	188	233	835	6020	1610	614	307	97	52	360	113
17	108	187	230	760	4450	1550	638	300	91	49	308	108
18	107	189	230	690	3770	1480	662	299	90	52	237	98
19	109	186	231	640	5280	1360	698	296	87	75	206	90
20	105	183	232	609	7950	1260	708	290	86	81	178	82
21	102	184	233	584	9670	1190	689	281	81	72	174	81
22	103	189	232	566	e7630	1120	662	268	74	65	203	79
23	100	353	229	548	5690	1040	628	259	72	61	307	76
24	99	359	230	537	4710	986	623	248	78	58	219	72
25	99	308	230	526	4270	927	665	227	79	61	203	72
26	105	284	227	529	4010	856	687	210	77	88	165	73
27	290	268	227	574	3700	808	672	210	75	72	139	73
28	224	258	227	1100	3290	777	649	210	74	128	121	73
29	221	250	233	1260	---	731	613	296	69	203	106	75
30	193	244	537	1330	---	695	588	261	66	139	95	77
31	186	---	1440	1230	---	670	---	283	---	119	85	---
TOTAL	4001	6175	8894	54656	159003	46930	19225	10560	3564	2295	5248	3611
MEAN	129	206	287	1763	5679	1514	641	341	119	74.0	169	120
MAX	290	359	1440	8180	31000	2940	708	565	280	203	360	269
MIN	92	155	227	526	632	670	588	210	66	49	75	72
MED	106	185	233	1030	3890	1610	639	307	98	65	165	94
AC-FT	7940	12250	17640	108400	315400	93090	38130	20950	7070	4550	10410	7160
CFSM	0.02	0.03	0.04	0.22	0.72	0.19	0.08	0.04	0.02	0.01	0.02	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2005, BY WATER YEAR (WY)

MEAN	378	275	507	703	793	856	579	299	107	200	488	383
MAX	7447	2230	5798	13990	5679	3629	2775	2038	716	736	2499	2081
(WY)	1984	1979	1979	1993	2005	1991	1973	1973	1992	1921	1923	1975
MIN	39.9	48.6	60.1	92.8	102	82.3	63.8	37.8	19.7	43.2	62.2	35.9
(WY)	1957	1957	1957	1954	1954	1971	1971	1956	1956	2003	2003	1956

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1921 - 2005
ANNUAL TOTAL	88304	324162	
ANNUAL MEAN	241	888	463
HIGHEST ANNUAL MEAN			2229
LOWEST ANNUAL MEAN			101
HIGHEST DAILY MEAN	1480	31000	90000
LOWEST DAILY MEAN	34	49	13
ANNUAL SEVEN-DAY MINIMUM	40	56	15
ANNUAL RUNOFF (AC-FT)	175200	643000	335700
ANNUAL RUNOFF (CFSM)	0.031	0.112	0.059
10 PERCENT EXCEEDS	553	1720	968
50 PERCENT EXCEEDS	176	233	176
90 PERCENT EXCEEDS	51	75	64

e Estimated

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, AZ—CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD--Jan. 1976 to Oct. 1981, Oct. 1988 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarbohardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
DEC 08...	1110	278	76	690	10.2	98	8.4	827	11.5	9.1	170	12	50.7
MAR 31...	1305	646	40	686	9.8	108	8.4	568	19.5	14.8	160	12	45.5
JUN 08...	1245	141	36	682	7.6	103	8.5	980	28.5	24.6	210	47	64.1c
AUG 17...	1125	298	2750d	683	6.9	96	8.2	643	31.0	25.9	150	13	45.0
Date	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd, recover, mg/L (00925)	Magnesium, water, unfltrd, recover, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
DEC 08...	57.5	11.6	12.6	4.58	2	75.1	162	192	3	101	1.2	45.2	388
MAR 31...	54.7	10.4	11.4	3.44	2	54.7	145	172	2	60.8	1.0	42.9	307
JUN 08...	73.6	12.9c	15.1	6.59c	3	104c	167	186	8	154	1.4	74.8	518
AUG 17...	134d	8.83	37.2d	5.37	2	65.0	136	161	2	86.6	1.2	39.3	335
Date	Residue on water, fltrd, tons/acre-ft (70303)	Residue evap. at 180degC, wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, unfltrd, mg/L (00600)	E coli, m-TEC MF, col/100 mL (31633)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd, ug/L (01097)	Arsenic, water, fltrd, ug/L (01000)	Arsenic, water, unfltrd, ug/L (01002)
DEC 08...	.60	440	122	.32	<.04	.20	.21	.52	E14k	<.20	<.2	2.6	3
MAR 31...	.48	351	84	.26	<.04	.32	.19	.57	<1k	<.20	<.2	2.1	E1n
JUN 08...	.80	587	47	.24	<.04	.26	.13	.50	E15k	<.20	E.1n	3.2	4
AUG 17...	.53	386	2890c	4.2	<.04	.48	3.06d	4.7	3000	E.14n	E.1n	3.9	7
Date	Barium, water, unfltrd recover-able, ug/L (01007)	Beryllium, water, unfltrd, recover, ug/L (01010)	Beryllium, water, unfltrd, recover, ug/L (01012)	Boron, water, unfltrd, recover, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd, ug/L (01027)	Chromium, water, unfltrd, recover, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd, recover, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd, recover, ug/L (01051)	Manganese, water, unfltrd, recover, ug/L (01055)	Mercury water, fltrd, ug/L (71890)
DEC 08...	63	<.06	.20	65	<.04	.08	3.2	1.6	24.6	<.08	3.17	99	<.01
MAR 31...	58	<.06	.14	67	<.04	.06	2.1	2.0	10.9	<.08	2.34	77	<.01
JUN 08...	64	<.06	.11	119	<.04	.04	1.5	2.3	8.2	.15	1.15	62	<.01
AUG 17...	516	<.06	4.98	82	E.02n	.98	30.1d	3.2	94.1	.23	54.6	2480	<.01

**GILA RIVER BASIN**  
**09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, AZ—CONTINUED**

**WATER-QUALITY RECORDS**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Mercury water, unfltrd recover -able, ug/L (71900)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC						
08...	<.01	.6	E.5n	12	145	109
MAR						
31...	E.01n	.5	1.3	9	115	201
JUN						
08...	<.01	.8	2.2	6	60	23
AUG						
17...	.09	.6p	2.1	127	3740	3010

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

c -- See laboratory comment  
d -- Diluted sample: method hi range exceeded  
k -- Counts outside acceptable range  
n -- Below the LRL and above the LT-MDL  
p -- Value reported is preferred

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, AZ—CONTINUED

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Water-quality measurements in the following table were made as part of the ADEQ Fixed-Station Network Program. The following analyses are quality-assurance samples processed during the 2005 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

Date	Time	Sample type	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Phos- phorus, water, unfltrd mg/L (00665)	Beryll- ium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)
JUN 08...	1000	2	5.7	1	30.0	27.3	<.10	<.04	<.06	<.02	<.06	<.04	E.3n

Date	Lead, water, fltrd, ug/L (01049)	Mercury water, fltrd, ug/L (71890)	Zinc, water, fltrd, ug/L (01090)
JUN 08...	<.08	<.01	E.3n

Remark codes used in this table:  
 < -- Less than.  
 E -- Estimated.

Value qualifier codes used in this table:  
 n -- Below the LRL and above the LT-MDL

## 09460150 FRYE CREEK NEAR THATCHER, AZ

**LOCATION.**--Lat 32°44'38", long 109°50'15", in NE1/4 sec. 13, T.8 S., R.24 E. (unsurveyed), Graham County, Hydrologic Unit 15040005, in Coronado National Forest, on left bank 8.5 mi southwest of Thatcher.

**DRAINAGE AREA.**--4.02 mi<sup>2</sup>. (Area at site used 1966--76, 3.91 mi<sup>2</sup>.)

**PERIOD OF RECORD.**--Dec. 1966 to Sept. 1976, Dec. 1988 to current year.

**REVISED RECORDS.**--WRD AZ 1968: Drainage area.

**GAGE.**--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 5,580 ft above sea level, from topographic map. Prior to Dec. 1988, at site 0.25 mi upstream at different datum.

**REMARKS.**--Records fair, except estimated daily discharges, which are poor. No regulation or diversion above station. City of Safford diverts water from Frye Mesa Reservoir 1 mi downstream for municipal supply.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 2,260 ft<sup>3</sup>/s, Aug. 17, 2004, gage height, 6.94 ft, from floodmark and from rating curve extended above 2,000 ft<sup>3</sup>/s; no flow at times in most years.

**EXTREMES FOR CURRENT YEAR.**--Peak discharge greater than base discharge of 75.0 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29 .....	2130	167	2.69	Feb. 11 .....	1530	121	2.46
Jan. 3 .....	2030	130	2.51	Aug. 12 .....	1530	*2,250e	*8.36e

Minimum daily discharge, 0.20 on Dec. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.26	0.79	0.71	2.2	2.2	3.7	1.9	6.9	1.9	0.62	0.60	0.83
2	0.29	0.74	0.72	1.9	1.8	3.3	2.0	7.1	1.9	0.61	0.56	0.84
3	0.23	0.74	0.80	18	1.6	3.1	2.2	7.4	1.8	0.60	0.70	0.83
4	0.21	0.66	1.1	15	1.7	2.9	2.3	7.5	1.6	0.58	0.86	e0.87
5	0.20	0.58	1.1	5.9	1.8	2.8	2.4	8.4	1.5	0.57	0.72	e0.97
6	0.22	0.59	1.2	3.9	1.7	3.3	2.7	8.4	1.4	0.56	1.0	e1.1
7	0.28	3.6	1.1	3.3	1.6	2.9	3.3	7.1	1.3	0.57	0.75	e4.5
8	0.32	1.8	1.0	2.9	1.6	2.9	4.6	6.5	1.3	0.59	e0.92	e1.4
9	0.29	1.4	1.0	2.8	1.5	2.9	5.1	6.3	1.2	0.59	1.6	e1.4
10	0.28	1.4	1.0	2.8	2.5	3.0	4.5	6.4	1.2	0.58	1.5	e1.4
11	0.27	1.4	1.1	2.8	26	3.2	4.2	6.3	1.2	0.57	e1.3	e1.3
12	0.29	1.4	1.1	2.6	27	3.3	4.5	5.7	1.1	0.55	e139	e1.3
13	0.30	1.3	1.1	2.5	17	3.2	5.6	5.4	1.1	0.53	e1.5	e1.3
14	0.29	1.4	1.1	2.4	11	3.0	7.8	5.4	1.0	0.54	e1.6	e1.3
15	0.26	2.0	1.1	2.4	7.8	2.7	10	5.6	1.0	0.53	e1.6	e1.3
16	0.26	1.9	1.0	2.3	6.2	2.4	12	5.8	0.97	0.52	e1.2	e1.3
17	0.27	1.5	0.98	2.2	6.0	2.3	13	5.8	0.94	0.52	1.7	e1.2
18	0.28	1.5	0.97	2.1	10	2.2	13	5.6	0.91	0.54	1.3	e1.2
19	0.27	1.3	0.97	2.1	11	2.1	12	5.4	0.88	0.52	1.1	e1.2
20	0.23	1.3	0.96	2.1	12	2.1	11	5.5	0.84	0.51	1.1	e1.1
21	2.8	1.3	0.95	2.2	9.9	1.9	11	5.5	0.82	0.50	0.96	e1.1
22	5.2	1.4	0.86	2.2	8.5	1.9	11	5.1	0.81	0.50	0.98	e1.0
23	1.1	1.4	0.73	2.1	6.6	1.9	12	4.5	0.82	0.54	1.1	e0.91
24	0.95	1.2	0.69	2.3	5.4	1.9	13	4.0	0.84	0.55	1.1	e0.78
25	0.95	1.0	0.70	2.3	5.3	1.8	9.6	3.6	0.83	0.59	1.0	0.74
26	4.5	1.0	0.69	2.5	5.0	1.9	6.8	3.2	0.77	0.59	0.91	0.71
27	1.3	0.87	0.70	3.0	4.5	1.8	5.3	2.8	0.74	0.58	0.88	0.71
28	3.7	0.94	0.72	2.8	4.2	1.8	5.1	2.9	0.72	0.56	0.91	0.70
29	2.7	0.81	24	2.7	---	1.9	6.2	2.8	0.68	0.54	0.89	0.70
30	1.6	0.78	8.8	2.5	---	1.9	6.8	2.3	0.65	0.54	0.85	0.70
31	0.92	---	3.1	2.4	---	1.9	---	2.1	---	0.57	0.81	---
TOTAL	31.02	38.00	62.05	109.2	201.4	77.9	210.9	167.3	32.72	17.26	171.00	34.69
MEAN	1.00	1.27	2.00	3.52	7.19	2.51	7.03	5.40	1.09	0.56	5.52	1.16
MAX	5.2	3.6	24	18	27	3.7	13	8.4	1.9	0.62	139	4.5
MIN	0.20	0.58	0.69	1.9	1.5	1.8	1.9	2.1	0.65	0.50	0.56	0.70
AC-FT	62	75	123	217	399	155	418	332	65	34	339	69
CFSM	0.25	0.32	0.50	0.88	1.79	0.63	1.75	1.34	0.27	0.14	1.37	0.29
IN.	0.29	0.35	0.57	1.01	1.86	0.72	1.95	1.55	0.30	0.16	1.58	0.32

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2005, BY WATER YEAR (WY)

	MEAN	1.05	1.30	0.94	1.75	1.93	2.17	3.06	4.54	1.77	1.17	1.30	0.99
MAX	9.74	9.26	4.43	13.7	11.3	10.9	9.37	17.0	7.37	6.81	5.52	6.85	
(WY)	2001	1995	1995	1995	1995	1995	1992	1991	1991	1999	2005	1990	
MIN	0.03	0.09	0.11	0.11	0.17	0.13	0.04	0.01	0.00	0.00	0.00	0.00	
(WY)	2004	2003	2003	2003	2000	1999	2002	2002	2002	1996	2003	2002	

## SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1990 - 2005	
ANNUAL TOTAL	680.05		1153.44			
ANNUAL MEAN	1.86		3.16		1.83	
HIGHEST ANNUAL MEAN					5.02 1995	
LOWEST ANNUAL MEAN					0.17 2002	
HIGHEST DAILY MEAN	56	Aug 17	139	Aug 12	150	Jan 5 1995
LOWEST DAILY MEAN	0.04	Jul 17	0.20	Oct 5	0.00	Jun 23 1990
ANNUAL SEVEN-DAY MINIMUM	0.04	Jul 16	0.24	Oct 1	0.00	Jun 23 1990
ANNUAL RUNOFF (AC-FT)	1350		2290		1330	
ANNUAL RUNOFF (CFSM)	0.462		0.786		0.455	
ANNUAL RUNOFF (INCHES)	6.29		10.67		6.19	
10 PERCENT EXCEEDS	4.2		6.7		4.2	
50 PERCENT EXCEEDS	0.61		1.4		0.48	
90 PERCENT EXCEEDS	0.12		0.56		0.03	

e Estimated

09466500 GILA RIVER AT CALVA, AZ

**LOCATION**--Lat 33°11'08", long 110°13'10", in SW1/4 sec. 8, T.3 S., R.21 E. (unsurveyed), Graham County, Hydrologic Unit 15040005, in San Carlos Indian Reservation, on Southern Pacific Railroad bridge at head of San Carlos Reservoir, 2 mi west of Calva.

**DRAINAGE AREA**--11,470 mi<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD**--Oct. 1929 to current year.

**GAGE**--Water-stage recorder. Datum of gage is 2,517.29 ft above sea level. Prior to Oct. 1, 1954, and Aug. 25, 1958, to Dec. 31, 1962, at datum 2.52 ft lower. Oct. 1, 1954, to Aug. 24, 1958, at datum 5.52 ft lower. Dec. 31, 1962, to Oct. 20, 1972, at site 530 ft downstream at datum 3.65 ft lower. Oct. 20, 1972, to Sept. 30, 1974, supplementary gage at bridge on U.S. Highway 70, 6.2 mi upstream at datum 2,560.19 ft, NGVD.

**REMARKS**--Records fair except for estimated daily discharges, which are poor. Diversion above station for irrigation of about 69,000 acres, metallurgical treatment of ores, and municipal uses.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 150,000 ft<sup>3</sup>/s Oct. 3, 1983, gage height, 23.1 ft, from rating curve extended above 87,000 ft<sup>3</sup>/s on basis of area-velocity and flow-over-road computations of peak flow; no flow at times.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Maximum discharge since at least 1914, probably in excess of 100,000 ft<sup>3</sup>/s Jan. 20, 1916, determined on basis of peak discharge at stations near Solomon and at Kelvin.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 6 .....	1800	5,160	11.26
Feb. 14 .....	1745	*40,100	*22.13
Feb. 22 .....	0430	12,400	14.75

Minimum daily discharge, 0.49 ft<sup>3</sup>/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	130	181	552	924	3500	557	440	98	24	9.5	2.7
2	118	124	184	749	854	3120	536	421	92	24	7.4	4.3
3	107	121	176	735	765	2740	521	396	89	23	8.2	7.2
4	97	118	174	743	686	2370	509	371	82	24	8.1	4.6
5	101	112	175	850	641	2110	489	356	77	25	28	3.3
6	100	97	174	3700	605	1930	482	341	72	23	9.5	2.1
7	93	87	183	4060	570	1810	468	332	73	19	10	1.6
8	81	88	197	4260	541	1790	460	326	72	16	11	0.82
9	72	87	211	2930	497	1720	456	313	e63	16	6.6	12
10	71	83	190	1990	479	1690	459	278	e63	14	4.6	26
11	69	81	182	1550	522	1640	485	256	62	12	4.3	20
12	60	82	175	1290	1070	1580	498	261	60	12	3.9	29
13	63	87	169	1090	5840	1520	500	259	59	11	29	21
14	60	90	166	995	31300	1490	484	248	56	8.3	39	17
15	60	101	162	896	20700	1440	461	236	54	e8.5	44	14
16	54	118	175	808	10300	1400	448	222	50	8.0	37	9.9
17	56	130	170	729	6240	1370	443	203	50	5.5	27	8.2
18	54	123	162	637	4550	1310	448	182	48	6.3	48	5.2
19	43	123	150	581	3880	1250	460	170	47	5.2	29	3.4
20	31	124	153	537	5430	1190	494	166	44	4.6	19	3.1
21	26	110	156	509	9230	1100	504	154	41	3.3	16	3.0
22	23	106	161	481	12100	1040	496	146	38	2.6	14	2.3
23	19	107	139	452	9720	977	475	137	36	13	24	2.3
24	22	197	121	436	6730	907	464	129	37	23	16	2.3
25	24	281	130	405	5200	839	455	118	34	45	23	2.2
26	23	234	134	399	4570	771	456	113	31	8.3	15	2.1
27	25	216	136	416	4230	750	475	109	28	6.4	12	1.7
28	250	199	138	452	3880	696	463	105	26	13	12	2.1
29	134	196	130	659	---	660	458	113	26	9.6	12	1.3
30	176	184	130	819	---	625	444	103	25	8.8	6.6	e0.49
31	137	---	172	897	---	592	---	102	---	6.9	3.7	---
TOTAL	2335	3936	5056	35607	152054	45927	14348	7106	1633	429.3	537.4	215.21
MEAN	75.3	131	163	1149	5430	1482	478	229	54.4	13.8	17.3	7.17
MAX	250	281	211	4260	31300	3500	557	440	98	45	48	29
MIN	19	81	121	399	479	592	443	102	25	2.6	3.7	0.49
AC-FT	4630	7810	10030	70630	301600	91100	28460	14090	3240	852	1070	427
CFSM	0.01	0.01	0.01	0.10	0.47	0.13	0.04	0.02	0.00	0.00	0.00	0.00
IN.	0.01	0.01	0.02	0.12	0.49	0.15	0.05	0.02	0.01	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)

MEAN	336	226	435	739	766	722	405	219	51.3	76.6	290	235
MAX	8486	2468	5652	16310	6225	3757	2623	3079	1272	838	1661	1681
(WY)	1984	2001	1979	1993	1993	1991	1992	1992	1992	1955	1967	1975
MIN	0.00	0.00	0.00	21.6	28.5	10.3	1.35	1.25	0.00	0.00	0.00	0.00
(WY)	1954	1954	1954	1956	1957	1957	1957	1956	1946	1989	1989	1956

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1930 - 2005

ANNUAL TOTAL	56804.68		269183.91		374		1993	
ANNUAL MEAN	155		737		2451		1956	
HIGHEST ANNUAL MEAN					28.7		1983	
HIGHEST DAILY MEAN	807	Apr 16	31300	Feb 14	90000	Oct 3	1983	
LOWEST DAILY MEAN	0.00	Jul 1	0.49	Sep 30	0.00	Jul 4	1930	
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 1	1.7	Sep 24	0.00	Aug 24	1933	
ANNUAL RUNOFF (AC-FT)	112700		533900		270700			
ANNUAL RUNOFF (CFSM)	0.014		0.064		0.033			
ANNUAL RUNOFF (INCHES)	0.18		0.87		0.44			
10 PERCENT EXCEEDS	365		1460		768			
50 PERCENT EXCEEDS	119		130		70			
90 PERCENT EXCEEDS	9.5		7.8		2.3			



**GILA RIVER BASIN**  
**09466500 GILA RIVER AT CALVA, AZ—CONTINUED**

**WATER-QUALITY RECORDS**

**PERIOD OF RECORD.**—Oct. 1974 to Sept. 1994 and Aug. 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrcrtd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarbohardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
DEC 09...	1130	213	160	706	10.8	98	8.5	1020	12.0	7.9	200	25	59.7
APR 01...	1115	558	70	706	9.1	96	8.3	1700	18.0	13.7	300	87	85.0
JUN 09...	1100	E63	7.8	696	7.9	104	8.2	4800	25.5	23.3	610	290	159dc
AUG 18...	1050	62	40	699	7.6	104	8.3	2250	27.5	26.3	270	43	76.7d
Date	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recover-able, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
DEC 09...	69.1	13.3	15.6	5.41	4	124	179	206	6	165	1.5	70.9	548
APR 01...	91.2	21.6	21.3	5.52	6	241	213	253	4	314d	1.4	146d	947
JUN 09...	170d	52.4dc	55.3d	10.7dc	14	771dc	325	392	2	1110d	2.1	466d	2770
AUG 18...	84.7d	19.8d	22.1d	8.17d	9	325d	229	260	10	449d	1.7	199d	1230
Date	Residue water, fltrd, tons/acre-ft (70303)	Residue evap. at 180degC, mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate, fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, water, unfltrd, mg/L (00600)	E coli, m-TEC MP, water, col/100 mL (31633)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd, ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water, unfltrd, ug/L (01002)
DEC 09...	.83	614	207d	.41	<.04	.26	.30	.67	E33k	<.20	<.2	3.7	4
APR 01...	1.37	1010	126	.43	<.04	.89	.22	1.3	E17k	E.11n	E.1n	4.1	4
JUN 09...	3.94	2900	14	.57	<.04	.72	.04	1.3	E10k	<.40d	E.4nd	6.6d	7
AUG 18...	1.79	1320	51d	.81	<.04	1.75	.15	2.6	220	.27	.3	11.0	11
Date	Barium, water, unfltrd recover-able, ug/L (01007)	Beryllium, water, unfltrd recover-able, ug/L (01010)	Beryllium, water, unfltrd recover-able, ug/L (01012)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd, ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)
DEC 09...	88	<.06	.32	108	E.04n	.12	4.3	1.5	19.6	<.08	5.08	163	<.01
APR 01...	92	<.06	.19	224	E.04n	.10	2.5	3.2	18.1	<.08	2.83	239	<.01
JUN 09...	135d	<.12d	<.12d	734d	E.06nd	E.04nd	E.5n	3.9d	11.4d	.23d	.29d	369d	<.01
AUG 18...	103	<.06	.10	328	E.03n	.06	1.3	3.4	5.7	.21	1.10	84	<.01

**GILA RIVER BASIN**  
**09466500 GILA RIVER AT CALVA, AZ—CONTINUED**

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**WATER-QUALITY RECORDS**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Mercury water, unfltrd recover -able, ug/L (71900)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC 09...	E.01n	.8	.8	17	223	128
APR 01...	E.01n	1.0	4.2	11	134	202
JUN 09...	<.01	4.0d	2.8d	5d	51	--
AUG 18...	<.01	2.9	3.7	5	112	19

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

c -- See laboratory comment  
d -- Diluted sample: method hi range exceeded  
k -- Counts outside acceptable range  
n -- Below the LRL and above the LT-MDL

## 09468500 SAN CARLOS RIVER NEAR PERIDOT, AZ

**LOCATION**--Lat 33°17'47", long 110°27'03", in SE1/4 sec. 36, T.1 S., R.18 E. (unsurveyed), Gila County, Hydrologic Unit 15040007, in San Carlos Indian Reservation, on U.S. Highway 70 bridge, 0.9 mi south of Peridot.

**DRAINAGE AREA**--1,026 mi<sup>2</sup>.

**PERIOD OF RECORD**--Aug. 1910 to Jan. 1911 (gage heights only), Apr. 1914 to July 1915, Aug. to Sept. 1915 (monthly discharge only), Oct. 1929 to current year. Prior to Oct. 1929 published as "at San Carlos."

**REVISED RECORDS**--WSP 1283: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 2,542.29 ft above sea level (AZ Highway Department benchmark). See WSP 1713 or 1733 for history of changes prior to Feb. 1, 1942. Feb. 1, 1942, to Aug. 13, 1970, at sites 1.9 mi upstream at different datums. Aug 14, 1970, to Sept. 30, 1980, at site 1.8 mi upstream at datum 2,578.90 ft, above sea level. Supplementary water-stage recorder Dec. 21, 1967, to July 2, 1968, at site 2.2 mi downstream at datum in use prior to Feb. 1, 1942; Jan. 31, 1979, to Sept. 30, 1980, at present site and datum.

**REMARKS**--Records fair except for estimated daily discharges, which are poor. Diversions above station for irrigation of about 600 acres. Small inflow from sewage treatment system about 3.6 mi upstream. Flow regulated to some extent since June 15, 1979, by Talkalai Reservoir; capacity, about 6,000 acre-ft.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 54,800 ft<sup>3</sup>/s Jan. 8, 1993, gage height, 12.12 ft, from rating curve extended above 23,000 ft<sup>3</sup>/s on basis of rate of change in storage in San Carlos Reservoir; maximum gage height 14.8 ft, Dec. 22, 1965, site and datum then in use; no flow at times in most years.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 2,200 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5 .....	0215	5,450	8.79
Feb. 12 .....	1745	*20,000	*11.46
Feb. 20 .....	0930	10,200	9.91

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	94	134	92	15	7.3	0.00	0.00	0.00	0.23
2	0.00	0.00	0.00	44	104	67	14	7.0	0.00	0.00	81	0.00
3	0.00	0.00	0.00	34	87	55	14	7.0	0.00	0.00	21	0.00
4	0.00	0.00	0.00	1990	69	47	14	6.9	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	2430	59	48	12	6.4	0.00	0.00	50	0.00
6	0.00	0.00	0.00	409	50	95	11	5.8	0.00	0.00	0.00	0.00
7	0.00	0.00	e0.84	228	46	231	11	5.0	0.00	0.00	3.0	0.00
8	0.00	0.00	e1.9	164	68	117	10	3.3	0.00	0.00	0.00	0.00
9	0.00	0.00	e2.7	128	101	66	11	2.9	0.00	0.00	0.00	0.00
10	0.00	0.00	5.3	109	81	50	11	2.4	0.00	0.00	0.00	0.00
11	0.00	0.00	6.7	93	491	42	11	1.9	0.00	0.00	0.00	0.00
12	0.00	0.00	8.2	78	12000	34	10	1.6	0.00	0.00	2.0	0.00
13	0.00	0.00	9.3	69	3530	30	10	1.4	0.00	0.00	5.0	0.00
14	0.00	0.00	11	67	777	27	10	1.2	0.00	0.00	0.00	0.00
15	0.00	0.00	14	58	371	24	9.7	1.1	0.00	0.00	0.00	0.00
16	0.00	0.00	15	50	264	21	9.8	0.96	0.00	0.00	0.00	0.00
17	0.00	0.00	17	42	198	21	10	0.94	0.00	0.00	0.00	0.00
18	0.00	0.00	18	37	163	20	9.1	0.92	0.00	0.00	0.00	0.00
19	0.00	0.00	19	31	706	18	8.9	0.93	0.00	0.00	0.00	0.00
20	0.00	0.00	18	28	5180	20	9.1	0.84	0.00	0.00	0.00	0.00
21	0.00	0.00	15	23	1050	19	8.5	0.70	0.00	0.00	0.00	0.00
22	0.00	0.00	15	20	785	19	8.0	0.60	0.00	0.00	0.00	0.00
23	0.00	0.00	15	19	589	19	8.6	0.47	0.00	0.00	0.00	0.00
24	0.00	0.00	15	19	343	19	9.2	0.32	0.00	0.00	0.00	0.00
25	0.00	0.00	15	20	231	19	7.9	0.24	0.00	0.00	0.00	0.00
26	0.00	0.00	16	25	171	18	8.0	0.18	0.00	0.00	0.00	0.00
27	0.00	0.00	17	33	157	19	7.7	0.03	0.00	0.00	0.00	0.00
28	0.00	0.00	19	342	130	18	6.9	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	36	206	---	17	6.6	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	316	145	---	17	7.0	0.00	0.00	0.00	0.00	0.00
31	0.00	---	256	147	---	17	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	881.94	7182	27935	1326	299.0	68.33	0.00	0.00	162.00	0.23
MEAN	0.00	0.00	28.4	232	998	42.8	9.97	2.20	0.00	0.00	5.23	0.01
MAX	0.00	0.00	316	2430	12000	231	15	7.3	0.00	0.00	81	0.23
MIN	0.00	0.00	0.00	19	46	17	6.6	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	1750	14250	55410	2630	593	136	0.00	0.00	321	0.5
CFSM	0.00	0.00	0.03	0.23	0.97	0.04	0.01	0.00	0.00	0.00	0.01	0.00
IN.	0.00	0.00	0.03	0.26	1.01	0.05	0.01	0.00	0.00	0.00	0.01	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)

	MEAN	27.6	19.3	99.7	138	170	140	23.2	7.47	3.46	17.5	49.7	23.8
MAX	519	178	1581	3208	1500	1262	170	41.8	19.8	84.6	320	166	
(WY)	1973	1979	1966	1993	1980	1941	1941	1980	1993	1930	1990	1983	
MIN	0.00	0.00	5.07	5.80	7.03	4.83	2.17	0.03	0.00	0.00	0.29	0.00	
(WY)	2003	2005	1951	1958	1953	1959	1959	2004	1948	1947	2003	1956	

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005	
ANNUAL TOTAL	4107.62		37854.50			
ANNUAL MEAN	11.2		104		59.6	
HIGHEST ANNUAL MEAN					426	
LOWEST ANNUAL MEAN					6.61	
HIGHEST DAILY MEAN	779		12000		20000	
LOWEST DAILY MEAN	0.00		0.00		0.00	
ANNUAL SEVEN-DAY MINIMUM	0.00		0.00		0.00	
ANNUAL RUNOFF (AC-FT)	8150		75080		43200	
ANNUAL RUNOFF (CFSM)	0.011		0.101		0.058	
ANNUAL RUNOFF (INCHES)	0.15		1.37		0.79	
10 PERCENT EXCEEDS	15		97		65	
50 PERCENT EXCEEDS	0.00		0.00		9.5	
90 PERCENT EXCEEDS	0.00		0.00		0.50	

09469000 SAN CARLOS RESERVOIR AT COOLIDGE DAM, AZ

**LOCATION**--Lat 33°10'32", long 110°31'38", in NW<sub>1/4</sub> sec. 17, T.3 S., R.18 E. (unsurveyed), Gila County, Hydrologic Unit 15040005, in San Carlos Indian Reservation, at right intake tower of Coolidge Dam on Gila River.

**DRAINAGE AREA**--12,886 mi<sup>2</sup>.

**REVISED RECORDS**--WSP 1049: 1929, 1934, 1937--38. WSP 1283: Drainage area.

**PERIOD OF RECORD**--Nov. 1928 to current year.

**GAGE**--Water-stage recorder. Datum of gage is 2,539.54 ft above sea level. Prior to Jan. 15, 1937, series of stakes with tops at known elevations for reference points on right bank about 1,000 ft upstream from dam. Jan. 15, 1937, to Dec. 31, 1947, water-stage recorder at present site at datum 0.72 ft lower.

**REMARKS**--Records good. Reservoir is formed by concrete multiple-dome dam. Dam completed Oct. 25, 1928; storage began Nov. 15, 1928. Usable capacity (from capacity table computed by San Carlos Irrigation District, based on an estimate of sediment deposited since 1966; used since Jan. 1, 1991) 866,600 acre-ft between elevations 2,382.63 ft, sill of lowest outlet gate, and 2,510.4 ft (revised), crest of spillway. No dead storage. Figures given herein represent usable contents. Reservoir is used to store water for irrigation of San Carlos project and for power development, dependent on irrigation demands. In 1997 laws were passed that prohibited water users from using storage below 29,559 acre-ft. Spill over Coolidge Dam because of capacity storage has occurred Apr. 22 to May 5, 1979, Feb. 24 to Mar. 13, 1980, Oct. 4--23, 28--31, Dec. 3--13, 1983, Jan. 2 to June 5, 1985, Jan. 11 to Mar. 18, 1993.

**COOPERATION**--Wire-weight gage readings furnished by Bureau of Indian Affairs.

**EXTREMES FOR PERIOD OF RECORD**--Maximum contents, 1,090,000 acre-ft Feb. 26 to Mar. 6, 1980; maximum elevation observed, 2,521.36 ft Jan. 20, 1993; no usable contents at times.

**EXTREMES FOR CURRENT YEAR**--Maximum contents, 441,400 acre-ft Mar. 28, elevation, 2,479.45 ft; minimum, 15,760 acre-ft Oct. 9, elevation 2,409.00.

Reservoir storage, acre feet, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16380	17290	22030	23980	84430	387000	439400	423800	396600	350300	296100	261100
2	16300	17390	22010	24940	86130	392200	438700	423500	395000	348300	294600	259700
3	16300	17590	22010	26550	87380	396400	437900	423000	393900	346500	293500	258100
4	16170	17890	22030	27960	88550	400000	437500	422700	392500	344800	292800	256600
5	16040	18090	22030	32230	89570	403400	437000	421900	391100	343100	292100	255100
6	15960	18250	22180	35590	90630	406700	436800	421300	389300	341300	291100	253600
7	15910	18490	22370	41790	91480	409500	436400	420800	387900	339400	290100	252300
8	15810	18610	22540	48350	92150	412200	434800	420400	386500	337700	288700	250400
9	15760	18740	22810	54950	92650	414800	433900	419700	384800	336000	287600	249500
10	15780	18820	22940	59400	93240	417200	433100	418900	383400	334100	287200	248300
11	15830	18980	23030	62500	94200	419500	432300	418400	381700	332100	286300	247200
12	15790	19170	23120	64890	111000	421700	431800	417900	380200	330500	285600	245800
13	15790	19260	23180	66920	125200	423600	431100	417600	378800	328700	284900	244600
14	15810	19490	23120	68520	145900	425500	430600	416300	377300	326700	284200	243900
15	15890	19490	23140	70070	200800	427200	429900	415400	375900	325000	283300	243200
16	15920	19640	23120	71460	228100	428900	429500	414400	374200	323200	282500	241700
17	16000	19870	23070	72770	241900	430400	428800	413400	372400	321500	281600	241000
18	16040	20030	22980	73940	251500	432500	428100	412600	370800	319600	280500	240300
19	16070	20240	22890	74740	260300	433700	427500	411800	369400	317900	279100	239700
20	16150	20470	22850	75520	276400	435000	426700	410700	367900	315700	277800	238600
21	16150	20640	22760	75910	292800	436400	426400	409600	366500	314100	276400	237800
22	16190	20850	22720	76220	314600	437800	426200	408400	364600	312100	274900	237300
23	16210	20890	22830	76380	333600	438800	425600	407200	363400	310200	273800	236500
24	16210	20910	22830	76540	347000	439500	425200	406000	361900	308700	272500	235600
25	16230	21110	22830	76810	356400	440200	425000	404600	360100	307400	271000	234800
26	16300	21570	22830	77290	365100	440800	424900	403400	358400	305700	269700	234100
27	16260	21880	22960	77770	373500	441200	424400	402200	356900	304400	268400	233600
28	16300	22030	23090	78600	380800	441400	424100	401300	355000	302700	266900	232900
29	16630	22130	23590	79640	---	440500	424000	400200	353500	300800	265800	232300
30	16850	22110	23660	81230	---	440200	424000	398800	351800	299100	264000	231600
31	17190	---	23750	82790	---	439800	---	397800	---	297700	262500	---
MAX	17190	22130	23750	82790	380800	441400	439400	423800	396600	350300	296100	261100
MIN	15760	17290	22010	23980	84430	387000	424000	397800	351800	297700	262500	231600
(*)	2490.73	2412.10	2412.84	2431.84	2473.63	2479.30	2477.84	2475.32	2470.58	2464.47	2460.31	2456.41
(**)	+810	+4920	+1640	+59040	+298010	+59000	-15800	-26200	-46000	-54100	-35200	-30900

CAL YEAR 2004 MAX 33690 MIN 15760 (\*\*)-3480  
WTR YEAR 2005 MAX 441400 MIN 15760 (\*\*)+215220

(\*) Elevation, at end of month, in feet  
(\*\*) Change in contents, in acre-feet

## 09469500 GILA RIVER BELOW COOLIDGE DAM, AZ

**LOCATION.**--Lat 33°10'10", long 110°31'50", in SW $\frac{1}{4}$  sec. 17, T.3 S., R.18 E. (unsurveyed), Pinal County, Hydrologic Unit 15050100, on left bank 2,200 ft downstream from Coolidge Dam.

**DRAINAGE AREA.**--12,886 mi<sup>2</sup>.

**PERIOD OF RECORD.**--July to Oct. 1899, Apr. 1900 to Mar. 1902, July to Sept. 1902, Dec. 1902 to Dec. 1904, Jan. to May 1905 (gage heights only), June to Nov. 1905; Aug. 1910 to Feb. 1911 (gage heights only); Apr. 1914 to current year. Published as "at San Carlos" 1899--1911, as "near San Carlos" 1914--26, and as "at Coolidge Dam" 1927--38.

**REVISED RECORDS.**--WSP 629: 1915--16. WSP 1049: 1899--1904. WSP 1149: 19M), 1921, 1922(M), 1923, 1924(M). WSP 1283: Drainage area.

**GAGE.**--Water-stage recorder and Parshall flume. Datum of gage is 2,309.33 ft above sea level. Prior to Feb. 5, 1911, nonrecording gage at various sites and datums upstream from mouth of San Carlos River. Apr. 29, 1914, to Mar. 8, 1937, water-stage recorder at various sites within 1 mi upstream from present site at different datums. Mar. 27, 1979 to Oct. 10, 1980, and since Oct. 4, 1983, supplementary water-stage recorder at site on left bank 1,000 ft upstream at datum 2,309.5 ft above sea level, used above discharges at approximately 2,000 ft<sup>3</sup>/s, maximum capacity of parshall flume.

**REMARKS.**--Records good except for estimated daily discharges and those below 20 ft<sup>3</sup>/s, which are fair. Flow regulated by San Carlos Reservoir since Nov. 15, 1928. (See sta 09469000.) Record includes flow of Warm Springs, which enters between the dam and gage. Large diversions above San Carlos Reservoir for irrigation, metallurgical treatment of ore, and municipal supply; about 69,000 acres of land was irrigated, a considerable portion by pumping from ground water.

**AVERAGE DISCHARGE** (adjusted for storage in San Carlos Reservoir).--93 years (water years 1901, 1904, 1915--2005) 399 ft<sup>3</sup>/s, 289,100 acre-ft/yr; median of yearly mean discharges, 230 ft<sup>3</sup>/s, 166,600 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD.**--1914--28: Maximum discharge, 130,000 ft<sup>3</sup>/s Jan. 20, 1916, estimated on basis of peak discharge near Solomon and at Kelvin; no flow at times.

1928--2000: Maximum discharge, 32,800 ft<sup>3</sup>/s Jan. 20, 21, 1993 from calculated discharge over Coolidge Dam; no flow at times prior to 1938; minimum daily since 1938, 0.18 ft<sup>3</sup>/s Oct. 5--9 and 19--21, 2000.

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 867 ft<sup>3</sup>/s July 17; minimum daily discharge, 0.81 ft<sup>3</sup>/s Nov. 9--14 and 18--22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	1.1	179	45	117	157	702	442	596	798	792	708
2	112	1.1	173	45	117	258	755	452	622	798	781	706
3	113	1.1	173	20	117	258	785	473	636	797	424	706
4	113	1.1	173	2.0	130	258	526	502	665	797	304	706
5	113	1.1	173	2.0	146	258	668	515	679	796	426	706
6	113	1.1	95	1.7	146	258	746	515	685	795	426	706
7	113	1.1	50	1.7	148	258	745	515	689	820	518	706
8	113	0.95	63	1.7	223	258	744	515	689	835	510	704
9	69	0.81	70	1.7	279	258	744	515	688	834	447	689
10	41	0.81	83	1.7	283	260	744	515	717	833	325	656
11	41	0.81	97	1.7	191	289	743	515	734	833	282	606
12	41	0.81	117	37	3.3	349	723	515	734	832	330	563
13	41	0.81	147	58	2.0	371	702	532	734	831	330	523
14	19	0.81	158	58	e2.0	371	677	541	734	831	330	509
15	1.7	0.85	158	58	e1.7	373	653	556	733	831	374	424
16	1.7	1.1	158	58	e1.7	390	653	564	732	853	443	343
17	1.7	0.95	171	58	1.7	400	653	564	732	867	354	327
18	1.7	0.81	181	58	1.7	400	653	e581	731	866	550	327
19	1.8	0.81	181	125	1.7	400	653	e607	731	866	618	327
20	1.7	0.81	181	171	2.2	391	641	617	731	866	635	327
21	1.7	0.81	181	260	2.0	386	629	641	731	865	648	327
22	1.7	0.81	128	319	2.0	387	e629	656	730	864	590	327
23	1.6	40	101	319	2.0	387	e628	656	731	863	582	312
24	1.6	51	108	319	2.0	388	e628	656	759	631	624	303
25	1.4	42	108	287	2.0	387	e545	656	778	667	628	303
26	1.3	42	108	263	2.0	482	528	655	777	778	614	282
27	1.2	42	108	203	2.0	570	462	654	777	812	604	270
28	1.1	42	43	162	2.0	620	426	654	776	827	604	255
29	1.1	133	56	134	---	639	426	593	790	826	616	246
30	1.1	190	92	117	---	639	426	556	798	825	678	246
31	1.1	---	62	117	---	676	---	555	---	804	709	---
TOTAL	1178.2	602.46	3876	3305.2	1931.0	11776	19237	17483	21639	25341	16096	14140
MEAN	38.0	20.1	125	107	69.0	380	641	564	721	817	519	471
MAX	113	190	181	319	283	676	785	656	798	867	792	708
MIN	1.1	0.81	43	1.7	1.7	157	426	442	596	631	282	246
AC-FT	2340	1190	7690	6560	3830	23360	38160	34680	42920	50260	31930	28050

CAL YR 2004 TOTAL 47337.82 MEAN 129 MAX 487 MIN 0.78 AC-FT 93890  
WTR YR 2005 TOTAL 136604.86 MEAN 374 MAX 867 MIN 0.81 AC-FT 271000

e Estimated

09470500 SAN PEDRO RIVER AT PALOMINAS, AZ

**LOCATION**--Lat 31°22'48", long 110°06'38", in SW<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>, sec. 33, T.23 S., R.22 E., Cochise County, Hydrologic Unit 15050202, near left bank on downstream side of pier of bridge on State Highway 92, 0.7 mi east of Palominas, 2.5 mi upstream from Green Brush Draw, 4.5 mi downstream from international boundary, and 12 mi southwest of Bisbee.

**DRAINAGE AREA**--737 mi<sup>2</sup>, of which 649 mi<sup>2</sup> is in Mexico.

**PERIOD OF RECORD**--May 1930 to Oct. 1933, May 1935 to July 1941, July 1950 to Sept. 30, 1981 (discontinued as a continuous-record station; converted to a crest-stage partial-record station). Oct. 1995 to current year.

**GAGE**--Water-stage recorder. Datum of gage is 4,187.62 ft above sea level (State Highway Department benchmark). See WSP 1733 for history of changes prior to Nov. 24, 1955.

**REMARKS**--Records good except for estimated daily discharges, which are poor. Small diversions for irrigation of a few hundred acres above station, mostly in Mexico. Records show approximate flow of river at international boundary.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 22,000 ft<sup>3</sup>/s Aug. 14, 1940, gage height, 16.16 ft, present datum, from rating curve extended above 5,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times most years.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Greatest flood since at least 1906 occurred Sept. 28, 1926, gage height, about 23.9 ft, present datum, from floodmarks; discharge not determined.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 2,400 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
July 31.....	1515	*6,410	*14.66	Aug. 23.....	2215	2,760	9.91
Aug. 14.....	1245	3,000	10.27	Sept. 8.....	2030	2,980	10.24

Minimum daily discharge, no flow June 14 to July 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.11	0.03	0.33	0.92	2.1	2.4	0.57	0.12	0.01	0.00	e297	34
2	0.09	0.03	0.30	1.1	2.0	2.4	0.61	0.11	0.01	0.00	e158	33
3	0.07	0.04	0.29	1.3	2.0	2.4	0.63	0.11	0.01	0.00	56	32
4	0.07	0.04	0.34	1.2	2.2	2.5	0.66	0.11	0.01	0.00	850	31
5	0.07	0.03	0.36	1.1	2.3	2.5	0.69	0.09	0.01	0.00	36	110
6	0.07	0.03	0.61	1.1	38	2.4	0.63	0.09	0.01	0.00	144	48
7	0.08	0.04	0.61	1.1	25	2.3	0.61	0.10	0.01	0.00	126	147
8	0.08	0.06	0.58	1.0	5.3	2.2	0.55	0.08	0.01	0.00	60	1120
9	0.06	0.06	0.56	1.1	3.3	2.2	0.53	0.08	0.01	0.00	188	421
10	0.06	0.06	0.56	1.1	2.8	2.2	0.54	0.08	0.01	0.00	580	374
11	0.07	0.06	0.60	1.2	2.9	2.1	0.56	0.06	0.01	0.00	e118	90
12	0.06	0.06	0.65	1.2	79	2.0	0.54	0.06	0.01	0.00	e214	22
13	0.06	0.06	0.60	1.2	159	1.9	0.43	0.06	0.01	0.00	457	14
14	0.06	0.08	0.57	1.2	39	1.5	0.36	0.06	0.00	0.00	1860	11
15	0.04	0.08	0.63	1.2	13	1.0	0.31	0.06	0.00	0.00	452	8.3
16	0.04	0.08	0.68	1.2	6.2	0.73	0.24	0.05	0.00	0.00	137	6.9
17	0.04	0.08	0.63	1.2	4.7	0.70	0.19	0.07	0.00	0.00	545	5.8
18	0.04	0.08	0.66	1.2	3.8	0.71	0.17	0.07	0.00	0.00	e227	4.7
19	0.04	0.08	0.70	1.2	3.4	0.75	0.16	0.08	0.00	0.00	335	4.4
20	0.04	0.08	0.71	1.2	3.1	0.75	0.16	0.07	0.00	0.00	103	4.0
21	0.03	0.08	0.82	1.44	2.9	0.76	0.17	0.06	0.00	0.00	64	3.5
22	0.03	0.10	0.84	35	3.0	0.77	0.17	0.05	0.00	0.00	51	3.3
23	0.03	0.11	0.84	4.8	2.7	0.77	0.16	0.05	0.00	0.00	710	2.8
24	0.02	0.12	0.77	3.6	2.5	0.77	0.18	0.15	0.00	195	469	2.4
25	0.02	e0.11	0.76	2.9	2.5	0.75	0.17	0.13	0.00	52	142	2.2
26	0.05	e0.12	0.81	2.7	2.5	0.71	0.14	0.57	0.00	29	107	1.9
27	0.04	e0.16	0.83	2.8	2.4	0.68	0.14	0.28	0.00	e508	88	1.8
28	0.03	e0.20	0.84	2.4	2.4	0.68	0.13	0.05	0.00	e0.72	58	1.4
29	0.04	e0.25	0.96	2.2	---	0.65	0.13	0.04	0.00	e0.09	47	1.2
30	0.04	e0.32	1.4	2.2	---	0.64	0.13	0.02	0.00	447	41	1.1
31	0.03	---	0.95	2.1	---	0.61	---	0.02	---	2870	36	---
TOTAL	1.61	2.73	20.79	227.72	420.0	43.43	10.66	3.03	0.13	4101.81	8756	2542.7
MEAN	0.05	0.09	0.67	7.35	15.0	1.40	0.36	0.10	0.00	132	282	84.8
MAX	0.11	0.32	1.4	144	159	2.5	0.69	0.57	0.01	2870	1860	1120
MIN	0.02	0.03	0.29	0.92	2.0	0.61	0.13	0.02	0.00	0.00	36	1.1
AC-FT	3.2	5.4	41	452	833	86	21	6.0	0.3	8140	17370	5040

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2005, BY WATER YEAR (WY)

MEAN	37.7	6.12	19.0	18.6	8.55	6.90	1.91	0.61	3.70	85.0	128	26.0
MAX	770	133	414	452	73.5	75.8	14.6	4.63	55.3	280	591	275
(WY)	1978	2001	1979	1979	1979	1978	1979	1979	2000	1959	1954	1958
MIN	0.00	0.00	0.10	0.04	0.07	0.22	0.00	0.00	0.00	0.26	2.68	0.03
(WY)	1966	1966	1954	1954	1954	1972	1969	1965	1962	1997	1962	2000

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1950 - 2005

ANNUAL TOTAL	5043.39			16130.61			29.2				
ANNUAL MEAN	13.8			44.2			93.3				
HIGHEST ANNUAL MEAN							4.16				
LOWEST ANNUAL MEAN							1979				
HIGHEST DAILY MEAN	1620			Sep 20	2870			Jul 31	10300		
LOWEST DAILY MEAN	0.00			Jun 7	0.00			Jun 14	0.00		
ANNUAL SEVEN-DAY MINIMUM	0.00			Jun 7	0.00			Jun 14	0.00		
ANNUAL RUNOFF (AC-FT)	10000			32000			21150				
10 PERCENT EXCEEDS	2.1			62			28				
50 PERCENT EXCEEDS	0.23			0.61			1.1				
90 PERCENT EXCEEDS	0.00			0.00			0.00				

e Estimated

## GILA RIVER BASIN

## 09470700 BANNING CREEK NEAR BISBEE, AZ

**LOCATION.**--Lat 31°30'12", long 110°00'17", in NE1/4SE1/4 sec. 21, T.23 S., R. 22 E., Cochise County, Hydrologic Unit 15050202, on the right bank, about 8 mi above the confluence with the San Pedro River and 6 mi northwest of Bisbee, AZ.

**DRAINAGE AREA.**--8.74 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Feb. 8, 2001, to current year.

**GAGE.**--Water-stage recorder and concrete control. Elevation of gage is 4,767.81 ft above sea level.

**REMARKS.**--Records fair, except for discharges above 40 ft<sup>3</sup>/s, which are poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 1,288 ft<sup>3</sup>/s Aug. 4, 2002 at 1130, gage height, 5.04 ft.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 57 ft<sup>3</sup>/s Aug. 23 at 1515, gage height 2.56 ft. Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.45	0.00	0.00	0.00	1.5	0.75	0.13	0.00	0.00	0.00	0.00	1.6
2	0.45	0.00	0.00	0.00	1.4	0.78	0.11	0.00	0.00	0.00	0.00	1.3
3	0.42	0.00	0.00	0.00	1.1	0.79	0.10	0.00	0.00	0.00	0.00	1.2
4	0.38	0.00	0.00	0.00	0.89	0.76	0.10	0.00	0.00	0.00	0.00	1.1
5	0.36	0.00	0.00	0.00	0.93	0.68	0.10	0.00	0.00	0.00	0.00	0.96
6	0.35	0.00	0.00	1.8	2.4	0.67	0.08	0.00	0.00	0.00	0.00	0.78
7	0.32	0.00	0.00	1.8	3.7	0.62	0.08	0.00	0.00	0.00	0.02	0.70
8	0.27	0.00	0.00	1.5	3.3	0.56	0.06	0.00	0.00	0.00	0.00	0.67
9	0.23	0.00	0.00	1.2	2.9	0.55	0.06	0.00	0.00	0.00	0.00	0.60
10	0.20	0.00	0.00	1.00	2.8	0.54	0.06	0.00	0.00	0.00	0.00	0.55
11	0.16	0.00	0.00	0.89	3.2	0.50	0.05	0.00	0.00	0.00	0.00	0.50
12	0.10	0.00	0.00	0.90	31	0.45	0.05	0.00	0.00	0.00	0.00	0.44
13	0.09	0.00	0.00	0.70	21	0.45	0.04	0.00	0.00	0.00	0.00	0.39
14	0.07	0.00	0.00	0.60	12	0.45	0.04	0.00	0.00	0.00	1.5	0.30
15	0.06	0.00	0.00	0.57	7.4	0.45	0.04	0.00	0.00	0.00	3.2	0.25
16	0.05	0.00	0.00	0.55	5.2	0.41	0.03	0.00	0.00	0.00	2.4	0.20
17	0.05	0.00	0.00	0.56	4.0	0.37	0.02	0.00	0.00	0.00	2.6	0.23
18	0.04	0.00	0.00	0.55	3.2	0.36	0.01	0.00	0.00	0.00	3.2	0.23
19	0.03	0.00	0.00	0.55	2.7	0.36	0.00	0.00	0.00	0.00	2.2	0.13
20	0.01	0.00	0.00	0.55	2.3	0.36	0.00	0.00	0.00	0.00	1.6	0.12
21	0.00	0.00	0.00	0.56	1.9	0.28	0.00	0.00	0.00	0.00	1.4	0.12
22	0.00	0.00	0.00	0.55	1.7	0.23	0.00	0.00	0.00	0.00	1.1	0.11
23	0.00	0.00	0.00	0.55	1.5	0.21	0.00	0.00	0.00	0.00	9.9	0.09
24	0.00	0.00	0.00	0.52	1.3	0.21	0.00	0.00	0.00	0.00	6.9	0.08
25	0.00	0.00	0.00	0.51	1.2	0.20	0.00	0.00	0.00	0.00	4.6	0.07
26	0.00	0.00	0.00	0.55	1.1	0.19	0.00	0.00	0.00	0.00	3.4	0.06
27	0.00	0.00	0.00	0.55	1.00	0.17	0.00	0.00	0.00	0.00	2.6	0.06
28	0.00	0.00	0.00	1.8	0.86	0.16	0.00	0.00	0.00	0.00	2.1	0.06
29	0.00	0.00	0.00	2.3	---	0.15	0.00	0.00	0.00	0.00	1.7	0.05
30	0.00	0.00	0.00	2.2	---	0.15	0.00	0.00	0.00	0.00	1.6	0.04
31	0.00	---	0.00	1.8	---	0.14	---	0.00	---	0.00	1.7	---
TOTAL	4.09	0.00	0.00	25.61	123.48	12.95	1.16	0.00	0.00	0.00	53.72	12.99
MEAN	0.13	0.00	0.00	0.83	4.41	0.42	0.04	0.00	0.00	0.00	1.73	0.43
MAX	0.45	0.00	0.00	2.3	31	0.79	0.13	0.00	0.00	0.00	9.9	1.6
MIN	0.00	0.00	0.00	0.00	0.86	0.14	0.00	0.00	0.00	0.00	0.00	0.04
MED	0.05	0.00	0.00	0.56	2.3	0.41	0.04	0.00	0.00	0.00	1.5	0.24
AC-FT	8.1	0.00	0.00	51	245	26	2.3	0.00	0.00	0.00	107	26

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2005, BY WATER YEAR (WY)

MEAN	0.03	0.00	0.00	0.21	0.95	0.10	0.12	0.02	0.00	0.48	2.81	0.18
MAX	0.13	0.00	0.00	0.83	4.41	0.42	0.40	0.05	0.00	2.29	6.59	0.43
(WY)	2005	2002	2002	2005	2005	2005	2004	2001	2001	2001	2001	2005
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2001	2002	2003	2003

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2001 - 2005	
ANNUAL TOTAL	29.10		234.00			
ANNUAL MEAN	0.08		0.64		0.43	
HIGHEST ANNUAL MEAN					1.24	
LOWEST ANNUAL MEAN					0.00	
HIGHEST DAILY MEAN	3.5	Jul 14	31	Feb 12	78	Aug 4 2002
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 21	0.00	May 13 2001
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 21	0.00	May 13 2001
ANNUAL RUNOFF (AC-FT)	58		464		312	
10 PERCENT EXCEEDS	0.28		1.6		0.53	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

09470750 RAMSEY CANYON NEAR SIERRA VISTA, AZ

LOCATION--Lat 31°26'48", long 110°18'21", in NW1/4SW1/4NW1/4 sec. 10, T.23 S., R.20 E., Cochise County, Hydrologic Unit 15050202, on left bank 3.4 mi northwest of Nicksville, in the Coronado National Forest, and approximately 8.7 mi upstream from the confluence of the San Pedro River.

DRAINAGE AREA--Undetermined.

PERIOD OF RECORD--May 2000 to current year. Published as "near Nicksville, AZ" prior to October 2000.

GAGE--Water-stage recorder, crest stage gage, and V-notch sharp-crested weir. Elevation of gage is 5,525 ft above sea level from topographic map.

REMARKS--Records good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD--Maximum discharge, 117 ft<sup>3</sup>/s Oct. 22, 2000, gage height 3.44 ft; no flow at times.

EXTREMES FOR CURRENT YEAR--Maximum discharge, 56 ft<sup>3</sup>/s Aug. 24 at 1645, gage height 3.05 ft. Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	0.01	0.05	0.05	0.38	1.4	0.48	0.26	0.10	0.01	0.01	3.6
2	0.03	0.02	0.05	0.05	0.40	1.3	0.47	0.25	0.10	0.01	0.01	3.9
3	0.03	0.02	0.05	e0.21	0.41	1.3	0.46	0.25	0.09	0.01	0.01	2.8
4	0.03	0.02	0.04	e1.3	0.47	1.3	0.44	0.24	0.09	0.01	0.01	2.4
5	0.02	0.02	0.05	e0.98	0.53	1.2	0.44	0.23	0.08	0.01	0.01	2.2
6	0.02	0.02	0.05	e0.49	0.58	1.2	0.43	0.23	0.07	0.01	0.01	1.9
7	0.02	0.02	0.04	e0.33	0.57	1.1	0.42	0.22	0.07	0.01	0.01	2.1
8	0.01	0.02	0.04	0.27	0.57	1.1	0.42	0.21	0.06	0.01	0.01	2.2
9	0.01	0.02	0.04	0.24	0.57	1.0	0.41	0.20	0.06	0.01	0.02	2.1
10	0.01	0.02	0.03	0.20	0.59	1.00	0.39	0.19	0.06	0.01	0.62	1.9
11	0.01	0.02	0.03	0.17	e0.89	0.95	0.39	0.18	0.05	0.01	0.27	1.7
12	0.01	0.02	0.03	0.17	e2.1	0.92	0.40	0.18	0.05	0.01	e9.0	1.6
13	0.01	0.02	0.03	0.17	e2.1	0.89	0.40	0.17	0.05	0.00	e12	1.4
14	0.01	0.02	0.03	0.18	2.4	0.86	0.38	0.16	0.04	0.00	7.5	1.3
15	0.01	0.03	0.03	0.19	2.2	0.83	0.37	0.14	0.04	0.00	6.0	1.2
16	0.01	0.03	0.03	0.21	2.2	0.78	0.36	0.14	0.04	0.00	3.0	1.1
17	0.01	0.03	0.03	0.24	2.2	0.74	0.35	0.13	0.03	0.00	2.5	1.2
18	0.01	0.03	0.03	0.26	2.2	0.71	0.33	0.13	0.03	0.00	3.1	0.97
19	0.01	0.03	0.03	0.28	2.1	0.69	0.32	0.12	0.03	0.00	4.9	0.90
20	0.01	0.03	0.04	0.30	2.0	0.67	0.30	0.11	0.03	0.00	3.0	0.81
21	0.01	0.03	0.04	0.34	1.8	0.66	0.32	0.09	0.03	0.00	2.3	0.66
22	0.01	0.03	0.04	0.35	1.8	0.64	0.31	0.09	0.03	0.00	2.1	0.62
23	0.01	0.04	0.04	0.34	1.7	0.61	0.31	0.09	0.03	0.00	2.3	0.57
24	0.01	0.04	0.04	0.36	1.6	0.61	0.33	0.11	0.03	0.00	e14	0.62
25	0.01	0.04	0.04	0.34	1.6	0.59	0.32	0.12	0.03	0.00	e20	0.68
26	0.01	0.04	0.04	0.40	1.5	0.57	0.30	0.13	0.02	0.00	12	e0.67
27	0.01	0.05	0.04	0.43	1.5	0.55	0.29	0.12	0.02	0.00	9.5	e0.65
28	0.01	0.04	0.04	0.41	1.4	0.53	0.28	0.13	0.02	0.00	7.9	e0.63
29	0.01	0.05	0.05	0.39	---	0.52	0.28	0.13	0.01	0.00	6.1	0.61
30	0.01	0.05	0.06	0.37	---	0.51	0.27	0.13	0.01	0.00	5.2	0.59
31	0.01	---	0.05	0.37	---	0.49	---	0.12	---	0.01	4.2	---
TOTAL	0.42	0.86	1.23	10.39	38.36	26.22	10.97	5.00	1.40	0.13	137.59	43.58
MEAN	0.01	0.03	0.04	0.34	1.37	0.85	0.37	0.16	0.05	0.00	4.44	1.45
MAX	0.03	0.05	0.06	1.3	2.4	1.4	0.48	0.26	0.10	0.01	20	3.9
MIN	0.01	0.01	0.03	0.05	0.38	0.49	0.27	0.09	0.01	0.00	0.01	0.57
MED	0.01	0.03	0.04	0.30	1.6	0.78	0.36	0.14	0.04	0.00	3.0	1.2
AC-FT	0.8	1.7	2.4	21	76	52	22	9.9	2.8	0.3	273	86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2005, BY WATER YEAR (WY)

	2000	2001	2002	2003	2004	2005
MEAN	1.89	1.23	0.36	0.24	0.42	0.38
MAX	9.24	5.97	1.54	0.63	1.37	0.85
(WY)	2001	2001	2001	2001	2005	2005
MIN	0.01	0.03	0.04	0.05	0.05	0.06
(WY)	2005	2003	2004	2003	2003	2003

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 2000 - 2005
ANNUAL TOTAL	70.64	276.15	
ANNUAL MEAN	0.19	0.76	0.59
HIGHEST ANNUAL MEAN			1.89
LOWEST ANNUAL MEAN			0.03
HIGHEST DAILY MEAN	1.8	Apr 3	20
LOWEST DAILY MEAN	0.01	Jul 31	0.00
ANNUAL SEVEN-DAY MINIMUM	0.01	Aug 21	0.00
ANNUAL RUNOFF (AC-FT)	140	548	428
10 PERCENT EXCEEDS	0.63	2.0	1.2
50 PERCENT EXCEEDS	0.05	0.17	0.07
90 PERCENT EXCEEDS	0.01	0.01	0.00

e Estimated



## 09470800 GARDEN CANYON NEAR FORT HUACHUCA, AZ

**LOCATION.**--Lat 31°28'22", long 110°20'50", in NW1/4SE1/4 sec. 31, T.22 S., R.20 E. (unsurveyed), on right bank in Fort Huachuca (U.S. Army) Military Reservation, 2.4 mi southeast of Huachuca Peak, 5.5 mi south of Fort Huachuca, and 6.4 mi northwest of Miller Peak.

**DRAINAGE AREA.**--8.38 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Oct. 1959 to June 1965, Dec. 1993 to current year.

**GAGE.**--Water-stage recorder and concrete control with 90° V-notch weir. Elevation of gage is 5,400 ft above sea level from topographic map.

**REMARKS.**--Records good except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 382 ft<sup>3</sup>/s Oct. 23, 2000, gage height 3.69 ft; no flow at times.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 20 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 10 .....	1245	29	2.77	Aug. 19 .....	1430	50	2.93
Aug. 12 .....	2100	*193	*3.45	Aug. 25 .....	1600	30	2.78

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.05	0.00	0.00	0.07	0.73	1.5	0.43	0.12	0.05	0.00	0.00	8.4
2	0.04	0.00	0.00	0.09	0.70	1.4	0.41	0.12	0.04	0.00	0.00	7.5
3	0.03	0.00	0.00	0.18	0.66	1.3	0.39	0.10	0.03	0.00	0.00	6.7
4	0.02	0.00	0.01	0.45	0.64	1.3	0.38	0.09	0.02	0.00	0.00	5.8
5	0.01	0.00	0.00	0.94	0.64	1.2	0.37	0.08	0.01	0.00	0.00	4.8
6	0.01	0.00	0.03	0.97	0.65	1.2	0.36	0.08	0.01	0.00	0.00	4.3
7	0.01	0.00	0.02	0.91	0.58	1.1	0.34	0.07	0.00	0.00	0.00	4.3
8	0.00	0.00	0.04	0.74	0.54	1.1	0.32	0.07	0.00	0.00	0.00	4.3
9	0.00	0.00	0.04	0.65	0.51	1.0	0.33	0.06	0.00	0.00	0.00	4.2
10	0.00	0.00	0.04	0.58	0.50	0.96	0.33	0.06	0.00	0.00	6.0	3.7
11	0.00	0.00	0.04	0.54	0.67	0.90	0.32	0.05	0.00	0.00	6.2	3.4
12	0.00	0.00	0.03	0.63	2.9	0.86	0.29	0.05	0.00	0.00	21	2.9
13	0.00	0.00	0.03	0.59	15	0.82	0.27	0.04	0.00	0.00	42	2.6
14	0.00	0.00	0.03	0.57	9.8	0.80	0.25	0.03	0.00	0.00	21	2.4
15	0.00	0.00	0.04	0.55	4.8	0.78	0.24	0.02	0.00	0.00	20	2.4
16	0.00	0.00	0.05	0.54	4.1	0.75	0.23	0.02	0.00	0.00	15	2.2
17	0.00	0.00	0.05	0.51	3.6	0.72	0.22	0.01	0.00	0.00	12	e2.1
18	0.00	0.00	0.06	0.48	3.2	0.69	0.21	0.01	0.00	0.00	12	e2.0
19	0.00	0.00	0.06	0.45	2.8	0.69	0.21	0.01	0.00	0.00	39	e1.9
20	0.00	0.00	0.06	0.43	2.4	0.66	0.20	0.00	0.00	0.00	32	e1.9
21	0.00	0.00	0.05	0.45	2.2	0.64	0.19	0.00	0.00	0.00	19	e1.7
22	0.00	0.00	0.05	0.45	2.1	0.63	0.18	0.00	0.00	0.00	14	e1.6
23	0.00	0.00	0.05	0.41	1.9	0.59	0.17	0.00	0.00	0.00	13	e1.5
24	0.00	0.00	0.06	0.42	1.8	0.57	0.19	0.01	0.00	0.00	15	e1.4
25	0.00	0.00	0.06	0.40	1.8	0.56	0.19	0.04	0.00	0.00	24	e1.3
26	0.00	0.00	0.06	0.48	1.7	0.54	0.17	0.06	0.00	0.00	24	e1.2
27	0.00	0.00	0.05	0.55	1.6	0.53	0.15	0.06	0.00	0.00	18	e1.1
28	0.00	0.00	0.05	0.63	1.6	0.50	0.14	0.25	0.00	0.00	15	e1.0
29	0.00	0.00	0.07	0.76	---	0.49	0.14	0.07	0.00	0.00	13	0.98
30	0.00	0.00	0.06	0.80	---	0.47	0.14	0.06	0.00	0.00	11	0.93
31	0.00	---	0.06	0.77	---	0.45	---	0.06	---	0.00	9.5	---
TOTAL	0.17	0.00	1.25	16.99	70.12	25.70	7.76	1.70	0.16	0.00	401.70	90.51
MEAN	0.01	0.00	0.04	0.55	2.50	0.83	0.26	0.05	0.01	0.00	13.0	3.02
MAX	0.05	0.00	0.07	0.97	15	1.5	0.43	0.25	0.05	0.00	42	8.4
MIN	0.00	0.00	0.00	0.07	0.50	0.45	0.14	0.00	0.00	0.00	0.00	0.93
AC-FT	0.3	0.00	2.5	34	139	51	15	3.4	0.3	0.00	797	180
CFSM	0.00	0.00	0.00	0.07	0.30	0.10	0.03	0.01	0.00	0.00	1.55	0.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
	2.07	28.1	2001	0.00	1998
	1.20	11.9	2001	0.00	1998
	1.03	7.03	1995	0.00	2004
	1.73	11.5	1960	0.00	2004
	1.79	12.1	1995	0.00	2004
	1.35	6.15	1998	0.04	2000
	1.05	5.18	1998	0.00	2000
	0.41	1.94	1998	0.00	2000
	0.15	0.74	1995	0.00	1961
	0.48	2.23	1998	0.00	1994
	2.98	13.0	2005	0.00	1997
	1.94	14.5	1963	0.03	2003

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1960 - 2005

ANNUAL TOTAL	113.73	616.06	
ANNUAL MEAN	0.31	1.69	1.34
HIGHEST ANNUAL MEAN			5.06
LOWEST ANNUAL MEAN			0.04
HIGHEST DAILY MEAN	4.1	42	260
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
ANNUAL RUNOFF (AC-FT)	226	1220	969
ANNUAL RUNOFF (CFSM)	0.037	0.201	0.160
10 PERCENT EXCEEDS	0.92	3.6	3.2
50 PERCENT EXCEEDS	0.00	0.07	0.24
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

09471000 SAN PEDRO RIVER AT CHARLESTON, AZ

**LOCATION**--Lat 31°37'33", long 110°10'26", in NE1/4NE1/4 sec. 11, T.21 S., R.21 E., Cochise County, Hydrologic Unit 15050202, in Spanish land grant of San Juan de las Boquillas y Nogales, at downstream side of pier near center of highway bridge, 0.3 mi south of Charleston, 1.5 mi upstream from Charleston damsite, and 9 mi upstream from Babocomari River.

**DRAINAGE AREA**--1,234 mi<sup>2</sup>, of which 696 mi<sup>2</sup> is in Mexico.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD**--Jan. and Feb. 1904 (gage heights only); Mar. 1904 to Aug. 1906; Nov. 1910 to Dec. 1911 (gage heights only); Sept. 1912 to current year. Monthly discharge only Oct. 1926 to May 1928 and Dec. 1933 to Apr. 1935, published in WSP 1313. Published as "near Lewis Springs" 1910-11, and as "near Fairbank" 1911-26.

**REVISED RECORDS**--WSP 1119: 1939(M). WSP 1213: 1914, 1916(M), 1918(M), 1919, 1920(M), 1922-23(M), WDR AZ-90-1: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 3,954.01 ft above sea level. Prior to Dec. 1, 1942, nonrecording gage or water-stage recorder at various sites within 6.5 mi downstream at different datums.

**REMARKS**--Records good except for discharges higher than 350 ft<sup>3</sup>/s, which are fair and estimated daily discharges, which are poor. Diversions above station, mostly by pumping from ground water, for irrigation of 3,200 acres in 1978, excluding an unknown amount in Mexico. Record shows flow available at Charleston damsite.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, about 98,000 ft<sup>3</sup>/s Sept. 28, 1926, gage height, 21.9 ft, site and datum then in use, by slope-area measurement of peak flow; minimum daily discharge since 1928, 0.05 ft<sup>3</sup>/s June 14-16, 1994, gage height, 2.02 ft.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 1 .....	0245	4,260	8.00
Aug. 12 .....	2345	*4,280	*8.01
Aug. 14 .....	1130	3,430	7.50

Minimum daily discharge, 0.00 ft<sup>3</sup>/s, July 9-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	3.8	6.0	7.4	11	12	10	5.6	3.1	e0.19	1510	16
2	6.1	4.1	6.1	7.8	11	12	9.9	5.6	2.9	e0.14	125	15
3	5.7	4.2	6.2	8.0	11	12	9.5	5.6	e2.9	e0.08	263	15
4	5.3	4.2	6.3	8.0	11	12	9.2	5.5	e2.6	e0.03	586	13
5	5.0	4.3	6.4	7.7	11	12	9.1	5.4	e2.4	e0.02	205	71
6	4.8	4.5	6.4	7.8	12	13	9.2	5.3	2.2	0.01	71	42
7	4.7	4.3	6.3	7.8	32	13	8.8	5.3	1.9	0.01	348	31
8	4.5	4.6	6.3	7.8	20	13	8.2	5.3	1.7	0.01	353	228
9	4.4	4.6	6.3	7.8	15	12	7.8	5.1	1.6	0.00	222	646
10	4.4	4.7	6.3	8.0	14	12	7.5	4.8	1.6	0.00	428	112
11	4.3	4.5	6.3	7.8	13	12	7.5	4.7	1.5	0.00	309	252
12	4.4	4.6	6.6	7.8	13	12	7.7	4.7	1.4	0.00	776	49
13	4.5	4.9	6.2	7.8	83	12	7.5	4.6	1.4	0.00	1430	33
14	4.3	5.4	6.2	7.9	56	12	7.2	4.1	1.3	0.00	1440	27
15	4.3	5.5	6.3	7.8	29	12	7.1	3.9	1.1	e0.00	1480	23
16	4.3	5.7	6.3	7.7	20	12	7.3	3.7	0.98	e0.00	131	21
17	4.4	6.0	6.2	7.8	16	12	7.1	3.5	0.90	e11	169	19
18	4.6	5.9	6.4	7.8	15	12	6.9	3.5	0.86	e18	453	17
19	4.7	5.8	6.5	7.8	14	13	6.6	3.3	0.88	e1.5	234	16
20	4.4	5.9	6.7	7.8	13	12	6.5	3.1	0.95	1.3	133	16
21	4.5	6.4	6.7	8.4	13	12	6.4	2.6	0.85	1.0	51	14
22	4.6	6.6	6.8	94	13	12	6.3	e2.5	0.69	0.32	306	14
23	4.5	6.8	6.8	23	12	12	6.2	e2.5	0.67	0.40	174	13
24	4.4	6.7	6.9	16	12	12	6.3	e2.8	0.69	65	843	12
25	4.4	6.6	6.9	14	12	12	6.2	4.1	0.69	111	136	11
26	4.6	6.0	7.1	14	12	11	6.1	4.1	0.55	13	73	10
27	4.5	6.1	7.3	13	12	11	5.9	3.5	0.40	331	56	9.7
28	3.7	6.2	e7.4	12	12	11	5.8	4.2	0.45	89	36	9.3
29	3.8	6.1	e7.5	12	---	11	5.8	4.0	0.44	11	26	8.9
30	3.9	5.9	7.5	11	---	10	5.8	3.4	0.31	360	20	8.4
31	4.0	---	7.4	11	---	9.9	---	3.3	---	809	18	---
TOTAL	142.5	160.9	204.6	384.5	518	367.9	221.4	129.6	39.91	1823.01	12405	1772.3
MEAN	4.60	5.36	6.60	12.4	18.5	11.9	7.38	4.18	1.33	58.8	400	59.1
MAX	6.5	6.8	7.5	94	83	13	10	5.6	3.1	809	1510	646
MIN	3.7	3.8	6.0	7.4	11	9.9	5.8	2.5	0.31	0.00	18	8.4
MED	4.5	5.6	6.4	7.8	13	12	7.2	4.1	1.1	0.19	222	16
AC-FT	283	319	406	763	1030	730	439	257	79	3620	24610	3520
CFSM	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.05	0.32	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
	40.9	1087	1978	2.66	2003
	17.9	132	2001	4.00	2004
	45.0	1230	1915	5.15	2003
	38.8	507	1979	5.81	1999
	27.3	217	1915	7.18	1923
	23.6	160	1905	8.04	1999
	13.1	66.5	1917	3.03	1913
	8.22	37.2	1925	2.42	1918
	11.5	167	1921	1.19	1990
	135	876	1954	0.55	1997
	212	968	1926	9.97	1962
	78.8	1887	1926	3.22	2002

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1904 - 2005
ANNUAL TOTAL	5543.73	18169.62	
ANNUAL MEAN	15.1	49.8	55.2
HIGHEST ANNUAL MEAN			286
LOWEST ANNUAL MEAN			9.73
HIGHEST DAILY MEAN	1280 Sep 20	1510 Aug 1	2880 Sep 27 1926
LOWEST DAILY MEAN	0.29 Jul 7	0.00 Jul 9	0.00 Jul 9 2005
ANNUAL SEVEN-DAY MINIMUM	0.40 Jul 4	0.00 Jul 9	0.00 Jul 9 2005
ANNUAL RUNOFF (AC-FT)	11000	36040	40000
ANNUAL RUNOFF (CFSM)	0.012	0.040	0.045
10 PERCENT EXCEEDS	9.8	71	68
50 PERCENT EXCEEDS	6.3	7.1	13
90 PERCENT EXCEEDS	1.5	1.3	3.5

e Estimated

## 09471000 SAN PEDRO RIVER AT CHARLESTON, AZ—CONTINUED

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1963 to Sept. 1975, Dec. 1986 to Sept. 1993, Feb. 1996 to May 2005 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1964 to Sept. 1975, Oct. 1996 to Sept. 1998.

WATER TEMPERATURE: July 1963 to Sept. 1975, Oct. 1996 to Sept. 1998.

SUSPENDED-SEDIMENT DISCHARGE: July 1963 to Sept. 1975.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 correctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, unfltrd, mg/L (00915)	Calcium water, unfltrd recover-able, mg/L (00916)	
DEC	15...	1240	6.5	3.6	667	9.4	98	8.2	522	15.0	11.0	190	53.8	52.5
MAR	09...	1220	13	12	666	8.6	101	8.3	546	21.0	16.4	200	57.7	58.1
MAY	12...	1335	4.9	9.0	660	8.3	114	8.3	460	27.0	23.9	160	43.9	45.3
Date	Time	Magnesium, water, unfltrd, mg/L (00925)	Magnesium, water, recover-able, mg/L (00927)	Potassium, water, unfltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, unfltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, unfltrd, mg/L (00940)	Fluoride, water, unfltrd, mg/L (00950)	Sulfate, water, unfltrd, mg/L (00945)	Residue water, unfltrd, sum of constituents, mg/L (70301)	Residue water, unfltrd, sum of constituents, mg/L (70303)
DEC	15...	13.6	13.1	2.15	1	40.1	233	275	5	9.13	.7	28.9	289	.42
MAR	09...	13.1	12.7	2.19	1	42.1	230	274	4	9.48	.6	37.8	302	.45
MAY	12...	13.1	12.6	2.01	1	38.1	204	244	2	7.71	.8	22.2	250	.40
Date	Time	Residue on evap. at 180degC, mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia, water, unfltrd, mg/L as N (00608)	Nitrite + nitrate, water, unfltrd, mg/L as N (00631)	Phosphorus, water, unfltrd, mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)	Anti-mony, water, unfltrd, ug/L (01095)	Anti-mony, water, unfltrd, ug/L (01097)	Arsenic, water, unfltrd, ug/L (01000)	Arsenic, water, unfltrd, ug/L (01002)	Barium, water, unfltrd, recover-able, ug/L (01007)	Beryllium, water, unfltrd, recover-able, ug/L (01010)
DEC	15...	312	<10	.14	<.04	<.06	.03	E5k	E.12n	<.2	3.9	3	152	<.06
MAR	09...	329	10	.14	<.04	<.06	.03	24	.23	.2	3.5	3	153	<.06
MAY	12...	293	<10	.13	<.04	<.06	.04	E3k	.21	E.2n	4.7	6	129	<.06
Date	Time	Beryllium, water, unfltrd recover-able, ug/L (01012)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium, water, unfltrd, ug/L (01025)	Cadmium, water, unfltrd, ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)	Copper, water, unfltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Lead, water, unfltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury, water, unfltrd, ug/L (71890)	Mercury, water, unfltrd recover-able, ug/L (71900)	Selenium, water, unfltrd, ug/L (01147)
DEC	15...	<.06	70	<.04	E.02n	<.8	1.3	3.0	<.08	.14	41	<.01	<.01	.8
MAR	09...	E.04n	65	<.04	E.02n	E.5n	1.7	4.4	<.08	.68	60	<.01	<.01	.6
MAY	12...	<.06	79	<.04	E.02n	E.7n	1.8	3.8	.16	.55	75	<.01	<.01	.7
Date	Time	Zinc, water, unfltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)									
DEC	15...	.8	E1n	3	.07									
MAR	09...	1.0	3	15	.38									
MAY	12...	3.1c	2	14	.19									

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

c -- See laboratory comment  
k -- Counts outside acceptable range  
n -- Below the LRL and above the LT-MDL

## 09471000 SAN PEDRO RIVER AT CHARLESTON, AZ—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Water-quality measurements in the following table were made as part of the ADEQ Fixed-Station Network Program. The following analyses are quality-assurance samples processed during the 2005 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

Date	Time	Sample type	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd, uS/cm 25 degC (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Phos- phorus, water, unfltrd, mg/L (00665)	Beryll- ium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)
MAY 12...	1200	2	5.3	1	28.0	24.2	<.10	<.04	<.06	<.02	<.06	<.04	<.4

Date	Lead, water, fltrd, ug/L (01049)	Mercury water, fltrd, ug/L (71890)	Zinc, water, fltrd, ug/L (01090)
MAY 12...	<.08	<.01	E.5n

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

n -- Below the LRL and above the LT-MDL

## 09471310 HUACHUCA CANYON NEAR FORT HUACHUCA, AZ

**LOCATION.**--Lat 31°31'01", long 110°23'13", in NE1/4SW1/4 sec.14, T.22 S., R.19 E. (unsurveyed), Cochise County, Hydrologic Unit 15050202, on right bank in Fort Huachuca (U.S. Army) Military Reservation, 1.9 mi north of Huachuca Peak, 9.5 mi above confluence with the Babocomari River.

**DRAINAGE AREA.**--Undetermined.

**PERIOD OF RECORD.**--Apr. 2000 to current year.

**REVISED RECORDS.**--2004 (M).

**GAGE.**--Water-stage recorder and concrete control with 90° V-notch weir. Elevation of gage is 5,600 ft above sea level from topographic map.

**REMARKS.**--Records good except for estimated daily discharges, which are fair.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 98 ft<sup>3</sup>/s Oct. 23, 2000. Minimum daily discharge, no flow at times in most years.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 1.5 ft<sup>3</sup>/s Sept. 7 at 1930, gage height 2.85 ft. Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.01	0.01	0.01	0.01	0.05	0.02	0.01	0.00	0.00	0.00	0.00
2	0.01	0.01	0.01	0.01	0.01	0.05	0.02	0.00	0.00	0.00	0.00	0.00
3	0.01	0.01	0.01	0.01	0.01	0.05	0.02	0.00	0.00	0.00	0.00	0.00
4	0.01	0.01	0.01	0.01	0.01	0.05	0.02	0.00	0.00	0.00	0.00	0.00
5	0.01	0.01	0.01	0.01	0.01	e0.05	0.01	0.00	0.00	0.00	0.00	0.00
6	0.01	0.01	0.01	0.01	0.01	e0.05	0.02	0.00	0.00	0.00	0.00	0.00
7	0.01	0.01	0.01	0.01	0.01	0.04	0.02	0.00	0.00	0.00	0.00	0.12
8	0.01	0.01	0.01	0.01	0.01	0.04	0.01	0.00	0.00	0.00	0.00	0.03
9	0.01	0.01	0.01	0.01	0.01	0.04	0.02	0.00	0.00	0.00	0.00	0.00
10	0.01	0.01	0.01	0.01	0.01	0.04	0.01	0.00	0.00	0.00	0.00	0.00
11	0.01	0.01	0.01	0.01	0.01	0.04	0.01	0.00	0.00	0.00	0.00	0.09
12	0.01	0.01	0.01	0.01	0.02	0.04	0.01	0.00	0.00	0.00	0.00	0.25
13	0.01	0.01	0.01	0.01	0.01	0.03	0.01	0.00	0.00	0.00	0.00	0.35
14	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.41
15	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.43
16	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.42
17	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.42
18	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.42
19	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.45
20	0.03	0.01	0.01	0.01	0.01	e0.02	0.01	0.00	0.00	0.00	0.00	0.44
21	0.02	0.01	0.01	0.01	e0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.42
22	0.01	0.01	0.01	0.01	e0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.42
23	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.40
24	0.01	0.01	e0.01	0.01	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.38
25	0.01	0.01	e0.01	0.01	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.37
26	0.01	0.01	e0.01	0.01	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.35
27	0.01	0.01	e0.01	0.01	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.34
28	0.01	0.01	e0.01	0.01	0.05	0.02	0.01	0.00	0.00	0.00	0.00	0.33
29	0.01	0.01	0.01	0.01	---	0.02	0.01	0.00	0.00	0.00	0.00	0.30
30	0.01	0.01	0.01	0.01	---	0.02	0.01	0.00	0.00	0.00	0.00	0.26
31	0.01	---	0.01	0.01	---	0.02	---	0.00	---	0.00	0.00	---
TOTAL	0.38	0.30	0.31	0.31	0.61	0.80	0.37	0.01	0.00	0.00	0.00	7.40
MEAN	0.01	0.01	0.01	0.01	0.02	0.03	0.01	0.00	0.00	0.00	0.00	0.25
MAX	0.03	0.01	0.01	0.01	0.05	0.05	0.02	0.01	0.00	0.00	0.00	0.45
MIN	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
MED	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.33
AC-FT	0.8	0.6	0.6	0.6	1.2	1.6	0.7	0.02	0.00	0.00	0.00	15

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2005, BY WATER YEAR (WY)

MEAN	1.11	0.71	0.29	0.15	0.10	0.09	0.10	0.08	0.11	0.04	0.16	0.18
MAX	5.40	3.42	1.34	0.60	0.33	0.32	0.39	0.35	0.49	0.21	0.44	0.44
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2000	2001	2002	2000
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
(WY)	2004	2004	2004	2004	2004	2004	2005	2005	2003	2003	2003	2003

## SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 2000 - 2005

ANNUAL TOTAL	4.73	10.49		
ANNUAL MEAN	0.01	0.03	0.25	
HIGHEST ANNUAL MEAN			1.09	2001
LOWEST ANNUAL MEAN			0.01	2004
HIGHEST DAILY MEAN	0.22	Aug 16	0.45	Sep 19
LOWEST DAILY MEAN	0.00	Jan 1	0.00	May 2
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	May 2
ANNUAL RUNOFF (AC-FT)	9.4		21	182
10 PERCENT EXCEEDS	0.04		0.04	0.37
50 PERCENT EXCEEDS	0.01		0.01	0.02
90 PERCENT EXCEEDS	0.00		0.00	0.00

e Estimated

09471380 UPPER BABOCOMARI RIVER NEAR HUACHUCA CITY, AZ

**LOCATION**--Lat 31°38'06", long 110°25'29", sec. 10, T.23 S., R.20 E. (unsurveyed), Cochise County, Hydrologic Unit 15050202, San Ignacio del Babocomari Land Grant, approximately 5.3 mi west of Huachuca City, on the left bank, approximately 18.1 mi from the confluence with the San Pedro River.

**DRAINAGE AREA**--Undetermined.

**PERIOD OF RECORD**--July 2000 to current year.

**GAGE**--Water-stage recorder.

**REMARKS**--Records poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 4,760 ft<sup>3</sup>/s Aug. 14 at 1245, gage height, 9.40 ft. Minimum daily discharge, no flow at times in most years.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, 4,760 ft<sup>3</sup>/s Aug. 14 at 1245, gage height, 9.40 ft. Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.12	0.00	0.03	e0.16	0.22	0.19	0.14	0.11	0.06	0.00	0.00	0.21
2	0.12	0.00	0.04	e0.17	0.22	0.19	0.14	0.11	0.06	0.00	0.00	0.21
3	0.12	0.01	0.04	e0.16	0.22	0.26	0.13	0.09	0.05	0.00	0.00	0.21
4	0.10	0.01	0.04	0.15	0.23	0.25	0.13	0.09	0.04	0.00	0.00	0.20
5	0.10	0.01	0.04	0.16	0.24	0.25	0.13	0.08	0.04	0.00	0.00	0.19
6	0.09	0.01	0.04	0.15	0.24	0.25	0.13	0.07	0.03	0.00	0.00	0.19
7	0.08	0.02	0.04	0.16	0.24	0.25	0.13	0.07	0.03	0.00	0.00	0.21
8	0.08	0.02	0.04	0.16	0.24	0.24	0.13	0.07	0.02	0.00	0.00	0.12
9	0.07	0.02	0.05	0.17	0.21	0.24	0.13	0.06	0.01	0.00	0.00	0.10
10	0.07	0.02	0.05	0.17	0.22	0.24	0.15	0.06	0.00	0.00	0.00	0.10
11	0.06	0.02	0.05	0.17	0.23	0.23	0.14	0.06	0.00	0.00	0.00	0.12
12	0.06	0.02	0.06	0.18	0.23	0.23	0.14	0.07	0.01	0.00	0.00	0.12
13	0.06	0.02	0.06	0.19	0.22	0.22	0.14	0.06	0.01	0.00	0.00	0.12
14	0.05	0.03	0.07	0.20	0.22	0.22	0.15	0.06	0.01	0.00	1090	0.12
15	0.04	0.03	0.07	0.22	0.21	0.22	0.16	0.05	0.00	0.00	78	0.12
16	0.04	0.03	0.07	0.23	0.21	0.21	0.17	0.05	0.00	0.00	0.28	0.10
17	0.04	0.03	0.08	0.24	0.21	0.21	0.17	0.05	0.00	0.00	0.25	0.10
18	0.04	0.03	0.08	0.24	0.21	0.20	0.17	0.05	0.00	0.00	0.25	0.10
19	0.04	0.03	0.09	0.25	0.20	0.19	0.16	0.04	0.00	0.00	0.24	0.10
20	0.03	0.03	0.09	0.25	0.20	0.19	0.17	0.04	0.00	0.00	0.24	0.09
21	0.02	0.03	0.10	0.26	0.20	0.18	0.17	0.04	0.00	0.00	0.23	0.08
22	0.01	0.03	0.10	0.26	0.20	0.18	0.17	0.03	0.00	0.00	0.23	0.07
23	0.01	0.03	0.10	0.27	0.20	0.18	0.16	0.04	0.00	0.00	0.24	0.07
24	0.01	0.03	0.11	0.28	0.20	0.17	0.16	0.05	0.00	0.00	0.27	0.05
25	0.01	0.03	0.11	0.28	0.19	0.17	0.15	0.06	0.00	0.00	0.20	0.04
26	0.01	0.03	0.11	0.28	0.20	0.17	0.13	0.06	0.00	0.00	0.19	0.03
27	0.01	0.03	0.12	0.29	0.19	0.16	0.13	0.06	0.00	0.00	0.20	0.03
28	0.01	0.03	0.12	0.29	0.19	0.16	0.13	0.09	0.00	0.00	0.20	0.02
29	0.01	0.03	0.13	0.29	---	0.15	0.13	0.08	0.00	0.00	0.20	0.02
30	0.01	0.03	e0.14	0.30	---	0.15	0.12	0.07	0.00	0.00	0.21	0.02
31	0.01	---	e0.14	0.31	---	0.14	---	0.06	---	0.00	0.21	---
TOTAL	1.53	0.69	2.41	6.89	5.99	6.29	4.36	1.98	0.37	0.00	1171.64	3.26
MEAN	0.05	0.02	0.08	0.22	0.21	0.20	0.15	0.06	0.01	0.00	37.8	0.11
MAX	0.12	0.03	0.14	0.31	0.24	0.26	0.17	0.11	0.06	0.00	1090	0.21
MIN	0.01	0.00	0.03	0.15	0.19	0.14	0.12	0.03	0.00	0.00	0.00	0.02
MED	0.04	0.03	0.07	0.23	0.21	0.20	0.14	0.06	0.00	0.00	0.20	0.10
AC-FT	3.0	1.4	4.8	14	12	12	8.6	3.9	0.7	0.00	2320	6.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2005, BY WATER YEAR (WY)

	2000	2001	2002	2003	2004	2005	2000	2001	2002	2003	2004	2005
MEAN	13.5	5.10	2.93	2.81	2.27	2.75	2.24	1.18	0.88	5.95	13.3	2.90
MAX	61.5	21.2	9.61	9.67	7.77	10.7	8.67	4.15	3.41	13.9	37.8	12.6
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2002	2005	2002
MIN	0.05	0.02	0.08	0.22	0.21	0.20	0.15	0.06	0.01	0.00	2.92	0.06
(WY)	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2002	2000

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 2000 - 2005
ANNUAL TOTAL	484.51	1205.41	
ANNUAL MEAN	1.32	3.30	4.69
HIGHEST ANNUAL MEAN			12.5
LOWEST ANNUAL MEAN			1.38
HIGHEST DAILY MEAN	224	1090	1160
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.01	0.00	0.00
ANNUAL RUNOFF (AC-FT)	961	2390	3400
10 PERCENT EXCEEDS	0.66	0.23	8.0
50 PERCENT EXCEEDS	0.26	0.08	0.48
90 PERCENT EXCEEDS	0.03	0.00	0.08

## GILA RIVER BASIN

## 09471400 BABOCOMARI RIVER NEAR TOMBSTONE, AZ

**LOCATION.**--Lat 31°42'01", long 110°13'35", in NW1/4NE1/4NW1/4 sec. 17, T.20 S., R.21 E., Cochise County, Hydrologic Unit 15050202, gage is on the left bank, approximately 2.4 mi southwest of Fairbank, and approximately 3.1 mi upstream from confluence with the San Pedro River.

**DRAINAGE AREA.**--Undetermined.

**PERIOD OF RECORD.**--Mar. 1999 to current year.

**GAGE.**--Water-stage recorder and crest stage gages.

**REMARKS.**--Records good.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge 1,351 ft<sup>3</sup>/s, Aug. 14, 2005, gage height 6.11 ft. Minimum daily discharge, no flow at times in most years.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 1,351 ft<sup>3</sup>/s Aug. 14 at 1800, gage height 6.11 ft. Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.04	0.45	0.60	0.91	0.95	0.99	0.85	0.95	0.38	0.00	0.00	0.45
2	0.05	0.52	0.61	0.98	1.0	0.99	0.89	0.98	0.34	0.00	0.00	0.43
3	0.05	0.55	0.63	0.95	0.99	1.0	0.85	0.96	0.31	0.00	0.00	0.45
4	0.03	0.57	0.69	0.95	1.0	1.0	0.85	0.88	0.30	0.00	3.0	0.44
5	0.03	0.59	0.65	0.94	1.0	1.0	0.90	0.82	0.27	0.00	2.5	0.46
6	0.03	0.56	0.69	0.94	0.99	1.1	0.87	0.73	0.21	0.00	0.16	0.43
7	0.03	0.54	0.67	0.94	1.0	1.1	0.90	0.69	0.21	0.00	0.13	20
8	0.03	0.55	0.69	0.94	0.94	1.0	0.85	0.71	0.20	0.00	0.15	39
9	0.03	0.56	0.71	0.95	0.99	0.99	0.84	0.64	0.17	0.00	0.15	22
10	0.04	0.59	0.74	0.95	0.97	0.99	0.92	0.60	0.17	0.00	0.19	1.5
11	0.04	0.55	0.74	0.96	1.0	0.99	0.91	0.58	0.14	0.00	0.18	1.0
12	0.05	0.56	0.75	0.96	1.1	0.99	0.86	0.56	0.13	0.00	0.21	0.91
13	0.07	0.56	0.77	0.96	0.99	1.0	0.87	0.54	0.10	0.00	0.27	0.83
14	0.08	0.61	0.78	0.98	0.99	1.0	0.86	0.52	0.07	0.00	326	0.74
15	0.09	0.59	0.80	0.99	0.95	1.0	0.86	0.50	0.04	0.00	44	0.71
16	0.08	0.59	0.80	1.00	0.95	1.0	0.86	0.46	0.02	0.00	5.3	0.71
17	0.09	0.57	0.82	1.00	0.99	0.97	0.86	0.47	0.00	0.00	3.0	0.63
18	0.12	0.60	0.82	1.0	0.99	0.94	0.85	0.49	0.00	0.00	3.2	0.57
19	0.14	0.61	0.83	1.0	0.96	0.96	0.84	0.46	0.00	0.00	1.1	0.58
20	0.14	0.60	0.85	1.0	0.96	0.94	0.88	0.45	0.00	0.00	0.94	0.59
21	0.17	0.60	0.87	1.1	0.97	0.94	0.86	0.42	0.00	0.00	0.80	0.49
22	0.24	0.64	0.87	1.1	1.00	0.94	0.84	0.39	0.00	0.00	0.74	0.48
23	0.27	0.65	0.88	1.1	0.96	0.89	0.89	0.38	0.00	0.00	0.81	0.47
24	0.29	0.65	0.88	1.2	0.97	0.90	0.92	5.9	0.00	0.00	0.79	0.43
25	0.30	0.63	0.88	1.1	0.94	0.88	0.94	1.9	0.00	0.00	8.8	0.41
26	0.65	0.64	0.90	1.2	0.98	0.82	0.93	0.62	0.00	0.00	0.92	0.40
27	0.59	0.63	0.92	0.91	0.96	0.87	0.88	0.58	0.00	0.00	0.73	0.38
28	0.46	0.62	0.92	0.90	0.97	0.87	0.89	0.62	0.00	0.00	0.64	0.36
29	0.41	0.61	0.90	0.90	---	0.84	0.90	0.57	0.00	0.00	0.55	0.33
30	0.41	0.58	0.90	0.92	---	0.85	0.93	0.48	0.00	0.00	0.49	0.31
31	0.43	---	0.91	0.93	---	0.84	---	0.42	---	0.23	0.43	---
TOTAL	5.48	17.57	24.47	30.66	27.46	29.59	26.35	25.27	3.06	0.23	406.18	96.49
MEAN	0.18	0.59	0.79	0.99	0.98	0.95	0.88	0.82	0.10	0.01	13.1	3.22
MAX	0.65	0.65	0.92	1.2	1.1	1.1	0.94	5.9	0.38	0.23	326	39
MIN	0.03	0.45	0.60	0.90	0.94	0.82	0.84	0.38	0.00	0.00	0.00	0.31
MED	0.09	0.59	0.80	0.96	0.98	0.99	0.87	0.58	0.03	0.00	0.73	0.48
AC-FT	11	35	49	61	54	59	52	50	6.1	0.5	806	191

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2005, BY WATER YEAR (WY)

	2000	2001	2002	2003	2004	2005
MEAN	4.15	2.13	1.44	1.73	1.72	1.72
MAX	17.8	8.09	3.48	3.92	4.15	3.78
(WY)	2001	2001	2001	2001	2001	2001
MIN	0.18	0.59	0.79	0.99	0.98	0.95
(WY)	2005	2005	2005	2005	2005	2005

## SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 2000 - 2005

ANNUAL TOTAL	197.38	692.81	
ANNUAL MEAN	0.54	1.90	1.81
HIGHEST ANNUAL MEAN			3.89
LOWEST ANNUAL MEAN			0.65
HIGHEST DAILY MEAN	2.4	Apr 4	326
LOWEST DAILY MEAN	0.00	Jun 10	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 10	0.00
ANNUAL RUNOFF (AC-FT)	392	1370	1310
10 PERCENT EXCEEDS	1.1	1.0	3.2
50 PERCENT EXCEEDS	0.58	0.67	0.74
90 PERCENT EXCEEDS	0.00	0.00	0.00

09471550 SAN PEDRO RIVER NEAR TOMBSTONE, AZ

**LOCATION**--Lat 31°45'03", long 110°12'02", in SE1/4 sec. 28, T.19 S., R.21 E. (unsurveyed), Cochise County, Hydrologic Unit 15050202, in Spanish land grant of San Juan de las Boquillas y Nogales, on right bank 0.5 mi downstream from Willow Wash, 2.6 mi north of Fairbank, and 8 mi northwest of Tombstone.

**DRAINAGE AREA**--1,740 mi<sup>2</sup> approximately, of which 696 mi<sup>2</sup> is in Mexico.

**PERIOD OF RECORD**--Apr. 1967 to Sept. 1986, Oct. 1996 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 3,780 ft above sea level, from topographic map.

**REMARKS**--Records fair except for discharges above 1,500 ft<sup>3</sup>/s and estimated daily discharges, which are poor. Diversions above station, mostly by pumping from ground water.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 24,200 ft<sup>3</sup>/s Oct. 9, 1977, gage height, 11.40 ft, from rating curve extended above 4,900 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 8.89 ft and 11.40 ft; no flow at times during most summers.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 1.....	0630	3,760	8.21
Aug. 13.....	0259	*4,060	*8.39

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	0.00	e0.76	3.4	9.3	8.7	7.0	3.0	0.00	0.00	1570	42
2	0.00	0.00	e0.82	4.1	8.9	9.1	7.2	2.6	0.00	0.00	124	39
3	0.00	0.00	0.92	4.5	8.7	9.0	7.0	2.3	0.00	0.00	187	38
4	0.00	0.00	0.99	4.5	9.0	9.5	6.8	2.1	0.00	0.00	440	34
5	0.00	0.00	1.1	4.5	9.7	9.6	6.5	1.9	0.00	0.00	231	96
6	0.00	0.00	1.2	4.6	10	10	6.5	1.6	0.00	0.00	53	68
7	0.00	0.00	1.2	4.7	22	9.6	6.5	1.7	0.00	0.00	288	111
8	0.00	0.00	1.2	4.6	26	9.5	6.2	1.7	0.00	0.00	107	278
9	0.00	0.00	1.2	4.6	18	9.1	5.9	1.5	0.00	0.00	401	663
10	0.00	0.00	1.2	4.8	15	9.2	5.7	1.1	0.00	0.00	165	142
11	0.00	0.00	1.3	5.0	14	8.8	5.7	0.94	0.00	0.00	461	247
12	0.00	0.00	1.3	5.1	15	8.6	5.7	0.81	0.00	0.00	451	62
13	0.00	0.00	1.4	4.8	55	8.2	5.4	0.68	0.00	0.00	1730	42
14	0.00	0.00	1.4	5.0	62	7.9	4.8	0.44	0.00	0.00	1360	34
15	0.00	0.00	1.5	5.0	33	7.6	4.6	0.08	0.00	0.00	1820	28
16	0.00	0.00	1.5	5.0	17	7.3	4.3	0.00	0.00	0.00	148	23
17	0.00	0.00	1.6	5.0	10	7.9	4.2	0.00	0.00	0.00	114	19
18	0.00	0.00	1.8	5.1	9.4	8.1	4.1	0.00	0.00	0.00	367	15
19	0.00	0.00	1.9	5.0	8.1	8.2	3.8	0.00	0.00	0.00	191	14
20	0.00	0.00	1.9	5.1	6.8	8.2	3.6	0.00	0.00	0.00	168	13
21	0.00	0.00	2.2	18	6.5	8.1	3.7	0.00	0.00	0.00	63	11
22	0.00	0.00	2.3	67	7.0	8.1	3.7	0.00	0.00	0.00	283	9.5
23	0.00	0.00	2.2	31	7.3	8.1	3.9	0.00	0.00	0.00	187	8.9
24	0.00	0.00	2.3	17	7.6	7.9	3.9	0.00	0.00	5.0	776	7.6
25	0.00	0.00	e2.4	13	7.9	7.7	3.9	0.55	0.00	88	186	6.8
26	0.00	0.01	e2.5	12	8.2	7.5	3.7	0.00	0.00	7.8	96	6.0
27	0.00	0.10	2.6	11	8.3	7.5	3.5	0.00	0.00	185	75	5.3
28	0.00	0.41	2.5	11	8.6	7.7	3.3	0.03	0.00	149	63	4.9
29	0.00	0.36	3.0	9.8	---	7.3	3.2	0.14	0.00	9.9	54	4.4
30	0.00	e0.62	3.3	9.4	---	7.2	3.3	0.00	0.00	109	48	3.7
31	0.00	---	3.2	9.1	---	7.0	---	0.00	---	707	43	---
TOTAL	4.00	1.50	54.69	302.7	428.3	258.2	147.6	23.17	0.00	1260.70	12250	2076.1
MEAN	0.13	0.05	1.76	9.76	15.3	8.33	4.92	0.75	0.00	40.7	395	69.2
MAX	4.0	0.62	3.3	67	62	10	7.2	3.0	0.00	707	1820	663
MIN	0.00	0.00	0.76	3.4	6.5	7.0	3.2	0.00	0.00	0.00	43	3.7
AC-FT	7.9	3.0	108	600	850	512	293	46	0.00	2500	24300	4120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2005, BY WATER YEAR (WY)

MEAN	90.0	17.7	46.4	41.7	34.3	29.1	12.6	6.03	4.15	91.5	152	48.8
MAX	998	185	375	450	214	179	43.9	20.8	45.2	369	820	177
(WY)	1978	2001	1979	1979	1983	1983	1985	1985	2000	1974	1984	1982
MIN	0.00	0.00	0.72	2.35	4.80	6.17	4.16	0.35	0.00	0.00	6.86	0.09
(WY)	1974	1999	2004	1999	1999	1999	1982	1999	1974	1997	1997	1973

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1967 - 2005
ANNUAL TOTAL	4817.98	16806.96	
ANNUAL MEAN	13.2	46.0	48.4
HIGHEST ANNUAL MEAN			156
LOWEST ANNUAL MEAN			10.1
HIGHEST DAILY MEAN	1330	Sep 20	17100
LOWEST DAILY MEAN	0.00	May 11	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	May 11	0.00
ANNUAL RUNOFF (AC-FT)	9560		35090
10 PERCENT EXCEEDS	9.4		69
50 PERCENT EXCEEDS	2.0		10
90 PERCENT EXCEEDS	0.00		0.00

e Estimated



## GILA RIVER BASIN

## 09472050 SAN PEDRO RIVER AT REDINGTON BRIDGE NEAR REDINGTON, AZ

**LOCATION**--Lat 32°26'46", long 110°29'16", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec. 34, T.11 S., R.18 E., Pima County, Hydrologic Unit 15050203, on left bank of bridge 1.5 mi downstream from the Cochise/Pima County line, 0.5 mi east of Redington and 6.4 mi downstream from former gage, sta 09472000.

**DRAINAGE AREA**--3,096 mi<sup>2</sup>, of which 696 mi<sup>2</sup> is in Mexico.

**PERIOD OF RECORD**--July 1998 to current year.

**GAGE**--Water-stage recorder. Datum of gage is 2,820 ft above sea level.

**REMARKS**--Records poor. Diversions above station for irrigation of about 10,800 acres in 1978, excluding an unknown amount in Mexico.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 5,990 ft<sup>3</sup>/s, July 22, 2003, gage height, 14.93 ft. No flow for many days each year.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 2.....	0100	1,940	11.79	Aug. 25.....	0300	1,550	11.38
Aug. 15.....	2115	2,320	12.16	Sept. 8.....	0030	1,760	11.62
Aug. 23.....	1830	1,710	11.56	Sept. 10.....	0400	*2,380	*12.21

Minimum daily discharge, no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	675	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	566	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	82	0.00
4	0.00	0.00	0.00	279	0.00	0.00	0.00	0.00	0.00	0.00	8.3	0.00
5	0.00	0.00	0.00	171	0.00	0.00	0.00	0.00	0.00	0.00	144	0.00
6	0.00	0.00	0.00	3.3	0.00	0.00	0.00	0.00	0.00	0.00	98	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60	649
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	533	584
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	136	897
11	0.00	0.00	0.00	0.00	84	0.00	0.00	0.00	0.00	0.00	174	179
12	0.00	0.00	0.00	0.00	819	0.00	0.00	0.00	0.00	0.00	224	233
13	0.00	0.00	0.00	0.00	515	0.00	0.00	0.00	0.00	0.00	693	31
14	0.00	0.00	0.00	0.00	95	0.00	0.00	0.00	0.00	0.00	896	0.00
15	0.00	0.00	0.00	0.00	11	0.00	0.00	0.00	0.00	0.00	1760	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	799	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	190	0.00
18	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	31	0.00
19	0.00	0.00	0.00	0.00	2.2	0.00	0.00	0.00	0.00	0.00	338	0.00
20	0.00	0.00	0.00	0.00	225	0.00	0.00	0.00	0.00	0.00	34	0.00
21	0.00	0.00	0.00	0.00	92	0.00	0.00	0.00	0.00	0.00	98	0.00
22	0.00	0.00	0.00	0.00	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	326	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	336	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	183	714	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	182	0.00
27	1.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86	8.6	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	122	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	82	0.00	0.00
30	0.00	0.00	0.01	0.00	---	0.00	0.00	0.00	0.00	66	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	137	0.00	---
TOTAL	1.30	0.00	0.01	453.30	1854.23	0.00	0.00	0.35	0.00	676.00	9105.90	2615.00
MEAN	0.04	0.00	0.00	14.6	66.2	0.00	0.00	0.01	0.00	21.8	294	87.2
MAX	1.3	0.00	0.01	279	819	0.00	0.00	0.35	0.00	183	1760	897
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	144	0.00
AC-FT	2.6	0.00	0.02	899	3680	0.00	0.00	0.7	0.00	1340	18060	5190
CFSM	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.01	0.09	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

MEAN	62.8	16.7	0.00	3.22	11.3	3.11	0.00	0.00	0.04	38.6	113	23.1
MAX	439	117	0.00	14.6	66.2	13.2	0.00	0.01	0.25	129	294	87.2
(WY)	2001	2001	2005	2005	2005	2003	1999	2005	2000	1999	2005	2005
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	21.8	0.00
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	2000	2002	2001

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1998 - 2005

ANNUAL TOTAL	2315.08	14706.09	
ANNUAL MEAN	6.33	40.3	23.8
HIGHEST ANNUAL MEAN			54.5
LOWEST ANNUAL MEAN			3.23
HIGHEST DAILY MEAN	423	Sep 21	1760
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	4590	29170	17250
ANNUAL RUNOFF (CFSM)	0.002	0.013	0.008
10 PERCENT EXCEEDS	1.0	83	12
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

09473000 ARAVAIPA CREEK NEAR MAMMOTH, AZ

**LOCATION**--Lat 32°50'37", long 110°37'09", in NW1/4NW1/4 sec. 9, T.7 S., R.17 E., Pinal County, Hydrologic Unit 15050203, on right bank 6 mi upstream from mouth and 9 mi north of Mammoth.

**DRAINAGE AREA**--537 mi<sup>2</sup>.

**PERIOD OF RECORD**--May 1931 to Dec. 1942 (published as "near Feldman"), May 1966 to current year. Monthly discharge only July 1941 to Sept. 1941, published in WSP 1313.

**REVISED RECORDS**--WDR AZ-68-1: 1967. WDR AZ-82-1: 1968, 1969, 1973, 1979 (M). WDR AZ-90-1: Drainage area.

**GAGE**--Water-stage recorder and, since Mar. 1980, crest-stage gage. Elevation of gage is 2,345 ft above sea level, from topographic map. Oct. 1, 1981, to Oct. 1, 1983, gage at site 300 ft upstream at datum 4.19 ft higher. Prior to Oct. 1, 1981, at datum 1.00 ft higher. May 1931 to Dec. 1942 at site 0.3 mi downstream at different datum.

**REMARKS**--Records fair except for estimated daily discharges, which are poor. Diversions for irrigation of several hundred acres above station.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge since at least 1919, 70,800 ft<sup>3</sup>/s Oct. 1, 1983, from slope-area measurement of peak flow, gage height, 16.76 ft, from profile past gage; minimum, 0.3 ft<sup>3</sup>/s Aug. 30, 1940.

**EXTREMES OUTSIDE PERIOD OF RECORD**--A discharge of 20,000 ft<sup>3</sup>/s occurred Aug. 2, 1919, at site of former gaging station 6 mi downstream, operated Apr. 1919 to Sept. 1921, gage height, 6.3 ft, from floodmark, site and datum then in use, from rating curve extended above 5,100 ft<sup>3</sup>/s on basis of velocity-area study.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 2,500 ft<sup>3</sup>/s and (or) maximum (\*), from rating curve extended above 130 ft<sup>3</sup>/s on the basis of slope-area measurement at gage height 16.76 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 3 .....	0008	*3,030	*9.94

Minimum daily discharge, 0.45 ft<sup>3</sup>/s July 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	9.5	12	10	21	19	13	7.5	2.3	1.00	12	20
2	5.0	9.7	12	8.9	19	18	12	7.3	2.4	1.1	113	53
3	5.0	10	12	15	18	18	12	7.1	2.4	1.1	319	12
4	5.1	9.6	12	242	18	18	12	6.9	2.1	0.95	92	11
5	4.8	9.1	13	162	17	19	12	6.7	2.0	0.94	102	11
6	4.6	9.3	13	42	18	20	11	6.9	2.2	0.88	48	11
7	4.6	9.4	13	23	18	21	11	7.6	2.5	0.88	38	11
8	4.6	9.9	12	18	17	18	11	8.0	2.5	0.90	32	e17
9	4.5	9.9	12	17	17	17	11	7.8	2.4	0.71	28	e13
10	4.5	10	12	15	17	17	11	7.7	2.4	0.64	28	e14
11	4.9	9.9	12	15	21	17	11	7.7	2.2	0.54	25	e13
12	5.1	10	13	17	506	16	11	7.5	2.3	0.56	88	e13
13	5.2	10	13	16	437	16	10	6.8	1.9	0.64	63	13
14	5.1	10	13	15	122	16	10	5.8	1.8	0.62	36	12
15	5.4	10	14	15	47	15	9.6	5.2	2.0	0.46	35	11
16	5.4	11	14	15	33	15	9.3	4.8	1.4	0.49	17	11
17	5.6	11	14	15	28	15	8.9	4.4	1.4	0.58	19	10
18	6.0	11	15	14	82	16	8.8	4.2	1.4	0.78	16	10
19	6.3	11	15	14	120	15	8.8	3.9	1.4	0.60	36	10
20	6.2	11	15	14	134	15	8.7	3.6	1.3	0.45	30	10
21	6.3	11	15	14	46	15	8.7	3.2	1.2	11	22	9.6
22	8.2	11	15	13	32	14	8.5	2.8	1.0	4.9	22	9.4
23	7.8	12	15	13	27	15	8.5	2.7	1.0	3.1	93	9.1
24	7.6	12	15	13	24	14	10	2.6	1.1	3.2	31	8.8
25	7.6	12	16	13	22	14	10	2.5	1.0	2.6	24	8.3
26	7.7	11	16	16	21	14	9.3	2.5	1.1	3.4	e24	8.4
27	8.7	11	15	111	19	13	8.8	2.3	0.93	7.1	24	7.9
28	8.7	11	16	43	19	13	8.5	2.4	0.92	10	23	7.4
29	9.8	11	39	29	---	13	8.4	2.5	0.96	1.3	e23	7.0
30	9.5	11	76	25	---	13	7.8	2.5	0.92	1.0	19	6.5
31	9.7	---	15	22	---	13	---	2.4	---	22	18	---
TOTAL	194.5	314.3	514	1014.9	1920	492	300.6	155.8	50.43	84.42	1500	368.4
MEAN	6.27	10.5	16.6	32.7	68.6	15.9	10.0	5.03	1.68	2.72	48.4	12.3
MAX	9.8	12	76	242	506	21	13	8.0	2.5	22	319	53
MIN	4.5	9.1	12	8.9	17	13	7.8	2.3	0.92	0.45	12	6.5
AC-FT	386	623	1020	2010	3810	976	596	309	100	167	2980	731
CFSM	0.01	0.02	0.03	0.06	0.13	0.03	0.02	0.01	0.00	0.01	0.09	0.02
IN.	0.01	0.02	0.04	0.07	0.13	0.03	0.02	0.01	0.00	0.01	0.10	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2005, BY WATER YEAR (WY)

MEAN	43.6	23.1	45.5	51.1	63.1	56.4	20.5	14.2	11.4	23.1	31.1	23.3
MAX	1098	91.1	474	682	215	349	53.1	44.8	40.1	115	133	55.8
(WY)	1984	1979	1979	1993	1983	1991	1993	1979	1940	1942	1935	1984
MIN	6.00	8.70	9.69	10.1	11.1	9.49	7.17	3.45	1.51	2.58	7.81	5.35
(WY)	2004	1940	1971	1940	1977	1976	1976	2004	2004	2004	1975	1973

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1932 - 2005
ANNUAL TOTAL	4256.26	6909.35	
ANNUAL MEAN	11.6	18.9	33.0
HIGHEST ANNUAL MEAN			140
LOWEST ANNUAL MEAN			9.62
HIGHEST DAILY MEAN	461	506	16000
LOWEST DAILY MEAN	0.60	0.45	0.40
ANNUAL SEVEN-DAY MINIMUM	0.72	0.56	0.56
ANNUAL RUNOFF (AC-FT)	8440	13700	23910
ANNUAL RUNOFF (CFSM)	0.022	0.035	0.061
ANNUAL RUNOFF (INCHES)	0.29	0.48	0.83
10 PERCENT EXCEEDS	16	28	43
50 PERCENT EXCEEDS	9.4	11	16
90 PERCENT EXCEEDS	1.7	1.4	6.0

e Estimated

## 09474000 GILA RIVER AT KELVIN, AZ

**LOCATION**--Lat 33°06'10", long 110°58'33", in NE1/4NW1/4 sec. 12, T.4 S., R.13 E., Pinal County, Hydrologic Unit 15050100, on left bank at Kelvin, 500 ft downstream from Mineral Creek, 18 mi downstream from San Pedro River, and 19 mi upstream from Ashurst-Hayden Dam.

**DRAINAGE AREA**--18,011 mi<sup>2</sup>, of which 5,125 mi<sup>2</sup> is below Coolidge Dam.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD**--Jan. 1911 to current year.

**REVISED RECORDS**--WSP 329: 1911. WSP 609: 1916(M). WSP 629: 1914-17. WSP 1119: 1913, 1915, 1917(M), 1921(M), 1922-23, 1927(M). WSP 1283: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 1,745.02 ft above sea level. Prior to June 15, 1914, and Dec. 1, 1914, to Aug. 31, 1915, nonrecording gages at several sites within 2 mi of present site at different datums. Sept. 1, 1915, to Sept. 30, 1963, water-stage recorder at site 900 ft downstream at datum 1.80 ft lower. Jan. 16, 1985, to June 1990, supplementary water-stage recorder at same site and datum.

**REMARKS**--Records fair, no estimated daily discharges. Large diversions above station for irrigation, of which about 90 percent is above Coolidge Dam. About 82,000 acres irrigated, a considerable portion by pumping from ground water. Flow regulated by San Carlos Reservoir 49 mi upstream since Nov. 15, 1928. (See sta 09469000.) San Pedro River contributes major portion of unregulated inflow.

**AVERAGE DISCHARGE** (adjusted for storage in San Carlos Reservoir)--94 years, 511 ft<sup>3</sup>/s, 370,200 acre-ft/yr; median of yearly mean discharges, 314 ft<sup>3</sup>/s, 227,900 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD**--1911-28: Maximum discharge, about 132,000 ft<sup>3</sup>/s Jan. 20, 1916, gage height, 19.5 ft, site and datum then in use, from rating curve extended above slope-area measurement at gage height, 16.2 ft for flood of Sept. 28, 1926; no flow Feb. 25, 1913.

1929-2000: Maximum discharge, 100,000 ft<sup>3</sup>/s Oct. 2, 1983, gage height, 33.0 ft from floodmark, from rating curve extended above 12,000 ft<sup>3</sup>/s on basis of peak discharge computed by step-backwater method at Hayden Railroad Bridge, 17.8 mi upstream, and by flood-routing; minimum daily, no flow for many days in most years.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12.....	2345	*7,040	*12.30

Minimum daily discharge, 0.40 ft<sup>3</sup>/s Nov. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	0.90	111	129	169	204	579	419	532	751	903	718
2	94	0.84	122	100	148	235	594	426	567	751	974	809
3	96	0.97	122	127	138	310	632	430	582	753	1480	734
4	97	1.0	126	1730	132	317	686	441	596	753	613	734
5	98	0.97	130	1560	136	324	519	454	622	755	612	732
6	99	1.3	131	855	151	364	631	459	631	757	622	732
7	98	1.7	108	331	152	392	661	459	640	756	538	733
8	99	1.6	69	189	151	377	657	460	647	778	594	778
9	99	2.3	65	104	241	358	655	463	641	789	577	973
10	90	2.5	71	73	334	345	653	468	642	827	796	926
11	38	2.3	73	59	781	339	648	468	663	871	486	1190
12	23	1.6	86	46	4820	350	645	469	673	862	448	646
13	19	1.4	94	37	4790	374	626	471	679	866	675	583
14	17	1.3	110	40	1300	379	610	479	677	882	677	533
15	17	1.0	122	55	593	380	592	486	679	871	946	502
16	11	0.62	123	57	425	380	580	495	684	864	1190	419
17	5.7	0.40	124	56	339	391	577	498	687	888	1030	357
18	5.5	0.54	130	54	275	394	574	498	685	903	502	324
19	5.3	0.66	138	53	360	395	572	505	685	854	621	312
20	4.3	0.80	139	86	767	400	567	523	690	828	653	312
21	5.3	1.4	139	177	569	395	559	528	696	880	639	313
22	5.2	2.1	137	314	494	392	555	547	692	843	647	312
23	3.4	2.5	118	426	397	390	552	592	698	850	646	308
24	1.8	2.1	97	437	337	388	559	580	697	863	681	295
25	0.78	2.3	99	439	292	390	554	586	716	647	708	286
26	0.85	1.8	99	402	265	390	509	591	726	733	770	289
27	0.90	0.82	99	447	238	434	480	592	728	781	619	265
28	0.87	0.90	99	474	215	470	441	597	729	826	620	252
29	1.1	1.2	103	300	---	516	426	603	731	865	631	245
30	1.1	14	336	247	---	553	423	550	748	865	640	247
31	1.0	---	195	192	---	551	---	529	---	847	691	---
TOTAL	1098.10	53.82	3715	9596	19009	11877	17316	15666	20063	25359	22229	15859
MEAN	35.4	1.79	120	310	679	383	577	505	669	818	717	529
MAX	99	14	336	1730	4820	553	686	603	748	903	1480	1190
MIN	0.78	0.40	65	37	132	204	423	419	532	647	448	245
AC-FT	2180	107	7370	19030	37700	23560	34350	31070	39790	50300	44090	31460
CAL YR 2004	TOTAL	44558.31	MEAN	122	MAX	909	MIN	0.40	AC-FT	88380		
WTR YR 2005	TOTAL	161840.92	MEAN	443	MAX	4820	MIN	0.40	AC-FT	321000		

09474000 GILA RIVER AT KELVIN, AZ—CONTINUED

WATER-QUALITY RECORDS

LOCATION.--Water samples collected between Florence-Kelvin road bridge and Mineral Creek, and 700 ft to 500 ft upstream from gaging station.

PERIOD OF RECORD.--Dec. 1950 to Sept. 1994, Feb. 1996 to Feb. 1998, Sept. 2001 to June 2005 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1964 to Sept. 1976, Oct. 1996 to Feb. 1998.

WATER TEMPERATURE: Dec. 1950 to Sept. 1976, Oct. 1996 to Feb. 1998.

SUSPENDED-SEDIMENT DISCHARGE: Jan. 1958 to Sept. 1976.

REMARKS.--No inflow from Mineral Creek between sampling point and gaging station except during infrequent periods of heavy local rains. Unpublished daily specific conductance measurements for period December 1950 to September 1964 available from the Arizona Water Science Center in Tucson, AZ.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, of saturation mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarbohardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	
DEC	07...	1120	109	90	723	10.9	99	8.5	1530	10.5	8.7	260	69	65.6
MAR	08...	1110	E227	77	720	9.4	97	8.3	733	17.5	13.7	190	40	49.9
JUN	07...	1055	646	43	715	8.7	102	8.4	642	28.5	20.1	140	9	39.1

Date	Calcium water unfltrd recover, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recover, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
DEC	67.9	23.7	23.0	7.58	6	215	192	226	4	280	1.4	143	851
MAR	53.6	15.0	15.4	3.76	2	78.2	146	170	4	88.5	.8	75.2	401
JUN	50.0	11.3	12.8	3.35	3	69.8	135	155	5	81.4	.8	49.9	337

Date	Residue water, fltrd, tons/acre-ft (70303)	Residue evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, unfltrd as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/100 mL (31633)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd, ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water, unfltrd, ug/L (01002)
DEC	1.22	898	101	.76	<.04	E.05n	.17	--	340	.30	.3	4.8	5
MAR	.62	459	98	.61	<.04	.47	.22	1.1	E100k	E.18n	E.2n	4.2	4
JUN	.51	375	71	.50	<.04	<.06	.32	--	E67k	E.15n	.2	3.8	4

Date	Barium, water, unfltrd recover, ug/L (01007)	Beryllium, water, unfltrd recover, fltrd, ug/L (01010)	Beryllium, water, unfltrd recover, ug/L (01012)	Boron, water, unfltrd recover, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd, ug/L (01027)	Chromium, water, unfltrd recover, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, unfltrd recover, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, unfltrd recover, ug/L (01051)	Manganese, water, unfltrd recover, ug/L (01055)	Mercury water, fltrd, ug/L (71890)
DEC	94	<.06	.16	202	E.03n	.09	1.7	2.7	15.3	<.08	3.76	228	<.01
MAR	59	<.06	.15	83	E.04n	.07	1.8	4.6	16.8	<.08	3.50	145	<.01
JUN	93	<.06	.20	85	<.04	.07	1.6	4.4	18.1	.09	4.39	197	<.01

**GILA RIVER BASIN**  
**09474000 GILA RIVER AT KELVIN, AZ—CONTINUED**  
**WATER-QUALITY RECORDS**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Mercury water, unfltrd recover -able, ug/L (71900)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC 07...	<.01	1.7	1.1	10	118	35
MAR 08...	<.01	.8	1.1	10	136	--
JUN 07...	<.01	.7	4.8	13	106	185

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

k -- Counts outside acceptable range  
n -- Below the LRL and above the LT-MDL

**GILA RIVER BASIN  
DIVERSION FROM GILA RIVER**

165

**09475500 FLORENCE-CASA GRANDE CANAL, NEAR FLORENCE, AZ**

**LOCATION.**--Lat 33°05'15", long 111°17'10", in NE1/4NE1/4 sec. 14, T.4 S., R.10 E., Pinal County, Hydrologic Unit 15050100, on left bank at China Wash, 2.6 mi downstream from head at Ashurst-Hayden Dam and 7.5 mi northeast of Florence.

**PERIOD OF RECORD.**--Jan. 1928 to current year (monthly diversions only). Published as a supplement to records for Gila River at Ashurst-Hayden Dam, 1928-80.

**GAGE.**--Water-stage recorder and Parshall flume. Prior to Jan. 12, 1937, water-stage recorder 900 ft downstream from Ashurst-Hayden Dam.

**REMARKS.**--Records show monthly diversion from the Gila River at Ashurst-Hayden Dam for irrigation of land under the 100,000 acre San Carlos Project. Diversion records are those at the canal gaging station at the flume 2.6 mi downstream from dam; values are adjusted for sluicing through the dam or from the canal and pumping of water into the canal between the dam and the flume, but are not adjusted for natural losses. Adjusted values show water available at Ashurst-Hayden Dam, except for spill over the dam or water sluiced through the dam during times of flood runoff.

**COOPERATION.**--Pumping records furnished by Bureau of Indian Affairs.

**MONTHLY DIVERSIONS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005**

Month	Discharge, in cubic feet per second			Diversions in acre-feet	Water sluiced above flume, in acre-feet
	Maximum	Minimum	Mean		
October	69	0	22.3	1,370	0
November	0	0	0	0	0
December	271	17	107	6,580	0
CAL YR 2004	639	0	109	78,880	1,984
January	290	3.2	115	7,050	6,377
February	950	121	288	15,980	13,190
March	562	101	348	21,420	60
April	686	381	582	34,610	0
May	602	380	499	30,660	0
June	711	525	644	38,330	0
July	818	610	756	46,510	0
August	856	312	535	32,920	6,508
September	794	274	486	28,950	942
WTR YR 2005	950	0	365	264,400	27,077

## GILA RIVER BASIN

## 09477570 GILA RIVER AT ATTAWAY ROAD, FLORENCE, AZ

**LOCATION**--Lat 33°01'10", long 111°31'41", in NE<sub>1/4</sub>NE<sub>1/4</sub> NE<sub>1/4</sub>, sec. 12, T.5 S., R.8 E. on left bank at Attaway Rd. bridge, 8.25 mi downstream from Ashurst-Hayden Dam.

**DRAINAGE AREA**--Undetermined.

**PERIOD OF RECORD**--Sept. 1, 2002--present.

**GAGE**--Water-stage recorder. Datum of gage 1,418 ft above sea level.

**REMARKS**--Records fair, except estimated daily discharges, which are poor.

**EXTREMES FOR CURRENT YEAR**--Maximum daily discharge, 1,820 ft<sup>3</sup>/s (estimated) Feb. 13, gage height 5.48 ft.; Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	e172	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	382	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	1480	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	1700	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	1250	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	e0.00	525	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	e0.00	1200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	e0.00	1810	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	e0.00	1690	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	e0.00	1690	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	e0.00	e1000	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	e15	e367	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	e0.00	e1820	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	e1070	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	e19	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	e0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	12914.00	3276.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	0.00	417	117	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0.00	0.00	0.00	1810	1820	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	25610	6500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAL YR 2004	TOTAL	0.00	MEAN	0.00	MAX	0.00	MIN	0.00	MED	0.00	AC-FT	0.00
WTR YR 2005	TOTAL	16190.00	MEAN	44.4	MAX	1820	MIN	0.00	MED	0.00	AC-FT	32110

e Estimated

09478500 QUEEN CREEK BELOW WHITLOW DAM NEAR SUPERIOR, AZ

**LOCATION**--Lat 33°17'57", long 111°16'37", in NW1/4SE1/4 sec. 36, T.1 S., R.10 E., Pinal County, Hydrologic Unit 15050100, 1 mi upstream from Queen Valley and 10 mi west of Superior. Gage is located on the outlet box structure below Whitlow Ranch Dam.

**DRAINAGE AREA**--144 mi<sup>2</sup>.

**PERIOD OF RECORD**--Jan. 1896 to Dec. 1897, Jan. 1898 to Aug. 1899 (fragmentary), Feb. to Sept. 1915 (gage-heights only), Oct. 1915 to Sept. 1920, May 1948 to Jan. 1959, Apr. 2001 to current year. Published as "at Whitlow's Ranch" 1896-99, "near Superior" 1915-20 and as "at Whitlow Dam Site near Superior" 1948-59.

**GAGE**--Water-stage recorder. Elevation of gage is 2,040 ft above sea level, from topographic map. From Jan. 25, 1896, to Aug. 11, 1899, and Feb. 14, 1915 to Sept. 30, 1920, staff gages were operated in the vicinity of the present gage at different datums. Stilling-well gages were operated from May 1, 1948, to Aug. 19, 1954, and Jan. 6, 1955, to Jan. 1959 at sites about 1,100 ft and 800 ft upstream and datums of 2,048.96 and 2,045.70 ft above mean sea level, respectively.

**REMARKS**--Records poor.

**EXTREMES FOR PERIOD OF RECORD**--1915-20, 1948-59: Maximum discharge, 42,900 ft<sup>3</sup>/s Aug. 19, 1954. No flow at times in each year. 2001-present: Maximum discharge, 825 ft<sup>3</sup>/s Feb. 13, 2005. Minimum daily discharge, 0.29 ft<sup>3</sup>/s Aug. 2, 2004.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, 825 ft<sup>3</sup>/s Feb. 13. Minimum daily discharge, 0.87 ft<sup>3</sup>/s Oct. 4-6 (estimated), Oct. 8, Nov. 30-Dec. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.88	e1.1	0.87	1.9	2.8	24	6.9	e5.7	4.7	4.1	e3.9	e3.5
2	e0.88	e1.1	0.87	2.1	2.8	20	7.0	e5.7	4.8	4.0	4.0	e3.4
3	e0.88	e1.1	0.87	62	2.8	16	7.0	5.7	4.9	3.9	4.0	e3.4
4	e0.87	e1.1	0.89	437	2.8	15	6.8	e5.7	5.0	3.8	4.1	e3.4
5	e0.87	e1.1	0.93	427	2.8	41	6.9	e5.7	5.0	3.8	4.0	e3.4
6	e0.87	e1.1	0.96	7.8	2.8	66	7.0	e5.7	4.7	3.8	4.0	e3.4
7	e0.88	e1.1	1.1	2.8	2.8	53	6.9	e5.6	4.7	3.8	3.9	e3.3
8	0.87	e1.1	1.1	2.9	2.8	34	6.7	e5.6	4.8	3.8	3.9	e3.3
9	0.91	e1.1	1.1	3.2	2.8	25	6.5	e5.6	4.9	3.8	3.0	e3.3
10	1.1	e1.1	1.1	3.2	3.1	20	6.4	e5.6	4.9	3.8	11	e3.3
11	1.1	e1.1	1.1	3.2	16	16	6.3	e5.7	4.7	e3.8	3.6	e3.2
12	1.1	e1.1	1.4	3.2	748	14	6.3	e5.6	4.3	e3.8	123	e3.2
13	0.99	1.2	1.5	3.1	820	14	e6.3	e5.6	4.2	3.7	29	e3.2
14	1.1	1.2	1.5	e3.1	817	13	e6.3	e5.6	4.3	3.7	3.8	e3.1
15	1.1	1.2	1.7	e3.1	807	11	e6.2	e5.6	4.3	e3.7	3.6	e3.1
16	1.1	0.98	1.7	e3.1	778	9.6	e6.2	e5.7	4.4	e3.7	e3.7	e3.1
17	1.1	1.1	1.7	e3.1	708	6.5	6.2	5.6	4.5	e3.7	e3.6	e3.1
18	1.3	1.1	1.7	e3.1	337	9.3	6.1	5.7	4.6	e3.7	e3.7	3.1
19	1.1	1.1	1.7	e3.0	122	9.1	6.0	5.9	4.6	e3.7	e3.7	2.7
20	e1.1	1.1	1.7	3.0	258	8.6	5.9	e5.6	4.6	e3.7	e3.6	2.8
21	e1.1	1.1	1.7	3.0	104	8.5	6.0	e5.5	4.8	e3.7	e3.6	2.9
22	e1.1	1.1	1.7	3.0	289	8.3	6.0	5.5	5.0	e3.7	e3.6	2.9
23	e1.1	1.1	1.7	2.9	152	7.3	e6.0	5.4	4.8	3.7	e3.6	3.0
24	e1.1	0.99	1.7	2.8	92	7.3	e6.0	5.2	5.0	3.7	e3.6	2.9
25	e1.1	1.0	1.7	2.8	66	e7.3	e6.0	5.1	4.8	3.7	e3.5	2.7
26	e1.1	1.0	1.7	e2.9	49	e7.3	e5.9	5.0	4.3	3.7	e3.5	2.7
27	e1.1	1.1	1.7	e2.9	35	e7.3	e5.9	5.0	4.2	3.7	e3.5	2.7
28	e1.1	1.1	1.8	2.9	30	e7.2	e5.8	5.0	4.2	3.7	e3.5	2.8
29	e1.1	0.94	22	2.9	---	e7.2	5.7	5.1	4.2	e3.8	e3.5	2.7
30	e1.1	0.87	3.9	2.8	---	e7.2	e5.7	5.0	4.1	e3.8	e3.5	2.7
31	e1.1	---	1.7	2.9	---	7.1	---	5.0	---	e3.8	e3.5	---
TOTAL	32.20	32.48	66.79	1012.7	6256.3	507.1	188.9	170.0	138.3	116.8	293.0	92.3
MEAN	1.04	1.08	2.15	32.7	223	16.4	6.30	5.48	4.61	3.77	9.45	3.08
MAX	1.3	1.2	22	437	820	66	7.0	5.9	5.0	4.1	123	3.5
MIN	0.87	0.87	0.87	1.9	2.8	6.5	5.7	5.0	4.1	3.7	3.5	2.7
MED	1.1	1.1	1.7	3.0	58	9.6	6.2	5.6	4.7	3.7	3.7	3.1
AC-FT	64	64	132	2010	12410	1010	375	337	274	232	581	183
CFSM	0.01	0.01	0.01	0.23	1.55	0.11	0.04	0.04	0.03	0.03	0.07	0.02

CAL YR 2004	TOTAL	857.99	MEAN	2.34	MAX	217	MIN	0.29	MED	1.1	AC-FT	1700	CFSM	0.02
WTR YR 2005	TOTAL	8906.87	MEAN	24.4	MAX	820	MIN	0.87	MED	3.7	AC-FT	17670	CFSM	0.17

e Estimated



## GILA RIVER BASIN

## 09479350 GILA RIVER NEAR MARICOPA, AZ

**LOCATION**--Lat 33°10'07", long 112°00'24", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>, sec. 13, T.3 S., R.3 E., Pinal County, Hydrologic Unit 15050100, in Gila River Indian Reservation, on the downstream side of the highway bridge 8 mi north of Maricopa, AZ.

**DRAINAGE AREA**--19,915 mi<sup>2</sup>.

**PERIOD OF RECORD**--Occasional medium range to high range flow measurements were made in 1993--1994 water year. Established as a continuous-record station May 1995 to current year.

**GAGE**--Water-stage recorder. Elevation of gage 1,113.87 ft above sea level, from topographic map.

**REMARKS**--Records good, no estimated daily discharges. Many diversions above station for irrigation. Most low flow is wastewater from irrigated lands from Chandler, AZ, treatment plant. Flow regulated by storage in San Carlos Reservoir. This station replaces Gila River near Laveen (09479501), which was discontinued in the 1995 water year. Flood Jan. 20, 1993, discharge 49,350 ft<sup>3</sup>/s, measured from bridge, no gage height recorded. Flood Jan. 22, 1993, discharge 46,300 ft<sup>3</sup>/s, measured from bridge, approximate gage height, 6.80 ft.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, 24 ft<sup>3</sup>/s Mar. 11, gage height 1.87 ft. Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	6.0	4.6	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	4.3	2.7	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	2.7	4.2	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	3.6	1.9	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	4.9	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	5.6	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	13	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	22	2.7	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	22	1.3	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	15	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	15	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	23	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	21	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	18	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	18	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	19	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	19	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	17	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	17	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	15	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	12	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	6.6	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	10	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	11	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	8.3	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.54	4.1	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	2.9	1.7	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	3.7	3.8	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	4.5	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	4.6	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	4.7	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	7.14	352.4	17.40	0.00	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	0.00	0.00	0.26	11.4	0.58	0.00	0.00	0.00	0.00	0.00
MAX	0.00	0.00	0.00	0.00	3.7	23	4.6	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	1.7	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	14	699	35	0.00	0.00	0.00	0.00	0.00
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)
	0.04	0.40	2001	0.00	1996	0.00	1.14	2005	0.00	1996	0.00	0.06	2005	0.00	1996
	0.00	0.25	2004	0.00	1996	0.03	11.4	2005	0.00	1996	0.00	0.58	2005	0.00	1996
	0.00	1.56	1996	0.00	1996	0.03	0.06	1996	0.00	1995	0.00	0.00	1995	0.00	1995
	0.00	0.00	1996	0.00	1996	0.00	0.00	1996	0.00	1995	0.00	0.00	1995	0.00	1995

## SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1995 - 2005

ANNUAL TOTAL	7.60	376.94	0.12
ANNUAL MEAN	0.02	1.03	1.03
HIGHEST ANNUAL MEAN			2005
LOWEST ANNUAL MEAN			1998
HIGHEST DAILY MEAN	7.6 Aug 16	23 Mar 12	38 Sep 2 1996
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 May 19 1995
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 May 19 1995
ANNUAL RUNOFF (AC-FT)	15	748	88
ANNUAL RUNOFF (CFSM)	0.000	0.000	0.000
10 PERCENT EXCEEDS	0.00	2.2	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

0948000 SANTA CRUZ RIVER NEAR LOCHIEL, AZ

**LOCATION**--Lat 31°21'19", long 110°35'20", in SW<sub>1</sub>/<sub>4</sub> sec. 11, T.24 S., R.17 E. (unsurveyed), Santa Cruz County, Hydrologic Unit 15050301, on southern border of Spanish land grant of San Rafael, near left bank on downstream side of pier of bridge on county road, 1.7 mi upstream from international boundary, and 2.5 mi northeast of Lochiel.

**DRAINAGE AREA**--82.2 mi<sup>2</sup>.

**PERIOD OF RECORD**--Jan. 1949 to current year.

**REVISED RECORDS**--WSP 1733: 1951. WDR AZ-94-1: 1993.

**GAGE**--Water-stage recorder. Elevation of gage is 4,620 ft above sea level, from topographic map.

**REMARKS**--Records good except for estimated daily discharges, which are poor. Small diversions for irrigation of 200 acres above station, mostly by pumping from ground water.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 12,000 ft<sup>3</sup>/s Oct. 9, 1977 and Aug. 15, 1984, gage height, 10.21 ft and 10.2 ft, respectively, from rating curve extended above 1,600 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 10.21 ft; no flow at times in most years.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 23.....	1340	*73	*8.05

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.06	0.14	0.20	0.20	0.21	0.21	0.07	0.02	0.00	0.00	0.04
2	0.00	0.07	0.15	0.21	0.19	0.21	0.22	0.08	0.00	0.00	0.00	0.05
3	0.00	0.07	0.16	0.21	0.19	0.21	0.22	0.06	0.00	0.00	0.00	0.05
4	0.00	0.07	0.17	0.21	0.20	0.21	0.22	0.05	0.00	0.00	0.00	0.05
5	0.00	0.07	0.17	0.21	0.20	0.21	0.21	0.03	0.00	0.00	0.00	0.04
6	0.00	0.08	0.19	0.21	0.20	0.21	0.21	0.04	0.00	0.00	0.00	0.04
7	0.00	0.08	0.17	0.21	0.19	0.21	0.20	0.05	0.00	0.00	0.00	0.03
8	0.00	0.08	0.18	0.21	0.19	0.21	0.19	0.06	0.00	0.00	0.00	0.03
9	0.00	0.08	0.18	0.21	0.19	0.21	0.19	0.07	0.00	0.00	0.00	0.04
10	0.00	0.09	0.18	0.21	0.19	0.22	0.19	0.07	0.00	0.00	0.00	0.04
11	0.00	0.09	0.18	0.21	0.20	0.22	0.19	0.07	0.00	0.00	0.00	0.03
12	0.00	0.09	0.18	0.21	0.22	0.22	0.19	0.07	0.00	0.00	0.00	0.02
13	0.00	0.09	0.18	0.21	0.20	0.22	0.17	0.08	0.00	0.00	0.00	0.02
14	0.00	0.09	0.18	0.20	0.19	0.22	0.16	0.08	0.00	0.00	0.37	0.00
15	0.00	0.09	0.18	0.20	0.19	0.22	0.14	0.08	0.00	0.00	0.06	0.00
16	0.00	0.10	0.18	0.19	0.19	0.21	0.14	0.07	0.00	0.00	e0.03	0.00
17	0.00	0.10	0.18	0.20	0.19	0.21	0.14	0.07	0.00	0.00	e0.04	0.00
18	0.01	0.11	0.19	0.19	0.19	0.21	0.14	0.07	0.00	0.00	0.04	0.00
19	0.01	0.11	0.19	0.19	0.19	0.21	0.15	0.07	0.00	0.00	0.04	0.00
20	0.02	0.12	0.19	0.19	0.20	0.21	0.15	0.05	0.00	0.00	0.03	0.01
21	0.02	0.12	0.19	0.21	0.19	0.21	0.14	0.03	0.00	0.00	0.03	0.00
22	0.03	0.12	0.19	0.21	0.20	0.21	0.12	0.02	0.00	0.00	0.03	0.00
23	0.04	0.13	0.19	0.20	0.20	0.21	0.12	0.03	0.00	0.00	e3.0	0.00
24	0.04	0.13	0.19	0.20	0.20	0.21	0.13	0.03	0.00	0.00	0.15	0.00
25	0.04	0.13	0.19	0.20	0.20	0.21	0.13	0.02	0.00	0.00	0.09	0.00
26	0.04	0.13	0.19	0.20	0.20	0.21	0.11	0.03	0.00	0.00	0.07	0.00
27	0.05	0.13	0.19	0.19	0.20	0.22	0.10	0.05	0.00	0.00	0.07	0.00
28	0.05	0.14	0.19	0.19	0.20	0.22	0.10	0.08	0.00	0.00	0.06	0.00
29	0.06	0.14	0.20	0.20	---	0.22	0.09	0.08	0.00	0.00	0.05	0.00
30	0.06	0.14	0.20	0.20	---	0.22	0.07	0.06	0.00	0.00	0.04	0.00
31	0.06	---	0.20	0.20	---	0.21	---	0.04	---	0.00	0.03	---
TOTAL	0.53	3.05	5.64	6.28	5.49	6.61	4.74	1.76	0.02	0.00	4.23	0.49
MEAN	0.02	0.10	0.18	0.20	0.20	0.21	0.16	0.06	0.00	0.00	0.14	0.02
MAX	0.06	0.14	0.20	0.21	0.22	0.22	0.22	0.08	0.02	0.00	3.0	0.05
MIN	0.00	0.06	0.14	0.19	0.19	0.21	0.07	0.02	0.00	0.00	0.00	0.00
MED	0.00	0.10	0.18	0.20	0.20	0.21	0.15	0.06	0.00	0.00	0.03	0.00
AC-FT	1.1	6.0	11	12	11	13	9.4	3.5	0.04	0.00	8.4	1.0
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
	4.49	77.0	1978	0.00	1954
	1.23	16.2	2001	0.00	1954
	1.78	17.8	1979	0.00	1954
	3.95	94.7	1993	0.02	1963
	1.72	18.0	1985	0.03	1963
	1.73	34.2	1983	0.01	1963
	0.85	8.68	1993	0.00	1963
	0.43	2.77	1983	0.00	1954
	0.32	2.83	1973	0.00	1949
	7.39	69.4	1950	0.00	2005
	14.0	187	1984	0.00	1962
	4.47	44.3	1964	0.00	1953

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1949 - 2005
ANNUAL TOTAL	60.11	38.84	
ANNUAL MEAN	0.16	0.11	3.57
HIGHEST ANNUAL MEAN			29.0 1984
LOWEST ANNUAL MEAN			0.11 2005
HIGHEST DAILY MEAN	8.1 Aug 5	3.0 Aug 23	1770 Jan 18 1993
LOWEST DAILY MEAN	0.00 May 22	0.00 Oct 1	0.00 May 19 1949
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 14	0.00 Oct 1	0.00 May 19 1949
ANNUAL RUNOFF (AC-FT)	119	77	2590
ANNUAL RUNOFF (CFSM)	0.002	0.001	0.043
10 PERCENT EXCEEDS	0.34	0.21	3.9
50 PERCENT EXCEEDS	0.11	0.08	0.45
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

## 09480500 SANTA CRUZ RIVER NEAR NOGALES, AZ

**LOCATION**--Lat 31°20'40", long 110°51'03", in NW<sup>1</sup>/<sub>4</sub> sec. 18, T.24 S., R.15 E. (unsurveyed), Santa Cruz County, Hydrologic Unit 15050301, in Spanish land grant of Maria Santisima del Carmen, on left bank 0.8 mi downstream from international boundary and 5.5 mi east of Nogales.

**DRAINAGE AREA**--533 mi<sup>2</sup>, of which 348 mi<sup>2</sup> is in Mexico.

**PERIOD OF RECORD**--Mar. to Nov. 1907 and Apr. 1909 to Dec. 1912 (discharge measurements and fragmentary gage-height record), Jan. 1913 to June 1922 (Oct. 1915 to Sept. 1916 monthly discharge only), May 1930 to Dec. 1933, July 1935 to current year. Water-year estimates for 1913, 1915-16, 1920-22, 1930, 1934-35, published in WSP 1733.

**REVISED RECORDS**--WSP 959: 1935(M). WSP 1213: 1915-16, 1930-32(M), 1934(M), 1936-37(M). WSP 1283: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 3,702.54 ft above sea level (levels by International Boundary and Water Commission). Prior to June 30, 1922, nonrecording gage or water-stage recorder at various sites 5 to 6 mi downstream at different datums.

**REMARKS**--Records fair, except for estimated daily discharges, which are poor. Diversions above station of about 4,300 acre-ft/yr for irrigation of about 2,150 acres in Mexico in 1977. Diversion 19 mi upstream for municipal supply of city of Nogales, Sonora, began in 1949; diversion in 1968 totaled 3,500 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 31,000 ft<sup>3</sup>/s Oct. 9, 1977, gage height, 15.5 ft, from rating curve extended above 1,660 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times in most years.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
July 24 .....	1645	*2,310	*5.33

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e53	0.20
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e168	0.20
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	54	0.15
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39	0.03
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36	0.01
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	84	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39	8.9
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.7	26
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.53
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64	0.30
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	105	e0.15
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	121	e0.14
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53	e0.16
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.29
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.3	0.33
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	e37	0.33
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e9.1	0.30
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.5	0.22
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.4	0.23
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.3	0.17
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	e149	0.09
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	207	34	0.03
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.7	2.3	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.17	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.21	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	e124	0.19	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	348.70	1122.17	38.92
MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	11.2	36.2	1.30
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	207	168	26
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	692	2230	77
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.00
IN.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2005, BY WATER YEAR (WY)

MEAN	26.1	9.97	32.5	38.6	31.4	22.7	7.65	1.74	1.26	38.1	81.9	24.4
MAX	904	164	542	492	370	318	58.1	16.8	24.4	254	745	158
(WY)	1978	2001	1979	1979	1985	1983	1992	1983	1984	1950	1955	1983
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00
(WY)	1914	1919	1919	1974	1974	1914	1914	1914	1914	1918	1991	1918

## SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1914 - 2005

ANNUAL TOTAL	140.99	1510.77	
ANNUAL MEAN	0.39	4.14	25.8
HIGHEST ANNUAL MEAN			123
LOWEST ANNUAL MEAN			0.42
HIGHEST DAILY MEAN	67	207	13200
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
ANNUAL RUNOFF (AC-FT)	280	3000	18660
ANNUAL RUNOFF (CFSM)	0.001	0.008	0.048
ANNUAL RUNOFF (INCHES)	0.01	0.11	0.66
10 PERCENT EXCEEDS	0.00	0.31	40
50 PERCENT EXCEEDS	0.00	0.00	2.0
90 PERCENT EXCEEDS	0.00	0.00	0.00

09481740 SANTA CRUZ RIVER AT TUBAC, AZ

**LOCATION**--Lat 31°36'46", long 111°02'27", in SE1/4SW1/4SW1/4, sec.8 T.21 S., R.13 E., Santa Cruz County, Hydrologic Unit 15050301 in Spanish land grant of San Ignacio de la Canoa, on right bank at the Bridge Street bridge, 1/4 mi east of Tubac, 3.1 mi downstream from Tumacacori, and 19 mi south of Continental.

**DRAINAGE AREA**--1,209 mi<sup>2</sup> of which 395 mi<sup>2</sup> is in Mexico.

**PERIOD OF RECORD**--Oct. 1995 to current year.

**REVISED RECORDS**--WRD AZ: 1997.

**GAGE**--Water-stage recorder. Elevation of gage is 3,180 ft above sea level, from topographic map.

**REMARKS**--Records poor. Base flow is regulated by sewage-treatment plant at Rio Rico. No natural flow for most of each year.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 10,600 ft<sup>3</sup>/s, Oct. 23, 2000, gage height 26.56 ft; minimum daily, no flow May 19 to June 20, 2002; June 4 to July 11, 2003, and July 14 to July 19, 2003.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
July 23 .....	2145	2,420	23.67	Aug. 3.....	0140	3,630	24.22
July 25 .....	0245	2,670	23.86	Aug. 14.....	1430	4,580	24.52
July 31 .....	0840	*5,020	*24.65	Aug. 23.....	1145	3,390	24.01
Aug. 1.....	0730	2,840	23.93				

Minimum daily discharge, 1.5 ft<sup>3</sup>/s, Sept. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e8.7	e11	19	11	10	14	14	e9.6	8.9	7.3	1090	e2.5
2	e8.7	e11	19	8.1	11	14	13	e7.7	8.1	8.0	e24	e2.8
3	e8.7	e11	19	18	11	14	13	e7.5	7.6	7.5	936	e2.9
4	e8.7	e11	20	32	11	14	13	e8.0	8.6	6.6	36	e2.9
5	e8.8	e11	30	23	11	14	14	e7.5	8.3	6.5	e5.4	e2.9
6	e8.7	e11	55	13	13	17	14	e7.7	8.0	6.3	e45	e3.0
7	e8.8	e11	20	15	12	17	13	e8.7	9.5	6.1	101	e3.1
8	e9.2	e9.2	15	12	12	16	13	e7.3	e8.7	11	53	3.7
9	e9.4	10	14	12	12	15	13	e7.5	e7.6	7.7	e80	7.6
10	e9.4	8.8	14	12	12	15	13	e7.8	9.2	6.9	107	5.8
11	e9.4	7.4	14	14	16	15	13	4.9	8.8	6.6	e30	1.8
12	e9.4	8.5	13	17	52	15	12	e6.8	e8.4	7.0	e19	1.6
13	e9.4	10	14	14	15	15	11	e6.8	9.1	7.8	e37	1.5
14	e9.4	11	15	14	11	14	10	e6.1	9.0	e7.6	e1630	1.8
15	e9.4	10	15	13	12	15	10	e5.5	8.9	6.0	904	3.4
16	e9.5	13	16	14	12	16	e11	e3.2	8.6	7.2	e7.4	4.0
17	e9.5	13	16	13	13	16	e9.1	7.1	6.5	7.1	e3.6	4.1
18	e9.7	13	16	15	13	16	e8.7	e6.2	7.2	7.3	e24	3.8
19	e10	13	16	15	13	15	e9.1	e6.2	7.5	7.7	8.0	4.1
20	e10	13	16	15	16	15	9.0	e5.5	6.4	e7.5	e3.4	4.7
21	e10	12	16	39	13	14	9.9	e5.7	7.1	e7.7	e3.3	4.6
22	e10	14	16	22	17	15	9.7	e3.6	6.5	e7.5	e17	4.1
23	e10	22	16	9.6	13	15	8.0	e2.1	7.7	e337	e1200	4.2
24	e10	18	16	9.1	14	14	18	e3.2	17	e118	e177	4.4
25	e10	17	15	9.7	14	13	e11	e2.5	10	e630	e2.2	4.2
26	e10	18	14	9.9	14	13	e11	3.1	7.7	e9.5	e2.1	4.1
27	e10	18	15	18	14	13	e10	3.2	e6.6	24	e2.1	3.1
28	e10	18	15	10	14	12	e9.8	7.9	7.7	13	e2.1	3.6
29	e11	18	18	10	---	14	e10	76	8.1	8.2	e2.1	4.0
30	e11	18	19	10	---	14	e10	10	7.4	135	e2.1	4.2
31	e11	---	12	9.8	---	14	---	10	---	1750	e2.2	---
TOTAL	297.8	389.9	548	457.2	401	453	343.3	264.9	250.7	3185.6	6556.0	108.5
MEAN	9.61	13.0	17.7	14.7	14.3	14.6	11.4	8.55	8.36	103	211	3.62
MAX	11	22	55	39	52	17	18	76	17	1750	1630	7.6
MIN	8.7	7.4	12	8.1	10	12	8.0	2.1	6.4	6.0	2.1	1.5
AC-FT	591	773	1090	907	795	899	681	525	497	6320	13000	215

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2005, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005		
MEAN	92.0	43.7	27.6	28.0	30.1	24.0	23.2	9.72	7.34	38.0	56.4	21.5
MAX	798	278	91.1	77.5	67.8	45.4	68.7	29.2	22.4	103	211	69.1
(WY)	2001	2001	2001	2001	1998	1998	2001	2001	2000	2005	2005	1999
MIN	2.89	8.57	16.1	14.6	14.3	14.6	8.73	3.15	0.12	2.24	22.1	3.62
(WY)	2003	1998	2003	2003	2005	2005	1997	2002	2003	1997	1996	2005

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1996 - 2005

ANNUAL TOTAL	6573.64	13255.9	
ANNUAL MEAN	18.0	36.3	35.0
HIGHEST ANNUAL MEAN			127
LOWEST ANNUAL MEAN			15.6
HIGHEST DAILY MEAN	398	Apr 3	1750
LOWEST DAILY MEAN	0.51	May 31	1.5
ANNUAL SEVEN-DAY MINIMUM	2.0	May 31	2.1
ANNUAL RUNOFF (AC-FT)	13040	26290	25320
10 PERCENT EXCEEDS	20	19	46
50 PERCENT EXCEEDS	12	10	16
90 PERCENT EXCEEDS	7.5	4.1	3.9

e Estimated

## 09481770 SANTA CRUZ RIVER AT ELEPHANT HEAD ROAD NEAR AMADO, AZ

**LOCATION**--Lat 31°44'41.4", long 111°02'11.2", in sec.29, T.19 S., R.10 E. On left bank, upstream side of Elephant Head Road Bridge, 3 miles north of Arivaca Junction, and 5 miles north of Amado, Arizona.

**DRAINAGE AREA**--Undetermined.

**PERIOD OF RECORD**--Aug. 2003 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 3,000 ft. above sea level, from topographic map.

**REMARKS**--Records fair except for estimated daily discharges, which are poor. Base flow consists of effluent releases from the International Boundary Wastewater Treatment Plant (IBWTP) located in Rio Rico, AZ. The plant is located at the confluence of Nogales Wash and the Santa Cruz River, 25 miles south of the gage.

**EXTREMES FOR PERIOD OF RECORD**--Maximum daily discharge, 7,640 ft<sup>3</sup>/s, Aug. 23, 2005; minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	5.4	e14	14	12	17	5.8	7.1	4.0	3.9	297	0.00
2	5.2	6.4	e12	13	12	17	5.3	6.6	3.4	4.3	e417	0.00
3	4.6	5.5	7.4	18	13	17	5.6	6.2	1.6	3.8	247	0.00
4	3.4	4.8	7.6	33	13	16	4.4	6.8	3.3	3.9	e0.50	0.00
5	3.2	4.8	15	39	14	16	4.9	5.2	3.8	3.0	35	0.00
6	3.6	5.2	23	20	15	19	5.0	4.8	2.8	2.6	3.8	0.00
7	3.9	4.9	29	18	16	21	4.3	6.0	3.8	2.3	6.5	0.00
8	3.8	4.7	13	20	16	16	4.0	5.2	3.7	2.7	92	0.00
9	3.4	5.1	11	18	16	15	4.3	4.9	3.3	3.9	423	0.00
10	2.8	4.7	10	18	17	15	4.4	5.0	3.3	3.0	9.4	0.00
11	2.4	4.3	10	19	20	14	4.2	5.1	3.5	2.6	1.1	0.00
12	2.6	4.8	9.5	21	36	13	4.2	5.4	3.7	2.8	0.41	0.00
13	2.6	5.0	7.9	22	36	13	3.8	5.2	3.1	3.5	2.1	0.00
14	3.0	5.2	8.3	19	14	12	3.5	4.5	3.8	3.9	286	0.00
15	2.9	4.9	8.1	19	15	12	3.2	4.1	3.4	3.0	245	0.00
16	3.0	5.8	8.5	19	15	12	2.9	3.0	3.2	2.3	0.69	0.00
17	2.9	6.5	11	18	16	12	2.3	3.7	3.0	e0.80	e0.55	0.00
18	3.1	7.2	11	18	17	12	1.9	4.1	3.6	e0.78	e0.58	0.00
19	3.6	7.6	11	18	17	11	2.3	4.0	3.6	3.2	e0.00	0.00
20	4.0	8.0	11	17	21	11	2.6	3.7	3.2	3.4	e0.00	0.00
21	4.0	7.4	12	20	18	9.5	3.3	4.2	3.8	4.0	e0.00	0.00
22	4.8	6.3	13	41	20	9.6	3.4	3.2	3.8	4.5	e0.00	0.00
23	4.4	7.7	15	17	17	9.1	3.2	2.4	3.6	13	e1370	0.00
24	4.2	8.0	15	13	17	8.2	5.2	2.8	6.7	140	33	0.00
25	3.8	9.0	16	14	17	7.4	8.7	3.0	8.9	134	0.01	0.00
26	4.3	9.9	13	14	17	7.0	6.1	3.2	6.0	5.0	0.00	0.00
27	4.2	9.3	14	23	17	6.5	5.2	3.4	5.1	5.6	0.01	0.00
28	5.0	8.3	15	15	16	5.8	5.7	4.8	4.2	14	0.00	0.00
29	5.2	7.8	16	13	---	6.6	5.9	7.9	4.1	4.3	0.00	0.00
30	5.7	e13	23	12	---	6.5	7.0	6.8	3.8	22	0.00	0.00
31	5.3	---	16	12	---	6.3	---	4.2	---	587	0.00	---
TOTAL	119.9	197.5	406.3	595	490	373.5	132.6	146.5	117.1	993.08	3470.65	0.00
MEAN	3.87	6.58	13.1	19.2	17.5	12.0	4.42	4.73	3.90	32.0	112	0.00
MAX	5.7	13	29	41	36	21	8.7	7.9	8.9	587	1370	0.00
MIN	2.4	4.3	7.4	12	12	5.8	1.9	2.4	1.6	0.78	0.00	0.00
MED	3.8	6.0	12	18	16	12	4.3	4.8	3.6	3.9	0.69	0.00
AC-FT	238	392	806	1180	972	741	263	291	232	1970	6880	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

MEAN	1.93	3.33	7.88	12.2	12.7	9.35	4.32	2.63	1.95	24.1	65.5	4.39
MAX	3.87	6.58	13.1	19.2	17.5	12.0	4.42	4.73	3.90	32.0	112	8.77
(WY)	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2004
MIN	0.00	0.08	2.64	5.25	7.97	6.64	4.21	0.53	0.00	16.2	19.1	0.00
(WY)	2004	2004	2004	2004	2004	2004	2004	2004	2004	2004	2004	2005

## SUMMARY STATISTICS

## FOR 2004 CALENDAR YEAR

## FOR 2005 WATER YEAR

## WATER YEARS 2003 - 2005

ANNUAL TOTAL	2823.15	7042.13	
ANNUAL MEAN	7.71	19.3	12.6
HIGHEST ANNUAL MEAN			19.3
LOWEST ANNUAL MEAN			5.97
HIGHEST DAILY MEAN	149	Jul 16	1370
LOWEST DAILY MEAN	0.00	May 21	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	May 21	0.00
ANNUAL RUNOFF (AC-FT)	5600	13970	9140
10 PERCENT EXCEEDS	13	19	17
50 PERCENT EXCEEDS	4.8	5.2	4.3
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

09482000 SANTA CRUZ RIVER AT CONTINENTAL, AZ

**LOCATION**--Lat 31°52'17", long 110°58'46", in SE1/4SE1/4 sec. 11, T.18 S., R.13 E. (unsurveyed), Pima County, Hydrologic Unit 15050301, in Spanish land grant of San Ignacio de la Canoa, on right bank 0.8 mi northeast of Green Valley Post Office, and 1.5 mi north of Continental. Prior to Feb. 13, 1981, at site 1.5 mi upstream.

**DRAINAGE AREA**--1,682 mi<sup>2</sup>, of which 395 mi<sup>2</sup> is in Mexico.

**PERIOD OF RECORD**--July 1940 to Dec. 1946, Oct. 1951 to Sept. 1984, Oct. 1991 to current year (monthly discharge only for 1985--86), (crest-stage partial record station for 1987--1990). Low-flow records not equivalent prior to Feb. 13, 1981, owing to undetermined amount of underflow between sites.

**REVISED RECORDS**--WSP 1283: Drainage area. WDR AZ--81--1: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 2,806.61 ft above sea level. Prior to Feb. 13, 1981, at site 1.5 mi upstream. July 21, 1940 to Sept. 8, 1965 at datum 17.28 ft higher; Sept. 8, 1965 to present at datum 13.21 ft higher. Old site used as supplementary gage until Oct. 29, 1985.

**REMARKS**--Records fair except for estimated daily discharges, which are poor. Irrigation above station of about 12,500 acres including about 2,300 acres in Mexico, mostly by pumping ground water.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 45,000 ft<sup>3</sup>/s Oct. 2, 1983, gage height, 16.34 ft from rating curve extended above 530 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 7.75 ft and slope-area measurement of peak flow, maximum gage height 16.70 ft Oct. 9, 1977, site and datum then in use; no flow for most of each year.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 2.....	2345	*3,970	*7.49
Aug. 9.....	2100	2,210	6.18
Aug. 23.....	1600	3,920	7.46

Minimum daily discharge, no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	2.6	2.1	0.54	0.00	0.00	388	0.00
2	0.00	0.00	0.00	0.00	0.00	2.8	1.8	0.55	0.00	0.00	165	0.00
3	0.00	0.00	0.00	0.00	0.32	3.0	1.7	0.50	0.00	0.00	483	0.00
4	0.00	0.00	0.00	0.00	0.41	3.0	1.4	0.48	0.00	0.00	0.26	0.00
5	0.00	0.00	0.00	e0.26	0.53	3.0	1.3	0.49	0.00	0.00	51	0.00
6	0.00	0.00	0.00	e0.01	0.31	3.1	1.4	0.43	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	e0.00	0.72	3.8	1.2	0.52	0.00	0.00	33	0.00
8	0.00	0.00	0.00	e0.00	0.41	3.4	1.1	0.59	0.00	0.00	156	0.00
9	0.00	0.00	0.00	e0.00	0.70	3.5	1.1	0.37	0.00	0.00	244	0.00
10	0.00	0.00	0.00	e0.00	0.86	3.5	1.2	0.20	0.00	0.00	78	0.00
11	0.00	0.00	0.00	e0.00	1.1	3.3	1.2	0.06	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	1.8	3.2	1.2	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	5.5	3.0	1.1	0.00	0.00	0.00	22	0.00
14	0.00	0.00	0.00	0.00	0.24	3.5	0.94	0.00	0.00	0.00	270	0.00
15	0.00	0.00	0.00	0.00	0.00	4.2	0.83	0.00	0.00	0.00	380	0.00
16	0.00	0.00	0.00	0.00	0.50	3.9	0.79	0.00	0.00	0.00	0.02	0.00
17	0.00	0.00	0.00	0.00	0.97	3.6	0.67	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	1.6	4.0	0.55	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	2.1	4.1	0.33	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	2.3	3.6	0.39	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	2.7	3.7	0.50	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	2.0	1.8	3.3	0.48	0.00	0.00	0.00	13	0.00
23	0.00	0.00	0.00	0.04	2.7	3.6	0.36	0.00	0.00	0.00	772	0.00
24	0.00	0.00	0.00	0.00	1.9	3.5	0.37	0.00	0.00	0.00	68	0.00
25	0.00	0.00	0.00	0.00	2.3	3.2	0.53	0.00	0.00	44	0.00	0.00
26	0.00	0.00	0.00	0.00	2.4	2.9	0.45	0.00	0.00	17	0.00	0.00
27	0.00	0.00	0.00	0.58	2.5	2.5	0.46	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.58	2.5	2.3	0.51	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	2.3	0.57	0.00	0.00	0.06	0.00	0.00
30	0.00	0.00	0.00	0.00	---	2.3	0.57	0.00	0.00	0.08	0.00	0.00
31	0.00	---	0.00	0.11	---	2.2	---	0.00	---	372	0.00	---
TOTAL	0.00	0.00	0.00	3.58	39.17	99.9	27.10	4.73	0.00	433.14	3123.28	0.00
MEAN	0.00	0.00	0.00	0.12	1.40	3.22	0.90	0.15	0.00	14.0	101	0.00
MAX	0.00	0.00	0.00	2.0	5.5	4.2	2.1	0.59	0.00	372	772	0.00
MIN	0.00	0.00	0.00	0.00	0.00	2.2	0.33	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	7.1	78	198	54	9.4	0.00	859	6200	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)

MEAN	49.8	5.21	33.1	43.2	11.5	9.83	0.70	0.03	0.39	28.4	76.4	17.5
MAX	1525	133	658	1386	207	181	31.5	1.32	6.18	227	753	285
(WY)	1984	1979	1968	1993	1966	1983	1992	1992	1978	1954	1955	1964
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1943	1941	1942	1942	1942	1941	1941	1941	1941	1993	1956	1953

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1941 - 2005
ANNUAL TOTAL	557.33	3730.90	
ANNUAL MEAN	1.52	10.2	23.3
HIGHEST ANNUAL MEAN			206
LOWEST ANNUAL MEAN			0.26
HIGHEST DAILY MEAN	89	772	17800
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
ANNUAL RUNOFF (AC-FT)	1110	7400	16870
10 PERCENT EXCEEDS	0.02	3.1	1.5
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

09482500 SANTA CRUZ RIVER AT TUCSON, AZ

**LOCATION** --Lat 32°13'19", long 110°58'52", in SE1/4SE1/4 sec. 11, T.14 S., R.13 E., Pima County, Hydrologic Unit 15050301, on right bank, 300 ft downstream from Congress Street Bridge, in Tucson.

**DRAINAGE AREA** --2,222 mi<sup>2</sup>, of which 395 mi<sup>2</sup> is in Mexico, adjusted for 15.2 mi<sup>2</sup> of Tucson Arroyo drainage area contributing to this station effective July 1956.

**PERIOD OF RECORD** --Oct. 1905 to Sept. 1981 (monthly discharge only, Jan. 1907 to Sept. 1912, Jan. to Sept. 1914), June 1986 to Sept. 1995 (discharge above 500 ft<sup>3</sup>/s only), Oct. 1995 to current year.

**REVISED RECORDS** --WSP 859: 1915(M). WSP 1283: Drainage area. WSP 1313: 1939(M). WDR AZ-88-1: 1986-87(M).

**GAGE** --Water-stage recorder and crest-stage gage. Datum of gage is 2,320.68 ft above sea level. Prior to Nov. 27, 1929, nonrecording gages or reference points for measuring to water surface at various places on Congress Street bridge at various datums. Nov. 27, 1929 to Sept. 30, 1981, water-stage recorder at Congress Street bridge: at datum 6.22 ft higher Nov. 27, 1929 to June 18, 1958; at datum 2.22 ft higher June 18, 1958 to May 21, 1963; at datum 3.48 ft lower May 21, 1963 to Oct. 27, 1970; at datum 2.86 ft lower Oct. 1, 1971, to Sept. 30, 1981. No gage Oct. 27, 1970 to Oct. 1, 1971, and Oct. 10, 1977, to Feb. 14, 1978.

**REMARKS** --Records fair, except for discharges above 630 ft<sup>3</sup>/s and estimated daily discharges, which are poor. Irrigation above station of about 26,000 acres, including about 2,300 acres in Mexico, mostly by pumping from ground water. Ground water is also pumped above the station for municipal supply and mining. From Oct. 1969 to Sept. 1981, all flow past station was published, including waste water when known.

**EXTREMES FOR PERIOD OF RECORD** --Maximum discharge, 37,400 ft<sup>3</sup>/s Jan. 19, 1993, gage height, 11.67 ft; no flow for most of each year.

**EXTREMES OUTSIDE PERIOD OF RECORD** --Maximum discharge since at least 1892, 52,700 ft<sup>3</sup>/s, from slope-area measurement of peak flow, Oct. 2, 1983; gage height, 22.2 ft, from floodmark, at site and datum used in 1981.

Maximum discharge during the 1985 water year was 10,000 ft<sup>3</sup>/s Dec. 28, 1984; gage height, 12.5 ft, at site and datum used in 1981.

**EXTREMES FOR CURRENT YEAR** --Peak discharges greater than base discharge of 1,700 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 19 .....	2030	1,820	3.96	Aug. 8 .....	0430	6,290	6.06
Aug. 3 .....	0515	3,960	5.18	Aug. 10 .....	0245	3,110	4.79
Aug. 6 .....	1930	3,820	5.12	Aug. 23 .....	0923	*16,300	*11.67

Minimum daily discharge, no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	508	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56	0.00
3	0.00	0.00	0.00	1.6	0.00	0.00	0.00	0.00	0.00	0.00	485	0.00
4	0.00	0.00	9.1	e1.1	0.00	0.00	0.00	0.00	0.00	0.00	9.8	0.00
5	0.00	0.00	e0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	253	0.00
6	0.00	0.00	e0.13	0.00	0.00	e1.3	0.00	0.00	0.00	0.00	174	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	176	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	755	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	262	0.00
11	0.00	0.00	0.00	0.00	3.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	e165	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e107	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	564	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	542	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	20	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	e2.4	0.00	0.00	e0.00	0.00	5.1	0.00	0.00
19	0.00	0.00	0.00	0.00	112	0.00	0.00	e0.00	0.00	51	0.00	0.00
20	0.00	0.00	0.00	0.00	e2.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.23	0.00	0.00	68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	e3.7	2.9	0.00	e3.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	e1.8	0.00	0.00	0.00	0.00	0.00	0.02	0.00	3870	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	e5.3	0.00	0.12	0.00	48	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35	0.00	0.00
26	35	0.00	0.00	2.1	0.00	0.00	0.00	0.00	0.00	75	0.00	0.00
27	e0.00	0.00	0.00	28	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	e0.78	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	e0.62	0.00	15	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.01	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	186	0.00	---
TOTAL	38.93	4.70	10.10	104.20	286.20	1.30	5.30	1.48	0.14	367.11	7857.80	0.00
MEAN	1.26	0.16	0.33	3.36	10.2	0.04	0.18	0.05	0.00	11.8	253	0.00
MAX	35	2.9	9.1	68	165	1.3	5.3	0.78	0.12	186	3870	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.8	0.00
AC-FT	77	9.3	20	207	568	2.6	11	2.9	0.3	728	15590	0.00
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.11	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2005, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002	2003	2004	2005			
MEAN	51.1	12.8	0.09	1.88	1.81	0.61	1.28	0.18	2.71	22.6	50.2	11.4
MAX	356	85.0	0.33	9.23	10.2	2.73	3.63	1.20	18.8	84.2	253	43.9
(WY)	2001	2001	2005	2001	2005	2001	1999	2003	2000	1999	2005	2002
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.77	1.10	0.00
(WY)	1999	2000	2000	1999	2001	2002	2000	1999	1999	2001	2004	2005

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1997 - 2005

ANNUAL TOTAL	1363.45	8677.26	
ANNUAL MEAN	3.73	23.8	13.7
HIGHEST ANNUAL MEAN			39.0
LOWEST ANNUAL MEAN			3.97
HIGHEST DAILY MEAN	257	Sep 18	3870
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	2700		17210
ANNUAL RUNOFF (CFSM)	0.002		0.011
10 PERCENT EXCEEDS	0.31		1.9
50 PERCENT EXCEEDS	0.00		0.00
90 PERCENT EXCEEDS	0.00		0.00

e Estimated

09484000 SABINO CREEK NEAR TUCSON, AZ

**LOCATION**--Lat 32°19'00", long 110°48'35", in SE1/4NE1/4 sec. 9, T.13 S., R.15 E., Pima County, Hydrologic Unit 15050302, on left bank, 30 ft upstream from Lower Sabino Dam, 0.5 mi north of Coronado National Forest boundary and 12 mi northeast of Tucson City Hall.

**DRAINAGE AREA**--35.5 mi<sup>2</sup>.

**PERIOD OF RECORD**--July 1904 to June 1912 (monthly discharge only); June 1932 to Sept. 1974 (continuous-record station); Oct. 1974 to Sept. 1989 (crest-stage partial-record station); Oct. 1989 to current year.

**REVISED RECORDS**--WSP 1213: 1938, 1946. WSP 1283: Drainage area.

**GAGE**--Water-stage recorder and concrete control. Elevation of gage is 2,720 ft above sea level, from topographic map. July 1904 to June 1912, water-stage recorder and sharp-crested weir at site 0.7 mi upstream at different datum. June 1932 to Sept. 1974 (water-stage recorder) and Oct. 1974 to Aug. 1981 (crest-stage gage) at site 1,000 ft upstream at different datum.

**REMARKS**--Records fair. No diversion above station except for domestic supply.

**AVERAGE DISCHARGE**--60 years (water years 1905-11, 1933-74, 1990-2000), 14.6 ft<sup>3</sup>/s, 10,580 acre-ft/yr; median of yearly mean discharges 8.9 ft<sup>3</sup>/s, 6,400 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 15,400 ft<sup>3</sup>/s July 15, 1999, gage height 8.25 ft from highwater marks, from rating curve extended above 3,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 9.65 ft; no flow at times in most years.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29.....	2015	1,460	3.28	Feb. 20.....	0015	669	2.53
Jan. 4.....	0000	884	2.77	Aug. 2.....	2030	201	1.88
Jan. 26.....	1700	350	2.12	Aug. 9.....	1415	780	2.66
Feb. 12.....	0915	*3,120	*4.42	Sept. 9.....	1945	740	2.61

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.16	0.53	0.59	64.2	57.9	21.8	9.67	0.47	1.31	0.00	0.52	5.53
2	0.93	0.50	0.52	55.3	55.9	20.0	8.75	0.46	1.04	0.00	23.9	5.70
3	0.89	0.55	0.46	220	33.9	19.8	7.92	0.50	0.59	0.00	36.1	2.38
4	0.83	0.54	29.8	342	33.7	19.5	7.61	0.51	0.45	0.00	9.63	2.36
5	0.61	0.56	53.2	126	33.5	21.5	8.55	0.53	0.37	0.00	11.8	1.43
6	0.55	0.61	41.9	83.5	39.7	25.3	7.36	0.54	0.30	0.00	0.84	1.05
7	0.48	0.68	29.5	69.5	28.4	20.3	8.75	0.53	0.23	0.00	49.5	10.1
8	0.42	1.05	31.0	61.9	25.9	18.6	8.81	0.52	0.10	0.00	34.2	21.2
9	0.38	2.17	50.4	57.4	24.4	20.7	7.67	0.50	0.04	0.00	159	75.5
10	0.35	2.48	114	50.2	24.1	20.7	5.30	0.51	0.00	0.00	56.9	83.3
11	0.30	2.46	107	61.4	394	15.6	3.44	0.51	0.00	0.00	29.9	37.7
12	0.30	3.98	71.6	54.2	1370	14.2	3.31	0.50	0.00	0.00	29.6	11.5
13	0.23	5.74	50.4	49.7	377	11.0	3.53	0.45	0.00	0.00	29.6	7.55
14	0.14	5.55	39.3	57.1	141	9.08	4.91	0.49	0.00	0.00	30.4	3.71
15	0.06	1.31	36.8	50.6	79.1	12.8	4.29	0.46	0.00	0.00	19.3	1.51
16	0.02	0.68	31.0	48.8	65.8	10.7	3.49	0.46	0.00	0.00	16.1	0.65
17	0.01	0.78	28.3	38.6	57.0	7.78	5.05	0.39	0.00	0.00	13.4	0.64
18	0.00	0.95	27.0	36.9	120	3.92	4.71	0.37	0.00	0.00	12.7	0.58
19	0.00	0.73	24.3	35.5	128	5.84	4.40	0.38	0.00	0.00	9.45	0.59
20	0.00	0.67	25.0	36.1	303	5.03	4.09	0.37	0.00	0.00	8.97	0.57
21	0.00	0.69	26.6	38.4	125	3.55	3.27	0.33	0.00	0.00	5.72	0.55
22	2.98	1.37	26.8	55.6	72.5	3.66	2.86	0.22	0.00	0.00	3.21	0.47
23	0.60	3.12	27.7	47.0	66.7	6.92	3.01	0.12	0.00	0.00	21.9	0.43
24	0.36	3.40	23.7	54.4	47.6	9.63	9.32	0.05	0.00	0.00	18.6	0.39
25	0.29	2.00	27.7	51.3	35.4	8.99	0.52	0.01	0.00	0.00	9.23	0.34
26	0.33	1.18	30.5	112	32.0	5.85	0.42	0.01	0.00	0.00	9.15	0.25
27	0.32	0.72	30.8	209	28.8	8.90	0.42	0.01	0.00	0.00	7.94	0.20
28	0.35	0.74	29.9	166	23.9	8.99	0.43	2.10	0.00	0.00	7.40	0.17
29	7.91	0.82	344	124	---	7.89	0.44	46.2	0.00	0.00	5.64	0.12
30	1.01	0.69	217	102	---	9.34	0.49	11.6	0.00	0.00	4.17	0.02
31	0.62	---	91.9	70.9	---	9.44	---	3.73	---	0.92	3.27	---
TOTAL	22.43	47.25	1668.67	2629.5	3824.2	387.31	142.79	73.83	4.43	0.92	678.04	276.49
MEAN	0.72	1.57	53.8	84.8	137	12.5	4.76	2.38	0.15	0.03	21.9	9.22
MAX	7.91	5.74	344	342	1370	25.3	9.67	46.2	1.31	0.92	159	83.3
MIN	0.00	0.50	0.46	35.5	23.9	3.55	0.42	0.01	0.00	0.00	0.52	0.02
MED	0.35	0.80	30.5	57.1	56.5	9.63	4.34	0.47	0.00	0.00	12.7	0.85
AC-FT	44	94	3310	5220	7590	768	283	146	8.8	1.8	1340	548
CFSM	0.02	0.04	1.52	2.39	3.85	0.35	0.13	0.07	0.00	0.00	0.62	0.26
IN.	0.02	0.05	1.75	2.76	4.01	0.41	0.15	0.08	0.00	0.00	0.71	0.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2005, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	5.72	9.07	24.0	46.5	50.3	52.1	22.8	4.23	0.42	12.2	19.8	11.3						
MAX	72.8	39.7	114	441	211	311	97.1	40.2	6.37	85.1	84.4	60.8						
(WY)	2001	1995	1993	1993	1995	1991	1991	1988	1992	1999	1995	1995						
MIN	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	1.13	0.01						
(WY)	1989	1990	1990	1989	2000	2002	2002	1989	1988	1988	1988	1991						

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1988 - 2005
ANNUAL TOTAL	5651.27	9755.86	
ANNUAL MEAN	15.4	26.7	21.4
HIGHEST ANNUAL MEAN			64.6
LOWEST ANNUAL MEAN			0.86
HIGHEST DAILY MEAN	344 Dec 29	1370 Feb 12	3180 Jan 8 1993
LOWEST DAILY MEAN	0.00 May 25	0.00 Oct 18	0.00 Oct 2 1987
ANNUAL SEVEN-DAY MINIMUM	0.00 May 25	0.00 Jun 10	0.00 Jun 3 1988
ANNUAL RUNOFF (AC-FT)	11210	19350	15490
ANNUAL RUNOFF (CFSM)	0.435	0.753	0.602
ANNUAL RUNOFF (INCHES)	5.92	10.22	8.19
10 PERCENT EXCEEDS	45	58	52
50 PERCENT EXCEEDS	2.3	3.4	0.89
90 PERCENT EXCEEDS	0.00	0.00	0.00



09484500 TANQUE VERDE CREEK AT TUCSON, AZ

**LOCATION.**--Lat 32°15'55", long 110°50'26", in NE1/4NE1/4NE1/4 sec. 31, T.13 S., R.15 E., Pima County, Hydrologic Unit 15050302, at Sabino Canyon Road, 0.8 mi downstream from Sabino Creek.

**DRAINAGE AREA.**--219 mi<sup>2</sup>.

**PERIOD OF RECORD.**--June 1940 to Oct. 1945; water years 1966--81, 1988--90 (annual maximums only); Oct. 1990 to current year. Prior to 1945, published as "Rillito Creek near Wrightstown."

**GAGE.**--Water-stage recorder. Elevation of gage is 2,470 ft above sea level, from topographic map. Prior to Oct. 1945, at same location at different datum. Oct. 1965 to Sept. 1981, nonrecording gage at same site at different datum. Oct. 1987 to Sept. 1990, nonrecording gage at same site and datum.

**REMARKS.**--Records fair except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 24,500 ft<sup>3</sup>/s, Jan. 8, 1993, gage height, 11.85 ft; no flow most of each year.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29 .....	2200	1,270	7.57	Feb. 12 .....	1000	*6,070	*9.19
Jan. 4 .....	0200	996	7.34	Feb. 20 .....	0200	877	7.18

Minimum daily discharge, no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	52	44	42	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	20	34	36	0.00	0.00	0.00	0.00	0.55	0.00
3	0.00	0.00	0.00	175	25	20	0.00	0.00	0.00	0.00	4.8	0.00
4	0.00	0.00	2.1	499	17	10	0.00	0.00	0.00	0.00	2.4	0.00
5	0.00	0.00	65	199	15	5.3	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	45	106	11	2.9	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	22	96	12	1.5	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	25	105	10	0.24	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	32	78	6.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	55	74	4.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	e53	77	453	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	e39	70	2470	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	e25	59	802	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	15	47	315	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	9.3	34	204	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	2.7	23	146	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	18	125	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	15	220	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	14	212	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	e15	528	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	e16	260	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	e33	153	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	e34	132	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	e34	107	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	30	82	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	57	66	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	201	56	0.00	0.00	0.00	0.00	0.15	0.00	0.00
28	0.00	0.00	0.00	135	49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	195	87	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	345	63	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	116	44	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	1046.10	2510	6558.8	117.94	0.00	0.00	0.00	0.15	7.75	0.00
MEAN	0.00	0.00	33.7	81.0	234	3.80	0.00	0.00	0.00	0.00	0.25	0.00
MAX	0.00	0.00	345	499	2470	42	0.00	0.00	0.00	0.15	4.8	0.00
MIN	0.00	0.00	0.00	14	4.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	2070	4980	13010	234	0.00	0.00	0.00	0.3	15	0.00
CFSM	0.00	0.00	0.15	0.37	1.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00
IN.	0.00	0.00	0.18	0.43	1.11	0.02	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)

MEAN	6.48	6.74	28.9	86.1	61.0	49.0	15.4	0.64	0.00	11.7	4.81	1.39
MAX	144	92.9	248	1295	329	277	125	3.90	0.01	121	30.4	9.17
(WY)	2001	2001	1941	1993	1998	1991	1998	1941	1988	1990	2003	1998
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1941	1943	1943	1943	1943	1996	1943	1944	1941	1942	1991	1943

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1941 - 2005

ANNUAL TOTAL		4467.43		10240.74		
ANNUAL MEAN		12.2		28.1		22.4
HIGHEST ANNUAL MEAN						147
LOWEST ANNUAL MEAN						0.01
HIGHEST DAILY MEAN		345	Dec 30	2470	Feb 12	9840
LOWEST DAILY MEAN		0.00	Jan 1	0.00	Oct 1	0.00
ANNUAL SEVEN-DAY MINIMUM		0.00	Jan 1	0.00	Oct 1	0.00
ANNUAL RUNOFF (AC-FT)		8860		20310		16230
ANNUAL RUNOFF (CFSM)		0.056		0.128		0.102
ANNUAL RUNOFF (INCHES)		0.76		1.74		1.39
10 PERCENT EXCEEDS		39		56		24
50 PERCENT EXCEEDS		0.00		0.00		0.00
90 PERCENT EXCEEDS		0.00		0.00		0.00

e Estimated

GILA RIVER BASIN

09484550 CIENEGA CREEK NEAR SONOITA, AZ

LOCATION--Lat 31°51'56", long 110°34'12", in SW1/4NW1/4SW1/4 sec. 13, T.18 S., R.17 E, Pima County, Hydrologic Unit 15050302, north of Sonoita.

DRAINAGE AREA--Undetermined.

PERIOD OF RECORD--Oct. 2001 to current year.

GAGE--Water-stage recorder and concrete weir. Elevation of gage is 4,180 ft above sea level, from topographic map.

REMARKS--Records fair except for estimated daily discharges, which are poor. No known diversion above station.

EXTREMES FOR PERIOD OF RECORD--Maximum discharge, 429 ft<sup>3</sup>/s, Aug. 2, 2005, gage height, 9.19 ft. Minimum daily discharge, 0.12 ft<sup>3</sup>/s in some years.

EXTREMES FOR CURRENT YEAR--Peak discharge above 300 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 2.....	1945	*429	*9.19

Minimum daily discharge, 0.12 ft<sup>3</sup>/s, July 6, 12, 13, and Aug. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.34	0.54	0.63	0.69	0.75	0.80	0.80	0.56	0.29	0.15	e1.3	2.6
2	0.34	0.56	0.64	0.74	0.75	0.80	0.81	0.55	0.29	0.15	e18	0.52
3	0.33	0.55	0.65	0.83	0.75	0.81	0.82	0.54	0.28	0.14	e1.6	0.50
4	0.33	0.57	0.73	0.85	0.77	0.81	0.80	0.52	0.29	0.14	e0.53	0.49
5	0.34	0.54	0.68	0.75	0.78	0.83	0.80	0.50	0.30	0.13	e11	0.49
6	0.35	0.55	0.67	0.73	0.77	0.94	0.80	0.49	0.29	0.12	e0.65	0.47
7	0.35	0.55	0.64	0.72	0.77	0.86	0.78	0.49	0.28	0.13	e15	2.8
8	0.35	0.55	0.62	0.72	0.78	0.83	0.76	0.48	0.27	0.15	e1.2	0.61
9	0.36	0.53	0.62	0.73	0.77	0.81	0.76	0.46	0.26	0.14	e0.82	4.7
10	0.35	0.54	0.62	0.73	0.78	0.81	0.76	0.45	0.27	0.14	e0.12	0.67
11	0.39	0.57	0.63	0.72	0.85	0.78	0.76	0.45	0.27	0.14	e0.44	0.50
12	0.40	0.58	0.63	0.72	0.93	0.78	0.75	0.43	0.27	0.12	e0.75	0.47
13	0.40	0.59	0.62	0.71	0.81	0.77	0.72	0.42	0.26	0.12	e17	0.44
14	0.41	0.57	0.63	0.73	0.80	0.77	0.70	0.40	0.25	0.14	e46	0.42
15	0.40	0.58	0.63	0.72	0.80	0.77	0.68	0.39	0.24	0.14	e34	0.41
16	0.42	0.60	0.64	0.73	0.79	0.78	0.63	0.36	0.23	0.14	e2.6	0.40
17	0.53	0.62	0.64	0.73	0.80	0.79	0.62	0.36	0.23	0.16	4.5	0.36
18	0.56	0.63	0.64	0.73	0.80	0.78	0.62	0.36	0.22	0.17	0.65	0.36
19	0.57	0.63	0.66	0.74	0.83	0.79	0.61	0.34	0.23	0.15	0.57	0.38
20	e0.53	0.62	0.66	0.75	0.92	0.78	0.61	0.31	0.23	0.16	0.52	0.38
21	0.48	0.62	0.66	0.83	0.82	0.77	0.61	0.29	0.21	0.16	0.50	0.38
22	0.55	0.64	0.66	0.79	0.81	0.77	0.60	0.27	0.21	0.17	3.6	0.32
23	0.53	0.66	0.66	0.77	0.80	0.76	0.61	0.29	0.22	0.22	24	0.30
24	0.53	0.65	0.65	0.76	0.80	0.77	0.68	0.29	0.23	12	29	0.27
25	0.53	0.63	0.66	0.77	0.81	0.78	0.67	0.30	0.22	0.47	21	0.25
26	0.54	0.64	0.67	0.78	0.81	0.79	0.61	0.31	0.19	0.34	2.7	0.33
27	0.54	0.64	0.68	0.80	0.81	0.80	0.58	0.33	0.18	0.72	0.62	0.32
28	0.54	0.65	0.67	0.78	0.80	0.82	0.57	0.39	0.18	e0.29	0.52	0.33
29	0.54	0.63	0.70	0.79	---	0.82	0.61	0.37	0.16	e0.35	0.48	0.25
30	0.54	0.63	0.69	0.79	---	0.81	0.59	0.33	0.15	e0.39	0.45	0.32
31	0.55	---	0.69	0.76	---	0.81	---	0.30	---	e0.84	0.44	---
TOTAL	13.92	17.86	20.27	23.39	22.46	24.79	20.72	12.33	7.20	18.78	240.56	21.04
MEAN	0.45	0.60	0.65	0.75	0.80	0.80	0.69	0.40	0.24	0.61	7.76	0.70
MAX	0.57	0.66	0.73	0.85	0.93	0.94	0.82	0.56	0.30	12	46	4.7
MIN	0.33	0.53	0.62	0.69	0.75	0.76	0.57	0.27	0.15	0.12	0.12	0.25
MED	0.42	0.59	0.65	0.74	0.80	0.79	0.68	0.39	0.23	0.15	1.2	0.41
AC-FT	28	35	40	46	45	49	41	24	14	37	477	42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2005, BY WATER YEAR (WY)

MEAN	0.61	0.71	0.84	0.96	1.09	1.12	0.92	0.51	0.26	0.88	3.21	0.56
MAX	0.89	0.95	1.10	1.33	1.51	1.51	1.26	0.69	0.33	1.41	7.76	0.97
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2003	2005	2001
MIN	0.36	0.56	0.65	0.75	0.80	0.80	0.69	0.40	0.22	0.60	1.17	0.31
(WY)	2003	2003	2005	2005	2005	2005	2005	2005	2003	2002	2001	2004

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 2001 - 2005

ANNUAL TOTAL	300.50	443.32	
ANNUAL MEAN	0.82	1.21	0.99
HIGHEST ANNUAL MEAN			1.21 2005
LOWEST ANNUAL MEAN			0.87 2004
HIGHEST DAILY MEAN	22 Aug 19	46 Aug 14	54 Aug 26 2003
LOWEST DAILY MEAN	0.16 Aug 8	0.12 Jul 6	0.12 Jul 9 2003
ANNUAL SEVEN-DAY MINIMUM	0.18 Aug 2	0.13 Jul 6	0.13 Jul 6 2005
ANNUAL RUNOFF (AC-FT)	596	879	717
10 PERCENT EXCEEDS	1.2	0.82	1.3
50 PERCENT EXCEEDS	0.60	0.62	0.69
90 PERCENT EXCEEDS	0.24	0.23	0.26

e Estimated

09484600 PANTANO WASH NEAR VAIL, AZ

**LOCATION.**--Lat 32°02'09", long 110°40'37", in SW1/4SE1/4 sec. 14, T.16 S., R.16 E., Pima County, Hydrologic Unit 15050302, on right bank 60 ft upstream from dam, 2.2 mi southeast of Vail, and 20 mi southeast of Tucson City Hall.

**DRAINAGE AREA.**--457 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Jan. 1959 to Sept. 1974, water years 1975--89 (annual maximums only), Oct. 1989 to current year.

**GAGE.**--Water-stage recorder and concrete weir. Elevation of gage is 3,205 ft above sea level, from topographic map. Jan. 1959 to Sept. 1974 (water-stage recorder) and Oct. 1974 to Sept. 1989 (crest-stage gage) at same site and datum.

**REMARKS.**--Records fair, except for estimated daily discharges, which are poor. No known diversion above station. Records published herein represent flow by gage. Infiltration flow is not included. Base runoff past gage station consists of downvalley underflow that is brought to the surface by the concrete dam 60 ft downstream, which extends to bedrock.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 12,000 ft<sup>3</sup>/s Oct. 1 or 2, 1983, gage height, 15.25 ft, from inside highwater mark, from rating curve extended above 2,000 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 10.9 and 24 ft; no flow June 26 to July 13, Aug. 7, 1971 (result of work on infiltration gallery), June 27 to July 13, 1973 (result of ponding during construction work on dam), May 28 to June 12, and July 12, 13, 17, and 18, 1974.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge since at least 1930, about 38,000 ft<sup>3</sup>/s, Aug. 11, 1958, gage height, about 24 ft, from floodmark, from slope-area measurement.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 9.....	1700	*2,030	*8.30

Minimum daily discharge, 0.04 ft<sup>3</sup>/s, May 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.45	0.40	0.47	0.16	0.09	0.41	0.40	0.68	0.07	0.22	2.4	3.8
2	0.45	0.40	0.47	0.16	0.08	0.41	0.40	0.69	0.12	0.22	5.0	1.2
3	0.44	0.40	0.47	0.17	0.08	0.44	0.40	0.72	0.10	0.23	3.5	1.2
4	0.38	0.40	0.47	0.16	0.10	0.45	0.40	0.74	0.09	0.23	8.3	1.3
5	0.39	0.40	0.47	0.16	0.09	0.40	0.40	0.75	0.07	0.21	1.5	1.3
6	0.39	0.40	0.47	0.13	0.10	0.42	0.40	0.79	0.07	0.24	1.3	1.3
7	0.40	0.41	0.47	0.13	0.12	0.40	0.40	0.82	0.06	0.26	3.4	1.3
8	0.39	0.41	0.47	0.12	0.14	0.40	0.40	0.83	0.05	0.27	23	4.0
9	0.39	0.40	0.47	0.12	0.15	0.37	0.40	0.82	0.05	0.27	4.4	e190
10	0.40	0.40	0.47	0.13	0.13	0.33	0.40	0.86	0.06	0.28	49	e1.0
11	0.40	0.40	0.47	0.15	0.14	0.32	0.40	0.88	0.08	0.30	13	e0.74
12	0.40	0.40	0.47	0.15	0.19	0.35	0.40	0.87	0.10	0.31	5.2	e0.69
13	0.40	0.40	0.48	0.16	0.16	0.35	0.40	0.87	0.12	0.34	11	e0.54
14	0.40	0.42	0.53	0.17	0.17	0.35	0.40	0.86	0.14	0.33	110	0.54
15	0.40	0.47	0.54	0.20	0.19	0.35	0.41	0.84	0.16	0.32	e75	0.54
16	0.40	0.47	0.54	0.26	0.23	0.35	0.44	0.83	0.15	0.32	e0.67	0.54
17	0.40	0.47	0.54	0.32	0.30	0.36	0.44	0.85	0.13	0.33	0.57	0.55
18	0.40	0.47	0.54	0.24	0.35	0.38	0.45	0.87	0.14	0.34	0.50	0.57
19	0.40	0.47	0.54	0.21	0.33	0.40	0.45	0.87	0.15	0.36	0.47	0.59
20	0.40	0.47	0.54	0.23	0.36	0.40	0.46	0.86	0.17	0.38	0.46	0.54
21	0.40	0.47	0.47	3.9	0.33	0.40	0.45	0.82	0.17	0.39	0.45	0.58
22	0.40	0.47	0.42	0.19	0.33	0.39	0.44	0.80	0.16	0.39	22	0.62
23	0.40	0.47	0.38	0.15	0.33	0.39	0.44	0.82	0.16	0.48	e401	0.62
24	0.40	0.47	0.35	0.13	0.33	0.40	0.53	0.82	0.18	0.54	e3.7	0.60
25	0.40	0.47	0.31	0.13	0.38	0.40	0.57	0.85	0.18	0.54	e2.0	0.60
26	0.40	0.47	0.30	0.13	0.41	0.39	0.58	0.88	0.19	0.52	e1.8	0.54
27	0.40	0.47	0.28	0.16	0.44	0.39	0.59	25	0.19	77	1.9	0.49
28	0.40	0.47	0.23	0.10	0.42	0.39	0.62	0.14	0.21	0.31	1.8	0.47
29	0.40	0.47	0.20	0.10	---	0.40	0.68	0.08	0.22	0.17	1.8	0.45
30	0.40	0.47	0.20	0.10	---	0.40	0.69	0.06	0.22	31	1.7	0.45
31	0.40	---	0.16	0.10	---	0.40	---	0.04	---	87	1.8	---
TOTAL	12.48	13.16	13.19	8.72	6.47	11.99	13.84	46.61	3.96	204.10	758.62	217.66
MEAN	0.40	0.44	0.43	0.28	0.23	0.39	0.46	1.50	0.13	6.58	24.5	7.26
MAX	0.45	0.47	0.54	3.9	0.44	0.45	0.69	25	0.22	87	401	190
MIN	0.38	0.40	0.16	0.10	0.08	0.32	0.40	0.04	0.05	0.17	0.45	0.45
AC-FT	25	26	26	17	13	24	27	92	7.9	405	1500	432
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.02
IN.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2005, BY WATER YEAR (WY)

	3.01	2.27	4.95	6.21	5.96	3.35	2.10	1.19	1.64	12.7	18.7	9.24
MEAN	3.01	2.27	4.95	6.21	5.96	3.35	2.10	1.19	1.64	12.7	18.7	9.24
MAX	45.6	38.7	50.3	111	75.1	21.2	12.0	2.62	20.8	49.6	92.6	105
(WY)	2001	2001	1966	1993	1998	1998	1998	2004	2000	1967	1971	1964
MIN	0.10	0.10	0.10	0.09	0.10	0.12	0.32	0.19	0.07	0.22	0.52	0.16
(WY)	1974	1974	1974	2003	1974	1974	1974	1974	1974	1997	1973	1973

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1960 - 2005

ANNUAL TOTAL	991.99	1310.80	
ANNUAL MEAN	2.71	3.59	5.96
HIGHEST ANNUAL MEAN			15.7
LOWEST ANNUAL MEAN			1.44
HIGHEST DAILY MEAN	272	Aug 5	401
LOWEST DAILY MEAN	0.14	Apr 7	0.04
ANNUAL SEVEN-DAY MINIMUM	0.16	Apr 6	0.06
ANNUAL RUNOFF (AC-FT)	1970		2600
ANNUAL RUNOFF (CFSM)	0.006		0.008
ANNUAL RUNOFF (INCHES)	0.08		0.11
10 PERCENT EXCEEDS	2.0		1.3
50 PERCENT EXCEEDS	0.49		0.40
90 PERCENT EXCEEDS	0.29		0.13

09485000 RINCON CREEK NEAR TUCSON, AZ

**LOCATION**--Lat 32°07'46.5", long 110°37'31.4", in NW1/4NE1/4 sec. 17, T.15 S., R.17 E., Pima County, Hydrologic Unit 15050302, on left bank 0.2 mi north of Sentinel Butte, 9 mi upstream from mouth, and 22 mi southeast of Tucson City Hall.

**DRAINAGE AREA**--44.8 mi<sup>2</sup>.

**PERIOD OF RECORD**--Oct. 1952 to Sept. 1974, Oct. 1974 to Sept. 1989 (crest-stage partial-record station), Oct. 1989 to current year.

**GAGE**--Water-stage recorder and concrete control. Elevation of gage is 3,120 ft above sea level, from topographic map. Oct. 1952 to Sept. 1974 (water-stage recorder) and Oct. 1974 to Sept. 1989 (crest-stage gage) at same site and datum.

**REMARKS**--Records good.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 9,660 ft<sup>3</sup>/s Aug. 19, 1971, gage height, 10.5 ft, from inside highwater mark, from rating curve extended above 1,800 ft<sup>3</sup>/s on basis of slope-area measurement at gage heights 6.50 ft and 9.90 ft; no flow for many days in each year.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12.....	1100	1,520	5.85

Minimum daily discharge, no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.32	9.4	6.3	0.46	0.15	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.11	6.9	5.2	0.47	0.14	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	2.6	5.1	4.4	0.44	0.14	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	101	4.0	3.8	0.43	0.13	0.00	0.00	0.12	0.00
5	0.00	0.00	0.00	65	3.6	3.4	0.41	0.12	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	31	3.8	4.7	0.39	0.12	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	16	3.8	6.1	0.39	0.12	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	11	3.2	4.3	0.37	0.11	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	11	2.8	3.6	0.36	0.10	0.00	0.00	1.5	0.00
10	0.00	0.00	0.00	10	2.5	3.1	0.35	0.08	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	12	28	2.5	0.32	0.07	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	8.9	614	2.2	0.30	0.06	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	6.2	203	1.9	0.30	0.05	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	4.5	100	1.6	0.28	0.03	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	3.1	52	1.4	0.26	0.01	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	2.4	32	1.2	0.25	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	1.9	22	1.1	0.24	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	1.6	26	1.0	0.23	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	1.4	22	0.97	0.22	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	1.3	55	0.93	0.22	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	2.0	48	0.87	0.21	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	12	33	0.81	0.20	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	6.7	24	0.76	0.20	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	4.9	18	0.69	0.24	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	4.1	14	0.65	0.20	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	3.4	11	0.61	0.19	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	105	9.1	0.58	0.18	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	61	7.6	0.58	0.17	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	32	---	0.55	0.17	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	20	---	0.52	0.17	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.70	13	---	0.49	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.70	555.43	1363.8	66.81	8.62	1.43	0.00	0.00	1.62	0.00
MEAN	0.00	0.00	0.02	17.9	48.7	2.16	0.29	0.05	0.00	0.00	0.05	0.00
MAX	0.00	0.00	0.70	105	614	6.3	0.47	0.15	0.00	0.00	1.5	0.00
MIN	0.00	0.00	0.00	0.11	2.5	0.49	0.17	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	1.4	1100	2710	133	17	2.8	0.00	0.00	3.2	0.00
CFSM	0.00	0.00	0.00	0.40	1.09	0.05	0.01	0.00	0.00	0.00	0.00	0.00
IN.	0.00	0.00	0.00	0.46	1.13	0.06	0.01	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2005, BY WATER YEAR (WY)

MEAN	2.23	1.91	8.09	15.5	15.2	12.7	3.92	0.17	0.05	1.09	9.05	2.56
MAX	42.9	44.4	130	247	85.8	74.4	42.0	1.95	1.48	12.6	64.0	19.1
(WY)	2001	2001	1966	1993	1998	1973	1998	1973	1971	1955	1955	1970
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1953	1953	1953	1953	1953	1955	1955	1953	1953	1960	1956	1953

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1953 - 2005

ANNUAL TOTAL		1021.99		1998.41		
ANNUAL MEAN		2.79		5.48		6.13
HIGHEST ANNUAL MEAN						33.4
LOWEST ANNUAL MEAN						0.07
HIGHEST DAILY MEAN		74	Mar 8	614	Feb 12	1400
LOWEST DAILY MEAN		0.00	Jan 1	0.00	Oct 1	0.00
ANNUAL SEVEN-DAY MINIMUM		0.00	Jan 1	0.00	Oct 1	0.00
ANNUAL RUNOFF (AC-FT)		2030		3960		4440
ANNUAL RUNOFF (CFSM)		0.062		0.122		0.137
ANNUAL RUNOFF (INCHES)		0.85		1.66		1.86
10 PERCENT EXCEEDS		2.7		6.5		10
50 PERCENT EXCEEDS		0.00		0.00		0.00
90 PERCENT EXCEEDS		0.00		0.00		0.00

## 09485450 PANTANO WASH AT BROADWAY BOULEVARD, AT TUCSON, AZ

**LOCATION**--Lat 32°13'14", long 110°49'44", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec. 17, T.14 S., R.15 E., Pima County, Hydrologic Unit 15050302, near right bank on downstream side of eastbound bridge on Broadway Blvd., 4.6 mi upstream from mouth, and 8.3 mi east of intersection with Stone Avenue in Tucson.

**DRAINAGE AREA**--599 mi<sup>2</sup>.

**PERIOD OF RECORD**--Water years 1979-81, 1984, 1988-90 (annual maximums only), Oct. 1990 to current year.

**REVISED RECORDS**--WDR AZ-88-1: 1984(M).

**GAGE**--Water-stage recorder. Datum of gage is 2,568.83 ft above sea level.

**REMARKS**--Records fair.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 11,000 ft<sup>3</sup>/s Oct. 1, 1983, gage height, 8.60 ft; no flow for many days each year.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Flood of Aug. 12, 1958, reached a discharge of 20,000 ft<sup>3</sup>/s at Tanque Verde Road, 2.3 mi downstream.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 2,500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 23.....	1300	*2,060	*3.92

Minimum daily discharge, no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	149	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	89
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.00
12	0.00	0.00	0.00	0.00	46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	5.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	4.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.29	0.00	0.00	1.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	299	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.6	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.3	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	3.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	14	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	48	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	116	0.00	---
TOTAL	0.37	0.00	0.00	4.70	56.12	0.00	0.00	0.92	0.00	187.30	609.08	132.00
MEAN	0.01	0.00	0.00	0.15	2.00	0.00	0.00	0.03	0.00	6.04	19.6	4.40
MAX	0.29	0.00	0.00	3.0	46	0.00	0.00	0.92	0.00	116	299	89
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.7	0.00	0.00	9.3	111	0.00	0.00	1.8	0.00	372	1210	262
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

MEAN	7.62	2.78	0.01	0.03	0.31	0.11	0.06	0.00	2.80	6.50	11.2	2.07
MAX	52.8	19.1	0.04	0.15	2.00	0.66	0.42	0.03	19.6	30.4	34.8	6.48
(WY)	2001	2001	2004	2005	2005	2004	2004	2005	2000	1999	1999	1999
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
(WY)	1999	2000	1999	1999	1999	1999	2000	1999	1999	2001	2001	2001

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

WATER YEARS 1998 - 2005

ANNUAL TOTAL	391.99	990.49		
ANNUAL MEAN	1.07	2.71		2.95
HIGHEST ANNUAL MEAN				6.08
LOWEST ANNUAL MEAN				0.41
HIGHEST DAILY MEAN	136	Aug 6	299	Aug 23
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1
ANNUAL RUNOFF (AC-FT)	778		1960	2130
ANNUAL RUNOFF (CFSM)	0.002		0.005	0.005
10 PERCENT EXCEEDS	0.00		0.00	0.00
50 PERCENT EXCEEDS	0.00		0.00	0.00
90 PERCENT EXCEEDS	0.00		0.00	0.00

09485700 RILLITO CREEK AT DODGE BOULEVARD, AT TUCSON, AZ

LOCATION--Lat 32°16'17", long 110°54'50", in NE1/4NW1/4SE1/4 sec. 28, T.13 S., R.14 E., Pima County, Hydrologic Unit 15050302, on right bank, at downstream side of bridge on Dodge Boulevard, 0.4 mi north of intersection of Ft. Lowell Road and Dodge Boulevard in Tucson.

DRAINAGE AREA--871 mi<sup>2</sup>.

PERIOD OF RECORD--Water years 1988-90 (annual maximums only), Oct. 1990 to current year.

GAGE--Water-stage recorder. Elevation of gage is 2,380 ft above sea level, from topographic map.

REMARKS--Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD--Maximum discharge, 24,100 ft<sup>3</sup>/s Jan. 8, 1993, gage height, 14.84 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29.....	2300	767	5.20	Aug. 4.....	2100	1,790	5.88
Jan. 4.....	0300	681	5.09	Aug. 8.....	0445	2,540	6.75
Feb. 12.....	1115	*5,250	*8.11	Aug. 23.....	1445	1,200	5.57
Feb. 19.....	2115	1,120	5.70	Sept. 9.....	2230	1,560	5.76
July 31.....	0200	736	5.17				

Minimum daily discharge, no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	486	0.00	0.00	0.00	0.00	0.00	0.00	55	0.00
5	0.00	0.00	2.2	256	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
6	0.00	0.00	0.00	86	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.00
7	0.00	0.00	0.00	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	176	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	210	77
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14	25
11	0.00	0.00	0.00	0.00	223	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	2440	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	538	0.00	0.00	0.00	0.00	0.00	0.03	0.00
14	0.00	0.00	0.00	0.00	108	0.00	0.00	0.00	0.00	0.00	24	0.00
15	0.00	0.00	0.00	0.00	12	0.00	0.00	0.00	0.00	0.00	11	0.00
16	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	12	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	34	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	110	0.00	0.00	0.00	0.00	0.00	15	0.00
20	0.00	0.00	0.00	0.00	242	0.00	0.00	0.00	0.00	0.00	2.7	0.00
21	0.00	0.00	0.00	22	88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	28	0.00	0.00	0.00	0.00	0.00	182	0.00
24	0.00	0.00	0.00	0.00	12	0.00	0.00	0.00	0.00	0.00	4.9	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	2.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	142	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	59	0.00	0.00	0.00	6.5	0.00	0.00	0.00	0.00
29	0.00	0.00	77	0.00	---	0.00	0.00	0.00	0.00	1.8	0.00	0.00
30	0.00	0.00	144	0.00	---	0.00	0.00	0.00	0.00	0.01	0.00	0.00
31	0.00	---	0.69	0.00	---	0.00	---	0.00	---	73	0.00	---
TOTAL	0.00	0.00	223.89	1109.10	3884.15	0.00	0.00	6.50	0.00	74.81	729.45	102.00
MEAN	0.00	0.00	7.22	35.8	139	0.00	0.00	0.21	0.00	2.41	23.5	3.40
MAX	0.00	0.00	144	486	2440	0.00	0.00	6.5	0.00	73	210	77
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	444	2200	7700	0.00	0.00	13	0.00	148	1450	202
CFSM	0.00	0.00	0.01	0.04	0.16	0.00	0.00	0.00	0.00	0.00	0.03	0.00
IN.	0.00	0.00	0.01	0.05	0.17	0.00	0.00	0.00	0.00	0.00	0.03	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2005, BY WATER YEAR (WY)

	MEAN	12.4	7.04	30.7	118	58.4	40.5	11.6	0.01	1.05	10.2	13.8	8.08
MAX	182	48.7	278	1443	214	263	78.8	0.21	15.3	109	39.9	64.5	
(WY)	2001	1995	1993	1993	1998	1991	1998	2005	2000	1999	2003	1996	
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1991	1991	1994	1994	1994	1996	1993	1991	1991	1991	1991	1991	1991

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1991 - 2005
ANNUAL TOTAL	2659.11	6129.90	
ANNUAL MEAN	7.27	16.8	27.8
HIGHEST ANNUAL MEAN			164 1993
LOWEST ANNUAL MEAN			0.12 1994
HIGHEST DAILY MEAN	500 Sep 18	2440 Feb 12	11300 Jan 8 1993
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1990
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1990
ANNUAL RUNOFF (AC-FT)	5270	12160	20150
ANNUAL RUNOFF (CFSM)	0.008	0.019	0.032
ANNUAL RUNOFF (INCHES)	0.11	0.26	0.43
10 PERCENT EXCEEDS	6.4	5.5	7.9
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## GILA RIVER BASIN

## 09486055 RILLITO CREEK AT LA CHOLLA BOULEVARD, NEAR TUCSON, AZ

**LOCATION**--Lat 32°18'12", long 111°00'41", in SW1/4SW1/4NW1/4 sec. 15, T.13 S., R.13 E., Pima County, Hydrologic Unit 15050301, on right bank, 200 ft upstream from bridge on La Cholla Boulevard, 1.8 mi downstream from former gage, Rillito Creek near Tucson, 3.0 mi upstream from mouth, and 5.8 mi north of Tucson City Hall.

**DRAINAGE AREA**--922 mi<sup>2</sup>.

**PERIOD OF RECORD**--June 1990 to Sept. 1995 (published mean daily discharges over 200 ft<sup>3</sup>/s), Oct. 1995 to current year.

**GAGE**--Water-stage recorder and crest-stage gages. Elevation of gage is 2,260 ft above sea level, from topographic map.

**REMARKS**--Records fair. Only discharges above 25 ft<sup>3</sup>/s are recorded. Several small diversions above station for irrigation and for municipal and domestic supply, mostly by pumping from ground water.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 24,400 ft<sup>3</sup>/s Jan. 8, 1993, gage-height 11.39 ft; no flow for most of each year.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30 .....	0330	568	4.09	Feb. 19 .....	2245	1,630	5.26
Jan. 4 .....	0515	736	4.38	Aug. 6 .....	2015	583	4.12
Feb. 12 .....	1215	*3,730	*6.39	Aug. 9 .....	1515	1,250	4.97

Minimum daily discharge, no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
2	0.00	0.00	0.00	3.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	447	0.00	0.00	0.00	0.00	0.00	0.00	16	0.00
5	0.00	0.00	0.00	252	0.00	0.00	0.00	0.00	0.00	0.00	43	0.00
6	0.00	0.00	0.00	130	0.00	0.00	0.00	0.00	0.00	0.00	49	0.00
7	0.00	0.00	0.00	34	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	110	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	245	0.00
10	0.00	0.00	0.00	16	0.00	0.00	0.00	0.00	0.00	0.00	26	0.13
11	0.00	0.00	0.00	0.00	183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	1710	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	564	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	200	0.00	0.00	0.00	0.00	0.00	12	0.00
15	0.00	0.00	0.00	0.00	53	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	48	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	119	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	441	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	37	217	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	26	27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22	0.00
24	0.00	0.00	0.00	2.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	122	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	79	0.00	0.00	0.00	2.2	0.00	0.00	0.00	0.00
29	0.00	0.00	5.4	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	250	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.05	0.00	---
TOTAL	0.95	0.00	255.40	1210.20	3562.00	0.00	0.00	2.20	0.00	0.05	524.22	0.13
MEAN	0.03	0.00	8.24	39.0	127	0.00	0.00	0.07	0.00	0.00	16.9	0.00
MAX	0.95	0.00	250	447	1710	0.00	0.00	2.2	0.00	0.05	245	0.13
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2005, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005		
MEAN	30.2	7.17	0.89	4.04	27.5	3.23	3.57	0.01	1.24	16.6	15.7	9.18
MAX	299	64.9	8.24	39.0	148	22.2	31.3	0.07	12.4	140	47.2	53.7
(WY)	2001	2001	2005	2005	1998	2004	1998	2005	2000	1999	2003	1996
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1997	1997

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

WATER YEARS 1996 - 2005

ANNUAL TOTAL	1928.44	5555.15		
ANNUAL MEAN	5.27	15.2	9.86	
HIGHEST ANNUAL MEAN			30.8	2001
LOWEST ANNUAL MEAN			0.00	1997
HIGHEST DAILY MEAN	291	Sep 18	1710	Feb 12
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 2
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 2
10 PERCENT EXCEEDS	5.1		0.46	
50 PERCENT EXCEEDS	0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00	

09486350 CANADA DEL ORO BELOW INA ROAD, NEAR TUCSON, AZ

LOCATION--Lat 32°20'10", long 111°02'29", in NW1/4NE1/4NW1/4 sec. 5, T.13 S., R.13 E., Pima County, Hydrologic Unit 1505301, on left bank, 0.125 mi downstream from Ina Road, 0.25 mi upstream from Thornydale Rd., 1.5 mi upstream from mouth, and 7.3 mi north of Tucson.

DRAINAGE AREA--255 mi<sup>2</sup>.

PERIOD OF RECORD--May 1990 to Sept. 1995 (discharge above 200 ft<sup>3</sup>/s only), Oct. 1995 to current year.

GAGE--Water-stage recorder and crest-stage gages. Elevation of gage is 2,240 ft above sea level, from topographic map.

REMARKS--Records poor. Lago del Oro—capacity 9,400 acre-ft—19.6 mi upstream, has contained no storage since May 4, 1971.

EXTREMES FOR CURRENT YEAR--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12 .....	1145	*1,040e	*8.42e
Aug. 6 .....	2030	648	8.13

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.9
2	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
3	0.00	0.00	0.00	e0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80
4	0.00	0.00	0.00	e94	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.40
5	0.00	0.00	0.00	e0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.1	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.6	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.00
11	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	e163	0.00	0.00	0.00	0.00	0.00	1.6	0.00
13	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.5	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	6.3	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.1	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	94.94	163.00	0.00	0.00	0.00	0.00	8.09	51.13	6.49
MEAN	0.00	0.00	0.00	3.06	5.82	0.00	0.00	0.00	0.00	0.26	1.65	0.22
MAX	0.00	0.00	0.00	94	163	0.00	0.00	0.00	0.00	6.0	19	4.9
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2005, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005		
MEAN	3.60	0.06	0.00	0.44	1.30	0.10	0.01	0.06	0.05	3.38	11.6	0.73
MAX	33.9	0.37	0.04	3.06	5.82	0.84	0.07	0.58	0.43	11.6	77.5	4.01
(WY)	2001	2004	1999	2005	2005	2004	1998	1997	1997	2003	2003	1996
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1998	1999

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1996 - 2005
ANNUAL TOTAL	969.50	323.65	
ANNUAL MEAN	2.65	0.89	1.80
HIGHEST ANNUAL MEAN			7.74
LOWEST ANNUAL MEAN			0.05
HIGHEST DAILY MEAN	417 Aug 13	163 Feb 12	1020 Oct 10 2000
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1995
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1995
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated



## 09486500 SANTA CRUZ RIVER AT CORTARO, AZ

**LOCATION.**--Lat 32°21'04", long 111°05'38", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec. 35, T.12 S., R.12 E., Pima County, Hydrologic Unit 15050302, 0.5 mi southwest of Cortaro, 1 mi downstream from Ina Road treatment plant, 2.6 mi downstream from Canada del Oro, and 3.7 mi downstream from Rillito Creek.

**DRAINAGE AREA.**--3,503 mi<sup>2</sup>, of which 395 mi<sup>2</sup> is in Mexico.

**PERIOD OF RECORD.**--Oct. 1939 to June 1947 (published as "at Rillito"), July 1950 to Sept. 1984, Mar. to June 1990, July to Sept. 1990 (fragmentary record), Oct. 1990 to current year.

**REVISED RECORDS.**--WSP 1283: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 2,100.00 ft, above sea level. Prior to June 30, 1947, at site 5.5 mi downstream at different datum. July 8, 1950, to Jan. 20, 1966, at present site at datum 19.11 ft lower. Jan. 20, 1966, to Sept. 30, 1984, at present site and datum 23.11 ft lower. Aug. 1 to Oct. 19, 1990, at site on right bank 0.33 mi downstream from bridge at datum 30.20 ft lower. Apr. 10 to May 17, 1991, at site on bridge, 200 ft toward right bank, at different datum. Supplementary water-stage recorder on downstream site on left bridge pier at datum 19.11 ft lower Aug. 29, 1969, to Sept. 30, 1984. Temporary water-stage recorder on right bank Oct. 27, 1983, to Sept. 30, 1984, at datum 20.80 ft lower. Prior to May 8 at site 300 ft upstream at different datum.

**REMARKS.**--Records good, except for estimated daily discharges, which are poor. Many diversions above station, mostly by pumping from ground water, for irrigation of about 34,000 acres. Waste water from irrigation and from sewage-disposal plants is included in flow past station in water years 1951, 1952, 1970-82, 1990-97.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 65,000 ft<sup>3</sup>/s Oct. 2, 1983, gage height 16.57 ft from floodmark, computed by flood-routing method from Santa Cruz River at Tucson and Rillito Creek at Tucson; no natural flow for most of each year. (See REMARKS)

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 2,700 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12.....	1450	5,890	10.22	Aug. 23.....	1215	*16,300	*12.64
Aug. 6.....	2315	5,700	10.26				

Minimum daily discharge, 45 ft<sup>3</sup>/s on June 10 and 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	72	72	66	70	61	58	63	47	55	384	72
2	62	72	75	66	65	55	67	63	52	56	109	70
3	61	67	71	115	71	56	66	61	47	54	289	74
4	63	76	102	601	73	63	62	53	52	54	126	75
5	65	67	92	406	81	65	55	55	52	50	281	76
6	61	68	85	142	79	76	53	59	57	50	309	74
7	66	71	78	83	77	71	57	65	55	55	569	74
8	65	70	76	71	76	69	57	68	49	56	973	77
9	65	69	85	70	72	64	61	68	50	58	430	83
10	63	67	80	65	74	66	64	66	45	64	402	167
11	65	62	75	70	140	65	63	52	51	69	72	80
12	63	70	75	74	2000	65	62	57	50	68	68	77
13	59	72	74	76	715	69	e61	62	50	e66	147	71
14	68	73	79	73	208	63	e58	59	46	65	545	72
15	66	73	71	75	75	54	64	58	50	58	615	70
16	68	73	76	75	60	57	65	56	48	63	139	69
17	61	72	72	80	67	63	64	53	50	64	72	76
18	64	82	72	79	77	64	63	48	48	65	66	76
19	62	72	70	74	103	76	61	50	52	119	62	76
20	59	79	70	76	616	82	56	54	51	53	77	80
21	67	71	74	96	139	79	60	56	49	56	78	83
22	78	83	79	151	59	76	62	55	45	58	78	84
23	70	97	83	83	49	69	65	57	51	65	4230	84
24	67	75	78	83	53	75	76	57	55	63	656	85
25	69	86	67	74	52	73	70	51	58	60	78	83
26	94	75	67	90	59	72	63	51	58	135	65	81
27	74	76	75	222	61	71	53	50	59	57	69	80
28	79	70	77	123	63	71	55	61	56	50	68	84
29	78	71	80	77	---	69	58	70	47	69	68	84
30	77	70	413	75	---	61	62	59	53	65	63	86
31	74	---	82	72	---	61	---	52	---	188	64	---
TOTAL	2100	2201	2725	3583	5334	2081	1841	1789	1533	2108	11252	2423
MEAN	67.7	73.4	87.9	116	190	67.1	61.4	57.7	51.1	68.0	363	80.8
MAX	94	97	413	601	2000	82	76	70	59	188	4230	167
MIN	59	62	67	65	49	54	53	48	45	50	62	69
AC-FT	4170	4370	5410	7110	10580	4130	3650	3550	3040	4180	22320	4810
CFSM	0.02	0.02	0.03	0.03	0.05	0.02	0.02	0.02	0.01	0.02	0.10	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)							
MEAN	51.8	32.9	81.6	99.3	51.8	42.5	23.3	21.8	22.9	76.5	123	62.5
MAX	744	228	1044	2485	252	496	104	71.3	84.9	393	868	358
(WY)	1978	2001	1979	1993	1995	1978	1998	2004	2000	1954	1955	1964
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69	1.97	0.00
(WY)	1940	1943	1943	1943	1943	1940	1940	1940	1941	1960	1962	1953

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1940 - 2005
ANNUAL TOTAL	30889	38970	
ANNUAL MEAN	84.4	107	58.4
HIGHEST ANNUAL MEAN			262
LOWEST ANNUAL MEAN			2.59
HIGHEST DAILY MEAN	776	Sep 18	4230
LOWEST DAILY MEAN	59	Jun 8	45
ANNUAL SEVEN-DAY MINIMUM	62	Jun 6	49
ANNUAL RUNOFF (AC-FT)	61270	77300	42290
ANNUAL RUNOFF (CFSM)	0.024	0.030	0.017
10 PERCENT EXCEEDS	89	99	74
50 PERCENT EXCEEDS	74	69	20
90 PERCENT EXCEEDS	64	53	0.00

e Estimated

**09486520 SANTA CRUZ RIVER AT TRICO ROAD, NEAR MARANA, AZ**

**LOCATION.**--Lat 32°28'21", long 111°18'02", in NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>, sec. 14, T.11 S., R.10 E., in Pima County, Hydrologic Unit 15050303, on right bank 750 ft upstream from Trico Road bridge, 5 mi west of Marana, and 24 mi northwest of Tucson.

**DRAINAGE AREA.**--3,641 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Apr. 1989 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 1,910 ft above sea level, from topographic map.

**REMARKS.**--Records good except for estimated daily discharges, which are poor. Base flow is effluent from combined municipal sewage treatment plants at Ina Road, 17.6 mi upstream and Roger Rd., 20 mi upstream.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum mean daily discharge, 15,000 ft<sup>3</sup>/s Jan. 19, 1993; no flow for many days some years.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 2,700 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 23.....	1938	*15,000	*13.76

Minimum daily discharge, 8.2 ft<sup>3</sup>/s, July 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	55	56	47	49	33	23	27	14	16	298	31
2	34	52	55	42	45	24	17	30	10	15	163	44
3	32	47	57	70	44	21	30	24	15	20	201	38
4	34	51	50	267	45	28	34	15	10	16	185	43
5	37	55	76	358	47	27	23	12	19	21	327	41
6	34	45	66	148	51	44	18	16	21	13	80	50
7	35	49	59	93	50	47	20	16	23	10	401	44
8	40	63	59	61	46	38	22	27	17	14	949	47
9	34	58	59	63	39	30	17	32	14	9.2	253	45
10	41	51	67	61	37	30	29	31	18	14	542	134
11	39	40	51	53	47	30	35	18	10	17	76	72
12	41	53	54	58	554	25	27	12	18	19	54	73
13	28	47	56	57	e404	35	21	24	19	16	86	64
14	31	47	56	57	e115	39	19	22	15	13	137	61
15	33	56	53	45	53	19	22	24	10	11	844	58
16	30	50	48	51	26	28	19	26	14	8.2	226	53
17	35	46	57	53	33	25	27	22	13	21	63	52
18	39	47	49	62	43	30	28	15	15	20	57	55
19	36	51	52	49	50	29	22	9.9	19	43	63	61
20	31	49	52	49	391	46	18	12	26	28	59	57
21	37	50	58	57	175	50	21	12	18	19	69	58
22	57	63	56	95	77	39	27	16	15	23	73	57
23	42	86	61	69	42	30	21	19	10	23	3670	58
24	46	57	60	74	30	29	36	17	18	33	2120	53
25	51	61	50	66	33	35	36	13	15	30	48	55
26	45	63	46	51	33	29	34	9.0	22	62	30	59
27	61	59	52	111	36	42	19	12	24	47	27	51
28	51	51	58	142	42	33	14	9.8	17	26	30	53
29	62	59	59	61	---	36	20	33	15	20	37	56
30	51	54	170	56	---	22	15	24	9.8	36	30	56
31	48	---	93	63	---	19	---	25	---	71	29	---
TOTAL	1260	1615	1895	2589	2637	992	714	604.7	483.8	734.4	11227	1679
MEAN	40.6	53.8	61.1	83.5	94.2	32.0	23.8	19.5	16.1	23.7	362	56.0
MAX	62	86	170	358	554	50	36	33	26	71	3670	134
MIN	28	40	46	42	26	19	14	9.0	9.8	8.2	27	31
AC-FT	2500	3200	3760	5140	5230	1970	1420	1200	960	1460	22270	3330

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2005, BY WATER YEAR (WY)

MEAN	37.8	28.4	38.1	139	63.1	28.7	18.0	11.3	10.1	44.4	54.8	36.9
MAX	337	73.0	157	1509	294	82.1	50.8	32.5	27.1	318	362	207
(WY)	2001	2001	1995	1993	1998	1991	2004	2004	2004	1990	2005	1996
MIN	0.00	1.76	3.83	9.60	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00
(WY)	1996	1996	2001	1992	1993	1993	1991	1991	1991	1991	1991	1995

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1990 - 2005
ANNUAL TOTAL	18851	26430.9	
ANNUAL MEAN	51.5	72.4	42.6
HIGHEST ANNUAL MEAN			135 1993
LOWEST ANNUAL MEAN			9.71 1997
HIGHEST DAILY MEAN	548	Aug 14	3670 Aug 23 15000 Jan 19 1993
LOWEST DAILY MEAN	21	Jul 3	8.2 Jul 16 0.00 Jul 28 1990
ANNUAL SEVEN-DAY MINIMUM	24	Jun 29	14 May 22 0.00 Jul 28 1990
ANNUAL RUNOFF (AC-FT)	37390	52430	30890
10 PERCENT EXCEEDS	64	73	48
50 PERCENT EXCEEDS	47	42	16
90 PERCENT EXCEEDS	28	15	0.00

## 09486590 ARIVACA CREEK NEAR ARIVACA, AZ

**LOCATION**--Lat 31°35'01", long 111°20'57", in SW1/4NW1/4SW1/4, sec. 20, T.10 E., R.21 S., Pima County, 1.5 mi west of Arivaca, on the Arivaca/Sasabe Hwy.

**DRAINAGE AREA**--Undetermined.

**PERIOD OF RECORD**--Apr. 30, 2002, to current year.

**GAGE**--Water-stage recorder and data collection platform. Elevation of gage is 3,570 ft. above sea level, from topographic map. U.S. Fish and Wildlife Service has taken measurements 1.5 mi upstream since 1991. U.S. Geological Survey operated a gage 2.5 mi downstream (09486600) from 1967 to 1972. U.S. Geological Survey operated a gage 1.5 mi upstream (09486580) from 1996 to 2002.

**REMARKS**--Records good. No known regulation except for a few small stock ponds.

**EXTREMES FOR PERIOD OF RECORD**--At site 2.5 mi downstream (09486600), maximum discharge 3,550 ft<sup>3</sup>/s Dec. 20, 1967 (gage height 7.18 ft from highwater mark in gage well), from rating curve extended above 260 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 13.32 ft.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Flood of Dec. 24, 1965, reached a stage of 13.32 ft from a profile past gage (4 mi downstream) (discharge 15,900 ft<sup>3</sup>/s, by slope-area measurement of peak flow); flood resulted from storm runoff and failure of two earth dams, which were storing an estimated 2,000 acre ft.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 2.....	1915	*54	*2.82

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.04	0.10	0.03	0.01	0.00	0.00	0.59	0.00
2	0.00	0.00	0.00	0.00	0.04	0.10	0.03	0.01	0.00	0.00	5.8	0.00
3	0.00	0.00	0.00	0.00	0.04	0.09	0.03	0.01	0.00	0.00	0.48	0.00
4	0.00	0.00	0.00	0.00	0.04	0.10	0.05	0.01	0.00	0.00	0.22	0.00
5	0.00	0.00	0.00	0.00	0.06	0.11	0.07	0.01	0.00	0.00	0.23	0.00
6	0.00	0.00	0.00	0.00	0.07	0.14	0.07	0.01	0.00	0.00	0.37	0.00
7	0.00	0.00	0.00	0.00	0.07	0.15	0.09	0.01	0.00	0.00	0.07	0.00
8	0.00	0.00	0.00	0.00	0.07	0.13	0.07	0.01	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.07	0.16	0.06	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.10	0.22	0.03	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.31	0.18	0.03	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.46	0.08	0.03	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.24	0.07	0.03	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.17	0.07	0.03	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.14	0.06	0.03	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.12	0.05	0.03	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.12	0.05	0.03	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.12	0.06	0.02	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.11	0.06	0.02	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.10	0.07	0.02	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.09	0.07	0.02	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.06	0.09	0.06	0.02	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.02	0.09	0.06	0.02	0.00	0.00	0.00	0.23	0.00
24	0.00	0.00	0.00	0.12	0.08	0.05	0.03	0.00	0.00	0.00	0.01	0.00
25	0.00	0.00	0.00	0.08	0.09	0.05	0.02	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.05	0.09	0.05	0.02	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.21	0.09	0.04	0.02	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.14	0.10	0.04	0.01	2.8	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.07	---	0.04	0.01	0.07	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.05	---	0.04	0.01	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.04	---	0.03	---	0.00	---	0.24	0.00	---
TOTAL	0.00	0.00	0.00	0.84	3.21	2.58	0.98	2.95	0.00	0.24	8.00	0.00
MEAN	0.00	0.00	0.00	0.03	0.11	0.08	0.03	0.10	0.00	0.01	0.26	0.00
MAX	0.00	0.00	0.00	0.21	0.46	0.22	0.09	2.8	0.00	0.24	5.8	0.00
MIN	0.00	0.00	0.00	0.00	0.04	0.03	0.01	0.00	0.00	0.00	0.00	0.00
MED	0.00	0.00	0.00	0.00	0.09	0.07	0.03	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	1.7	6.4	5.1	1.9	5.9	0.00	0.5	16	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2005, BY WATER YEAR (WY)

MEAN	0.05	0.03	0.08	0.16	0.27	0.22	0.10	0.03	0.00	0.24	0.79	0.00
MAX	0.14	0.09	0.23	0.36	0.39	0.39	0.27	0.10	0.00	0.41	1.37	0.00
(WY)	2004	2004	2004	2004	2004	2004	2004	2005	2002	2002	2003	2003
MIN	0.00	0.00	0.00	0.03	0.11	0.08	0.00	0.00	0.00	0.01	0.18	0.00
(WY)	2003	2003	2003	2005	2005	2005	2003	2003	2002	2005	2004	2002

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 2002 - 2005

ANNUAL TOTAL	56.67	18.80	
ANNUAL MEAN	0.15	0.05	0.14
HIGHEST ANNUAL MEAN			0.19 2004
LOWEST ANNUAL MEAN			0.05 2005
HIGHEST DAILY MEAN	5.3 Aug 6	5.8 Aug 2	29 Aug 2 2002
LOWEST DAILY MEAN	0.00 May 5	0.00 Oct 1	0.00 May 6 2002
ANNUAL SEVEN-DAY MINIMUM	0.00 May 5	0.00 Oct 1	0.00 May 11 2002
ANNUAL RUNOFF (AC-FT)	112	37	104
10 PERCENT EXCEEDS	0.39	0.09	0.32
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

09486800 ALTAR WASH NEAR THREE POINTS, AZ

LOCATION--Lat 31°50'20", long 111°24'13", in SE1/4NE1/4NE1/4 sec. 27, T.18 S., R.9 E., Pima County, Hydrologic Unit 15050304, on right bank attached to downstream side of bridge on State Highway 286, 0.3 mi below mouth of Chiltipines Wash and 18 mi south of Three Points.

DRAINAGE AREA--463 mi<sup>2</sup>.

PERIOD OF RECORD--Jan. 1966 to Sept. 1975, May 1992 to current year.

GAGE--Water-stage recorder and crest-stage gages. Datum of gage is 2,975.15 ft above sea level.

REMARKS--Records poor.

EXTREMES FOR PERIOD OF RECORD--Maximum discharge, 22,000 ft<sup>3</sup>/s Sept. 4, 1970, gage height 13.85 ft at site 2 mi upstream.

EXTREMES FOR CURRENT YEAR--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 2 .....	2100	1,070	4.21	Aug. 14 .....	1330	*3,140	*6.45
Aug. 4 .....	2315	1,320	4.55	Aug. 23 .....	1230	2,730	6.08
Aug. 6 .....	2300	1,720	5.04				

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	137	0.00
3	0.00	0.00	0.00	8.7	0.00	0.00	0.00	0.00	0.00	0.00	5.2	0.00
4	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	66	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24	0.00
6	0.00	0.00	2.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	136	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.5	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.5	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	384	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	2.2	15	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.2	389	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	2.6	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	1.2	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	15	0.00	---
TOTAL	0.00	0.00	2.20	9.35	0.00	0.00	0.00	0.43	1.80	28.20	1235.20	0.00
MEAN	0.00	0.00	0.07	0.30	0.00	0.00	0.00	0.01	0.06	0.91	39.8	0.00
MAX	0.00	0.00	2.2	8.7	0.00	0.00	0.00	0.31	1.8	15	389	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	4.4	19	0.00	0.00	0.00	0.9	3.6	56	2450	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2005, BY WATER YEAR (WY)

	1967	1967	1967	1967	1967	1967	1967	1967	1967	1967	1967	1967
MEAN	0.78	0.20	1.88	0.02	0.17	0.79	0.00	0.00	2.73	16.0	21.6	18.2
MAX	6.74	3.22	38.6	0.30	3.62	15.3	0.00	0.05	58.9	102	73.5	210
(WY)	1973	1997	1968	2005	1998	1973	1995	1967	2000	1999	1974	1970
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00
(WY)	1967	1967	1967	1967	1967	1967	1967	1968	1968	1993	1992	1968

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1967 - 2005

ANNUAL TOTAL	638.34	1277.18	
ANNUAL MEAN	1.74	3.50	5.45
HIGHEST ANNUAL MEAN			20.0
LOWEST ANNUAL MEAN			0.53
HIGHEST DAILY MEAN	257	Aug 13	389
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	1270		2530
10 PERCENT EXCEEDS	0.00		0.00
50 PERCENT EXCEEDS	0.00		0.00
90 PERCENT EXCEEDS	0.00		0.00

## GILA RIVER BASIN

## 09487000 BRAWLEY WASH NEAR THREE POINTS, AZ

**LOCATION**--Lat 32°04'32", long 111°20'17", in SE<sub>1/4</sub>NE<sub>1/4</sub>SW<sub>1/4</sub> sec. 32, T.15 S., R.10 E., Pima County, Hydrologic Unit 15050302, on right bank downstream side of State Highway 86 bridge, 1.6 mi west of Three Points, and 23 mi west of Tucson.

**DRAINAGE AREA**--776 mi<sup>2</sup>.

**PERIOD OF RECORD**--Oct. 1966 to Sept. 1981 (crest-stage gage) at site 1,000 ft downstream, May 1992 to current year.

**GAUGE**--Water-stage recorder and crest-stage gages. Elevation of gage is 2,540 ft above sea level, from topographic map. Prior to May 19, 1992, gage was located 1,000 ft downstream from current location.

**REMARKS**--Records poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge 13,700 ft<sup>3</sup>/s Sept. 4, 1970, gage height 15.8 ft site and datum then in use; no flow for most of each year.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Maximum discharge, 19,100 ft<sup>3</sup>/s Oct. 1, 1983, from contracted opening measurement of peak flow, gage height 12.07 ft from floodmarks.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 2 .....	2230	4,420	11.52	Aug. 14 .....	1445	*11,800	*15.47
Aug. 7 .....	0200	3,190	10.67	Aug. 23 .....	0900	3,910	10.45
Aug. 9 .....	1445	1,230	9.01				

Minimum daily discharge, no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	217	0.00
3	0.00	0.00	0.00	1.1	0.00	0.00	0.00	0.00	0.00	0.00	172	0.00
4	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.6	0.00
6	0.00	0.00	0.11	0.00	0.00	0.23	0.00	0.00	0.00	0.00	4.8	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	389	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	87	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2110	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
22	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.0	1080	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	5.6	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	0.00	0.00
28	1.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.02	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	1.60	0.62	0.13	1.70	0.00	0.23	0.00	0.00	0.00	23.01	4095.86	0.00
MEAN	0.05	0.02	0.00	0.05	0.00	0.01	0.00	0.00	0.00	0.74	132	0.00
MAX	1.6	0.62	0.11	1.1	0.00	0.23	0.00	0.00	0.00	17	2110	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	3.2	1.2	0.3	3.4	0.00	0.5	0.00	0.00	0.00	46	8120	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)
	2.91	26.8	2001	0.00	1993	0.75	10.6	1995	0.00	1994	1.03	0.11	2003	0.01	1994
	0.01	0.02	1995	0.00	1994	0.00	0.11	2003	0.00	1994	0.00	0.12	1993	0.00	1994
	0.00	0.00	1993	0.00	1993	0.00	0.00	1993	0.00	1993	0.00	0.00	1993	0.00	1993
	1.17	15.2	2000	0.00	1993	14.3	110	2005	0.00	1993	28.0	132	2005	0.00	1994
	0.01	0.00	1994	0.00	1993	0.00	0.00	1994	0.00	1993	0.00	0.00	1994	0.00	1993

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1993 - 2005
ANNUAL TOTAL	392.28	4123.15	
ANNUAL MEAN	1.07	11.3	5.35
HIGHEST ANNUAL MEAN			18.8
LOWEST ANNUAL MEAN			0.03
HIGHEST DAILY MEAN	82	2110	2110
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
ANNUAL RUNOFF (AC-FT)	778	8180	3870
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

09489000 SANTA CRUZ RIVER NEAR LAVEEN, AZ

**LOCATION**--Lat 33°13'56", long 112°10'08", in NE1/4NE1/4 sec. 29, T.2 S., R.2 E., Pinal County, Hydrologic Unit 15050303, in Gila River Indian Reservation, on downstream side of highway bridge, 3.4 mi upstream from mouth, 4.3 mi south of Komatke, and 9 mi south of Laveen.

**DRAINAGE AREA**--8,581 mi<sup>2</sup>.

**PERIOD OF RECORD**--Jan. 1940 to Sept. 1946, Dec. 1947 to current year.

**REVISED RECORDS**--WSP 1283: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 1,020.86 ft above sea level.

**REMARKS**--Records good, except for estimated daily discharges, which are poor. Many diversions above station, mostly by pumping from ground water, for municipal uses and for irrigation of about 240,000 acres, not including San Carlos Project. Much of the low flow passing this station is drainage and wasteway return from irrigated lands upstream and pumpage from ground water.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 33,000 ft<sup>3</sup>/s Oct. 4, 1983, gage height, 19.74 ft, from flow-routing computation; no flow for many days.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 380 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 20.....	0015	*923	*12.45

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	1.8	0.26	0.60	0.00	0.00	0.00	0.00	0.40	0.45
2	0.00	0.00	0.00	0.82	0.21	0.41	0.00	0.00	0.00	0.00	0.53	0.37
3	0.00	0.00	0.00	7.9	0.18	0.30	0.00	0.00	0.00	0.00	82	0.53
4	0.00	0.00	0.00	223	0.14	0.26	0.00	0.00	0.00	0.00	67	0.38
5	0.00	0.00	2.2	149	0.09	1.6	0.00	0.00	0.00	0.00	9.5	0.28
6	0.00	0.00	23	62	0.04	43	0.00	0.00	0.00	0.00	2.5	0.27
7	0.00	0.00	13	7.2	0.04	6.1	0.00	0.00	0.00	0.00	1.3	0.28
8	0.00	0.00	1.8	1.8	0.02	1.7	0.00	0.00	0.00	0.00	0.83	0.28
9	0.00	0.00	0.66	0.83	0.00	0.85	0.00	0.00	0.00	0.00	1.3	0.26
10	0.00	0.00	0.28	1.6	0.00	e0.50	0.00	0.00	0.00	0.00	e4.5	0.25
11	0.00	0.00	0.12	2.3	8.2	e0.31	0.00	0.00	0.00	0.00	5.7	0.25
12	0.00	0.00	0.01	1.3	191	e0.24	0.00	0.00	0.00	0.00	39	0.24
13	0.00	0.00	0.00	0.70	70	e0.16	0.00	0.00	0.00	0.00	9.8	0.24
14	0.00	9.7	0.00	0.39	6.0	e0.14	0.00	0.00	0.00	0.00	2.4	0.23
15	0.00	6.5	0.00	0.25	2.0	e0.08	0.00	0.00	0.00	0.00	1.2	0.23
16	0.00	1.8	0.00	0.16	1.0	e0.03	0.00	0.00	0.00	0.00	0.69	0.20
17	0.00	0.64	0.00	0.08	0.59	e0.00	0.00	0.00	0.00	0.00	0.46	0.20
18	0.00	0.22	0.00	0.04	2.0	0.00	0.00	0.00	0.00	0.00	0.36	0.20
19	0.00	0.03	0.00	0.00	461	0.00	0.00	0.00	0.00	0.11	0.28	0.12
20	0.00	0.00	0.00	0.00	416	0.00	0.00	0.00	0.00	0.28	0.28	0.00
21	0.00	0.00	0.00	0.00	21	0.00	0.00	0.00	0.00	0.35	0.28	0.00
22	0.00	0.00	0.00	0.00	4.6	0.00	0.00	0.00	0.00	0.39	0.24	0.00
23	0.00	0.00	0.00	0.00	12	0.00	0.00	0.00	0.00	0.51	0.26	0.00
24	0.00	0.00	0.00	0.00	11	0.00	0.00	0.00	0.00	9.5	0.25	0.00
25	0.00	0.00	0.00	0.00	3.2	0.00	0.00	0.00	0.00	8.5	0.27	0.00
26	0.00	0.00	0.00	0.00	1.9	0.00	0.00	0.00	0.00	1.8	0.27	e0.00
27	0.00	0.00	0.00	4.2	1.3	0.00	0.00	0.00	0.00	2.2	0.25	e0.00
28	0.00	0.00	0.00	1.5	0.83	0.00	0.00	0.00	0.00	1.3	34	e0.00
29	0.00	0.00	0.00	0.71	---	0.00	0.00	0.00	0.00	0.80	8.6	e0.00
30	0.00	0.00	2.6	0.41	---	0.00	0.00	0.00	0.00	0.56	1.5	e0.00
31	0.00	---	4.8	0.32	---	0.00	---	0.00	---	0.44	0.50	---
TOTAL	0.00	18.89	48.47	468.31	1214.60	56.28	0.00	0.00	0.00	26.74	276.45	5.26
MEAN	0.00	0.63	1.56	15.1	43.4	1.82	0.00	0.00	0.00	0.86	8.92	0.18
MAX	0.00	9.7	23	223	461	43	0.00	0.00	0.00	9.5	82	0.53
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00
AC-FT	0.00	37	96	929	2410	112	0.00	0.00	0.00	53	548	10
CFSM	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
	36.3	1812	1984	0.00	1959
	6.97	200	1958	0.00	1957
	21.2	435	1968	0.00	1959
	33.0	1182	1993	0.00	1959
	14.0	186	1983	0.00	1961
	11.7	229	1941	0.00	1964
	3.46	75.6	1941	0.00	1963
	1.58	13.8	1941	0.00	1961
	1.17	10.8	1967	0.00	1961
	12.6	193	1990	0.00	1963
	48.9	597	1955	0.00	1973
	27.4	570	1946	0.00	1968

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1940 - 2005
ANNUAL TOTAL	688.49	2115.00	
ANNUAL MEAN	1.88	5.79	18.6
HIGHEST ANNUAL MEAN			170 1984
LOWEST ANNUAL MEAN			0.47 1977
HIGHEST DAILY MEAN	327 Sep 20	461 Feb 19	18000 Oct 4 1983
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Jul 17 1940
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Jul 17 1940
ANNUAL RUNOFF (AC-FT)	1370	4200	13450
ANNUAL RUNOFF (CFSM)	0.000	0.001	0.002
10 PERCENT EXCEEDS	0.65	2.5	8.0
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 09489500 BLACK RIVER BELOW PUMPING PLANT, NEAR POINT OF PINES, AZ

**LOCATION.**--Lat 33°28'36", long 109°45'48", in W sec. 32, T.2 N., R.25 E. (unsurveyed), Graham County, Hydrologic Unit 15060101, in San Carlos Indian Reservation, on left bank 0.9 mi downstream from Phelps Dodge Corp. pumping plant, 1.3 mi downstream from Freezeout Creek, 8 mi northwest of Point of Pines, and 63 mi upstream from confluence with White River.

**DRAINAGE AREA.**--560 mi<sup>2</sup>.

**PERIOD OF RECORD.**--June 1953 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 5,725 ft above sea level, from topographic map.

**REMARKS.**--Records good, no estimated daily discharges. Water is diverted at pumping plant 0.9 mi upstream and pumped into headwaters of Willow Creek (tributary of Eagle Creek) for mining, metallurgical treatment of ores, and domestic supply in vicinity of Morenci. (See sta 09445000.)

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 17,900 ft<sup>3</sup>/s Oct. 19, 1972, gage height, 18.0 ft, from floodmarks, from rating curve extended above 5,000 ft<sup>3</sup>/s; minimum daily, 2.6 ft<sup>3</sup>/s July 5, 1974.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30 .....	0935	3,570	7.49	Feb. 20 .....	0305	4,200	8.18
Jan. 28 .....	0330	837	4.55	Apr. 25 .....	0150	1,180	5.34
Feb. 12 .....	0800	*5,320	*8.99				

Minimum daily discharge, 24 ft<sup>3</sup>/s Oct. 9-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	39	46	589	329	615	498	438	112	29	32	31
2	32	36	48	406	268	564	519	412	100	29	32	33
3	30	34	55	325	231	538	589	386	92	28	38	36
4	28	32	56	1030	214	504	660	360	87	28	38	46
5	26	32	48	845	203	503	698	338	80	28	35	46
6	25	33	44	509	203	513	697	328	75	27	37	40
7	25	34	43	393	205	524	779	328	71	26	41	44
8	25	47	42	350	199	511	962	313	65	26	47	64
9	24	52	41	314	195	525	1030	294	60	25	67	58
10	24	51	40	275	191	560	890	274	57	25	55	66
11	28	46	41	289	1140	619	728	255	55	25	45	68
12	28	43	42	302	4270	688	685	249	53	25	70	59
13	30	42	42	257	2940	772	754	237	52	25	78	49
14	29	43	43	225	1850	865	915	216	45	29	84	43
15	27	43	44	202	1390	826	983	202	39	29	90	40
16	26	43	42	168	1080	712	1030	191	37	27	102	36
17	26	44	42	161	905	667	1050	182	35	29	99	35
18	27	47	56	155	1130	615	1030	178	33	30	66	33
19	27	52	47	153	2100	583	952	173	32	30	61	32
20	26	52	52	161	3070	601	819	167	32	29	55	31
21	26	51	46	175	2140	611	709	163	30	30	46	31
22	32	53	38	186	1600	553	645	161	30	30	43	30
23	36	61	46	189	1350	552	601	159	33	28	48	29
24	39	63	32	208	1100	555	795	155	34	27	59	28
25	36	63	33	275	945	541	1030	149	33	33	52	28
26	34	56	46	279	840	545	744	140	32	34	44	27
27	34	56	50	613	742	530	637	134	31	36	42	27
28	34	56	46	709	654	529	561	142	30	36	37	26
29	37	55	49	540	---	540	511	143	30	36	35	26
30	38	57	1710	452	---	542	480	134	31	33	34	25
31	39	---	943	381	---	529	---	126	---	32	32	---
TOTAL	931	1416	3953	11116	31484	18332	22981	7127	1526	904	1644	1167
MEAN	30.0	47.2	128	359	1124	591	766	230	50.9	29.2	53.0	38.9
MAX	39	63	1710	1030	4270	865	1050	438	112	36	102	68
MIN	24	32	32	153	191	503	480	126	30	25	32	25
AC-FT	1850	2810	7840	22050	62450	36360	45580	14140	3030	1790	3260	2310
CFSM	0.05	0.08	0.23	0.64	2.01	1.06	1.37	0.41	0.09	0.05	0.09	0.07
IN.	0.06	0.09	0.26	0.74	2.09	1.22	1.53	0.47	0.10	0.06	0.11	0.08

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2005, BY WATER YEAR (WY)

	MEAN	104	89.9	115	142	243	543	693	271	59.5	42.8	102	85.2
MAX	1211	505	915	1571	1124	1863	2253	1933	244	122	509	385	
(WY)	1973	1995	1979	1993	2005	1985	1979	1973	1973	1965	1999	1963	
MIN	13.6	22.7	20.0	23.0	34.7	30.1	27.0	22.5	9.84	14.1	18.2	9.36	
(WY)	1954	1954	1954	1996	1974	1996	2002	1996	1974	1989	1962	1956	

## SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1954 - 2005
ANNUAL TOTAL	43954	102581	
ANNUAL MEAN	120	281	207
HIGHEST ANNUAL MEAN			617
LOWEST ANNUAL MEAN			38.0
HIGHEST DAILY MEAN	1710	4270	11000
LOWEST DAILY MEAN	22	24	2.6
ANNUAL SEVEN-DAY MINIMUM	23	25	5.4
ANNUAL RUNOFF (AC-FT)	87180	203500	149900
ANNUAL RUNOFF (CFSM)	0.214	0.502	0.370
ANNUAL RUNOFF (INCHES)	2.92	6.81	5.02
10 PERCENT EXCEEDS	406	761	558
50 PERCENT EXCEEDS	42	56	56
90 PERCENT EXCEEDS	25	28	24

09490500 BLACK RIVER NEAR FORT APACHE, AZ

**LOCATION**--Lat 33°42'46", long 110°12'40", in NW¼ sec. 12, T.4 N., R.20 E. (unsurveyed), Gila County, Hydrologic Unit 15060101, on downstream side of first pier from right bank on highway bridge, 5 mi upstream from confluence with White River and 14 mi west of Fort Apache.

**DRAINAGE AREA**--1,232 mi<sup>2</sup>.

**PERIOD OF RECORD**--Oct. 1912 to Dec. 1915, Sept. 1916, Oct. 1917 to Jan. 1918, Apr. 1918, Oct. 1957 to current year. Monthly discharge only for some periods, published in WSP 1313.

**REVISED RECORDS**--WSP 1313: 1914-15, drainage area.

**GAGE**--Water-stage recorder. Elevation of gage is 4,345 ft above sea level, from river-profile map. Nov. 1912 to July 1918, nonrecording gages or water-stage recorders at several sites within 1 mi of present site at various datums.

**REMARKS**--No estimated daily discharges. Records good. One transbasin diversion for industrial and municipal use (see record of Willow Creek diversion from Black River, near Morenci). Negligible storage in several small recreational lakes.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 54,700 ft<sup>3</sup>/s, Jan. 8, 1993, gage height, 28.10 ft, from rating curve extended above 8,500 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 22.33 ft and 24.80 ft; minimum daily, 11 ft<sup>3</sup>/s July 6, 1974.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30 .....	2000	3,960	7.92	Feb. 12.....	1615	*21,200	*17.78
Jan. 4.....	1115	6,050	9.85	Feb. 20.....	0745	16,500	15.79

Minimum daily discharge, 23 ft<sup>3</sup>/s, July 11-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	68	69	870	673	948	711	624	198	34	56	45
2	45	68	57	562	583	870	669	569	178	35	53	43
3	46	65	55	468	492	796	720	532	162	33	72	46
4	48	61	60	4510	438	752	836	508	148	31	58	57
5	45	59	78	3020	406	715	939	491	137	29	61	67
6	42	57	85	1470	390	985	965	485	129	28	108	89
7	40	58	80	851	487	989	974	487	118	27	86	77
8	39	62	77	663	637	839	1150	470	109	26	142	66
9	38	64	73	648	527	791	1410	444	100	25	190	86
10	37	84	70	568	467	798	1380	419	93	24	253	107
11	38	82	68	522	2780	862	1150	404	88	23	156	103
12	39	79	69	550	14300	958	972	388	83	23	117	111
13	43	75	70	529	7640	1070	959	371	80	23	189	104
14	46	72	71	437	3610	1190	1100	353	77	23	221	89
15	44	71	71	396	2410	1250	1320	340	71	24	358	76
16	44	74	71	352	1880	1130	1400	327	64	27	241	67
17	42	75	70	317	1510	988	1460	317	58	34	205	60
18	41	74	66	301	1500	905	1490	315	53	32	251	55
19	41	73	63	290	3650	839	1440	308	49	37	197	51
20	41	75	62	286	10200	830	1300	300	48	39	140	49
21	42	79	60	292	4190	906	1140	295	46	40	137	47
22	43	81	66	310	3110	864	1010	292	43	34	111	45
23	46	87	67	320	2600	788	930	286	42	35	102	43
24	56	93	51	328	2050	786	964	277	50	39	107	42
25	58	93	43	357	1670	771	1520	264	51	37	107	41
26	63	91	43	421	1430	757	1290	251	51	38	106	39
27	62	88	49	1020	1280	754	1010	234	46	52	88	39
28	58	85	73	1940	1100	721	857	234	44	55	75	37
29	64	84	125	1170	---	743	750	261	39	61	65	36
30	65	84	1790	928	---	756	684	244	36	65	56	35
31	68	---	1930	837	---	736	---	218	---	62	49	---
TOTAL	1467	2261	5682	25533	72010	27087	32500	11308	2491	1095	4157	1852
MEAN	47.3	75.4	183	824	2572	874	1083	365	83.0	35.3	134	61.7
MAX	68	93	1930	4510	14300	1250	1520	624	198	65	358	111
MIN	37	57	43	286	390	715	669	218	36	23	49	35
AC-FT	2910	4480	11270	50640	142800	53730	64460	22430	4940	2170	8250	3670
CFSM	0.04	0.06	0.15	0.67	2.09	0.71	0.88	0.30	0.07	0.03	0.11	0.05
IN.	0.04	0.07	0.17	0.77	2.17	0.82	0.98	0.34	0.08	0.03	0.13	0.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2005, BY WATER YEAR (WY)

MEAN	200	153	338	403	604	1028	1091	461	102	83.6	177	141
MAX	2725	769	2449	4904	3145	3864	4423	3109	448	763	659	650
(WY)	1984	1995	1979	1993	1980	1978	1915	1973	1973	1915	1959	1988
MIN	30.6	36.7	38.4	36.8	52.9	50.2	42.9	28.2	16.9	23.3	34.9	30.5
(WY)	1974	1976	1977	1976	2002	1999	2002	2002	1974	1994	1975	1960

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1915 - 2005
ANNUAL TOTAL	61897	187443	
ANNUAL MEAN	169	514	400
HIGHEST ANNUAL MEAN			1200
LOWEST ANNUAL MEAN			52.6
HIGHEST DAILY MEAN	1930	14300	32600
LOWEST DAILY MEAN	28	23	11
ANNUAL SEVEN-DAY MINIMUM	30	24	12
ANNUAL RUNOFF (AC-FT)	122800	371800	289900
ANNUAL RUNOFF (CFSM)	0.137	0.417	0.325
ANNUAL RUNOFF (INCHES)	1.87	5.66	4.41
10 PERCENT EXCEEDS	566	1160	1080
50 PERCENT EXCEEDS	63	106	96
90 PERCENT EXCEEDS	36	39	38



## GILA RIVER BASIN

## 09492400 EAST FORK WHITE RIVER NEAR FORT APACHE, AZ

**LOCATION**--Lat 33°49'20", long 109°48'50", in SE1/4 sec. 16, T.5 N., R.24 E. (unsurveyed), Apache County, Hydrologic Unit 15060102, in Fort Apache Indian Reservation, on left bank 600 ft downstream from highway bridge, 0.1 mi upstream from Rock Creek, and 10 mi east of Fort Apache.

**DRAINAGE AREA**--38.8 mi<sup>2</sup>.

**PERIOD OF RECORD**--Aug. 1957 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 6,050 ft above sea level. Prior to Dec. 29, 1960, at site 600 ft upstream at datum 12.78 ft higher. Dec. 29, 1960, to Sept. 28, 1962, at site 600 ft upstream at datum 12.92 ft higher.

**REMARKS**--Records good, except estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 2,700 ft<sup>3</sup>/s Oct. 1, 1983, gage height, 5.40 ft, from rating curve extended above 1,000 ft<sup>3</sup>/s; minimum daily, 3.5 ft<sup>3</sup>/s June 24, 25, 29, July 7, 2002.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30.....	0040	306	2.50	Apr. 18.....	2115	198	2.13
Feb. 12.....	1900	176	2.04	Apr. 24.....	1030	*316	*2.53
Feb. 19.....	1945	166	2.00	May 21.....	2015	211	2.18
Apr. 8.....	2200	124	1.80				

Minimum daily discharge, 6.3 ft<sup>3</sup>/s Dec. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	24	16	47	21	33	34	118	91	12	9.7	17
2	13	21	13	35	18	32	40	118	82	12	10	18
3	13	20	15	36	20	32	51	126	73	11	13	24
4	12	19	15	56	19	31	62	123	66	11	13	19
5	12	18	15	33	18	33	62	135	58	11	15	18
6	11	17	14	29	18	36	65	161	52	10	16	17
7	11	18	13	29	18	34	80	151	47	10	18	18
8	11	28	12	28	18	36	108	140	42	10	24	20
9	11	27	12	22	17	41	117	139	38	9.8	20	19
10	11	24	12	22	19	53	99	151	35	9.6	16	23
11	14	22	12	23	66	65	81	158	32	9.3	26	20
12	12	21	13	22	149	74	75	145	30	9.1	37	19
13	11	21	13	19	100	84	87	137	27	9.5	26	18
14	11	19	13	20	79	81	116	141	26	9.6	29	18
15	10	18	13	18	64	70	144	141	24	9.0	29	17
16	10	18	13	18	52	61	165	150	23	9.9	23	16
17	9.9	17	16	18	47	55	171	168	e22	12	22	15
18	10	17	15	19	62	50	182	161	e21	9.8	22	14
19	9.7	16	14	19	147	47	183	164	e21	9.3	26	14
20	9.4	16	14	21	122	47	171	186	e20	10	28	14
21	11	15	13	23	81	42	158	200	e21	9.7	23	13
22	18	17	11	23	72	38	153	201	e24	9.1	30	13
23	14	17	8.5	23	64	39	162	192	e19	9.5	33	12
24	14	14	e6.3	26	55	37	e287	177	e18	14	28	12
25	14	15	e6.4	26	48	37	e259	162	e17	15	28	12
26	16	16	e6.5	27	42	34	e183	142	e16	10	25	11
27	28	14	e7.1	36	39	35	e134	129	e15	9.7	22	11
28	30	15	e9.9	30	33	38	120	126	e15	13	20	11
29	31	11	51	27	---	39	121	117	e14	9.7	19	11
30	29	11	170	26	---	38	119	108	e13	10	18	11
31	26	---	73	24	---	36	---	102	---	10	17	---
TOTAL	457.0	546	635.7	825	1508	1408	3789	4569	1002	323.6	685.7	475
MEAN	14.7	18.2	20.5	26.6	53.9	45.4	126	147	33.4	10.4	22.1	15.8
MAX	31	28	170	56	149	84	287	201	91	15	37	24
MIN	9.4	11	6.3	18	17	31	34	102	13	9.0	9.7	11
AC-FT	906	1080	1260	1640	2990	2790	7520	9060	1990	642	1360	942
CFSM	0.38	0.47	0.53	0.69	1.39	1.17	3.26	3.80	0.86	0.27	0.57	0.41
IN.	0.44	0.52	0.61	0.79	1.45	1.35	3.63	4.38	0.96	0.31	0.66	0.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
MEAN	21.1	16.6	16.1	16.2	20.9
MAX	128	43.6	57.1	84.8	66.2
(WY)	1984	1987	1979	1993	1980
MIN	7.93	7.04	7.31	7.09	7.45
(WY)	2003	2002	2002	1994	2000

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1957 - 2005
ANNUAL TOTAL	8353.5	16224.0	
ANNUAL MEAN	22.8	44.4	35.1
HIGHEST ANNUAL MEAN			75.1
LOWEST ANNUAL MEAN			8.80
HIGHEST DAILY MEAN	170	287	1120
LOWEST DAILY MEAN	6.2	6.3	3.5
ANNUAL SEVEN-DAY MINIMUM	6.5	8.0	3.6
ANNUAL RUNOFF (AC-FT)	16570	32180	25430
ANNUAL RUNOFF (CFSM)	0.588	1.15	0.905
ANNUAL RUNOFF (INCHES)	8.01	15.55	12.29
10 PERCENT EXCEEDS	60	136	87
50 PERCENT EXCEEDS	13	22	18
90 PERCENT EXCEEDS	8.1	11	8.5

e Estimated

**09494000 WHITE RIVER NEAR FORT APACHE, AZ**

**LOCATION**--Lat 33°44'11", long 110°09'58", in SE1/4 sec. 32, T.4 N., R.21 E. (unsurveyed), Gila County, Hydrologic Unit 15060102, in Fort Apache Indian Reservation, on right bank 2,200 ft downstream from highway bridge, 4.5 mi upstream from confluence with Black River, and 11 mi west of Fort Apache.

**DRAINAGE AREA**--632 mi<sup>2</sup>.

**PERIOD OF RECORD**--Oct. 1917 to Sept. 1918 (published as "at Wanslee's Ranch"), Oct. 1957 to current year. Monthly discharge only for some periods, published in WSP 1313.

**REVISED RECORDS**--WRD AZ 1971: 1967(M).

**GAGE**--Water-stage recorder. Datum of gage is 4,365.99 ft above sea level. Oct. 12, 1917, to Aug. 31, 1918, nonrecording gage at site 2,100 ft upstream at different datum.

**REMARKS**--Records fair except for estimated daily discharges, which are poor. Small diversions above station for irrigation of about 1,460 acres. Negligible storage above station in several small recreational lakes.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 14,600 ft<sup>3</sup>/s Dec. 18, 1978, gage height, 15.71 ft, from rating curve extended above 7,800 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow July 18--21, 1963.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30 .....	0945	1,170	4.51	Apr. 24 .....	1645	1,530	5.08
Feb. 12 .....	1400	3,370	7.51	Aug. 14 .....	1745	1,390	4.87
Feb. 20 .....	0200	3,600*	7.76*				

Minimum daily discharge, 25 ft<sup>3</sup>/s July 11--13, 17, and 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	e48	32	211	167	448	370	596	355	38	50	45
2	30	e47	37	154	136	406	393	553	321	36	40	50
3	28	e47	41	141	128	401	448	537	294	36	38	75
4	27	e47	43	440	129	379	525	531	258	33	39	95
5	28	e47	49	249	125	398	556	568	227	32	49	100
6	27	e47	53	152	128	442	559	646	e232	30	64	69
7	28	e49	51	128	146	439	626	655	e211	29	63	77
8	27	e54	48	147	141	423	802	614	e204	27	63	84
9	27	e85	47	139	137	436	924	586	141	26	67	89
10	27	e66	46	131	128	479	815	591	126	26	61	91
11	32	e63	45	146	406	548	681	613	120	25	73	83
12	39	e62	45	156	2320	610	619	574	114	25	244	70
13	34	e59	45	121	1700	684	648	535	106	25	113	65
14	30	e59	45	115	1010	719	780	525	104	26	205	60
15	29	e59	43	108	773	657	907	516	90	26	121	57
16	29	e59	42	103	615	561	983	521	81	26	100	52
17	28	e61	40	102	558	518	997	567	75	25	85	49
18	29	55	42	102	592	476	1040	568	70	33	109	45
19	31	54	42	105	2170	441	1030	560	66	29	104	42
20	29	55	40	109	2470	452	942	593	61	25	111	40
21	29	53	41	120	1300	479	850	657	57	26	86	38
22	35	58	44	125	1270	416	785	695	69	31	74	37
23	53	67	39	129	1140	416	756	696	70	29	116	36
24	43	59	33	135	836	399	1210	660	68	31	91	34
25	41	54	37	150	675	394	1360	608	65	41	79	32
26	74	53	39	153	590	397	1100	551	58	41	80	31
27	e146	55	45	315	552	379	914	491	50	42	65	33
28	e49	54	46	346	475	436	791	512	45	37	60	33
29	e80	53	74	246	---	451	712	488	43	39	54	31
30	e53	40	648	211	---	432	645	428	40	60	50	31
31	e50	---	341	187	---	398	---	390	---	66	48	---
TOTAL	1251	1669	2263	5176	20817	14514	23768	17625	3821	1021	2602	1674
MEAN	40.4	55.6	73.0	167	743	468	792	569	127	32.9	83.9	55.8
MAX	146	85	648	440	2470	719	1360	696	355	66	244	100
MIN	27	40	32	102	125	379	370	390	40	25	38	31
AC-FT	2480	3310	4490	10270	41290	28790	47140	34960	7580	2030	5160	3320
CFSM	0.06	0.09	0.12	0.26	1.18	0.74	1.25	0.90	0.20	0.05	0.13	0.09
IN.	0.07	0.10	0.13	0.30	1.23	0.85	1.40	1.04	0.22	0.06	0.15	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	97.9	82.4	111	123	178	359	568	430	144	66.6	115	99.0
MAX	774	218	715	1125	787	1159	1448	2073	602	187	388	293
(WY)	1984	1987	1979	1993	1980	1985	1979	1973	1973	1973	1967	1988
MIN	26.8	26.1	31.7	32.0	32.1	35.5	41.3	12.2	4.35	3.90	26.5	19.0
(WY)	2002	2002	2000	1964	2002	2002	2002	2002	2002	1963	1962	1989

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1957 - 2005

ANNUAL TOTAL	33044	96201	
ANNUAL MEAN	90.3	264	198
HIGHEST ANNUAL MEAN			487
LOWEST ANNUAL MEAN			32.5
HIGHEST DAILY MEAN	648	Dec 30	2470
LOWEST DAILY MEAN	13	Jul 7	25
ANNUAL SEVEN-DAY MINIMUM	15	Jul 3	25
ANNUAL RUNOFF (AC-FT)	65540	190800	143200
ANNUAL RUNOFF (CFSM)	0.143	0.417	0.313
ANNUAL RUNOFF (INCHES)	1.94	5.66	4.25
10 PERCENT EXCEEDS	286	658	524
50 PERCENT EXCEEDS	42	89	79
90 PERCENT EXCEEDS	23	31	32

## GILA RIVER BASIN

## 09494200 CARRIZO CREEK NEAR CIBECUE

**LOCATION**--Lat 34°07'17", long 110°25'03", in sec. 2, T.8 N., R.18 E. (unsurveyed), Navajo County, Hydrologic Unit 15060104, on Fort Apache Indian Reservation, approx. 14 mi. north of Carrizo, AZ. on dirt road B-30.

**DRAINAGE AREA**--To be determined.

**PERIOD OF RECORD**--July 2002 to Sept. 30, 2005 (discontinued).

**GAGE**--Water-stage recorder and rain gage. Elevation of gage is 5,428 ft above sea level.

**REMARKS**--Records fair, except for estimated daily discharges, which are poor.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, 3,340 ft<sup>3</sup>/s Dec. 29, gage height 8.98 ft. Minimum daily discharge, 0.76 ft<sup>3</sup>/s (estimated) July 13--15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.7	1.7	e75	e78	e211	e55	e21	e3.5	e1.4	e7.5	e2.9
2	1.3	1.5	1.5	e42	e71	e209	e51	e17	e3.5	e0.92	e6.3	3.1
3	1.3	1.4	1.5	e257	e64	e213	e48	e14	e3.4	e0.92	147	3.2
4	1.3	1.4	1.6	e811	e62	e225	e42	e11	e2.2	e0.87	e8.0	e8.4
5	1.2	1.3	1.6	e307	e62	e250	e37	e9.1	e2.1	e0.87	e7.0	e5.4
6	1.3	1.3	1.6	e146	e62	e300	e34	e8.3	e2.5	e0.97	e6.1	3.0
7	1.3	1.4	1.6	e125	e62	e345	e32	e7.1	e2.6	e1.1	e6.1	e3.3
8	1.2	1.6	1.6	e124	e62	e297	e30	e6.9	e2.5	e1.1	e6.1	5.5
9	1.3	1.4	1.5	e130	e63	e249	e28	e6.0	e2.5	e1.0	e6.7	e45
10	1.3	1.4	1.5	e217	e67	e217	e27	e5.2	e2.4	e0.93	e10	e23
11	1.3	1.4	1.6	e248	e689	e196	e26	e5.0	e2.4	e0.81	e28	e7.9
12	1.2	1.4	1.6	e205	e991	e180	e26	e5.0	e2.4	e0.81	e62	e5.0
13	1.2	1.5	1.6	e139	e447	e166	e25	e5.0	e2.3	e0.76	e24	3.1
14	1.2	1.5	1.6	e103	e324	e154	e24	e5.0	e2.3	e0.76	e15	3.1
15	1.2	1.5	1.6	e101	e286	e146	e24	e4.7	e2.2	e0.76	e11	3.1
16	1.2	1.6	1.6	e109	e269	e137	e23	e4.7	e2.3	e0.81	e9.6	2.9
17	1.1	1.5	1.6	e109	e263	e130	e23	e4.6	e2.3	e1.0	e7.9	2.9
18	1.2	1.4	1.6	e107	e415	e123	e23	e4.4	e2.3	e1.6	e7.1	2.8
19	1.2	1.4	1.6	e104	e923	e130	e23	e4.3	e2.2	e2.1	e6.3	e4.0
20	1.2	1.4	1.6	e103	e585	e183	e24	e4.0	e2.2	e2.6	e8.0	e4.0
21	1.3	1.6	1.7	e103	e375	e148	e25	e3.8	e2.2	e3.3	e5.1	e3.9
22	1.5	31	1.7	e114	e395	e107	e28	e3.7	e2.2	e3.8	e3.8	e3.7
23	1.3	31	1.7	e118	e394	e85	e33	e3.3	e2.2	e6.9	e3.8	e3.7
24	1.3	20	1.9	e97	e310	e76	e109	e3.0	e2.2	e5.4	e11	e3.7
25	1.3	7.8	1.7	e87	e285	e94	e59	e2.8	e2.6	e13	8.4	e3.7
26	1.3	5.3	1.5	e87	e265	e139	e41	e2.7	e2.5	e7.3	6.7	e3.7
27	2.4	4.0	1.5	e224	e247	e197	e31	e2.6	e2.6	e8.1	4.1	e3.5
28	5.7	3.5	1.6	e155	e226	e252	e27	e2.6	e2.4	e8.7	3.8	e3.5
29	4.1	3.0	935	e100	---	e207	e23	e7.1	e1.9	e5.0	3.8	e3.3
30	1.8	2.1	e396	e94	---	e139	e21	e5.9	e1.6	e5.0	3.4	e2.1
31	1.7	---	e134	e88	---	e85	---	e5.2	---	e14	4.2	---
TOTAL	48.5	138.3	1510.0	4829	8342	5590	1022	195.0	72.5	102.59	447.8	176.4
MEAN	1.56	4.61	48.7	156	298	180	34.1	6.29	2.42	3.31	14.4	5.88
MAX	5.7	31	935	811	991	345	109	21	3.5	14	147	45
MIN	1.1	1.3	1.5	42	62	76	21	2.6	1.6	0.76	3.4	2.1
MED	1.3	1.5	1.6	109	267	180	28	5.0	2.3	1.1	7.0	3.6
AC-FT	96	274	3000	9580	16550	11090	2030	387	144	203	888	350
CAL YR 2004	TOTAL	2528.9	MEAN	6.91	MAX	935	MIN	1.1	MED	2.2	AC-FT	5020
WTR YR 2005	TOTAL	22474.09	MEAN	61.6	MAX	991	MIN	0.76	MED	5.0	AC-FT	44580

e Estimated

09495000 FORESTDALE CREEK DIVERSION FROM SHOW LOW CREEK, NEAR SHOW LOW, AZ

**LOCATION**--Lat 34°10'40", long 110°00'56", in SE1/4NW1/4 sec. 16, T.9 N., R.22 E., Navajo County, Hydrologic Unit 15020005, in Sitgreaves National Forest, on right bank 170 ft downstream from terminal structure of Show Low Creek diversion works, 4,350 ft west of pumping plant on Show Low Lake, and 5 mi south of Show Low.

**PERIOD OF RECORD**--May 1953 to September 30, 2005.

**GAGE**--Water-stage recorders and V-notch sharp-crested weir. Datum of gage is 6,621.57 ft above sea level (Bureau of Reclamation benchmark).

**REMARKS**--No estimated daily discharges. Records excellent. No diversion this water year. Entire flow consists of water pumped from Show Low Lake in Little Colorado River basin, into Forestdale Creek in the Gila River basin.

**EXTREMES FOR PERIOD OF RECORD**--Maximum daily discharge, 28 ft<sup>3</sup>/s, June 2, 3, 5, 1973, Mar. 17--25, 27--30, Apr. 2--15, Apr. 18 to May 5, 1975; minimum daily discharge, no flow for most of time.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
12	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.02	0.11	0.01
MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.02	0.03	0.01
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.04	0.2	0.02
CAL YR 2004	TOTAL	0.00	MEAN	0.00	MAX	0.00	MIN	0.00	AC-FT	0.00		
WTR YR 2005	TOTAL	0.18	MEAN	0.00	MAX	0.03	MIN	0.00	AC-FT	0.4		

## 09495800 CORDUROY CREEK NEAR SHOW LOW

**LOCATION.**--Lat 34°03'30", long 110°12'50", in sec. 27, T.8 N., R.20 E. (unsurveyed), Navajo County, Hydrologic Unit 15060104, on Fort Apache Indian Reservation. Gage is 0.25 mi. into canyon west of mile marker 323.5 on US Highway 60, 5.4 mi. north of Junction US 60 and State Route 73.

**DRAINAGE AREA.**--To be determined.

**PERIOD OF RECORD.**--July 2002 to Sept. 30, 2005 (discontinued).

**GAGE.**--Water-stage recorder, rain gage, and crest stage gage. Datum of gage is 5,427 ft above sea level.

**REMARKS.**--Records poor.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 2,860 ft<sup>3</sup>/s Feb. 12, gage height 10.83 ft. Minimum daily discharge, 0.20 ft<sup>3</sup>/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.20	e0.30	e0.82	174	e59	40	e1.7	e0.42	e0.28	e0.25	0.79	0.36
2	0.22	e0.27	e0.83	113	e41	27	e1.5	e0.39	e0.28	e0.24	0.61	0.36
3	0.22	e0.25	e0.84	277	e37	20	e1.4	e0.37	e0.28	e0.23	0.59	0.37
4	0.22	e0.24	e0.85	1490	e35	16	e1.3	e0.36	e0.28	e0.22	0.56	0.37
5	0.25	e0.24	e0.88	e612	e35	110	e1.2	e0.36	e0.28	e0.21	0.56	0.37
6	0.26	e0.24	e0.90	e351	e37	745	e1.1	e0.36	e0.28	e0.27	0.56	0.37
7	0.26	e0.24	e0.94	e229	e83	413	e0.97	e0.36	e0.28	0.27	0.55	0.46
8	0.25	e0.24	e1.0	e241	e104	e185	e0.90	e0.36	e0.28	0.28	11	0.42
9	0.26	e0.26	e1.1	316	e57	e61	e0.85	e0.36	e0.28	0.29	1.1	29
10	0.27	e0.29	e1.1	304	e48	e45	e0.79	e0.36	e0.28	0.30	0.68	14
11	0.26	e0.30	e1.2	330	923	e38	e0.72	e0.36	e0.28	0.29	151	1.6
12	0.24	e0.30	e1.2	e343	2140	e32	e0.68	e0.36	e0.27	0.29	98	0.73
13	0.23	e0.30	e1.3	e73	989	e28	e0.68	e0.35	e0.27	0.29	41	0.46
14	0.22	e0.30	e1.4	e53	419	e25	e0.68	e0.35	e0.27	0.28	2.8	0.40
15	0.21	e0.30	e1.4	e49	244	e22	e0.67	e0.34	e0.27	0.29	1.3	0.38
16	0.22	e0.29	e1.4	e48	178	e20	e0.66	e0.33	e0.27	0.29	0.93	0.36
17	0.22	0.41	e1.5	e47	89	e19	e0.66	e0.33	e0.27	0.31	0.69	0.36
18	0.24	0.41	e1.6	e46	372	e19	e0.66	e0.32	e0.27	0.31	0.50	0.36
19	0.25	0.39	e1.7	e45	1830	e18	e0.66	e0.32	e0.27	0.32	0.74	0.36
20	0.25	0.41	e1.8	e44	1410	e17	e0.64	e0.31	e0.27	0.33	1.2	0.36
21	0.27	0.49	e1.9	e43	647	e16	e0.62	e0.31	e0.27	0.33	0.49	0.36
22	0.24	0.69	e1.9	e42	e1540	e14	e0.59	e0.30	e0.27	0.33	0.43	0.36
23	0.24	1.2	e2.0	e42	e1060	e13	e0.59	e0.30	e0.27	0.33	0.43	0.36
24	0.24	1.0	e2.1	e42	e620	e10	e0.93	e0.29	e0.27	24	0.39	0.36
25	0.26	0.91	e2.3	e41	e497	e7.9	1.5	e0.29	e0.27	6.4	0.39	0.36
26	0.29	0.91	e2.3	e42	e433	e6.3	1.3	e0.29	e0.27	0.68	0.39	0.37
27	46	0.91	e2.5	280	e340	e5.4	e0.98	e0.28	e0.27	0.55	0.38	0.38
28	29	0.91	e2.8	259	e252	e4.5	e0.61	e0.28	e0.27	0.54	0.38	0.39
29	14	0.91	e2.12	e81	---	e3.3	e0.49	e0.28	e0.27	0.51	0.37	0.39
30	e0.44	e0.89	713	e60	---	e2.5	e0.45	e0.28	e0.26	0.59	0.36	0.39
31	e0.35	---	321	e61	---	e2.0	---	e0.28	---	1.2	0.36	---
TOTAL	96.08	14.80	1287.56	6178	14519	1984.9	26.48	10.25	8.20	41.02	319.53	55.17
MEAN	3.10	0.49	41.5	199	519	64.0	0.88	0.33	0.27	1.32	10.3	1.84
MAX	46	1.2	713	1490	2140	745	1.7	0.42	0.28	24	151	29
MIN	0.20	0.24	0.82	41	35	2.0	0.45	0.28	0.26	0.21	0.36	0.36
MED	0.25	0.30	1.4	73	296	19	0.70	0.33	0.27	0.30	0.56	0.37
AC-FT	191	29	2550	12250	28800	3940	53	20	16	81	634	109
CAL YR 2004	TOTAL	2652.79	MEAN	7.25	MAX	713	MIN	0.05	MED	0.39	AC-FT	5260
WTR YR 2005	TOTAL	24540.99	MEAN	67.2	MAX	2140	MIN	0.20	MED	0.59	AC-FT	48680

e Estimated

09496000 CORDUROY CREEK, NEAR MOUTH, NEAR SHOW LOW

LOCATION --Lat 34°01'07", long 110°14'33", in sec. 9, T.7 N., R.20 E. (unsurveyed), Gila County, Hydrologic Unit 15060104, on Fort Apache Indian Reservation, on right bank 0.2 mi. east of Hwy 60 at mile marker 319.6. Elevation of gage is 4,998 ft. above sea level.

DRAINAGE AREA --203 mi<sup>2</sup>

PERIOD OF RECORD --1951-1975 (discontinued); Oct. 2003 to Sept. 30, 2005 (discontinued).

GAGE --Water-stage recorder.

REMARKS --Records poor.

EXTREMES FOR CURRENT YEAR --Maximum discharge, 2,780 ft<sup>3</sup>/s Feb. 12, gage height 6.24 ft. Minimum daily discharge, 1.7 ft<sup>3</sup>/s July 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.2	e2.1	e2.4	e60	50	73	9.8	3.2	e2.1	e1.8	4.2	e1.8
2	e2.2	e2.1	e2.4	e39	39	71	8.3	3.0	e1.9	e1.8	2.0	1.8
3	e2.2	e2.1	e2.4	e764	38	70	7.4	2.8	e1.9	e1.8	2.1	e1.8
4	e2.2	e2.1	e2.4	e1750	38	70	6.6	2.7	e1.9	e1.8	2.0	e1.8
5	e2.1	e2.1	e2.4	e800	38	102	5.6	2.6	e1.8	e1.8	1.9	e1.8
6	e2.1	e2.0	e2.4	e280	38	567	4.9	2.7	e1.8	e1.8	2.0	e1.8
7	e2.0	e2.1	e2.4	e79	46	276	4.5	2.7	e1.8	e1.8	1.8	e2.1
8	e2.0	e2.1	e2.4	e66	69	128	4.5	2.6	e1.8	e1.8	10	2.5
9	e2.0	e2.1	e2.4	e82	57	78	4.3	e2.6	e1.8	e1.8	10	14
10	e2.0	e2.1	e2.4	e125	47	63	4.2	e2.6	e1.8	e1.8	2.6	57
11	e1.9	e2.1	e2.4	171	667	e56	3.9	e2.6	e1.8	e1.8	104	e20
12	e1.9	e2.1	e2.4	190	2150	e54	3.7	e2.6	e1.8	e1.8	e127	e15
13	e1.9	e2.1	e2.4	73	771	e50	3.5	e2.5	e1.8	e1.8	e38	e12
14	e1.9	e2.1	e2.4	47	252	e45	3.2	e2.3	e1.8	e1.8	e22	e9.9
15	e1.9	e2.1	e2.4	37	132	e41	3.0	e2.2	e1.8	e1.8	e12	e7.8
16	e1.9	e2.1	e2.4	36	97	e37	2.9	e2.1	e1.8	e1.8	e9.7	e6.0
17	e1.9	e2.3	e2.4	36	66	e32	2.7	e2.1	e1.8	e1.8	e7.7	e4.8
18	e1.9	e2.3	e2.4	36	201	e31	2.6	e2.1	e1.8	e1.9	e6.3	e4.2
19	e1.9	e2.3	e2.4	35	1710	e31	2.5	e2.1	e1.8	e2.0	e5.5	e3.6
20	e1.9	e2.3	e2.4	35	1220	e34	2.5	e2.1	e1.8	e2.5	e4.4	e2.9
21	e1.9	e2.7	e2.4	35	424	e29	2.4	e2.1	e1.8	2.3	e3.2	e2.5
22	e1.9	e26	e2.4	35	1290	e22	2.4	2.1	e1.8	2.0	e2.5	e2.2
23	e1.9	e36	e5.9	35	749	e14	2.7	2.1	e1.8	2.4	e2.0	e2.0
24	e2.0	e20	e6.5	35	294	11	5.3	2.1	e1.8	2.8	e1.8	e2.0
25	e2.1	e4.1	e4.7	35	187	13	9.2	2.1	e1.8	31	e1.8	e1.9
26	e2.2	e2.6	e5.2	35	142	36	8.6	2.1	e1.8	4.1	e1.8	e1.9
27	13	e2.6	e5.1	154	115	33	7.6	2.1	e1.8	2.1	e1.8	e1.9
28	e2.2	e2.5	e5.2	154	83	31	4.9	4.4	e1.8	1.9	e1.8	e1.8
29	8.7	e2.4	e1440	62	---	28	3.9	2.8	e1.8	1.7	e1.8	e1.8
30	e2.2	e2.4	e793	51	---	19	3.4	e2.5	e1.8	2.1	e1.8	e1.8
31	e2.2	---	e217	53	---	13	---	e2.3	---	4.4	e1.8	---
TOTAL	80.3	144.0	2535.4	5425	11010	2158	141.0	76.9	54.6	93.8	397.3	192.4
MEAN	2.59	4.80	81.8	175	393	69.6	4.70	2.48	1.82	3.03	12.8	6.41
MAX	13	36	1440	1750	2150	567	9.8	4.4	2.1	31	127	57
MIN	1.9	2.0	2.4	35	38	11	2.4	2.1	1.8	1.7	1.8	1.8
AC-FT	159	286	5030	10760	21840	4280	280	153	108	186	788	382

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2005, BY WATER YEAR (WY)

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
MEAN	11.9	10.6	35.3	48.0	52.3	63.1	25.1	11.0	7.28	7.99	7.80	3.85													
MAX	161	93.9	347	434	393	429	191	72.0	28.2	30.5	24.4	17.5													
(WY)	1973	1960	1966	1952	2005	1973	1973	1973	1973	1973	1973	1963													
MIN	1.58	1.78	1.24	1.78	1.95	1.97	1.78	1.35	1.31	1.39	1.57	1.47													
(WY)	1974	1971	1975	1971	1974	1955	1955	1972	1964	1963	1970	1956													

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1951 - 2005	
ANNUAL TOTAL	4507.8		22308.7			
ANNUAL MEAN	12.3		61.1		23.6	
HIGHEST ANNUAL MEAN					115 1973	
LOWEST ANNUAL MEAN					2.29 1970	
HIGHEST DAILY MEAN	1440	Dec 29	2150	Feb 12	5260	Jan 18 1952
LOWEST DAILY MEAN	1.5	Jun 22	1.7	Jul 29	0.70	Nov 27 1974
ANNUAL SEVEN-DAY MINIMUM	1.5	Jun 22	1.8	Jun 5	0.74	Dec 14 1974
ANNUAL RUNOFF (AC-FT)	8940		44250		17100	
10 PERCENT EXCEEDS	6.2		80		34	
50 PERCENT EXCEEDS	3.2		2.5		2.4	
90 PERCENT EXCEEDS	1.8		1.8		1.6	

e Estimated

## 09496500 CARRIZO CREEK NEAR SHOW LOW, AZ

**LOCATION.**--Lat 33°59'09", long 110°16'49", in sec. 24, T.7 N., R.19 E. (unsurveyed), Gila County, Hydrologic Unit 15060104, in Fort Apache Indian Reservation, on right bank 500 ft upstream from bridge on U.S. Highway 60, 1 mi downstream from Corduroy Creek, 23 mi southwest of Show Low, and 24 mi upstream from mouth.

**DRAINAGE AREA.**--439 mi<sup>2</sup>.

**PERIOD OF RECORD.**--June 1951 to June 1961, June 1967 to June 1976, Oct. 1975 to June 1976 (monthly discharges only), Apr. 1977 to current year.

**REVISED RECORDS.**--WRD Ariz. 1968: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 4,749.52 ft above sea level. Prior to June 1976 at site on bridge pier 400 ft downstream at same datum.

**REMARKS.**--Records fair except for estimated daily discharges, which are poor. Diversions for irrigation above station of less than 300 acres. Records include transbasin diversion from Show Low Creek into headwaters of Carrizo Creek. (See sta 09495000.)

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 20,500 ft<sup>3</sup>/s Jan. 18, 1952, gage height, 12.08 ft, at site then in use, from rating curve extended above 2,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; maximum gage height, 15.1 ft Dec. 18, 1978, from highwater mark; minimum daily discharge, no flow, estimated, June 17, 2002.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge since at least 1951, about 23,000 ft<sup>3</sup>/s Dec. 30, 1965, gage height, 13.0 ft, from floodmark at previous site, from rating curve extended above 2,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 12.08 ft.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29.....	2000	3,140	7.35	Feb. 22.....	1920	1,800	5.86
Jan. 4.....	0820	2,750	6.96	Mar. 6.....	0410	1,070	4.78
Feb. 12.....	0655	*4,020	*8.14	Sept. 9.....	2220	1,100	4.83
Feb. 19.....	0850	3,340	7.53				

Minimum daily discharge, 0.84 ft<sup>3</sup>/s, July 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	6.4	6.9	81	95	147	39	17	8.3	1.7	20	e5.5
2	3.3	5.8	6.4	45	73	119	36	16	8.0	1.5	11	6.6
3	3.1	5.6	6.1	167	56	98	33	15	7.8	1.4	42	8.1
4	3.0	5.6	6.4	1790	45	84	30	15	7.3	1.2	78	17
5	2.8	5.5	7.5	604	41	145	28	14	6.9	1.8	19	9.2
6	2.7	5.4	7.6	260	38	694	27	13	6.4	1.9	17	7.6
7	2.7	5.8	7.0	186	56	496	26	13	6.3	1.9	15	6.9
8	2.6	7.1	6.7	166	105	263	25	13	6.2	1.8	24	19
9	2.6	6.1	6.5	225	90	167	24	13	6.0	1.6	44	91
10	2.7	5.8	6.3	247	75	121	24	12	6.1	1.7	51	e96
11	3.2	5.5	6.4	330	913	94	23	12	6.2	1.4	42	e22
12	3.5	5.5	6.4	323	2620	78	23	12	6.3	0.84	183	e12
13	3.1	5.7	6.3	163	987	68	22	12	5.8	0.92	66	e9.3
14	3.0	5.8	6.3	106	416	63	21	11	5.2	1.0	e82	e8.9
15	2.9	5.7	6.3	73	243	64	20	11	4.7	1.1	e35	e8.5
16	3.0	6.5	6.1	60	204	56	19	11	4.3	1.1	59	e8.0
17	3.3	6.0	6.1	52	145	50	18	10	4.2	1.2	19	e8.0
18	3.1	5.7	6.0	47	351	46	18	10	4.1	1.5	12	e7.9
19	3.1	5.6	6.1	44	2070	48	17	9.6	3.8	1.5	16	7.4
20	3.2	5.6	6.1	49	1520	58	17	9.1	3.4	5.6	15	7.1
21	3.5	7.0	6.1	55	711	60	16	8.6	3.4	5.5	10	7.0
22	6.7	43	6.0	66	1300	50	16	8.5	3.3	3.2	8.9	6.6
23	4.5	65	5.5	66	979	44	16	7.9	3.4	12	12	6.2
24	4.1	42	4.8	58	522	40	30	7.3	4.3	7.3	33	e6.6
25	4.3	22	5.6	48	342	45	29	7.0	3.7	3.0	e20	e7.0
26	4.8	15	5.6	52	272	77	36	6.9	3.1	1.9	e15	e6.3
27	38	12	5.6	242	234	87	25	7.3	2.7	9.6	e8.9	e6.4
28	20	10	5.5	264	182	103	21	11	2.5	18	e6.6	7.0
29	44	9.3	810	135	---	82	19	17	2.2	10	e5.9	6.6
30	9.1	7.7	751	109	---	60	18	11	1.9	11	e5.8	e6.3
31	6.6	---	199	104	---	46	---	9.1	---	37	e5.8	---
TOTAL	206.2	349.7	1934.2	6217	14685	3653	716	350.3	147.8	195.26	981.9	432.0
MEAN	6.65	11.7	62.4	201	524	118	23.9	11.3	4.93	6.30	31.7	14.4
MAX	44	65	810	1790	2620	694	39	17	8.3	37	183	96
MIN	2.6	5.4	4.8	44	38	40	16	6.9	1.9	0.84	5.8	5.5
AC-FT	409	694	3840	12330	29130	7250	1420	695	293	387	1950	857
CFSM	0.02	0.03	0.14	0.46	1.19	0.27	0.05	0.03	0.01	0.01	0.07	0.03
IN.	0.02	0.03	0.16	0.53	1.24	0.31	0.06	0.03	0.01	0.02	0.08	0.04

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2005, BY WATER YEAR (WY)

	MEAN	25.1	20.5	63.8	86.9	118	132	43.8	17.7	10.8	13.0	19.7	11.6
MAX	397	147	762	1031	965	698	350	154	41.3	41.1	83.4	45.2	
(WY)	1973	1960	1979	1993	1980	1978	1973	1973	1973	1973	2002	2003	
MIN	1.63	2.53	3.86	4.94	5.13	4.81	4.31	1.75	0.30	1.35	2.96	0.91	
(WY)	1957	1957	1957	2003	2002	2002	2002	2002	2002	1971	1997	1956	

## SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1951 - 2005

ANNUAL TOTAL		5790.85		29868.36								
ANNUAL MEAN		15.8		81.8						47.7		
HIGHEST ANNUAL MEAN										201		1979
LOWEST ANNUAL MEAN										5.22		2000
HIGHEST DAILY MEAN			810	Dec 29		2620	Feb 12		10900	Dec 18	1978	
LOWEST DAILY MEAN		0.58	Jun 29		0.84	Jul 12		0.00	Jun 17	2002		
ANNUAL SEVEN-DAY MINIMUM		0.60	Jun 26		1.1	Jul 11		0.09	Jun 23	2002		
ANNUAL RUNOFF (AC-FT)	11490				59240			34530				
ANNUAL RUNOFF (CFSM)		0.036			0.186			0.109				
ANNUAL RUNOFF (INCHES)		0.49			2.53			1.48				
10 PERCENT EXCEEDS		14			166			69				
50 PERCENT EXCEEDS		5.6			11			9.8				
90 PERCENT EXCEEDS		1.9			3.1			2.6				

e Estimated

09497500 SALT RIVER NEAR CHRYSOTILE, AZ

**LOCATION.**--Lat 33°47'53", long 110°29'57", in sec. 25, T.5 N., R.17 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in San Carlos Indian Reservation, on left bank 1,200 ft upstream from bridge on U.S. Highway 60, 5.7 mi northeast of Chrysotile, 8 mi upstream from Cibecue Creek, and 33 mi downstream from confluence of Black and White Rivers.

**DRAINAGE AREA.**--2,849 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Sept. 1924 to current year (monthly discharge only July to Dec. 1954).

**REVISED RECORDS.**--WSP 859: 1926--27, 1929--30, 1934, 1936. WSP 899: 1927, 1932, 1937, 1938(M). WSP 1313: 1925--26(M), 1929--30(M), 1935--36(M), 1944(M). WSP 1343: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 3,354.57 ft above sea level.

**REMARKS.**--Records good, except for estimated daily discharges, which are poor. Several diversions for irrigation above station of about 3,100 acres, one diversion into the basin (see record of Forestdale Creek diversion from Show Low Creek, near Show Low), and one diversion out of the basin (see record of Willow Creek diversion from Black River, near Morenci).

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 76,600 ft<sup>3</sup>/s Jan. 8, 1993, gage height, 18.33 ft, from rating curve extended above 52,000 ft<sup>3</sup>/s; minimum, 49 ft<sup>3</sup>/s July 6, 7, 1955.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Flood peak of 74,000 ft<sup>3</sup>/s occurred prior to 1924 and is believed to be the peak of the flood of Jan. 19, 1916, gage height, 18 ft, from floodmarks, from rating curve extended above 52,000 ft<sup>3</sup>/s.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 3,500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Date
Dec. 31 .....	0330	4,770	5.70	Feb. 12.....	1815	*31,000	*12.47
Jan. 4 .....	1645	11,800	8.37	Feb. 20.....	1200	24,400	11.28

Minimum daily discharge, 89 ft<sup>3</sup>/s July 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	201	176	1560	1050	e1970	1140	1260	553	131	213	156
2	137	196	155	987	872	e1940	1090	1160	504	125	174	151
3	130	190	148	862	726	e1910	1130	1090	464	126	188	161
4	127	175	152	7130	635	e1890	1310	1040	434	121	203	193
5	127	173	177	6000	577	e1880	1470	1030	402	115	204	228
6	124	171	201	2560	584	e2190	1540	1070	376	112	233	220
7	120	169	202	1450	631	e2110	1570	1120	350	107	251	215
8	118	178	194	e1130	974	e1910	1790	1080	338	104	222	227
9	115	191	189	e1060	837	e1840	2160	1020	326	100	298	231
10	113	213	179	e1020	698	e1790	2230	987	e309	97	383	466
11	115	222	173	1000	2700	e1740	1940	979	e293	95	321	273
12	122	208	173	1090	21400	e1700	1660	954	e276	91	486	230
13	130	203	173	963	15000	e1670	1580	906	e250	91	448	213
14	129	200	175	713	5950	e1640	1740	854	e226	91	531	198
15	127	193	175	620	3770	e1620	2050	826	e212	89	739	178
16	124	192	175	534	2780	e1650	2230	808	e198	92	522	166
17	124	194	173	478	2220	1600	2330	813	e185	97	382	156
18	121	195	171	450	2120	1480	2400	836	e176	103	321	147
19	121	189	168	428	8610	1360	2400	821	e170	119	417	141
20	122	187	164	419	17700	1320	2230	818	e168	114	324	136
21	122	193	160	433	7980	1420	1990	858	171	113	287	133
22	132	208	163	462	7270	1410	1790	900	162	122	262	125
23	141	305	171	489	6210	1270	1660	903	179	118	251	123
24	155	266	158	500	3910	1230	1810	879	175	115	264	119
25	158	246	121	519	2950	1210	2650	824	180	130	259	115
26	159	223	118	589	2450	1210	2550	767	176	178	252	114
27	300	214	140	1060	e2110	1220	2030	707	163	145	231	115
28	260	210	164	2970	e2020	1230	1730	688	154	177	204	118
29	245	204	275	1870	---	1260	1530	713	144	151	188	114
30	235	198	3130	1380	---	1250	1390	677	137	164	174	112
31	204	---	3250	1230	---	1210	---	608	---	347	162	---
TOTAL	4600	6107	11343	41956	124734	49130	55120	27996	7851	3880	9394	5274
MEAN	148	204	366	1353	4455	1585	1837	903	262	125	303	176
MAX	300	305	3250	7130	21400	2190	2650	1260	553	347	739	466
MIN	113	169	118	419	577	1210	1090	608	137	89	162	112
AC-FT	9120	12110	22500	83220	247400	97450	109300	55530	15570	7700	18630	10460
CFSM	0.05	0.07	0.13	0.48	1.56	0.56	0.64	0.32	0.09	0.04	0.11	0.06
IN.	0.06	0.08	0.15	0.55	1.63	0.64	0.72	0.37	0.10	0.05	0.12	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2005, BY WATER YEAR (WY)

	MEAN	326	277	476	625	904	1458	1663	883	302	219	394	334
MAX	3777	1300	3983	7939	6181	6029	4850	5070	1185	547	1249	1181	
(WY)	1984	1979	1966	1993	1980	1978	1979	1973	1941	1941	1967	1946	
MIN	79.1	112	113	130	145	155	149	101	72.2	91.0	135	68.5	
(WY)	1957	1957	1957	1954	1964	2002	2002	2002	2002	1963	1962	1956	

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1924 - 2005
ANNUAL TOTAL	125100	347385	
ANNUAL MEAN	342	952	653
HIGHEST ANNUAL MEAN			2091
LOWEST ANNUAL MEAN			160
HIGHEST DAILY MEAN	3250	21400	47400
LOWEST DAILY MEAN	76	89	55
ANNUAL SEVEN-DAY MINIMUM	79	92	56
ANNUAL RUNOFF (AC-FT)	248100	689000	473300
ANNUAL RUNOFF (CFSM)	0.120	0.334	0.229
ANNUAL RUNOFF (INCHES)	1.63	4.54	3.12
10 PERCENT EXCEEDS	982	2020	1540
50 PERCENT EXCEEDS	178	275	254
90 PERCENT EXCEEDS	103	122	130

e Estimated



## GILA RIVER BASIN

## 09497700 CIBECUE CREEK NEAR OVERGAARD, AZ

**LOCATION**--Lat 34°09'27", long 110°30'43", in sec. 26, T.9 N., R.17 E. (unsurveyed), Navajo County, Hydrologic Unit 15060103, in Fort Apache Indian Reservation, 500 ft. west of Indian Road 34 and 8.9 mi. north of Cibecue, AZ.

**DRAINAGE AREA**--To be determined.

**PERIOD OF RECORD**--July 2002 to Sept. 30, 2005 (discontinued).

**GAGE**--Water-stage recorder and rain gage. Datum of gage is 5,560 ft. above sea level.

**REMARKS**--Records fair, except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 823 ft<sup>3</sup>/s Dec. 29, 2004; gage height 8.01 ft. Minimum daily discharge, 5.7 ft<sup>3</sup>/s Oct. 16--17, 2004.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, 823 ft<sup>3</sup>/s Dec. 29, gage height 8.01 ft. Minimum daily discharge, 5.7 ft<sup>3</sup>/s Oct. 16--17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	9.5	18	84	77	97	55	19	12	8.6	9.2	e11
2	6.3	9.2	16	79	70	90	47	18	12	8.6	9.1	e12
3	6.1	8.7	14	124	58	87	44	18	12	8.6	14	e20
4	6.0	8.5	14	200	51	86	42	17	12	8.5	9.2	e13
5	6.2	8.2	13	119	47	86	39	17	12	8.5	8.9	e11
6	6.2	8.0	12	e97	44	97	36	17	12	8.5	8.9	e11
7	6.0	7.9	12	e89	43	106	34	16	12	8.5	10	e11
8	5.9	8.0	11	81	41	98	32	16	12	8.4	12	e12
9	6.1	8.9	11	74	41	89	31	16	11	8.3	11	e27
10	6.0	9.4	11	74	42	87	30	15	11	8.3	11	e20
11	5.9	9.4	15	95	172	84	28	15	11	8.3	11	e9.7
12	6.0	9.2	20	95	350	79	27	15	11	8.2	12	e9.1
13	5.8	9.2	22	86	196	71	26	15	11	8.2	11	e9.2
14	5.9	9.0	23	80	146	62	25	14	11	8.2	12	e8.9
15	5.9	8.8	22	71	133	57	24	14	11	8.3	12	e9.2
16	5.7	8.6	21	62	133	52	23	14	11	8.2	12	e9.6
17	5.7	8.4	19	58	118	48	23	14	11	8.1	12	9.0
18	6.0	8.3	17	58	170	45	21	14	11	8.5	12	8.8
19	6.2	8.2	16	59	274	43	21	13	11	8.4	12	8.6
20	6.3	8.1	14	64	206	42	20	13	11	8.3	11	8.5
21	6.0	8.1	14	71	170	51	20	13	11	8.2	11	8.5
22	6.3	27	13	80	183	56	19	e14	10	8.2	10	8.6
23	6.5	42	12	86	164	53	19	e14	11	8.2	16	8.4
24	5.9	43	12	86	143	48	20	e14	10	13	20	8.4
25	6.5	38	11	85	132	46	21	e14	10	10	17	8.4
26	6.2	33	11	87	127	44	21	13	10	10	15	8.3
27	6.7	28	10	153	120	47	21	13	10	9.7	14	8.1
28	6.5	24	9.6	106	108	70	20	13	10	9.4	13	8.3
29	7.5	22	252	92	---	76	20	13	9.3	9.4	12	8.1
30	9.9	20	170	86	---	73	19	13	8.6	9.3	11	8.1
31	9.8	---	100	81	---	67	---	13	---	9.2	e11	---
TOTAL	198.4	458.6	935.6	2762	3559	2137	828	457	327.9	272.1	370.3	321.8
MEAN	6.40	15.3	30.2	89.1	127	68.9	27.6	14.7	10.9	8.78	11.9	10.7
MAX	9.9	43	252	200	350	106	55	19	12	13	20	27
MIN	5.7	7.9	9.6	58	41	42	19	13	8.6	8.1	8.9	8.1
MED	6.1	9.1	14	85	129	70	24	14	11	8.5	12	9.1
AC-FT	394	910	1860	5480	7060	4240	1640	906	650	540	734	638

CAL YR 2004 TOTAL 4702.5 MEAN 12.8 MAX 252 MIN 5.7 MED 8.2 AC-FT 9330  
WTR YR 2005 TOTAL 12627.7 MEAN 34.6 MAX 350 MIN 5.7 MED 13 AC-FT 25050

e Estimated

09497800 CIBECUE CREEK NEAR CHRYSOTILE, AZ

**LOCATION**--Lat 33°50'35", long 110°33'25", in E1/2 sec. 8, T.5 N., R.17 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in Fort Apache Indian Reservation, on right bank 0.5 mi upstream from mouth and 7 mi north of Chrysotile.

**DRAINAGE AREA**--295 mi<sup>2</sup>.

**PERIOD OF RECORD**--May 1959 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 3,200 ft above sea level, from topographic map.

**REMARKS**-- Records good, except for estimated daily discharges, which are poor. Small diversions for irrigation in the vicinity of the village of Cibecue.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 22,200 ft<sup>3</sup>/s Sept. 2, 1977, gage height, 17.3 ft, on basis of slope-area measurement of peak flow; minimum daily, 4.1 ft<sup>3</sup>/s Aug. 17-19, 1968.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29.....	1930	2,270	5.50	Feb. 19.....	0830	2,520	5.71
Jan. 4.....	0845	2,460	5.66	Feb. 22.....	0645	1,770	5.03
Feb. 12.....	0830	2,980*	6.08*	Sept. 9.....	2300	1,910	5.17

Minimum daily discharge, 8.4 ft<sup>3</sup>/s July 9-17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	22	63	100	138	80	30	20	9.7	41	17
2	14	14	21	54	91	128	73	30	19	9.7	e54	17
3	14	14	20	102	78	121	69	30	19	9.6	e31	47
4	13	14	19	1270	66	117	66	29	18	9.4	e28	52
5	13	14	20	286	60	128	64	28	18	9.3	e25	22
6	13	13	19	144	55	221	61	28	17	9.0	e24	22
7	13	14	18	110	60	178	59	28	17	8.9	e23	21
8	13	15	17	93	54	150	58	27	17	8.7	e22	29
9	12	14	17	84	49	128	56	26	16	8.4	e21	119
10	12	14	17	82	51	118	56	26	15	8.4	e20	e197
11	12	14	17	112	433	111	55	26	14	8.4	e20	e27
12	12	14	19	130	2170	105	53	26	15	8.4	e19	e18
13	12	14	21	105	586	98	51	25	14	8.4	e19	e16
14	12	15	23	92	242	88	50	25	14	8.4	e19	e15
15	12	14	24	82	173	83	49	25	13	8.4	e19	e15
16	12	15	24	71	166	77	48	24	13	8.4	e19	14
17	11	14	22	63	143	73	48	23	13	8.4	e19	14
18	11	14	21	61	208	70	47	23	13	8.6	e19	14
19	11	14	20	61	1430	69	46	23	13	15	e19	14
20	11	14	19	65	895	69	45	22	13	11	e19	14
21	12	15	18	73	329	71	45	21	12	28	e19	14
22	16	20	18	87	877	75	44	20	12	16	e19	13
23	12	48	17	95	497	76	44	20	12	15	20	13
24	12	43	16	97	286	72	47	19	13	63	43	13
25	12	39	18	97	216	72	38	19	13	32	25	13
26	12	36	17	97	194	75	34	19	12	27	23	13
27	25	31	17	223	178	71	33	18	12	24	21	13
28	18	28	17	183	154	89	32	33	11	27	20	13
29	31	26	533	135	---	101	32	45	10	24	18	13
30	14	24	485	128	---	96	31	23	9.7	73	18	13
31	14	---	99	112	---	88	---	21	---	59	17	---
TOTAL	425	592	1655	4457	9841	3156	1514	782	427.7	572.5	723	835
MEAN	13.7	19.7	53.4	144	351	102	50.5	25.2	14.3	18.5	23.3	27.8
MAX	31	48	533	1270	2170	221	80	45	20	73	54	197
MIN	11	13	16	54	49	69	31	18	9.7	8.4	17	13
AC-FT	843	1170	3280	8840	19520	6260	3000	1550	848	1140	1430	1660
CFSM	0.05	0.07	0.18	0.49	1.19	0.35	0.17	0.09	0.05	0.06	0.08	0.09
IN.	0.05	0.07	0.21	0.56	1.24	0.40	0.19	0.10	0.05	0.07	0.09	0.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)
MEAN	32.4	27.5	50.9	61.5	84.4	99.9	53.5	23.6	14.5	25.5	37.1	31.5
MAX	277	186	368	870	703	477	274	131	39.7	78.7	106	93.1
(WY)	1973	1979	1966	1993	1993	1978	1973	1973	1979	1959	1963	1996
MIN	10.7	9.14	10.6	11.3	11.0	12.3	10.2	5.64	4.98	6.55	12.8	8.71
(WY)	2003	1978	1978	1964	1964	1971	2002	1972	1961	1963	1962	1959

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1959 - 2005
ANNUAL TOTAL	8106.2	24980.2	
ANNUAL MEAN	22.1	68.4	44.9
HIGHEST ANNUAL MEAN			182
LOWEST ANNUAL MEAN			16.2
HIGHEST DAILY MEAN	533 Dec 29	2170 Feb 12	4930 Jan 8 1993
LOWEST DAILY MEAN	5.2 Jul 1	8.4 Jul 9	4.1 Aug 17 1968
ANNUAL SEVEN-DAY MINIMUM	5.3 Jun 30	8.4 Jul 9	4.6 Jun 17 1961
ANNUAL RUNOFF (AC-FT)	16080	49550	32530
ANNUAL RUNOFF (CFSM)	0.075	0.232	0.152
ANNUAL RUNOFF (INCHES)	1.02	3.15	2.07
10 PERCENT EXCEEDS	34	124	82
50 PERCENT EXCEEDS	15	23	19
90 PERCENT EXCEEDS	5.7	12	10

e Estimated

GILA RIVER BASIN

09497980 CHERRY CREEK NEAR GLOBE, AZ

**LOCATION.**--Lat 33°49'40", long 110°51'20", in SW1/4 sec. 30, T.6 N., R.15 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in Tonto National Forest, on right bank 0.2 mi upstream from Devils Chasm, 13 mi upstream from mouth, and 30 mi north of Globe.

**DRAINAGE AREA.**--200 mi<sup>2</sup>.

**PERIOD OF RECORD.**--May 1965 to current year (monthly discharge only Feb. to Sept. 1979).

**GAGE.**--Water-stage recorder. Elevation of gage is 3,200 ft above sea level, from topographic map. Prior to Jan. 17, 1979, at site 125 ft downstream at datum 2.95 ft lower.

**REMARKS.**--Records good.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 15,700 ft<sup>3</sup>/s Jan. 17, 1979, gage height, unknown, from slope-area measurement of peak flow; minimum daily, 2.4 ft<sup>3</sup>/s Sept. 17, 22, 25, and 29, 1978.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 750 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29.....	1800	1,140	5.52	Feb. 19.....	0745	4,760	9.07
Jan. 4.....	0130	*5,400	*9.54	Mar. 6.....	0040	873	5.11
Feb. 12.....	0715	4,370	8.77				

Minimum daily discharge, 2.8 ft<sup>3</sup>/s Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.2	4.1	55	69	107	34	10	7.1	4.8	6.1	5.3
2	2.9	3.2	3.9	34	61	92	30	9.8	7.1	4.8	25	5.4
3	2.9	3.2	3.8	651	49	80	27	9.6	7.1	4.7	39	5.5
4	2.9	3.3	4.6	2750	40	70	24	9.3	7.0	4.7	11	5.8
5	2.9	3.3	5.7	495	34	368	22	9.2	6.9	4.7	18	5.6
6	2.9	3.3	5.3	205	30	544	20	9.0	6.8	4.6	11	5.3
7	2.9	3.4	4.6	98	68	274	19	9.2	6.7	4.6	7.4	5.2
8	2.9	4.4	4.3	45	91	173	18	8.9	6.5	4.6	15	5.5
9	2.8	3.7	4.2	39	70	128	17	8.6	6.4	4.5	7.9	5.9
10	2.9	3.6	4.2	52	60	102	17	8.5	6.4	4.5	6.7	5.9
11	3.0	3.5	4.2	76	1360	86	16	8.4	6.5	4.5	7.7	5.3
12	3.0	3.5	4.2	186	3170	73	16	8.4	6.4	4.4	15	5.1
13	3.0	3.5	4.1	112	886	64	15	8.2	6.1	4.3	48	5.0
14	2.9	3.6	4.1	77	356	57	14	8.1	6.0	4.4	39	5.0
15	2.9	3.6	4.1	58	213	52	14	8.1	5.8	4.4	61	5.0
16	2.9	3.7	3.9	47	200	46	13	7.9	5.7	4.8	18	4.9
17	2.9	3.7	3.8	41	155	42	12	7.8	5.7	4.6	14	4.7
18	2.9	3.6	3.9	36	237	39	12	7.8	5.7	4.5	11	4.7
19	3.0	3.6	3.9	32	2040	38	11	7.8	5.6	4.7	8.6	4.7
20	3.0	3.7	4.0	29	1410	40	11	7.7	5.5	4.6	10	4.8
21	3.1	5.3	4.1	27	652	37	11	7.5	5.4	19	11	4.9
22	3.7	6.0	4.0	25	674	35	10	7.4	5.4	6.3	9.1	4.9
23	3.2	4.9	3.8	21	518	33	11	7.3	5.4	5.1	7.2	4.8
24	3.2	5.1	3.8	19	289	30	18	7.3	5.5	7.4	20	4.8
25	3.2	4.7	3.8	17	214	33	17	7.2	5.3	9.2	10	4.7
26	3.2	4.5	4.0	20	179	42	15	7.2	5.2	26	7.2	4.8
27	3.2	4.3	4.0	90	150	66	14	7.2	5.0	14	5.9	4.8
28	3.7	4.5	4.0	112	125	93	12	7.3	5.0	7.1	5.6	4.8
29	4.1	4.3	302	78	---	71	11	7.8	4.9	5.9	5.5	4.7
30	3.3	4.2	521	74	---	52	11	7.4	4.9	5.6	5.4	4.7
31	3.3	---	127	76	---	40	---	7.1	---	5.8	5.3	---
TOTAL	95.6	118.4	1066.4	5677	13400	3007	492	253.0	179.0	203.1	471.6	152.5
MEAN	3.08	3.95	34.4	183	479	97.0	16.4	8.16	5.97	6.55	15.2	5.08
MAX	4.1	6.0	521	2750	3170	544	34	10	7.1	26	61	5.9
MIN	2.8	3.2	3.8	17	30	30	10	7.1	4.9	4.3	5.3	4.7
AC-FT	190	235	2120	11260	26580	5960	976	502	355	403	935	302
CFSM	0.02	0.02	0.17	0.92	2.39	0.48	0.08	0.04	0.03	0.03	0.08	0.03
IN.	0.02	0.02	0.20	1.06	2.49	0.56	0.09	0.05	0.03	0.04	0.09	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2005, BY WATER YEAR (WY)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	2000	2001	2002	2003	2004	2005	
MEAN	19.9	18.4	55.1	70.3	91.6	86.8	27.4	11.0	6.79	9.07	15.5	13.3										
MAX	296	101	537	652	568	423	195	65.7	18.0	28.1	84.7	151										
(WY)	1973	1973	1966	1993	1980	1978	1973	1973	1973	1999	1988	1970										
MIN	2.70	3.78	4.32	4.19	4.77	4.61	3.98	2.99	2.29	2.99	2.82	2.81										
(WY)	2004	2003	2003	2003	2002	2002	2002	2002	2002	2003	2002	2002										

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1965 - 2005

ANNUAL TOTAL	2836.1	25115.6		
ANNUAL MEAN	7.75	68.8	33.4	
HIGHEST ANNUAL MEAN			130	1973
LOWEST ANNUAL MEAN			3.77	2002
HIGHEST DAILY MEAN	521	Dec 30	3170	Feb 12
LOWEST DAILY MEAN	2.3	Jul 7	2.8	Oct 9
ANNUAL SEVEN-DAY MINIMUM	2.4	Jul 2	2.9	Oct 3
ANNUAL RUNOFF (AC-FT)	5630	49820	24160	
ANNUAL RUNOFF (CFSM)	0.039	0.344	0.167	
ANNUAL RUNOFF (INCHES)	0.53	4.67	2.27	
10 PERCENT EXCEEDS	7.0	95	55	
50 PERCENT EXCEEDS	4.1	7.1	7.9	
90 PERCENT EXCEEDS	2.7	3.5	4.5	

09498400 PINAL CREEK AT INSPIRATION DAM, NEAR GLOBE, AZ

**LOCATION.**--Lat 33°34'23", long 110°54'02", in NE1/4NW1/4SE1/4 sec. 26, T.3 N., R.14 E., Gila County, Hydrologic Unit 15060103, in Tonto National Forest, on right bank 7 ft upstream from Inspiration Dam, 3.8 mi upstream from mouth, and 14 mi northwest of Globe.

**DRAINAGE AREA.**--195 mi<sup>2</sup>, of which about 33 mi<sup>2</sup> is partly or entirely noncontributing due to mining operations (1988).

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD.**--July 1980 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 2,740 ft above sea level, from topographic map. Prior to Feb. 12, 1991, at datum 1.0 ft higher.

**REMARKS.**--No estimated daily discharge. Records fair. Since Nov. 20, 1999, base flows may be affected by discharges from a ground-water treatment plant, located about 5 mi upstream from the gage.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 5,700 ft<sup>3</sup>/s Jan. 11, 1993, gage height, 8.50 ft, on basis of slope-area measurement of peak flow; minimum daily, 0.64 ft<sup>3</sup>/s July 1, 1999.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 4.....	1925	1,050	3.76	Feb. 20.....	0715	392	2.86
Feb. 12.....	1245	*3,470	*6.15	Feb. 22.....	0845	759	3.23

Minimum daily discharge, 0.64 ft<sup>3</sup>/s July 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.99	1.3	2.3	2.5	3.1	3.5	3.4	2.7	1.00	1.0	2.6	1.4
2	1.2	1.3	2.3	2.6	3.2	3.2	3.4	2.7	0.97	0.79	2.2	1.6
3	1.2	1.5	2.3	4.1	3.2	3.0	3.5	2.4	0.94	0.75	2.1	1.5
4	1.2	1.6	2.4	561	3.3	3.0	3.8	2.1	0.99	0.82	3.6	1.3
5	1.4	1.5	2.5	143	3.5	5.0	3.3	1.9	1.0	0.77	5.6	1.3
6	1.3	1.6	2.5	5.9	3.3	5.2	3.2	1.8	1.1	0.73	2.6	1.3
7	1.1	1.5	2.4	4.5	3.5	3.7	3.3	1.8	1.2	0.71	2.1	1.4
8	1.1	1.6	2.4	4.1	3.2	3.5	3.2	1.8	1.3	0.64	3.8	1.4
9	1.0	1.6	2.4	4.0	3.0	3.9	3.1	1.8	1.3	0.79	3.2	1.9
10	1.0	1.6	2.4	4.0	3.2	3.6	3.1	1.8	1.3	0.78	2.4	3.4
11	1.0	1.7	2.4	3.7	256	3.4	2.8	2.0	1.1	0.81	1.8	2.4
12	1.2	1.7	2.4	3.3	2070	3.4	2.7	1.9	0.99	0.75	5.1	2.2
13	1.2	1.7	2.5	3.1	669	3.2	2.6	1.9	0.99	0.73	6.4	2.1
14	1.2	1.8	2.5	3.1	12	3.1	2.6	2.0	1.0	0.67	3.1	2.1
15	1.2	1.8	2.5	3.1	7.4	3.3	2.7	2.1	1.0	0.70	3.7	2.1
16	1.2	1.8	2.4	3.2	5.5	3.3	2.6	1.9	1.1	0.73	3.2	1.8
17	1.3	1.8	2.4	3.0	4.6	3.1	2.4	2.6	1.0	0.71	2.6	1.7
18	1.2	1.9	2.4	2.9	4.4	3.0	2.4	3.3	1.1	0.83	2.4	1.7
19	1.5	1.9	2.4	3.0	14	2.9	2.5	2.8	1.2	0.95	2.4	1.4
20	1.5	2.0	2.5	3.0	160	3.2	2.6	1.9	1.1	1.1	2.3	1.4
21	1.4	2.0	2.5	3.1	7.6	3.2	2.6	1.5	1.0	1.0	2.2	1.5
22	1.6	2.0	2.5	3.3	225	3.9	2.6	1.4	1.2	1.3	2.3	1.4
23	1.5	2.2	2.5	3.2	13	3.9	2.6	1.3	1.4	1.2	2.4	1.5
24	1.6	2.1	2.5	3.1	5.8	3.7	2.7	1.5	1.5	5.2	2.1	1.3
25	1.5	2.1	2.4	3.2	4.9	3.6	2.3	1.5	1.4	4.0	1.9	1.3
26	1.3	2.1	2.4	4.0	4.4	3.5	2.4	1.3	1.2	3.9	1.6	1.2
27	1.2	2.1	2.5	4.1	3.9	3.5	2.8	1.2	1.3	3.6	1.4	1.1
28	1.3	2.1	2.5	3.6	3.6	3.4	2.5	1.0	1.4	3.0	1.3	1.1
29	1.4	2.2	3.2	3.5	---	3.4	2.5	1.9	1.3	2.6	1.3	1.1
30	1.3	2.3	2.8	3.4	---	3.6	2.7	1.3	1.2	2.6	1.2	1.1
31	1.4	---	2.6	3.2	---	3.4	---	1.1	---	2.7	1.1	---
TOTAL	39.49	54.4	76.7	804.8	3503.6	108.6	84.9	58.2	34.58	57.66	82.0	48.0
MEAN	1.27	1.81	2.47	26.0	125	3.50	2.83	1.88	1.15	1.86	2.65	1.60
MAX	1.6	2.3	3.2	561	2070	5.2	3.8	3.3	1.5	12	6.4	3.4
MIN	0.99	1.3	2.3	2.5	3.0	2.9	2.3	1.0	0.94	0.64	1.1	1.1
AC-FT	78	108	152	1600	6950	215	168	115	69	114	163	95
CFSM	0.01	0.01	0.01	0.13	0.64	0.02	0.01	0.01	0.01	0.01	0.01	0.01
IN.	0.01	0.01	0.01	0.15	0.67	0.02	0.02	0.01	0.01	0.01	0.02	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2005, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	8.75	7.21	9.97	28.2	30.5	14.4	9.00	7.31	5.68	6.98	8.08	7.38														
MAX	38.8	13.0	58.4	440	406	67.3	30.1	19.6	16.2	17.1	28.4	17.1														
(WY)	1984	2001	1985	1993	1993	1993	1993	1993	1993	1981	1990	2003														
MIN	1.27	1.81	2.47	3.20	3.44	3.50	2.83	1.88	0.83	0.80	1.81	0.96														
(WY)	2005	2005	2005	1999	1999	2005	2005	2005	2004	2004	2002	2004														

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1980 - 2005	
ANNUAL TOTAL	1014.98		4952.93			
ANNUAL MEAN	2.77		13.6		11.8	
HIGHEST ANNUAL MEAN					84.2	
LOWEST ANNUAL MEAN					3.14	
HIGHEST DAILY MEAN	83 Aug 13		2070 Feb 12		3300 Jan 11 1993	
LOWEST DAILY MEAN	0.40 Jul 7		0.64 Jul 8		0.40 Jul 7 2004	
ANNUAL SEVEN-DAY MINIMUM	0.45 Jul 4		0.73 Jul 11		0.45 Jul 4 2004	
ANNUAL RUNOFF (AC-FT)	2010		9820		8560	
ANNUAL RUNOFF (CFSM)	0.014		0.070		0.061	
ANNUAL RUNOFF (INCHES)	0.19		0.94		0.82	
10 PERCENT EXCEEDS	4.4		3.9		11	
50 PERCENT EXCEEDS	1.9		2.3		6.8	
90 PERCENT EXCEEDS	0.73		1.1		2.9	



09498500 SALT RIVER NEAR ROOSEVELT, AZ—CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Apr. 1958 to Sept. 1965 and Jan.1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Dec. 1996 to Jan. 1998.

WATER TEMPERATURE: Apr. 1958 to Sept. 1965 and Dec.1996 to Jan. 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 correctd (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std (00400)	Specific conductance, wat unfltrd, us/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarbohardness, wat flt field, mg/L as CaCO3 (00904)
DEC 02...	1140	9	229	24	713	11.8	100	8.5	2730	10.0	4.9	300	91
MAR 22...	1255	9	1960	4.3	705	9.7	99	8.1	718	18.0	12.9	140	43
APR 26...	1235	9	2640	60	705	9.3	100	7.9	421	25.5	15.2	75	14
MAY 18...	1225	9	939	6.2	703	8.2	99	8.1	1010	32.0	20.6	130	39
JUN 14...	1225	9	277	2.2	704	8.0	105	8.4	2140	37.0	24.4	240	84
JUN 14...	1230	7	--	<2.0	--	8.0	--	8.4	2140	--	24.5	240	86
AUG 16...	1215	9	709	2390d	707	7.1	94	8.2	1590	30.0	25.7	230	91

Date	Calcium water, unfltrd, mg/L (00915)	Calcium water, unfltrd recover, mg/L (00916)	Magnesium, unfltrd, mg/L (00925)	Magnesium, water, unfltrd recover, mg/L (00927)	Potassium, unfltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, unfltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)
DEC 02...	81.8d	82.1d	22.9d	23.0d	9.56d	11	432d	207	238	7	698d	.3	83.2d
MAR 22...	37.2	38.6	10.4	10.2	2.72	3	89.5	92	113	<1	140	.2	39.3
APR 26...	21.9	34.9	5.04	7.05	1.87	2	48.7	62	75	<1	75.4	.1	17.9
MAY 18...	35.3	38.0	10.5	10.1	3.80	6	149	93	113	<1	224	.1	34.8
JUN 14...	64.9	71.1	18.5	19.7	7.25	8	299	154	178	5	525d	.2	56.8d
JUN 14...	65.6	71.6	18.9	20.1	7.32	8	299	157	176	7	525d	.2	58.7d
AUG 16...	66.8	277	15.2	57.9	6.45	6	207	138	161	4	352d	.2	86.1

Date	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Phosphorus, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)
DEC 02...	1450	2.09	1540	26	.18	<.04	<.06	.02	--	E12k	<.40d	<.4d	5.7d
MAR 22...	374	.56	412	<10	.18	<.04	<.06	.13	--	E3k	<.20	<.2	2.2
APR 26...	208	.32	238	140	.66	<.04	E.04n	.24	--	100	<.20	E.1n	1.4
MAY 18...	514	.76	560	11	.13	<.04	<.06	.04	--	E4k	<.20	<.2	2.6
JUN 14...	1060	1.58	1160	<10	.11	<.04	<.06	E.02n	--	E5k	<.20	<.2	4.9
JUN 14...	1070	1.58	1160	<10	.13	<.04	<.06	E.01n	--	E8k	<.20	<.2	4.8
AUG 16...	818	1.20	884	2690d	5.6d	E.03n	.26	1.33	5.8	1800	E.14n	E.1n	7.3

**GILA RIVER BASIN**  
**09498500 SALT RIVER NEAR ROOSEVELT, AZ—CONTINUED**

**WATER-QUALITY RECORDS**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01010)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, unfltrd recover -able, ug/L (01022)	Cadmium water, unfltrd recover -able, ug/L (01025)	Cadmium water, unfltrd recover -able, ug/L (01027)	Chrom- ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, unfltrd recover -able, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, unfltrd recover -able, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)
DEC 02...	7	51d	<.12d	E.09nd	211d	<.08d	<.08d	1.0	1.3d	3.6d	.20d	.48d	30d
MAR 22...	2	28	<.06	E.05n	46	<.04	<.04	E.5n	.9	2.3	E.05n	.51	30
APR 26...	E2n	43	E.04n	.26	29	<.04	.06	1.8	1.1	4.5	.24	2.25	127
MAY 18...	3	28	<.06	E.03n	76	<.04	<.04	<.8	1.2	2.0	.16	.23	18
JUN 14...	5	55	<.06	<.06	146	<.04	<.04	<.8	1.0	1.1	.19	E.06n	24
JUN 14...	4	56	<.06	<.06	163	<.04	<.04	<.8	.9	1.1	.10	E.05n	24
AUG 16...	27	469	<.06	4.28	136d	<.04	.86	21.5	2.7	44.1	.31	33.6	1840

Date	Mercury water, unfltrd recover -able, ug/L (71890)	Mercury water, unfltrd recover -able, ug/L (71900)	Selen- ium, water, unfltrd recover -able, ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC 02...	<.01	<.01	E.5nd	1.2d	E3nd	43	27
MAR 22...	<.01	<.01	.6	.8	E2n	38	201
APR 26...	<.01	E.01n	.6	1.9	10	316	2250
MAY 18...	<.01	<.01	E.3n	2.6	E2n	18	46
JUN 14...	<.01	<.01	E.4n	.7	E1n	3	2.2
JUN 14...	<.01	<.01	.7	E.6n	<2	3	--
AUG 16...	<.01	.09	2.7	1.7	92	2860	5480

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

d -- Diluted sample: method hi range exceeded  
k -- Counts outside acceptable range  
n -- Below the IRL and above the LT-MDL

09498501 PINTO CREEK BELOW HAUNTED CANYON NEAR MIAMI, AZ

**LOCATION**--Lat 33°25'07", long 111°00'32", in SE1/4NE1/4, sec. 23, T.1 N., R.13 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, 3/4 mi downstream from Haunted Canyon, in Tonto National Forest, in Gila County, approximately 8 mi west-northwest of Miami, AZ.

**DRAINAGE AREA**--37.3 mi<sup>2</sup>, from topographic map.

**PERIOD OF RECORD**--Oct. 1995 to current year.

**GAGE**--Water-stage recorder. Control is a 90° V-notch, since Aug. 26, 1996. Elevation of gage is 3,180 ft above sea level, from topographic map.

**REMARKS**--Records good, except estimated daily discharges, which are poor. Some flows affected by pumpage from upstream wells.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 4,060 ft<sup>3</sup>/s, Feb. 12, 2005, at gage height 12.38 ft, recorded at gage. Minimum daily discharge, no flow for many days for the period July 2002 through Sept. 2004.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29 .....	1645	895	7.77	Jul. 26 .....	1415	102	4.86
Jan. 4 .....	0630	1,830	9.55	Jul. 31 .....	1645	169	5.31
Feb. 12 .....	0935	*4,060	*12.38	Aug. 9 .....	1545	346 (e)	6.14 (e)
Feb. 20 .....	0300	400	6.35	Aug. 12 .....	1745	511	6.73
Feb. 22 .....	0515	492	6.67	Sept. 7 .....	1830	219	5.60
Mar. 6 .....	1330	158	5.24				

Minimum daily discharge, 0.01 ft<sup>3</sup>/s Oct. 1–21 and July 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	0.02	0.07	8.5	13	25	4.0	1.0	0.34	0.12	1.7	0.17
2	0.01	0.02	0.06	5.9	11	20	3.8	0.98	0.33	0.11	0.09	0.24
3	0.01	0.03	0.06	228	8.8	16	3.8	0.96	0.32	0.11	0.08	0.28
4	0.01	0.03	0.07	1020	7.4	14	3.4	0.98	0.31	0.11	0.07	0.22
5	0.01	0.03	0.07	224	6.7	55	3.1	1.1	0.30	0.10	0.07	0.16
6	0.01	0.03	0.09	85	5.9	109	2.5	1.0	0.28	0.10	0.07	0.15
7	0.01	0.03	0.08	46	11	75	2.3	1.0	0.28	0.10	0.07	18
8	0.01	0.03	0.08	29	11	51	2.3	0.98	0.26	0.10	0.07	4.1
9	0.01	0.03	0.09	20	8.0	36	1.9	0.91	0.26	0.10	e55	1.0
10	0.01	0.03	0.09	15	8.1	29	1.7	0.86	0.25	0.11	e12	0.66
11	0.01	0.03	0.09	12	546	23	1.7	0.83	0.24	0.10	e0.56	0.32
12	0.01	0.04	0.09	12	2410	19	1.7	0.80	0.23	0.09	e39	0.29
13	0.01	0.04	0.10	8.2	683	16	1.7	0.76	0.23	0.08	8.3	0.30
14	0.01	0.04	0.10	6.9	244	14	1.7	0.72	0.21	0.08	0.83	0.30
15	0.01	0.04	0.11	5.7	134	12	1.6	0.69	0.21	0.08	4.3	e0.21
16	0.01	0.04	0.12	4.8	82	10	1.6	0.65	0.20	0.08	3.1	e0.20
17	0.01	0.04	0.12	4.1	52	9.1	1.6	0.60	0.19	0.07	0.89	e0.17
18	0.01	0.05	0.13	3.5	52	8.2	1.5	0.58	0.19	0.07	0.22	e0.16
19	0.01	0.05	0.15	3.1	184	7.8	1.4	0.55	0.18	0.07	0.15	e0.15
20	0.01	0.05	0.17	2.8	257	15	1.2	0.52	0.17	0.07	0.38	e0.15
21	0.01	0.05	0.18	2.6	125	11	1.2	0.49	0.17	0.07	0.15	e0.15
22	0.02	0.06	0.19	2.3	285	8.4	1.2	0.48	0.16	0.07	0.16	e0.15
23	0.02	0.06	0.20	2.2	161	7.6	1.4	0.46	0.16	0.07	0.17	e0.16
24	0.02	0.06	0.21	2.1	115	6.9	2.0	0.44	0.15	0.08	0.18	e0.15
25	0.02	0.06	0.22	2.0	88	6.6	1.7	0.43	0.14	0.08	0.17	e0.15
26	0.02	0.06	0.22	6.2	64	6.2	1.4	0.41	0.14	4.0	0.17	e0.15
27	0.02	0.06	0.22	34	47	5.6	1.3	0.40	0.13	0.42	0.17	e0.15
28	0.02	0.06	0.23	24	34	5.5	1.1	0.39	0.13	0.09	0.17	e0.14
29	0.02	0.07	133	19	---	5.1	1.1	0.38	0.13	0.02	0.17	e0.14
30	0.02	0.07	50	22	---	4.8	1.1	0.36	0.12	0.01	0.16	e0.13
31	0.02	---	15	17	---	4.4	---	0.35	---	11	0.16	---
TOTAL	0.41	1.31	201.61	1877.9	5653.9	636.2	58.0	21.06	6.41	17.76	128.78	28.70
MEAN	0.01	0.04	6.50	60.6	202	20.5	1.93	0.68	0.21	0.57	4.15	0.96
MAX	0.02	0.07	133	1020	2410	109	4.0	1.1	0.34	11	55	18
MIN	0.01	0.02	0.06	2.0	5.9	4.4	1.1	0.35	0.12	0.01	0.07	0.13
AC-FT	0.8	2.6	400	3720	11210	1260	115	42	13	35	255	57
CFSM	0.00	0.00	0.17	1.62	5.41	0.55	0.05	0.02	0.01	0.02	0.11	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	0.62	5.44	0.01	2001	1.83	16.9	0.04	2001	1.36	6.50	0.12	2003	8.01	60.6	0.30	1996
	0.39	9.73	0.17	1998	0.39	8.84	0.17	1998	28.6	202	0.41	2005	28.6	202	0.41	2000
	0.12	0.29	0.03	1998	0.12	0.84	0.03	1998	9.20	20.5	0.45	2005	9.20	20.5	0.45	2002
	0.31	0.99	0.01	1999	0.31	4.15	0.01	1999	2.69	9.73	0.37	2002	2.69	9.73	0.37	2002
	0.80	4.15	0.00	2005	0.80	4.15	0.00	2005	2.69	9.73	0.17	2000	2.69	9.73	0.17	2000
	0.24	0.96	0.00	2005	0.24	4.15	0.00	2005	2.69	9.73	0.17	2000	2.69	9.73	0.17	2000
	0.24	0.96	0.00	2005	0.24	4.15	0.00	2005	2.69	9.73	0.17	2000	2.69	9.73	0.17	2000

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1996 - 2005
ANNUAL TOTAL	898.97	8632.04	
ANNUAL MEAN	2.46	23.6	4.37
HIGHEST ANNUAL MEAN			23.6
LOWEST ANNUAL MEAN			0.22
HIGHEST DAILY MEAN	434	2410	2410
LOWEST DAILY MEAN	0.00	0.01	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.01	0.00
ANNUAL RUNOFF (AC-FT)	1780	17120	3170
ANNUAL RUNOFF (CFSM)	0.066	0.634	0.117
10 PERCENT EXCEEDS	1.1	24	3.2
50 PERCENT EXCEEDS	0.07	0.28	0.24
90 PERCENT EXCEEDS	0.00	0.03	0.02

e Estimated



## GILA RIVER BASIN

## 09498502 PINTO CREEK NEAR MIAMI, AZ

**LOCATION**--Lat 33°29'16", long 110°59'41", in NW1/4SW1/4NW1/4 sec. 25, T.2 S., R.13 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, 2 mi downstream from West Pinto Creek, in Tonto National Forest, 0.5 mi downstream from Forest Road No. 287 crossing of Pinto Creek, approximately 12 mi northwest of Miami, AZ, on the right bank side, at Pinto Valley weir.

**DRAINAGE AREA**--102 mi<sup>2</sup>.

**PERIOD OF RECORD**--Oct. 1994 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 2,820 ft above sea level, from topographic map.

**REMARKS**--Records fair except for estimated daily discharges, which are poor. Some flows may be affected by pumpage from many upstream wells.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 7,380 ft<sup>3</sup>/s, Feb. 12, 2005, at gage height 11.05 ft from slope-area measurement of peak flow. No flow at times.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and/or maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29 .....	1815	879	5.10	Feb. 20 .....	0430	629	5.73
Jan. 4 .....	1315	4,560	8.77	Feb. 22 .....	0615	659	5.78
Feb. 12 .....	1030 (e)	7,380*	11.05*	Aug. 12 .....	1930	251	4.96

Minimum daily discharge, 0.95 ft<sup>3</sup>/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.98	0.96	1.1	5.9	21	71	14	7.3	5.4	4.0	e4.0	e2.6
2	0.99	0.98	1.1	2.5	17	61	14	7.1	5.5	3.9	e3.5	2.6
3	1.0	1.0	1.1	545	15	e49	14	7.0	5.8	3.7	e3.3	2.6
4	0.99	1.0	1.1	3200	13	e42	13	7.0	5.7	3.8	e3.3	2.6
5	0.99	1.00	1.1	840	12	e70	13	6.8	5.4	3.7	e3.2	2.6
6	0.97	1.0	1.1	157	11	125	12	6.5	5.7	3.7	e3.2	2.6
7	0.96	1.0	1.1	94	13	101	12	6.5	5.3	3.7	e3.2	8.8
8	0.96	1.1	1.1	81	15	92	12	6.4	5.3	3.7	e3.1	9.2
9	0.96	1.1	1.1	41	12	75	11	6.3	5.5	3.7	18	3.3
10	0.99	1.1	1.2	22	12	58	11	6.3	5.6	3.7	9.6	3.5
11	1.0	1.0	1.2	17	e1820	e49	11	6.4	5.6	3.6	4.6	2.7
12	1.00	1.0	1.2	13	e4960	e44	11	6.2	5.6	3.8	25	2.4
13	0.97	1.0	1.2	11	e1570	e39	9.9	5.9	5.4	3.8	17	2.5
14	0.97	1.1	1.2	11	439	e36	9.4	6.0	5.5	3.8	e4.0	2.5
15	0.97	1.1	1.2	9.7	218	e35	9.1	6.1	5.5	3.7	e8.4	2.5
16	0.96	1.1	1.2	9.2	141	e33	8.7	6.0	5.4	3.7	e6.1	2.5
17	0.96	1.0	1.3	8.9	98	e30	8.3	5.9	5.4	3.6	e4.4	2.5
18	0.99	1.0	1.3	8.5	94	e28	8.1	5.9	5.3	3.6	e3.6	2.5
19	0.98	1.1	1.3	8.5	249	e27	7.9	6.0	5.1	3.6	e4.6	2.4
20	0.95	1.1	1.4	8.5	457	e29	7.7	6.0	4.7	3.7	e4.0	2.5
21	1.0	1.1	1.4	8.4	228	e25	7.6	5.6	4.4	3.7	e3.1	2.5
22	1.0	1.2	1.4	8.3	439	e23	7.6	5.5	4.5	3.7	e3.0	2.5
23	0.99	1.1	1.4	8.2	286	21	7.9	5.4	4.7	4.1	e2.9	2.5
24	0.96	1.1	1.4	8.1	182	19	9.9	5.3	4.5	4.5	e2.9	2.5
25	1.00	1.1	1.5	8.0	146	19	10	5.3	4.3	16	e2.9	2.5
26	0.99	1.1	1.5	8.0	111	17	9.0	5.4	4.5	e5.0	e2.8	2.5
27	1.0	1.1	1.5	41	92	16	8.0	5.2	4.5	e4.0	e2.8	2.4
28	1.0	1.1	1.6	53	83	16	7.7	5.1	4.4	e3.5	e2.8	2.5
29	1.0	1.1	215	27	---	15	7.3	5.2	4.3	e3.5	e2.8	2.4
30	0.97	1.1	146	34	---	14	7.4	5.1	4.1	e3.5	e2.7	2.3
31	0.97	---	22	26	---	14	---	5.3	22	e5.5	e2.7	---
TOTAL	30.42	31.84	418.3	5323.7	11754	1293	299.5	186.0	152.9	131.5	167.5	90.0
MEAN	0.98	1.06	13.5	172	420	41.7	9.98	6.00	5.10	4.24	5.40	3.00
MAX	1.0	1.2	215	3200	4960	125	14	7.3	5.8	16	25	9.2
MIN	0.95	0.96	1.1	2.5	11	14	7.3	5.1	4.1	3.5	2.7	2.3
AC-FT	60	63	830	10560	23310	2560	594	369	303	261	332	179
CFSM	0.01	0.01	0.13	1.68	4.12	0.41	0.10	0.06	0.05	0.04	0.05	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
MEAN	2.27	3.46	3.27	28.5	58.9
MAX	13.0	26.1	13.5	172	420
(WY)	2001	2001	2005	2005	1995
MIN	0.02	0.00	0.01	0.26	0.76
(WY)	1998	1998	1997	1998	1999

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

WATER YEARS 1995 - 2005

ANNUAL TOTAL	1821.80	19878.66	
ANNUAL MEAN	4.98	54.5	11.7
HIGHEST ANNUAL MEAN			54.5
LOWEST ANNUAL MEAN			1.21
HIGHEST DAILY MEAN	665	Mar 5	4960
LOWEST DAILY MEAN	0.93	Jan 21	0.95
ANNUAL SEVEN-DAY MINIMUM	0.95	Jan 16	0.97
ANNUAL RUNOFF (AC-FT)	3610		39430
ANNUAL RUNOFF (CFSM)	0.049		0.534
10 PERCENT EXCEEDS	2.9		49
50 PERCENT EXCEEDS	1.3		5.0
90 PERCENT EXCEEDS	0.99		1.0

e Estimated

09498503 SOUTH FORK PARKER CREEK NEAR ROOSEVELT, AZ

LOCATION--Lat 33°47'50", long 110°57'35", in NE1/4NW1/4 sec. 7, T.5 N., R.14 E., Gila County, Hydrologic Unit 15060103, in Tonto National Forest, 1.5 mi upstream from confluence with Pocket Creek, and 12 mi northeast of Roosevelt.

DRAINAGE AREA--1.09 mi<sup>2</sup>.

PERIOD OF RECORD--Nov. 1985 to Sept. 1992, June 1994 to current year. Prior to Nov. 1985, station operated by the Forest Service (records unpublished).

GAGE--Water-stage recorder and two sharp-crested weirs. Elevation of gage is 5,440 ft above sea level, from topographic map.

REMARKS--Records good, except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD--Maximum discharge, 108 ft<sup>3</sup>/s, Jan. 4, 2005, (estimated); no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD--Maximum discharge, since 1934, 270 ft<sup>3</sup>/s, Dec. 23, 1945, as reported by the Forest Service.

EXTREMES FOR CURRENT YEAR--Maximum discharge, 108 ft<sup>3</sup>/s Jan. 4 (estimated). Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.01	0.03	e1.4	1.3	e2.0	0.44	0.14	0.03	0.00	0.00	0.01
2	0.00	0.01	0.03	e0.92	1.0	1.5	0.41	0.13	0.03	0.00	0.00	0.01
3	0.00	0.01	0.02	e12	0.60	1.3	0.37	0.13	0.03	0.00	0.00	0.01
4	0.00	0.01	0.03	e49	0.30	1.2	0.36	0.12	0.03	0.00	0.00	0.01
5	0.00	0.01	0.04	e9.6	0.20	5.2	0.33	0.11	0.03	0.00	0.00	0.01
6	0.00	0.01	0.05	e4.2	0.30	8.5	0.31	0.11	0.03	0.00	0.01	0.01
7	0.00	0.01	0.05	e2.2	2.1	7.8	0.29	0.11	0.03	0.00	0.01	3.3
8	0.00	0.01	0.05	e1.2	3.2	6.4	0.28	0.10	0.02	0.00	0.01	0.80
9	0.00	0.01	0.06	e1.1	4.0	4.4	0.27	0.10	0.02	0.00	0.01	0.15
10	0.00	0.01	0.06	e1.4	6.3	3.1	0.26	0.09	0.02	0.00	0.01	0.12
11	0.00	0.01	0.42	e1.8	17	2.4	0.24	0.09	0.02	0.00	0.01	0.11
12	0.00	0.01	0.50	e3.6	e47	1.7	0.22	0.08	0.02	0.00	0.01	0.10
13	0.00	0.01	0.39	e2.7	14	1.4	0.21	0.08	0.02	0.00	0.01	0.10
14	0.00	0.02	0.31	e2.0	7.2	1.3	0.21	0.08	0.01	0.00	0.08	0.10
15	0.00	0.02	0.26	0.90	5.1	1.1	0.20	0.08	0.01	0.00	0.10	0.09
16	0.00	0.02	0.20	0.60	3.8	1.0	0.19	0.08	0.01	0.00	0.04	0.09
17	0.00	0.02	0.17	0.50	2.9	0.91	0.18	0.08	0.01	0.00	0.03	0.07
18	0.00	0.02	0.14	0.60	5.6	0.80	0.17	0.07	0.01	0.00	0.05	0.06
19	0.00	0.02	0.11	e0.73	e36	0.75	0.15	0.07	0.01	0.00	0.05	0.05
20	0.00	0.02	0.10	e0.71	e25	0.82	0.15	0.07	0.01	0.00	0.05	0.05
21	0.00	0.02	0.08	e0.68	e12	0.79	0.15	0.06	0.01	0.00	0.04	0.04
22	0.00	0.04	0.08	e0.64	e12	0.71	0.14	0.06	0.01	0.00	0.03	0.04
23	0.00	0.04	0.06	e0.58	e9.6	0.64	0.15	0.05	0.00	0.00	0.04	0.03
24	0.00	0.02	0.06	e0.54	e5.4	0.59	0.26	0.05	0.00	0.00	0.03	0.03
25	0.00	0.02	0.06	e0.51	e4.1	0.61	0.29	0.05	0.00	0.00	0.03	0.03
26	0.00	0.01	0.05	1.4	e3.4	0.62	0.24	0.04	0.00	0.01	0.03	0.02
27	0.00	0.02	0.04	11	e2.8	0.63	0.20	0.04	0.00	0.01	0.02	0.02
28	0.00	0.03	0.05	4.0	e2.4	0.63	0.18	0.04	0.00	0.01	0.02	0.02
29	0.01	0.03	3.5	1.9	---	0.58	0.17	0.04	0.00	0.00	0.02	0.02
30	0.01	0.03	7.2	1.5	---	0.53	0.15	0.04	0.00	0.00	0.01	0.02
31	0.01	---	e2.9	1.4	---	0.48	---	0.04	---	0.00	0.01	---
TOTAL	0.03	0.53	17.10	121.31	234.60	60.39	7.17	2.43	0.42	0.03	0.76	5.52
MEAN	0.00	0.02	0.55	3.91	8.38	1.95	0.24	0.08	0.01	0.00	0.02	0.18
MAX	0.01	0.04	7.2	49	47	8.5	0.44	0.14	0.03	0.01	0.10	3.3
MIN	0.00	0.01	0.02	0.50	0.20	0.48	0.14	0.04	0.00	0.00	0.00	0.01
AC-FT	0.06	1.1	34	241	465	120	14	4.8	0.8	0.06	1.5	11
CFSM	0.00	0.02	0.51	3.59	7.69	1.79	0.22	0.07	0.01	0.00	0.02	0.17
IN.	0.00	0.02	0.58	4.14	8.01	2.06	0.24	0.08	0.01	0.00	0.03	0.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2005, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
MEAN	0.04	0.11	0.32	0.86	1.46	1.61	0.60	0.08	0.01	0.01	0.06	0.05									
MAX	0.37	0.92	1.52	5.33	8.38	5.11	2.77	0.22	0.08	0.03	0.29	0.19									
(WY)	2001	2001	1992	1995	2005	1995	1991	1986	1992	1998	1986	1986									
MIN	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00									
(WY)	1990	1990	1990	1990	2002	2002	2002	2002	1989	1986	1996	1987									

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1986 - 2005
ANNUAL TOTAL	83.37	450.29	
ANNUAL MEAN	0.23	1.23	0.42
HIGHEST ANNUAL MEAN			1.50 1995
LOWEST ANNUAL MEAN			0.00 2002
HIGHEST DAILY MEAN	7.2 Dec 30	49 Jan 4	51 Mar 6 1995
LOWEST DAILY MEAN	0.00 Jun 4	0.00 Oct 1	0.00 Jun 7 1986
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 4	0.00 Oct 1	0.00 Jun 7 1986
ANNUAL RUNOFF (AC-FT)	165	893	306
ANNUAL RUNOFF (CFSM)	0.209	1.13	0.388
ANNUAL RUNOFF (INCHES)	2.85	15.37	5.27
10 PERCENT EXCEEDS	0.45	2.8	0.90
50 PERCENT EXCEEDS	0.03	0.05	0.02
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

GILA RIVER BASIN

09499000 TONTO CREEK ABOVE GUN CREEK, NEAR ROOSEVELT, AZ

**LOCATION.**--Lat 33°58'48", long 111°18'10", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec. 2, T.7 N., R.10 E., Gila County, Hydrologic Unit 15060105, in Tonto National Forest, on left bank 600 ft upstream from Gun Creek, 25 mi upstream from Roosevelt Dam, and 24 mi northwest of Roosevelt.

**DRAINAGE AREA.**--675 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Dec. 1940 to current year.

**REVISED RECORDS.**--WSP 1283: Drainage area. WDR AZ--80--1: 1978(M), WDR AZ--88--1: 1979(P).

**GAGE.**--Water-stage recorder. Datum of gage is 2,523.14 ft above sea level.

**REMARKS.**--Records good, no estimated daily discharges. Small diversions above station for irrigation.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 72,500 ft<sup>3</sup>/s Jan. 8, 1993, gage height, 17.95 ft; maximum gage height, 18.2 ft Sept. 5, 1970; no flow at times.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 1,700 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29 .....	1445	13,000	11.01	Feb. 12 .....	0645	*34,600	*13.58
Jan. 4 .....	0030	33,500	16.42	Feb. 19 .....	0845	25,200	12.07
Jan. 27 .....	1115	3,220	6.21	Mar. 6 .....	0315	3,420	5.89

Minimum daily discharge, 1.3 ft<sup>3</sup>/s July 15 and 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	45	53	987	619	563	181	72	23	3.0	62	5.0
2	20	34	47	604	484	476	163	64	22	2.9	44	4.3
3	17	27	41	3990	390	415	156	54	22	2.0	45	3.3
4	14	23	38	15300	327	371	159	51	22	2.6	34	3.5
5	13	20	40	4350	290	1830	151	50	21	2.7	38	3.5
6	12	19	52	2050	262	2200	138	46	21	2.5	18	3.5
7	10	17	72	1250	280	1220	130	44	20	2.4	23	3.5
8	6.5	18	78	872	463	835	130	43	19	2.3	69	3.6
9	5.7	19	82	946	348	650	132	43	18	2.2	112	3.7
10	5.9	19	94	1050	296	546	123	43	18	2.0	210	3.0
11	5.3	17	98	1070	4000	480	111	40	16	2.0	98	2.9
12	4.9	16	90	1460	19100	422	100	39	16	1.6	89	3.1
13	4.7	16	81	767	5770	388	94	39	16	1.8	162	3.1
14	5.2	16	74	549	2470	362	94	39	14	1.8	95	3.0
15	4.8	16	68	431	1430	318	93	38	13	1.3	96	2.9
16	4.7	16	62	360	1160	271	89	37	12	1.6	40	3.0
17	4.7	16	56	321	870	241	84	34	11	1.3	30	2.9
18	5.3	16	50	293	1150	221	82	34	11	1.9	24	2.9
19	4.6	16	44	270	10700	213	78	34	9.8	1.7	22	2.8
20	6.0	16	40	256	8330	262	69	33	9.0	38	68	2.5
21	6.3	216	37	254	3970	282	60	31	7.6	2.3	25	2.3
22	33	330	34	254	4250	245	59	30	6.7	1.7	20	2.8
23	7.3	442	31	239	3370	218	57	28	5.9	59	16	2.8
24	7.3	239	29	227	1920	203	177	27	6.2	63	15	2.7
25	7.5	161	26	218	1420	199	181	26	5.8	13	22	2.6
26	7.2	119	25	248	1110	338	127	25	4.3	28	16	2.6
27	7.8	94	25	2000	879	325	105	25	3.4	37	12	2.7
28	147	80	24	1350	691	294	90	25	3.7	21	9.7	2.9
29	163	73	5750	829	---	274	83	22	3.3	17	7.8	2.6
30	106	62	6020	805	---	236	79	25	3.3	39	6.2	2.6
31	66	---	1960	769	---	202	---	23	---	128	5.7	---
TOTAL	738.7	2218	15221	44369	76349	15100	3375	1164	384.0	486.6	1534.4	92.6
MEAN	23.8	73.9	491	1431	2727	487	112	37.5	12.8	15.7	49.5	3.09
MAX	163	442	6020	15300	19100	2200	181	72	23	128	210	5.0
MIN	4.6	16	24	218	262	199	57	22	3.3	1.3	5.7	2.3
AC-FT	1470	4400	30190	88010	151400	29950	6690	2310	762	965	3040	184
CFSM	0.04	0.11	0.73	2.12	4.04	0.72	0.17	0.06	0.02	0.02	0.07	0.00
IN.	0.04	0.12	0.84	2.45	4.21	0.83	0.19	0.06	0.02	0.03	0.08	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
MEAN	56.4	68.6	224	337	380
MAX	1053	438	2326	4272	4191
(WY)	1973	1973	1966	1993	1980
MIN	0.00	0.31	7.23	9.30	9.24
(WY)	2003	2003	2003	2002	2002

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1941 - 2005
ANNUAL TOTAL	26633.51	161032.3	
ANNUAL MEAN	72.8	441	154
HIGHEST ANNUAL MEAN			652
LOWEST ANNUAL MEAN			4.62
HIGHEST DAILY MEAN	6020	Dec 30	19100
LOWEST DAILY MEAN	0.00	Jun 10	1.3
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 13	1.6
ANNUAL RUNOFF (AC-FT)	52830		319400
ANNUAL RUNOFF (CFSM)	0.108		0.654
ANNUAL RUNOFF (INCHES)	1.47		8.87
10 PERCENT EXCEEDS	79		849
50 PERCENT EXCEEDS	12		40
90 PERCENT EXCEEDS	0.00		3.0

09501000 RESERVOIR SYSTEM ON SALT RIVER AT AND BELOW ROOSEVELT DAM, AZ

**LOCATION.**--This system comprises four storage reservoirs created by four separate dams on Salt River, Hydrologic Unit 15060106: Roosevelt Lake, formed by Roosevelt Dam in sec. 20, T.4 N., R.12 E. (unsurveyed), on State Highway 88; Apache Lake, formed by Horse Mesa Dam, 17 mi downstream from Roosevelt Dam; Canyon Lake, formed by Mormon Flat Dam, 27 mi downstream from Roosevelt Dam; Saguaro Lake, formed by Stewart Mountain Dam, 37 mi downstream from Roosevelt Dam. Contents given herein are combined usable contents of the four reservoirs.

**DRAINAGE AREA.**--6,211 mi<sup>2</sup>, at Stewart Mountain Dam.

**PERIOD OF RECORD.**--Prior to 1910 to current year. Prior to Oct. 1934, monthend contents only, published in WSP 1313. Evaporation: Apr. 1958 to June 1963.

**REVISED RECORDS.**--WSP 1283: Drainage area. WRD Ariz. 1975: 1974.

**GAGES.**--Roosevelt Lake, water-stage indicator in powerplant connected to long distance transmitter on lake (water-stage recorder prior to Jan. 1, 1967); Apache Lake, water-stage indicator in powerplant connected to long distance transmitter on lake since Apr. 1949 (prior to that date, nonrecording gage or reference mark); Canyon and Saguaro Lakes, mercury column gages.

**REMARKS.**--Total capacity of the four reservoirs as of 1997 was 2,025,800 acre-ft, divided as follows: Roosevelt Lake, 1,653,000 acre-ft; Apache Lake, 245,000 acre-ft; Canyon Lake, 58,000 acre-ft; Saguaro Lake, 70,000 acre-ft. Dead storage negligible. Dams forming these reservoirs were built as follows: Roosevelt 1905--11; Horse Mesa 1924--27; Mormon Flat 1923--26; Stewart Mountain 1928--30. The four dams forming these reservoirs completely develop the fall in the Salt River from Roosevelt Lake to Stewart Mountain Dam. Elevation of water surface varies from 1,422.0 ft (sill of lowest outlet in Stewart Mountain Dam) to 2,151 ft (top of spillway). Records given herein represent usable contents. Prior to Oct. 1, 1972, contents were given at 2400 hours. Water from this system is used for irrigation of Salt River Valley, power generation, municipal purposes, and recreation.

**COOPERATION.**--Records of daily contents furnished by Salt River Valley Water Users' Association.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum contents of system, 1,937,000 acre-ft May 1--4, 2005; minimum, 20,680 acre-ft Sept. 16, 1940.

**EXTREMES FOR CURRENT YEAR.**--Maximum contents of system at 0800 hours, 1,937,000 acre-ft May 1--3; minimum, 802,100 acre-ft Oct. 22.

RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	806900	806000	818500	880400	1142000	1725000	1880000	1937000	1928000	1878000	1811000	1779000
2	806700	805700	818700	885800	1146000	1731000	1882000	1937000	1927000	1876000	1808000	1776000
3	806300	805900	819300	889700	1150000	1736000	1884000	1937000	1926000	1873000	1809000	1773000
4	805900	806200	819700	921000	1153000	1740000	1886000	1937000	1925000	1872000	1807000	1771000
5	805300	806900	820300	998700	1156000	1746000	1887000	1936000	1925000	1870000	1807000	1770000
6	805000	806400	820900	1027000	1158000	1757000	1889000	1935000	1924000	1868000	1806000	1767000
7	804900	806700	821500	1039000	1161000	1769000	1891000	1934000	1924000	1865000	1805000	1765000
8	804300	807000	822200	1046000	1163000	1779000	1891000	1934000	1923000	1862000	1804000	1762000
9	803700	807000	822600	1051000	1167000	1786000	1894000	1934000	1921000	1860000	1803000	1760000
10	803400	807600	823300	1056000	1170000	1792000	1897000	1934000	1919000	1858000	1803000	1758000
11	802900	807800	823900	1061000	1175000	1798000	1900000	1933000	1918000	1855000	1803000	1756000
12	802900	808300	824300	1067000	1233000	1803000	1903000	1933000	1916000	1853000	1803000	1755000
13	802900	808500	824800	1073000	1360000	1807000	1905000	1933000	1915000	1850000	1804000	1752000
14	802500	808800	825200	1078000	1398000	1812000	1905000	1933000	1913000	1846000	1804000	1750000
15	802400	808700	825800	1081000	1424000	1817000	1906000	1934000	1912000	1845000	1805000	1748000
16	802300	809100	825800	1084000	1435000	1822000	1908000	1933000	1910000	1843000	1806000	1745000
17	802900	809400	826600	1087000	1443000	1827000	1909000	1933000	1907000	1840000	1806000	1743000
18	802500	809500	826600	1089000	1448000	1831000	1912000	1932000	1905000	1838000	1805000	1741000
19	802200	810200	827200	1091000	1463000	1834000	1915000	1933000	1903000	1836000	1804000	1739000
20	802400	810500	827600	1093000	1526000	1839000	1917000	1933000	1902000	1834000	1803000	1737000
21	802500	810700	828100	1095000	1589000	1842000	1918000	1933000	1900000	1832000	1802000	1735000
22	802100	812000	828200	1096000	1616000	1846000	1919000	1933000	1898000	1829000	1801000	1733000
23	802600	813000	828500	1098000	1650000	1849000	1920000	1934000	1896000	1827000	1800000	1731000
24	802700	814100	828700	1100000	1674000	1852000	1921000	1934000	1894000	1826000	1799000	1729000
25	803000	815400	828900	1101000	1690000	1856000	1923000	1933000	1891000	1825000	1796000	1727000
26	803200	816200	829500	1104000	1701000	1859000	1927000	1933000	1889000	1824000	1794000	1724000
27	803600	817000	829700	1106000	1710000	1860000	1931000	1932000	1887000	1822000	1792000	1722000
28	803600	817900	829400	1114000	1718000	1864000	1933000	1931000	1886000	1820000	1791000	1721000
29	804400	817700	831300	1123000	---	1869000	1935000	1930000	1883000	1818000	1788000	1718000
30	805300	818000	834600	1131000	---	1873000	1936000	1929000	1880000	1814000	1785000	1716000
31	805500	---	853600	1136000	---	1876000	---	1929000	---	1812000	1782000	---
MAX	806900	818000	853600	1136000	1718000	1876000	1936000	1937000	1928000	1878000	1811000	1779000
MIN	802100	805700	818500	880400	1142000	1725000	1880000	1929000	1880000	1812000	1782000	1716000
(*)	-900	+12500	+61900	+261600	+583000	+1555000	+57000	-9000	-50000	-67000	-32000	-65000
CAL YR 2004	MAX	982000	MIN	802100 (*)	+47900							
WTR YR 2005	MAX	1937000	MIN	802100 (*)	+907100							

(\*) Change in contents, in acre-feet (from 0800 first of month)

Note--contents at 0800 Oct. 01, 2005: 1714000

## 09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ

**LOCATION.**--Lat 33°33'10", long 111°34'33", in NW1/4NW1/4 sec. 6, T.2 N., R.8 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060106, on left bank 3.5 mi downstream from Stewart Mountain Dam and 6 mi upstream from Verde River.

**DRAINAGE AREA.**--6,232 mi<sup>2</sup>, of which 21 mi<sup>2</sup> is below Stewart Mountain Dam.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--Mar. 1930 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Stewart Mountain Dam" 1934--41.

**REVISED RECORDS.**--WSP 1343: Drainage area.

**GAGE.**--Water-stage recorder. Elevation of gage is 1,370 ft above sea level, from topographic map. Prior to Sept. 27, 1934, at site 3.2 mi upstream at different datum. Sept. 27, 1934, to Jan. 20, 1950, at site 2.8 mi upstream at datum 1,396.33 ft above sea level.

**REMARKS.**--Records good, except for estimated daily discharges, which are poor. Flow regulated by four reservoirs above station. (See elsewhere in this report.) Entire flow (except during infrequent periods of extreme flooding) is diverted at Granite Reef Dam, 10 mi downstream, for irrigation in Salt River Valley and for municipal use by the city of Phoenix.

**AVERAGE DISCHARGE.**--75 years, 975 ft<sup>3</sup>/s, 706,400 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 75,200 ft<sup>3</sup>/s Feb. 15, 1980, gage height, 25.0 ft, from highwater mark inside gage well, from rating curve then in use, extended above 10,000 ft<sup>3</sup>/s defined by known release rates from Stewart Mountain Dam and recorded gage heights; maximum daily discharge, 64,000 ft<sup>3</sup>/s Feb. 16, 1980; no flow at times in recent years.

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 5,550 ft<sup>3</sup>/s Feb. 12. Minimum daily discharge, 7.4 ft<sup>3</sup>/s May 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	7.9	8.2	9.8	10	176	38	823	710	1160	1180	1390
2	364	8.7	8.2	9.5	10	181	226	1250	784	1030	1180	1360
3	273	8.8	7.8	13	11	151	348	1260	830	970	845	1180
4	271	8.6	8.4	2380	10	19	509	1520	538	905	602	1040
5	334	8.5	8.7	946	10	14	638	1530	536	957	532	1080
6	347	8.7	9.8	245	10	11	678	1400	531	1090	554	1170
7	344	7.9	8.9	224	10	9.5	804	1330	463	1210	548	1280
8	312	8.2	8.6	222	10	9.6	1030	1240	698	1240	646	1350
9	242	8.0	8.6	220	11	9.3	762	1070	954	1150	622	1370
10	221	8.3	8.6	220	11	9.0	699	1070	1010	1000	399	1250
11	140	8.3	8.6	219	14	9.3	799	875	952	1090	379	1080
12	22	8.1	8.5	218	5550	9.2	1030	1010	828	1150	438	1130
13	17	8.2	8.5	e217	2590	8.8	e1240	1010	846	1140	437	1160
14	22	8.9	8.3	e121	2360	9.3	e1440	e782	946	1250	314	1160
15	14	8.8	7.9	e10	1870	9.7	e1430	698	959	1230	412	1170
16	11	8.6	8.4	e9.8	1850	9.6	e1420	e687	1170	1160	570	1230
17	9.7	8.8	8.1	e9.8	1870	9.8	e1290	e692	1220	1160	616	1060
18	12	8.9	e7.8	e9.8	1040	9.7	e1160	e698	1020	935	582	975
19	10	8.8	e7.8	e9.6	444	10	e1340	e695	972	915	631	919
20	9.9	8.3	e8.2	9.2	1910	10	e1560	764	890	1060	621	1050
21	10	8.4	e8.2	9.3	1910	10	e1630	636	1020	1180	625	1110
22	10	9.5	e8.3	9.4	1910	10	e1630	566	1170	1120	626	1140
23	7.9	9.1	e8.7	9.3	986	9.9	e1630	607	1220	936	833	1200
24	7.8	8.6	e8.2	9.6	184	9.8	e1190	909	1230	854	1170	1050
25	7.8	8.9	e8.2	10	178	9.7	e687	852	1170	818	1150	999
26	7.7	9.1	e8.7	12	176	9.5	e687	1040	1010	938	1210	939
27	7.5	8.7	e8.6	11	176	8.9	e691	1070	1030	1060	1100	982
28	11	7.9	8.9	11	176	7.6	938	961	1060	1420	1150	1040
29	11	7.9	15	14	---	7.4	1190	709	1100	1370	1140	1070
30	9.0	8.0	15	12	---	7.5	973	761	1210	1370	1230	1010
31	8.4	---	11	11	---	7.7	---	863	---	1220	1280	---
TOTAL	3333.7	255.4	276.7	5441.1	25297	782.8	29687	29378	28077	34088	23622	33944
MEAN	108	8.51	8.93	176	903	25.3	990	948	936	1100	762	1131
MAX	364	9.5	15	2380	5550	181	1630	1530	1230	1420	1280	1390
MIN	7.5	7.9	7.8	9.2	10	7.4	38	566	463	818	314	919
AC-FT	6610	507	549	10790	50180	1550	58880	58270	55690	67610	46850	67330

CAL YR 2004 TOTAL 110692.8 MEAN 302 MAX 1470 MIN 3.3 AC-FT 219600  
WTR YR 2005 TOTAL 214182.7 MEAN 587 MAX 5550 MIN 7.4 AC-FT 424800

e Estimated

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ—CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Dec. 1950 to Aug. 1992, Aug. 1999 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1964 to Sept. 1982, Mar. 1983 to Sept. 1990.

WATER TEMPERATURE: Dec. 1950 to Sept. 1982, Mar. 1983 to Sept. 1990.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarbohardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	
DEC	08...	1145	8.7	<2.0	732	11.0	116	7.9	1840	18.0	15.5	260	120	66.7
FEB	02...	1022	11	<2.0	733	9.1	89	8.3	2090	19.5	12.3	270	120	67.2
	12...	1440	17300	<2.0	727	10.6	107	8.3	2050	15.0	13.5	220	88	55.3
JUL	19...	1030	905	<2.0	724	7.6	95	8.1	1680	42.0	23.4	200	72	52.0
Date	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, unfltrd, mg/L (00925)	Magnesium, water, recover-able, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	
DEC	08...	74.0dc	23.3	20.6dc	8.05	9	333	145	177	<1	551d	.4	75.1d	1150
FEB	02...	73.7c	24.3	21.9	7.78	8	311	144	168	4	530d	.4	75.7d	1100
	12...	54.8	20.6	20.5	8.05	9	310	134	158	3	504d	.4	70.3d	1050
JUL	19...	53.1	17.5	16.6	6.62	7	222	130	158	<1	397d	.4	57.1	832
Date	Residue water, fltrd, tons/acre-ft (70303)	Residue evap. at 180degC, wat flt mg/L (70300)	Residue at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, unfltrd, mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, water, unfltrd, mg/L (00600)	E coli, m-TEC MP, water, col/100 mL (31633)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd, ug/L (01097)	Arsenic, water, fltrd, ug/L (01000)	Arsenic, water, unfltrd, ug/L (01002)	
DEC	08...	1.62	1190	<10	.26	<.04	<.06	E.01n	--	<1k	E.11n	<.2	3.7	4
FEB	02...	1.59	1170	<10	.27	<.04	<.06	E.01n	--	E3k	E.13n	E.1n	3.6	3
	12...	1.48	1090	14	.52	<.04	<.06	.04	--	<1k	E.18n	E.2n	4.1	5
JUL	19...	1.21	889	<10	.38	<.04	.08	.05	.47	E10k	E.16n	E.2n	5.0	5
Date	Barium, water, unfltrd recover-able, ug/L (01007)	Beryllium, water, unfltrd recover-able, ug/L (01010)	Beryllium, water, unfltrd recover-able, ug/L (01012)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium, water, fltrd, ug/L (01025)	Cadmium, water, unfltrd, ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury, water, fltrd, ug/L (71890)	
DEC	08...	83	<.06	<.06	166	<.04	<.04	E.7n	.9	2.4	<.08	<.06	20	<.01
FEB	02...	83	<.06	<.06	178	<.04	<.04	<.8	1.5	3.2	<.08	E.04n	42	<.01
	12...	91	<.06	<.06	175	<.04	<.04	<.8	2.5	3.1	E.05n	.43	48	<.01
JUL	19...	72	<.06	<.06	161d	<.04	<.04	<.8	1.7	.8	.16	<.06	81	<.01

**GILA RIVER BASIN**  
**09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ—CONTINUED**

**WATER-QUALITY RECORDS**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Mercury water, unfltrd recover -able, ug/L (71900)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC						
08...	<.01	.7	E.4n	E2n	1	.02
FEB						
02...	<.01	.9	4.8	<2	1	.03
12...	<.01	.7	5.4	4	38	1770
JUL						
19...	<.01	.5	3.2	<2	3	7.3

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

c -- See laboratory comment  
d -- Diluted sample: method hi range exceeded  
k -- Counts outside acceptable range  
n -- Below the LRL and above the LT-MDL

09502800 WILLIAMSON VALLEY WASH NEAR PAULDEN, AZ

**LOCATION**--Lat 34°52'00", long 112°36'45", in SE1/4SE1/4 sec. 7, T.17 N., R.3 W., Yavapai County, Hydrologic Unit 15060201, on left bank 3.6 mi north of Simmons and 8.5 mi west of Paulden.

**DRAINAGE AREA**--255 mi<sup>2</sup>.

**PERIOD OF RECORD**--Mar. 1965 to Sept. 1985; Aug. 2001 to current year.

**REVISED RECORDS**--WSP 1119: 1939(M), WSP 1213: 1914, 1916(M), 1918(M), 1919, 1920(M), 1922-23(M), WDR AZ-90-1: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 4,455 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1970, at datum 1.00 ft higher. Datum of 4,447 ft published in WRD Ariz. 1971-76 was in error.

**REMARKS**--Records fair, except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 14,800 ft<sup>3</sup>/s Sept. 23, 1983, gage height, 9.96 ft from rating curve extended above 2,200 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 6.38 ft, 8.22 ft, 8.93 ft, and 9.96 ft; no flow at times in most years.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 22.....	0000	394	4.78	Jan. 11.....	2130	6,350	8.26
Oct. 28.....	0845	1,220	5.97	Jan. 27.....	2330	619	5.17
Nov. 8.....	1015	572	5.09	Feb. 12.....	0800	*8,340	*8.76
Nov. 22.....	0145	800	5.45	Feb. 19.....	1315	2,030	6.93
Dec. 29.....	1600	7,260	8.50	Feb. 22.....	1900	1,580	6.34
Jan. 4.....	0330	1,210	5.96				

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.58	4.5	2.6	89	52	106	6.9	4.6	1.1	e1.2	0.72	1.9
2	0.57	2.9	2.4	54	48	67	7.5	3.0	1.0	e1.2	0.92	2.4
3	0.52	2.5	2.3	82	30	50	7.4	2.7	1.1	e0.60	0.96	3.7
4	0.43	2.3	2.3	969	38	43	6.7	2.4	0.99	e0.05	0.76	6.2
5	0.34	2.2	2.3	315	36	29	6.2	2.4	0.88	e0.00	0.78	1.5
6	0.25	2.1	2.3	120	28	20	5.7	2.6	0.84	e0.00	1.0	0.81
7	0.11	2.2	2.1	68	22	24	4.4	2.4	0.81	e0.00	1.4	0.81
8	0.01	213	2.1	58	55	30	3.3	2.4	0.82	e0.00	1.8	0.84
9	0.00	156	2.1	746	72	20	1.8	2.3	0.96	0.00	1.6	0.83
10	0.00	47	2.0	1210	37	16	1.6	2.7	1.2	0.00	2.3	2.5
11	0.00	16	2.0	2780	879	17	2.0	2.7	0.89	0.00	2.4	e4.7
12	0.00	7.2	2.0	1330	5300	11	1.6	2.6	0.79	0.00	2.2	e1.3
13	0.00	4.5	2.0	326	976	6.6	1.7	2.7	0.75	0.00	3.3	0.69
14	0.00	3.3	1.9	134	417	14	2.1	2.8	0.63	0.00	15	0.87
15	0.00	2.6	1.9	66	185	20	1.9	3.1	0.55	0.00	2.1	0.69
16	0.00	2.4	1.9	43	176	12	1.8	4.6	0.50	0.00	30	0.55
17	0.00	2.3	1.9	e42	134	11	2.1	5.0	0.46	0.00	3.3	0.53
18	0.09	2.2	1.9	e39	727	9.3	2.7	5.2	0.43	0.00	1.7	0.47
19	0.52	2.2	1.9	e35	1450	14	2.8	3.8	0.40	0.00	1.6	0.46
20	0.84	2.2	1.9	e34	739	20	2.9	4.6	0.42	0.00	1.9	0.77
21	15	114	1.9	e34	321	19	2.4	3.4	0.43	0.00	2.0	1.1
22	180	526	1.9	e32	948	14	2.1	2.8	0.43	0.00	2.1	1.1
23	3.6	223	1.9	e32	1070	14	1.3	2.5	1.8	0.00	2.5	0.46
24	0.99	77	1.8	e31	891	21	6.0	2.2	1.6	0.00	2.1	0.38
25	0.88	27	1.9	e30	469	16	3.4	1.8	0.97	22	2.1	0.24
26	0.84	14	1.9	30	295	16	4.6	1.6	0.77	44	2.2	0.20
27	0.82	7.8	1.9	e99	239	13	4.6	1.6	0.87	0.25	2.0	0.26
28	597	5.5	1.9	e91	161	8.9	5.3	4.2	1.0	0.65	2.4	0.51
29	250	3.9	2090	109	---	12	6.5	1.6	1.3	0.61	1.3	0.50
30	50	2.9	628	221	---	9.4	4.8	1.3	1.2	0.70	0.86	0.40
31	11	---	177	132	---	6.8	---	1.1	---	0.75	0.77	---
TOTAL	1114.39	1480.7	2951.9	9381	15795	690.0	114.1	88.7	25.89	72.01	96.07	37.67
MEAN	35.9	49.4	95.2	303	564	22.3	3.80	2.86	0.86	2.32	3.10	1.26
MAX	597	526	2090	2780	5300	106	7.5	5.2	1.8	44	30	6.2
MIN	0.00	2.1	1.8	30	22	6.6	1.3	1.1	0.40	0.00	0.72	0.20
MED	0.52	4.2	2.0	82	212	16	3.1	2.7	0.86	0.00	2.0	0.79
AC-FT	2210	2940	5860	18610	31330	1370	226	176	51	143	191	75
CFSM	0.14	0.19	0.37	1.19	2.21	0.09	0.01	0.01	0.00	0.01	0.01	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2005, BY WATER YEAR (WY)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	
MEAN	7.12	6.37	26.0	30.0	72.1	41.3	9.11	1.43	0.60	0.97	3.40	12.5										
MAX	76.8	49.4	185	303	564	381	107	3.67	2.05	3.66	15.0	233										
(WY)	1973	2005	1966	2005	2005	1978	1965	1980	1973	1971	1971	1983										
MIN	0.00	0.48	0.93	1.69	1.62	1.34	0.99	0.00	0.00	0.00	0.00	0.03										
(WY)	1979	1980	1980	2004	1967	1977	1966	1966	1966	2002	2002	1966										

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1965 - 2005
ANNUAL TOTAL	6261.65	31847.43	
ANNUAL MEAN	17.1	87.3	17.0
HIGHEST ANNUAL MEAN			87.3
LOWEST ANNUAL MEAN			1.58
HIGHEST DAILY MEAN	2090	5300	5300
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
ANNUAL RUNOFF (AC-FT)	12420	63170	12310
ANNUAL RUNOFF (CFSM)	0.067	0.342	0.067
10 PERCENT EXCEEDS	2.5	134	7.0
50 PERCENT EXCEEDS	1.1	2.3	1.7
90 PERCENT EXCEEDS	0.00	0.25	0.00



## GILA RIVER BASIN

## 09502900 DEL RIO SPRINGS NEAR CHINO VALLEY, AZ

**LOCATION.**--Lat 34°49'32", long 112°26'38", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ , sec. 26, T.17 N., R.2 W., Yavapai County, Hydrologic Unit 15060202, on left bank, about 3.5 mi north of Chino Valley, AZ.

**DRAINAGE AREA.**--40.9 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Aug. 1996 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 4,430 ft above sea level, from topographic map.

**REMARKS.**--No estimated daily discharges. Records fair.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 23 ft<sup>3</sup>/s, Sept. 7, 2002, maximum gage height, 2.17 ft, Sept. 7, 2002. Minimum daily discharge, 0.79 ft<sup>3</sup>/s July 8, 2005.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge, 65 ft<sup>3</sup>/s, for extension of rating curve, gage height, 3.66 ft, from highwater mark.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 3.8 ft<sup>3</sup>/s Aug. 11 at 1700, gage height, 1.91 ft. Minimum daily discharge, 0.79 ft<sup>3</sup>/s July 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.4	1.7	1.7	1.6	1.7	1.6	1.3	1.1	0.90	1.1	0.93
2	1.1	1.3	1.6	1.6	1.6	1.7	1.6	1.2	1.1	0.90	0.92	0.91
3	1.1	1.4	1.5	1.8	1.6	1.7	1.5	1.2	1.1	0.89	0.90	0.90
4	1.1	1.4	1.5	2.4	1.6	1.7	1.5	1.2	1.1	0.88	0.90	0.90
5	1.1	1.4	1.7	1.8	1.6	1.7	1.4	1.2	1.1	0.86	1.0	0.92
6	1.0	1.3	1.8	1.7	1.6	1.7	1.4	1.2	1.1	0.83	1.1	0.95
7	1.00	1.4	1.7	1.7	1.6	1.7	1.4	1.2	1.1	0.80	0.91	0.92
8	0.97	1.8	1.7	1.7	1.6	1.7	1.4	1.2	1.1	0.79	0.90	0.90
9	0.96	1.5	1.6	1.7	1.6	1.6	1.5	1.2	1.1	0.81	0.93	0.90
10	0.96	1.6	1.6	1.7	1.6	1.6	1.5	1.2	1.0	0.80	1.1	0.90
11	0.96	1.6	1.6	1.8	1.6	1.7	1.5	1.2	1.0	0.81	1.6	0.90
12	0.98	1.6	1.7	1.8	1.8	2.2	1.5	1.2	1.0	0.82	1.3	0.90
13	0.98	1.5	1.6	1.8	1.6	2.2	1.5	1.2	1.0	0.82	1.1	0.90
14	1.0	1.5	1.5	1.6	1.5	1.7	1.5	1.2	1.0	0.83	0.94	0.90
15	1.0	1.5	1.5	1.5	1.5	1.6	1.5	1.1	1.0	0.84	0.99	0.90
16	1.0	1.5	1.5	1.6	1.5	1.6	1.5	1.1	1.0	0.84	1.1	0.90
17	1.0	1.5	1.5	1.6	1.5	1.6	1.5	1.1	1.0	0.84	1.1	0.90
18	1.1	1.5	1.5	1.6	1.6	1.7	1.4	1.1	1.0	0.84	0.94	0.90
19	1.2	1.5	1.5	1.6	1.6	1.7	1.4	1.2	0.99	0.84	0.91	0.90
20	1.2	1.5	1.5	1.7	1.6	2.0	1.4	1.3	0.96	0.84	0.90	0.90
21	2.2	1.6	1.5	1.8	1.6	1.8	1.4	1.2	0.96	0.84	0.94	0.90
22	1.9	1.7	1.5	1.8	1.6	1.8	1.4	1.1	0.96	0.86	0.99	0.90
23	1.2	1.6	1.5	1.8	1.6	1.8	1.4	1.1	0.96	0.90	1.0	0.90
24	1.2	1.5	1.5	1.8	1.6	1.9	1.4	1.1	0.96	0.90	1.3	0.90
25	1.2	1.6	1.5	1.7	1.6	1.9	1.4	1.1	0.96	1.1	1.1	0.90
26	1.2	1.6	1.5	1.6	1.6	1.9	1.4	1.1	0.96	1.00	0.96	0.90
27	1.2	1.6	1.5	1.7	1.6	1.8	1.4	1.1	0.94	0.97	0.97	0.90
28	1.4	1.7	1.4	1.6	1.6	1.8	1.4	1.0	0.91	0.93	0.94	0.90
29	1.4	1.7	1.6	1.8	---	1.8	1.4	1.1	0.90	0.92	0.93	0.90
30	1.4	1.7	1.6	1.8	---	1.7	1.3	1.1	0.90	0.90	0.92	0.90
31	1.4	---	1.6	1.7	---	1.6	---	1.1	---	0.90	0.94	---
TOTAL	36.51	46.0	48.5	53.5	44.6	54.6	43.4	35.9	30.26	27.00	31.63	27.13
MEAN	1.18	1.53	1.56	1.73	1.59	1.76	1.45	1.16	1.01	0.87	1.02	0.90
MAX	2.2	1.8	1.8	2.4	1.8	2.2	1.6	1.3	1.1	1.1	1.6	0.95
MIN	0.96	1.3	1.4	1.5	1.5	1.6	1.3	1.0	0.90	0.79	0.90	0.90

09502960 GRANITE CREEK AT PRESCOTT, AZ

LOCATION.--Lat 34°33'07", long 112°27'42", in NE1/4SW1/4NW1/4, sec. 34, T.14 N., R.2 W., Yavapai County, Hydrologic Unit 15060202, at southwestern boundary of Yavapai-PreScott Indian Reservation, within the city of Prescott, AZ.

DRAINAGE AREA.--30.0 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Nov. 1994 to current year.

REVISED RECORDS.--WDR AZ-98-1: 1997.

GAGE.--Water-stage recorder. Elevation of gage is 5,285 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow is partly regulated by Goldwater Reservoirs on Bannon Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,200 ft<sup>3</sup>/s Mar. 6, 1995, gage height, 8.58 ft. from slope-conveyance survey; maximum gage height, 10.00 ft., Dec. 29, 2005. Minimum daily discharge, no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s (revised) and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 28 .....	0800	445	8.37	Jan. 11 .....	1700	2,400	10.00
Nov. 8 .....	0445	846	8.85	Feb. 12 .....	0115	1,810	9.58
Dec. 29 .....	1230	*2,440	*10.00	Feb. 19 .....	0445	560	8.53
Jan. 4 .....	0445	537	8.58	Aug. 10 .....	1700	1,220	9.47

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	10	e8.1	69	32	38	9.9	5.9	0.89	0.03	1.5	0.53
2	0.00	7.0	7.5	40	29	34	9.0	5.7	0.85	0.00	48	7.1
3	0.00	5.1	6.4	126	27	30	8.2	5.6	0.76	0.11	8.7	13
4	0.00	3.8	6.4	304	26	26	7.8	5.4	0.74	0.00	4.5	0.85
5	0.00	3.1	7.1	155	24	31	7.1	5.5	0.65	0.00	40	0.27
6	0.00	2.7	9.5	e56	23	26	6.2	5.5	0.62	0.00	17	0.07
7	0.00	5.6	7.9	e32	30	24	5.9	5.3	0.54	0.00	5.4	0.06
8	0.00	314	7.9	e63	25	21	5.4	5.0	0.52	0.00	33	1.1
9	0.00	83	7.8	167	23	19	6.1	4.7	0.45	0.00	34	0.14
10	0.00	40	7.4	223	21	17	6.0	4.5	0.54	0.00	193	0.02
11	0.00	24	7.1	734	278	15	5.4	4.2	0.41	0.00	73	0.02
12	0.00	25	6.7	263	925	13	5.3	4.0	0.36	0.00	44	0.01
13	0.00	19	6.1	e124	260	11	5.0	3.7	0.34	0.58	29	0.00
14	0.00	14	5.8	e83	150	9.3	4.7	3.4	0.21	0.00	21	0.00
15	0.00	11	5.3	e65	116	8.2	4.4	3.2	0.18	0.00	15	0.01
16	0.00	9.4	4.7	e53	92	7.5	4.2	3.0	0.16	0.00	9.8	0.02
17	0.00	7.3	4.3	e47	65	8.5	4.2	2.6	0.14	0.00	5.8	0.00
18	0.00	5.9	4.0	e42	158	8.7	4.3	2.3	0.16	0.00	3.9	0.00
19	0.00	5.0	3.6	e33	316	15	3.9	2.1	0.10	0.00	3.1	0.00
20	0.00	4.9	3.4	e29	188	18	3.6	2.0	0.05	e3.2	2.6	0.00
21	68	38	3.1	30	136	14	3.4	1.9	0.03	0.01	2.1	0.00
22	12	69	2.7	28	160	14	3.3	1.8	0.00	0.00	1.9	0.00
23	2.2	e54	2.2	26	144	20	16	1.7	2.9	0.00	8.2	0.00
24	1.3	e36	1.9	25	94	14	27	1.6	0.49	0.00	19	0.00
25	0.67	e24	2.0	26	66	14	12	1.5	0.38	2.9	4.7	0.03
26	0.36	e17	2.1	38	64	13	7.3	1.3	0.33	0.26	2.5	0.04
27	13	e14	2.1	74	56	12	6.0	1.2	0.28	7.0	1.9	0.04
28	235	e11	15	48	43	12	9.2	1.2	0.21	0.05	1.4	0.07
29	59	e9.9	899	52	---	12	7.3	1.1	0.16	6.2	0.97	0.03
30	27	e9.1	210	43	---	11	6.4	1.0	0.10	6.9	0.72	0.04
31	17	---	112	37	---	10	---	1.0	---	2.1	0.49	---
TOTAL	435.53	881.8	1379.1	3135	3571	526.2	214.5	98.9	13.55	29.34	636.18	23.45
MEAN	14.0	29.4	44.5	101	128	17.0	7.15	3.19	0.45	0.95	20.5	0.78
MAX	235	314	899	734	925	38	27	5.9	2.9	7.0	193	13
MIN	0.00	2.7	1.9	25	21	7.5	3.3	1.0	0.00	0.00	0.49	0.00
MED	0.00	11	6.4	52	65	14	6.0	3.0	0.35	0.00	5.8	0.03
AC-FT	864	1750	2740	6220	7080	1040	425	196	27	58	1260	47
CFSM	0.47	0.98	1.48	3.37	4.25	0.57	0.24	0.11	0.02	0.03	0.68	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
	2.98	14.0	2005	0.02	2004
	3.95	29.4	2005	0.14	1996
	4.68	44.5	2005	0.20	2000
	13.8	101	2005	0.09	2002
	23.9	128	2005	0.09	2002
	18.8	74.1	1995	0.20	2002
	5.56	31.6	1998	0.24	2002
	0.93	3.92	1998	0.03	1996
	0.24	1.15	1999	0.00	2002
	4.42	24.4	1999	0.00	1997
	6.95	20.5	2005	0.25	2002
	4.58	14.0	1997	0.25	2001

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1995 - 2005
ANNUAL TOTAL	3431.27	10944.55	
ANNUAL MEAN	9.38	30.0	6.56
HIGHEST ANNUAL MEAN			30.0
LOWEST ANNUAL MEAN			0.79
HIGHEST DAILY MEAN	899 Dec 29	925 Feb 12	940 Mar 6 1995
LOWEST DAILY MEAN	0.00 Jun 5	0.00 Oct 1	0.00 Jul 11 1995
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 5	0.00 Oct 1	0.00 Jul 22 1995
ANNUAL RUNOFF (AC-FT)	6810	21710	4760
ANNUAL RUNOFF (CFSM)	0.313	1.000	0.219
10 PERCENT EXCEEDS	14	65	12
50 PERCENT EXCEEDS	0.50	5.4	0.22
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

GILA RIVER BASIN

09503000 GRANITE CREEK NEAR PRESCOTT, AZ

**LOCATION.**--Lat 34°33'47", long 112°26'39", in SW1/4 sec. 26, T.14 N., R.2 W., (unsurveyed), Yavapai County, Hydrologic Unit 15060202, at bridge on Sundog Road, 2 mi north of Prescott and 4.5 mi upstream from Willow Creek.

**DRAINAGE AREA.**--36.3 mi<sup>2</sup>.

**PERIOD OF RECORD.**--July 1932 to Sept. 1947, Oct. 1994 to current year.

**REVISED RECORDS.**--WDR AZ-98-1: 1997, WDR-AZ-04: Location.

**GAGE.**--Water-stage recorder. Datum of gage is 5,204.29 ft above sea level from surveyed bench-mark elevation and levels survey.

**REMARKS.**--Records fair except for estimated daily discharges, which are poor. Flow is partly regulated by Goldwater Reservoirs on Bannon Creek.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 3,200 ft<sup>3</sup>/s Mar. 6, 1995, gage-height 8.90 ft, from slope-conveyance survey. Maximum gage height 9.90 ft, Dec. 29, 2004. No flow for many days.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Flood of Aug. 19, 1963, discharge of 6,600 ft<sup>3</sup>/s, gage height 9.4 ft (original gage height of 12.4 ft with datum correction), from contracted opening survey.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s (revised) and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 28.....	0800	401	6.38	Feb. 12.....	0115	1,830	8.86
Nov. 8.....	0430	736	7.19	Feb. 19.....	0500	544	6.62
Dec. 29.....	1200	*2,800	*9.90	Aug. 2.....	2200	447	6.31
Jan. 4.....	0530	607	6.91	Aug. 10.....	1800	741	7.00
Jan. 11.....	1715	2,480	9.59				

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	9.8	8.7	38	42	46	11	7.6	0.93	0.14	9.0	0.58
2	0.01	7.4	7.8	23	34	40	9.9	6.3	0.81	0.12	54	15
3	0.00	6.3	7.3	134	29	34	8.9	5.9	0.76	0.11	22	22
4	0.00	5.6	7.2	340	26	30	8.4	5.5	0.71	0.11	5.1	3.4
5	0.00	5.2	7.7	146	24	36	7.7	5.3	0.66	0.09	47	1.6
6	0.00	4.8	9.0	72	25	32	6.4	5.0	0.61	0.08	32	0.78
7	0.00	5.2	7.9	40	37	28	7.1	4.9	0.56	0.07	11	0.53
8	0.00	316	7.9	63	26	25	6.4	4.7	0.54	0.06	46	0.60
9	0.00	87	7.9	185	23	21	9.1	4.4	0.54	0.06	49	1.4
10	0.00	34	7.6	238	23	19	7.5	4.2	0.56	0.05	152	0.31
11	0.00	20	7.2	811	290	16	6.3	4.0	0.55	0.05	108	0.23
12	0.00	20	7.2	298	910	14	5.4	3.8	0.51	0.04	56	0.23
13	0.00	16	6.8	136	266	12	5.4	3.6	0.44	0.05	37	0.19
14	0.00	13	6.6	94	150	12	5.6	3.6	0.38	0.04	25	0.18
15	0.00	11	6.6	70	118	11	5.4	3.3	0.33	0.03	22	0.16
16	0.00	10	6.1	59	99	9.7	5.2	3.0	0.29	0.03	11	0.15
17	0.00	8.7	6.1	52	70	9.6	4.8	2.7	0.27	0.02	8.1	0.15
18	0.00	7.8	5.7	45	201	9.9	4.7	2.5	0.26	0.02	6.4	0.14
19	0.00	7.1	5.6	34	320	28	4.1	2.3	0.24	0.03	5.3	0.13
20	0.00	6.6	5.6	30	204	35	4.2	2.2	0.24	0.03	4.2	0.13
21	75	35	5.5	29	152	24	3.9	2.1	0.25	0.04	3.2	0.14
22	17	75	5.2	27	186	19	3.9	1.9	0.24	0.08	2.6	0.13
23	4.3	56	4.7	24	169	38	10	1.7	1.6	0.04	3.1	0.12
24	2.5	39	4.3	23	117	22	64	1.6	0.74	0.03	35	0.12
25	1.5	25	4.6	22	86	25	21	1.5	0.37	2.4	6.8	0.11
26	0.72	19	4.8	39	86	19	17	1.4	0.24	0.53	4.4	0.09
27	5.6	15	4.8	82	77	16	8.3	1.3	0.22	5.2	2.9	0.10
28	244	13	13	57	58	15	19	1.3	0.18	0.67	2.1	0.09
29	63	11	947	68	---	14	16	1.2	0.17	0.44	1.3	0.09
30	26	9.3	258	57	---	12	9.2	1.1	0.16	13	0.90	0.08
31	15	---	96	50	---	11	---	1.1	---	1.4	0.69	---
TOTAL	454.64	898.8	1490.4	3386	3848	683.2	305.8	101.0	14.36	29.23	773.09	48.96
MEAN	14.7	30.0	48.1	109	137	22.0	10.2	3.26	0.48	0.94	24.9	1.63
MAX	244	316	947	811	910	46	64	7.6	1.6	13	152	22
MIN	0.00	4.8	4.3	22	23	9.6	3.9	1.1	0.16	0.02	0.69	0.08
AC-FT	902	1780	2960	6720	7630	1360	607	200	28	58	1530	97
CFSM	0.40	0.83	1.32	3.01	3.79	0.61	0.28	0.09	0.01	0.03	0.69	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
MEAN	1.79	1.94	4.15	8.69	22.0
MAX	15.2	30.0	48.1	109	159
(WY)	2001	2005	2005	2005	1937
MIN	0.00	0.00	0.00	0.00	0.00
(WY)	1933	1933	1933	1934	1934

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1932 - 2005
ANNUAL TOTAL	3733.73	12033.48	
ANNUAL MEAN	10.2	33.0	6.84
HIGHEST ANNUAL MEAN			33.0
LOWEST ANNUAL MEAN			0.37
HIGHEST DAILY MEAN	947 Dec 29	947 Dec 29	1450 Feb 7 1937
LOWEST DAILY MEAN	0.00 May 20	0.00 Oct 3	0.00 Jul 1 1932
ANNUAL SEVEN-DAY MINIMUM	0.00 May 20	0.00 Oct 3	0.00 Jul 4 1932
ANNUAL RUNOFF (AC-FT)	7410	23870	4960
ANNUAL RUNOFF (CFSM)	0.281	0.908	0.188
10 PERCENT EXCEEDS	13	73	12
50 PERCENT EXCEEDS	1.1	6.3	0.30
90 PERCENT EXCEEDS	0.00	0.08	0.00

09503300 GRANITE CREEK BELOW WATSON LAKE NEAR PRESCOTT, AZ

**LOCATION**--Lat 34°36'49" long 112°25'02", in NW1/4NE1/4NE1/4 sec. 12, T.14 N., R.2 W., Yavapai County, Hydrologic Unit 15060202, 150 ft downstream of bridge on the U.S. Highway ALT 89, 6 mi north of Prescott, and 10 mi south of Chino Valley.

**DRAINAGE AREA**--Undetermined.

**PERIOD OF RECORD**--Sept. 1999 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 5,020 ft above sea level, from topographic map.

**REMARKS**--Records good except for estimated daily discharges, which are poor. Flow is partially regulated by Goldwater Reservoirs (2) on Bannon Creek and by Willow Creek and Watson Reservoirs. No diversion above station 09503000 (telecom with City Engineer 2/96). There is a diversion gate and canal at the gage, which conveys up to several ft<sup>3</sup>/s during the growing season.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 2,180 ft<sup>3</sup>/s Jan. 11, 2005, gage height 7.94 ft, from an extension of the rating curve based on an equation for free weir flow. No flow for many days during the period of record.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, 2,180 ft<sup>3</sup>/s Jan. 11 at 2000, gage height, 7.94 ft. Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.14	60	36	55	12	3.7	0.34	0.20	0.00	0.00
2	0.00	0.00	0.14	33	29	47	11	5.3	0.29	0.21	0.91	0.36
3	0.00	0.00	0.14	57	20	41	12	6.0	0.45	0.15	0.00	0.43
4	0.00	0.00	0.14	430	17	37	12	5.9	0.62	0.28	0.09	0.54
5	0.00	0.00	0.21	180	15	39	8.8	6.8	0.74	e0.23	2.2	0.56
6	0.00	0.00	0.70	101	14	37	6.6	5.6	0.93	e0.32	0.03	0.73
7	0.00	0.00	0.42	72	19	36	6.9	3.4	1.0	e0.41	0.00	1.3
8	0.00	3.0	0.26	68	19	29	5.6	4.4	1.00	0.72	0.00	2.1
9	0.00	0.00	0.22	147	14	25	5.1	4.5	1.3	0.00	0.04	0.60
10	0.00	0.00	0.22	218	11	21	5.1	4.2	1.5	0.00	0.26	0.00
11	0.00	0.00	0.22	743	89	20	5.0	2.5	1.6	0.00	0.00	0.00
12	0.00	0.00	0.26	489	1070	20	4.7	2.5	1.7	0.00	0.00	0.00
13	0.00	0.00	0.33	164	351	20	4.8	2.4	2.8	0.00	0.00	0.00
14	0.00	0.00	0.42	101	170	17	5.0	1.7	3.6	0.00	0.00	0.00
15	0.00	0.00	0.42	70	116	15	5.0	2.0	2.3	0.00	21	0.00
16	0.00	0.00	0.36	52	112	14	5.0	4.7	0.16	0.00	15	0.00
17	0.00	0.00	0.36	44	80	14	5.2	1.4	0.10	0.00	9.4	1.4
18	0.00	0.00	0.22	36	147	10	6.1	e1.6	0.15	0.00	7.5	8.5
19	0.00	0.00	0.33	30	322	15	5.5	1.7	0.16	0.00	6.0	3.4
20	0.00	0.00	0.42	23	231	30	3.5	1.0	0.16	0.00	5.5	0.00
21	0.04	0.00	0.51	20	155	26	3.6	0.84	0.15	0.00	5.8	0.00
22	0.00	0.00	0.62	17	176	22	1.7	0.54	0.08	0.00	2.3	0.00
23	0.00	0.00	0.61	13	171	34	0.93	0.71	0.73	0.00	0.00	0.00
24	0.00	0.00	0.53	12	144	27	9.2	1.1	0.46	0.00	0.00	0.00
25	0.00	0.00	0.62	11	102	23	7.9	1.7	0.45	0.00	0.00	0.00
26	0.00	0.00	0.62	11	83	21	9.9	1.7	0.37	0.00	0.00	0.00
27	0.00	0.00	0.70	53	89	19	4.3	1.3	0.34	0.00	0.00	0.00
28	0.20	0.00	0.88	52	68	19	2.3	1.0	0.27	0.00	0.00	0.00
29	0.00	0.00	625	53	---	15	2.0	0.86	0.26	0.00	0.00	0.00
30	0.00	0.03	375	55	---	15	3.0	0.78	0.24	0.22	0.00	0.00
31	0.00	---	119	46	---	12	---	0.45	---	0.00	0.00	---
TOTAL	0.24	3.03	1130.02	3461	3870	775	179.73	82.28	24.25	2.74	76.03	19.92
MEAN	0.01	0.10	36.5	112	138	25.0	5.99	2.65	0.81	0.09	2.45	0.66
MAX	0.20	3.0	625	743	1070	55	12	6.8	3.6	0.72	21	8.5
MIN	0.00	0.00	0.14	11	11	10	0.93	0.45	0.08	0.00	0.00	0.00
MED	0.00	0.00	0.42	53	89	21	5.1	1.7	0.45	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2005, BY WATER YEAR (WY)

MEAN	0.19	0.05	6.16	18.8	23.3	6.67	1.18	0.54	0.17	0.44	1.22	1.23
MAX	1.07	0.10	36.5	112	138	25.0	5.99	2.65	0.81	2.31	2.76	11.0
(WY)	2001	2005	2005	2005	2005	2005	2005	2005	2005	2003	2003	1999
MIN	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.00	0.00	0.00	0.00	0.00
(WY)	2002	2002	2002	2002	2002	2002	2002	2000	2000	2002	2002	2001

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1999 - 2005
ANNUAL TOTAL	1213.39	9624.24	
ANNUAL MEAN	3.32	26.4	4.88
HIGHEST ANNUAL MEAN			26.4 2005
LOWEST ANNUAL MEAN			0.11 2002
HIGHEST DAILY MEAN	625 Dec 29	1070 Feb 12	1070 Feb 12 2005
LOWEST DAILY MEAN	0.00 Mar 30	0.00 Oct 1	0.00 Oct 7 1999
ANNUAL SEVEN-DAY MINIMUM	0.00 Sep 9	0.00 Oct 1	0.00 Oct 14 1999
10 PERCENT EXCEEDS	0.62	55	2.5
50 PERCENT EXCEEDS	0.14	0.71	0.04
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

**09503700 VERDE RIVER NEAR PAULDEN, AZ**

**LOCATION**.--Lat 34°53'40", long 112°20'32", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec. 39, T.18 N., R.1 W., Yavapai County, Hydrologic Unit 15060202, in Prescott National Forest, on right bank 0.3 mi upstream from Verde Valley Ranch, 7 mi east of Paulden, 8 mi upstream from Hell Canyon, 8 mi downstream from Granite Creek, and 10 mi downstream from Sullivan Lake.

**DRAINAGE AREA**.--2,507 mi<sup>2</sup> (includes 357 mi<sup>2</sup> in Aubrey Valley Playa, a closed basin).

**PERIOD OF RECORD**.--July 1963 to current year.

**REVISED RECORDS**.--WDR AZ--83--1: 1981. WDR AZ--89--1: Drainage area.

**GAGE**.--Water-stage recorder. Elevation of gage is 4,117 ft above sea level, from topographic map.

**REMARKS**.--Records good except for estimated daily discharges which are fair. Diversions and storage above station for irrigation and municipal use.

**EXTREMES FOR PERIOD OF RECORD**.--Maximum discharge, 23,200 ft<sup>3</sup>/s Feb. 20, 1993, gage height, 14.25 ft, from rating curve extended above 7,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum daily discharge, 15 ft<sup>3</sup>/s May 13--23, 1964.

**EXTREMES FOR CURRENT YEAR**.--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 22.....	2315	2,550	7.03	Jan. 4.....	2015	1,450	5.79
Oct. 28.....	2115	1,830	6.28	Jan. 12.....	0430	*12,300	*12.08
Nov. 9.....	2145	1,140	5.34	Feb. 1.....	0745	390	3.64
Nov. 23.....	0845	1,310	5.60	Feb. 12.....	1645	8,210	10.50
Dec. 30.....	0015	4,560	8.58	Feb. 20.....	1615	3,440	7.79

Minimum daily discharge, 24 ft<sup>3</sup>/s Sept. 11--30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	124	28	275	288	116	28	27	26	26	30	26
2	26	72	27	137	153	79	28	28	26	26	26	25
3	26	50	27	88	106	e61	28	28	26	25	26	25
4	26	39	27	801	75	e54	27	28	26	25	26	26
5	26	33	26	1080	56	e49	27	28	26	25	26	26
6	25	31	27	561	43	e46	27	28	26	25	29	25
7	69	30	26	316	36	e43	27	28	26	25	32	25
8	48	109	25	179	33	e41	27	28	26	25	27	28
9	32	645	25	308	31	38	27	28	26	25	26	25
10	28	717	25	1950	32	36	27	29	26	25	27	25
11	26	233	25	5740	35	33	27	29	26	25	28	24
12	26	113	25	7440	e4960	31	27	30	26	25	27	24
13	26	71	25	2450	5440	30	27	30	26	25	26	24
14	26	59	25	840	1750	30	27	30	26	25	26	24
15	26	47	25	398	643	29	27	31	26	25	26	24
16	26	34	25	e244	377	29	27	31	26	25	26	24
17	25	29	25	e167	264	29	27	30	26	25	26	24
18	25	27	25	e111	294	28	26	30	26	25	26	24
19	26	26	25	e67	1690	30	27	30	26	25	26	24
20	26	26	25	55	2830	30	27	30	26	27	26	24
21	32	26	25	47	1620	28	28	30	26	27	26	24
22	358	346	25	42	816	28	28	30	26	26	25	24
23	1180	1150	25	39	1290	28	28	29	26	26	27	24
24	282	795	25	38	1170	28	28	29	26	26	28	24
25	106	e301	25	37	561	28	28	29	26	27	27	24
26	55	e141	25	36	358	28	28	29	26	27	26	24
27	30	83	25	36	248	28	27	29	26	26	26	24
28	354	51	25	61	182	28	28	28	26	26	25	24
29	1180	37	405	66	---	28	28	27	26	26	25	24
30	777	31	2330	115	---	28	28	27	26	26	25	24
31	271	---	954	154	---	28	---	26	---	41	26	---
TOTAL	5215	5476	4402	23878	25381	1170	821	894	780	808	824	736
MEAN	168	183	142	770	906	37.7	27.4	28.8	26.0	26.1	26.6	24.5
MAX	1180	1150	2330	7440	5440	116	28	31	26	41	32	28
MIN	25	26	25	36	31	28	26	26	26	25	25	24
AC-FT	10340	10860	8730	47360	50340	2320	1630	1770	1550	1600	1630	1460
CFSM	0.08	0.08	0.07	0.36	0.42	0.02	0.01	0.01	0.01	0.01	0.01	0.01
IN.	0.09	0.09	0.08	0.41	0.44	0.02	0.01	0.02	0.01	0.01	0.01	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2005, BY WATER YEAR (WY)

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005														
MEAN	33.8	30.3	42.3	72.5	127	68.7	31.7	24.7	23.8	25.4	31.3	43.1																																													
MAX	200	183	295	861	1443	669	155	30.7	27.5	36.4	83.6	440																																													
(WY)	1973	2005	1966	1993	1993	1978	1965	1967	1995	1996	2003	1983																																													
MIN	18.7	20.4	21.9	21.7	19.6	19.3	21.3	16.2	20.0	19.3	20.0	20.4																																													
(WY)	1964	1965	1978	1972	1964	1972	1972	1964	2004	2003	2002	1978																																													

SUMMARY STATISTICS

	FOR 2005 WATER YEAR	WATER YEARS 1963 - 2005
ANNUAL TOTAL	70385	
ANNUAL MEAN	193	45.7
HIGHEST ANNUAL MEAN		215
LOWEST ANNUAL MEAN		22.5
HIGHEST DAILY MEAN	7440	13700
LOWEST DAILY MEAN	24	15
ANNUAL SEVEN-DAY MINIMUM	24	15
ANNUAL RUNOFF (AC-FT)	139600	33140
ANNUAL RUNOFF (CFSM)	0.090	0.021
ANNUAL RUNOFF (INCHES)	1.22	0.29
10 PERCENT EXCEEDS	311	29
50 PERCENT EXCEEDS	27	25
90 PERCENT EXCEEDS	25	22

e Estimated

09504000 VERDE RIVER NEAR CLARKDALE, AZ

**LOCATION**--Lat 34°51'08", long 112°03'55", in SE1/4NW1/4SE1/4 sec. 17, T.17 N., R.3 E., Yavapai County, Hydrologic Unit 15060202, in Prescott National Forest, on left bank 1.7 mi downstream from Sycamore Creek and 5.6 mi north of Clarkdale.

**DRAINAGE AREA**--3,503 mi<sup>2</sup>, of which 364 mi<sup>2</sup> is noncontributing including 357 mi<sup>2</sup> in Aubrey Valley Playa, a closed basin.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD**--June 1915 to Oct. 1916, May 1917 to July 1921, Apr. 1965 to current year.

**REVISED RECORDS**--WSP 1213: 1917, 1920. WDR AZ--89--1: Drainage area.

**GAGE**--Water-stage recorder. Elevation of gage is 3,500 ft above sea level, from topographic map. June 1915 to June 1921, at site 2.5 mi downstream at different datum.

**REMARKS**--Records good except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 53,200 ft<sup>3</sup>/s Feb. 20, 1993, gage height, 26.39 ft, from rating curve extended above 20,000 ft<sup>3</sup>/s on basis of slope-area measurement at 53,200 ft<sup>3</sup>/s; minimum daily, 55 ft<sup>3</sup>/s Aug. 31 and Sept. 1, 1920.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 2,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23 .....	0700	2,150	5.17	Jan. 27 .....	1115	4,520	7.71
Nov. 8 .....	1600	7,440	9.60	Feb. 12 .....	0445	*27,000	*17.94
Nov. 22 .....	1245	2,300	5.34	Feb. 16 .....	0700	3,750	7.13
Dec. 29 .....	1830	22,400	16.39	Feb. 19 .....	1415	8,470	10.23
Jan. 4 .....	2245	2,910	6.02	Feb. 23 .....	0845	2,910	6.43
Jan. 11 .....	2130	22,500	16.43				

Minimum daily discharge, 67 ft<sup>3</sup>/s on Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	259	89	1070	569	285	103	88	77	73	95	91
2	70	170	85	643	414	228	93	87	77	72	90	e85
3	69	126	e81	441	265	186	89	85	77	72	80	e75
4	69	101	e81	1930	198	158	87	84	77	72	78	e74
5	68	89	e80	2090	e148	154	86	84	77	72	90	e74
6	68	82	e80	1200	e133	e177	86	83	77	72	84	e75
7	67	79	e80	762	e128	e225	86	84	76	72	79	e73
8	100	1980	82	529	e126	178	85	84	76	72	96	74
9	88	1480	80	629	e125	147	86	83	76	72	83	76
10	76	1060	80	3110	123	137	86	83	77	72	85	75
11	71	489	79	14300	2450	132	85	83	77	72	110	73
12	70	e260	79	13400	17600	122	85	83	77	72	109	73
13	68	e168	78	5560	e6020	e110	85	83	76	72	94	73
14	68	e129	78	2170	e3270	e106	84	83	76	72	87	73
15	68	e108	78	1160	e2160	e104	84	83	75	72	79	73
16	68	e98	77	770	2910	e102	84	82	74	72	78	73
17	68	91	77	684	1680	98	84	82	74	72	78	73
18	68	87	78	722	3010	94	84	82	74	72	78	73
19	68	85	77	712	7390	95	84	82	74	108	76	73
20	68	84	78	775	5590	941	84	81	74	79	75	73
21	72	85	78	763	3180	596	84	81	74	75	75	73
22	90	1340	78	887	2240	249	85	80	75	76	75	74
23	1070	1830	78	713	2580	161	85	80	111	76	84	73
24	530	1240	77	520	1920	212	90	79	83	77	78	73
25	251	539	77	361	1040	202	88	79	78	78	81	73
26	164	267	78	310	604	323	86	78	75	82	78	73
27	120	180	78	3160	459	356	85	79	74	89	76	74
28	117	134	78	1620	366	264	86	79	73	78	75	74
29	1020	104	6720	804	---	198	86	78	73	76	75	74
30	971	95	5830	654	---	148	87	78	73	78	74	73
31	486	---	2400	739	---	124	---	77	---	77	75	---
TOTAL	6321	12839	17169	63188	66698	6612	2592	2537	2307	2346	2570	2236
MEAN	204	428	554	2038	2382	213	86.4	81.8	76.9	75.7	82.9	74.5
MAX	1070	1980	6720	14300	17600	941	103	88	111	108	110	91
MIN	67	79	77	310	123	94	84	77	73	72	74	73
AC-FT	12540	25470	34050	125300	132300	13110	5140	5030	4580	4650	5100	4440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2005, BY WATER YEAR (WY)

	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	116	127	188	235	470	441	173	86.2	75.9	99.3	100	109																																																																															
MAX	1080	736	1032	2800	3485	2763	1520	355	90.5	670	201	670																																																																															
(WY)	1973	1920	1966	1993	1980	1978	1973	1973	1987	1919	1919	1983																																																																															
MIN	67.9	68.1	71.7	73.4	73.8	73.2	68.6	62.7	59.5	63.7	67.4	66.3																																																																															
(WY)	1979	2004	2004	1967	1972	1972	1968	2004	2004	2004	2002	1920																																																																															

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1915 - 2005
ANNUAL TOTAL	65975	187415	
ANNUAL MEAN	180	513	185
HIGHEST ANNUAL MEAN			645
LOWEST ANNUAL MEAN			76.2
HIGHEST DAILY MEAN	7080	Sep 20	30000
LOWEST DAILY MEAN	58	Jun 19	55
ANNUAL SEVEN-DAY MINIMUM	59	Jun 15	59
MAXIMUM PEAK FLOW			50600
MAXIMUM PEAK STAGE			19.10
ANNUAL RUNOFF (AC-FT)	130900	371700	134400
10 PERCENT EXCEEDS	160	1050	193
50 PERCENT EXCEEDS	76	84	82
90 PERCENT EXCEEDS	60	73	71

e Estimated

**GILA RIVER BASIN**  
**09504000 VERDE RIVER NEAR CLARKDALE, AZ—CONTINUED**

**WATER-QUALITY RECORDS**

**PERIOD OF RECORD.**--Mar. 1976 to Oct. 1979, Jan. 1980 to Aug. 1983 and Oct. 1986 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Calcium unfltrd recoverable, mg/L (00916)
DEC 08...	1230	84	<2.0	675	9.2	97	7.9	526	11.5	12.4	240	56.5	57.9
MAR 03...	0915	189	20	672	9.5	98	8.1	362	12.8	11.4	170	41.7	44.4
JUN 09...	1030	78	<2.0	667	8.7	107	8.2	518	27.5	19.0	230	51.2	58.9
AUG 31...	0910	75	14	673	7.6	95	8.1	520	18.3	19.8	240	54.2	54.9
Date	Magnesium, water, unfltrd, mg/L (00925)	Magnesium, water, recoverable, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, water fltrd, mg/L as CaCO3 (39086)	Bicarbonate, water fltrd, mg/L (00453)	Carbonate, water fltrd, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, at 180degC wat fltrd, acre-ft (70303)	Residue on evap. at 180degC wat fltrd, mg/L (70300)
DEC 08...	23.1	21.6	2.10	22.2	264	319	1	12.1	.2	8.2	284	.41	304
MAR 03...	15.3	15.1	2.26	15.7	169	204	1	8.98	.2	7.8	195	.28	207
JUN 09...	25.4	26.2	2.23	22.1	257	308	2	12.2	.2	7.8	275	.39	285
AUG 31...	25.4	23.8	2.07	22.7	257	314	.0	12.2	.2	7.4	279	.41	303
Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia org-N, water, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd, mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd, ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water, unfltrd, ug/L (01002)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (01012)
DEC 08...	<10	E.05n	<.04	.32r	.03	E3k	<.20	<.2	16.0	17	181	<.06	<.06
MAR 03...	14	.21	<.04	.31	.08r	E4k	E.10n	<.2	8.9	10	94	<.06	E.04n
JUN 09...	<10	.10	<.04	<.06	E.01*n	E5k	<.20	<.2	15.9	19	183	<.06	<.06
AUG 31...	19	.10	<.04	E.03n	.04	E10k	<.20	<.2	15.7	16.6oc	172	<.06	<.06
Date	Boron, water, unfltrd recoverable, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd, ug/L (01027)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recoverable, ug/L (71900)	Selenium, water, unfltrd, ug/L (01147)	Zinc, water, fltrd, ug/L (01090)
DEC 08...	137	E.02n	<.04	1.5	2.9r	1.3r	.50r	.15r	15	<.01	<.01	.7	43.2r
MAR 03...	91	<.04	E.02n	2.1	2.0	2.2	E.04n	.64	24	E.01n	E.01n	.7	1.6
JUN 09...	171	<.04	<.04	1.1	.7	1.4	.12	.32	9	<.01	E.01n	.7	1.0
AUG 31...	179	<.04	.07	1.1oc	1.0	2.4	E.07n	1.26	27	<.01	E.01n	.28oc	1.7

**GILA RIVER BASIN**  
**09504000 VERDE RIVER NEAR CLARKDALE, AZ—CONTINUED**

**WATER-QUALITY RECORDS**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Zinc, water, unfltrd recover -able, ug/L (01092)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC 08...	E2n	16	3.6
MAR 03...	2	43	22
JUN 09...	E2n	22	4.6
AUG 31...	3	51	10

Remark codes used in this table:

< -- Less than.

E -- Estimated.

Value qualifier codes used in this table:

\* -- Sample was warm when received

c -- See laboratory comment

k -- Counts outside acceptable range

n -- Below the LRL and above the LT-MDL

o -- Result determined by alternate method

r -- Value verified by rerun, same method



GILA RIVER BASIN

09504420 OAK CREEK NEAR SEDONA, AZ

**LOCATION.**--Lat 34°51'42", long 111°45'40", in NE1/4NE1/4NE1/4 sec. 18, T.17 N., R.6 E., Coconino County, Hydrologic Unit 15060202, on left bank 290 ft downstream from State Highway 179 bridge in Sedona, 28 mi southwest of Flagstaff, and 35.1 mi upstream from mouth.

**DRAINAGE AREA.**--233 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Oct. 1981 to current year. Prior to Oct. 1995 published under station 09504430.

**GAGE.**--Water-stage recorder and crest-stage gage. Datum of gage is 4,169.20 ft above sea level (ADOT benchmark).

**REMARKS.**--Records good, except for estimated daily discharges, which are fair. Many diversions above and below station for irrigation.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 23,200 ft<sup>3</sup>/s Feb. 19, 1993, gage height, 20.33 ft, from outside floodmark, from rating curve extended above 8,000 ft<sup>3</sup>/s on the basis of contracted-opening of peak flow; minimum daily, 19 ft<sup>3</sup>/s June 12, 1986.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 900 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 8.....	1615	1,100	4.84	Jan. 27.....	0530	3,570	7.03
Nov. 22.....	0100	2,640	6.15	Feb. 12.....	0200	9,470	11.33
Dec. 29.....	1100	*19,000	*18.47 a	Feb. 18.....	2330	5,230	8.36
Jan. 3.....	2300	1,530	5.27	Mar. 20.....	1615	1,140	4.88
Jan. 11.....	1900	7,320	9.96				

Minimum daily discharge, 27 ft<sup>3</sup>/s on July 8-16.

a- peak discharge was recorded, peak gage height from floodmark

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	43	42	349	200	133	70	92	32	29	30	30
2	29	39	40	e219	149	133	61	64	31	28	28	31
3	29	37	38	e409	110	137	60	52	32	28	29	30
4	29	36	38	702	96	140	61	46	32	28	28	30
5	29	35	40	217	96	325	60	43	32	28	28	29
6	29	35	48	132	109	305	52	41	32	28	29	29
7	29	36	41	92	143	184	49	41	32	28	28	28
8	29	293	41	79	159	162	48	40	31	27	30	28
9	29	256	42	172	123	175	50	39	32	27	40	29
10	29	109	70	612	101	200	52	38	34	27	37	28
11	29	56	118	3970	2100	197	48	38	34	27	41	29
12	29	43	123	2300	5750	180	44	37	36	27	34	28
13	29	40	121	726	1750	166	43	37	34	27	40	28
14	29	39	107	387	845	306	41	37	33	27	50	28
15	29	39	99	263	721	209	41	37	33	27	37	28
16	29	40	78	236	1530	170	42	36	32	27	34	28
17	29	39	57	258	668	151	41	36	32	28	31	28
18	30	39	46	288	1850	123	41	36	32	28	31	28
19	30	38	42	336	2870	242	40	35	32	28	30	28
20	29	40	40	411	1260	1040	39	35	32	28	31	28
21	45	1030	39	434	710	481	39	35	31	28	30	29
22	45	1930	38	465	1180	231	39	34	31	29	30	29
23	31	559	37	437	757	212	39	34	31	29	32	28
24	30	285	36	403	384	276	106	34	31	32	32	28
25	30	165	36	327	271	298	240	34	30	29	31	28
26	30	103	36	429	218	283	151	34	29	30	31	28
27	33	81	36	2180	191	243	105	34	29	29	30	29
28	304	82	36	716	150	182	80	33	29	29	30	29
29	117	83	9470	396	---	135	374	33	29	28	30	29
30	93	51	2350	259	---	109	165	32	29	29	30	29
31	65	---	690	247	---	87	---	32	---	29	29	---
TOTAL	1406	5701	14075	18451	24491	7215	2321	1229	949	873	1001	859
MEAN	45.4	190	454	595	875	233	77.4	39.6	31.6	28.2	32.3	28.6
MAX	304	1930	9470	3970	5750	1040	374	92	36	32	50	31
MIN	29	35	36	79	96	87	39	32	29	27	28	28
AC-FT	2790	11310	27920	36600	48580	14310	4600	2440	1880	1730	1990	1700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	MIN
MEAN	36.1	56.5	95.3
MAX (WY)	1987	1983	2005
MIN (WY)	1995	1996	1986

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1982 - 2005
ANNUAL TOTAL	34738	78571	
ANNUAL MEAN	94.9	215	85.4
HIGHEST ANNUAL MEAN			249
LOWEST ANNUAL MEAN			30.8
HIGHEST DAILY MEAN	9470	9470	9470
LOWEST DAILY MEAN	25	27	19
ANNUAL SEVEN-DAY MINIMUM	25	27	22
ANNUAL RUNOFF (AC-FT)	68900	155800	61880
10 PERCENT EXCEEDS	99	391	132
50 PERCENT EXCEEDS	31	39	32
90 PERCENT EXCEEDS	27	28	27

e Estimated

09504500 OAK CREEK NEAR CORNVILLE, AZ

**LOCATION**--Lat 34°45'52", long 111°53'25", in NW1/4SW1/4 sec. 23, T.16 N., R.4 E., Yavapai County, Hydrologic Unit 15060202, on right bank 250 ft downstream from county highway bridge, 0.2 mi upstream from Page Springs, 4 mi northeast of Cornville, and 15 mi upstream from mouth.

**DRAINAGE AREA**--355 mi<sup>2</sup>.

**PERIOD OF RECORD**--July 1940 to Sept. 1945, Apr. 1948 to current year.

**REVISED RECORDS**--WSP 1149: 1948(M). WRD Ariz. 1974: 1973. WDR AZ--89--1: Drainage area. WDR AZ--98--1: 1997.

**GAGE**--Water-stage recorder and crest-stage gage. Elevation of gage is 3,470 ft above sea level, from topographic map. Prior to Mar. 10, 1981, at site 250 ft upstream at same datum.

**REMARKS**--Records fair. Numerous diversions above and below station for irrigation.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 26,400 ft<sup>3</sup>/s Feb. 19, 1980, gage height, 16.30 ft; maximum gage height, 19.15 ft, Feb. 20, 1993; minimum discharge, 6 ft<sup>3</sup>/s July 27, 1940.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Maximum stage since at least 1885, 23 ft in Mar. 1938, from floodmarks (upstream side of bridge).

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 1,300 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 22.....	0600	2,550	6.68	Jan. 27.....	0945	3,950	7.54
Dec. 29.....	1730	*20,300	*17.11	Feb. 12.....	0515	12,500	13.69
Jan. 4.....	0115	4,050	7.79	Feb. 19.....	0245	5,200	8.52
Jan. 11.....	2215	7,360	10.25	Mar. 20.....	0745	1,450	4.92

Minimum daily discharge, 18 ft<sup>3</sup>/s on July 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	67	66	536	246	126	98	154	25	28	47	33
2	26	51	59	315	192	119	82	100	27	26	37	39
3	26	44	54	345	130	122	74	76	28	26	61	42
4	26	43	53	2370	98	136	72	66	27	25	53	48
5	26	42	56	695	98	270	73	56	26	25	34	51
6	26	40	59	373	114	431	66	51	25	24	30	55
7	26	41	70	e223	135	236	59	49	27	23	31	54
8	26	236	57	194	e158	166	57	50	26	26	151	73
9	25	370	56	217	166	171	53	48	28	26	115	69
10	25	179	59	587	114	190	55	44	27	27	97	54
11	27	102	107	3310	988	195	54	42	28	27	176	53
12	29	76	137	3340	7250	174	52	43	26	25	145	54
13	27	63	138	1030	2480	154	58	43	29	23	79	48
14	25	58	126	539	1180	274	57	41	28	25	68	32
15	26	54	118	321	785	239	57	42	27	e22	94	31
16	27	51	105	252	1840	172	52	42	34	e21	68	30
17	28	48	87	253	953	135	54	39	34	e20	63	25
18	29	47	71	292	1390	113	53	32	40	e20	49	22
19	29	47	63	347	3810	141	41	33	46	20	53	24
20	28	46	59	455	1790	1220	33	34	42	21	48	24
21	32	537	55	491	1050	784	31	33	38	20	42	24
22	102	2080	53	540	1450	367	32	32	39	20	41	25
23	42	773	51	519	1230	244	31	31	42	20	37	39
24	30	334	49	461	580	374	81	29	37	27	39	34
25	28	200	48	383	355	311	267	33	38	23	36	40
26	28	139	47	312	259	424	214	32	37	20	29	40
27	29	111	46	2360	222	343	176	30	27	22	27	31
28	482	98	47	1070	162	250	104	30	31	20	31	32
29	164	109	8400	701	---	209	347	28	28	18	29	34
30	124	85	3100	438	---	156	275	27	29	94	27	31
31	87	---	980	338	---	125	---	25	---	85	28	---
TOTAL	1682	6171	14476	23607	29225	8371	2758	1415	946	849	1865	1191
MEAN	54.3	206	467	762	1044	270	91.9	45.6	31.5	27.4	60.2	39.7
MAX	482	2080	8400	3340	7250	1220	347	154	46	94	176	73
MIN	25	40	46	194	98	113	31	25	25	18	27	22
MED	28	71	59	455	468	195	57	41	28	23	47	37
AC-FT	3340	12240	28710	46820	57970	16600	5470	2810	1880	1680	3700	2360
CFSM	0.15	0.58	1.32	2.15	2.94	0.76	0.26	0.13	0.09	0.08	0.17	0.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	45.6	63.0	112	107	189	243	157	31.9	20.6	23.9	33.7	39.5
MAX	571	450	881	1304	1391	1323	1097	216	58.0	40.8	90.9	373
(WY)	1973	1966	1967	1993	1980	1978	1973	1973	1957	1950	1951	1970
MIN	20.1	22.7	29.6	32.2	31.2	28.8	25.0	17.1	13.7	14.1	12.9	14.7
(WY)	1990	1993	1996	1996	2002	1972	1996	1943	1943	1940	1944	1980

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1940 - 2005
ANNUAL TOTAL	36312	92556	
ANNUAL MEAN	99.2	254	87.3
HIGHEST ANNUAL MEAN			256
LOWEST ANNUAL MEAN			19.6
HIGHEST DAILY MEAN	8400	Dec 29	14000
LOWEST DAILY MEAN	16	Jul 12	8.0
ANNUAL SEVEN-DAY MINIMUM	18	Jul 1	9.4
ANNUAL RUNOFF (AC-FT)	72020		63270
ANNUAL RUNOFF (CFSM)		183600	
10 PERCENT EXCEEDS	0.279	0.714	0.246
50 PERCENT EXCEEDS	125	486	137
90 PERCENT EXCEEDS	34	53	32
	20	26	18

e Estimated



09505350 DRY BEAVER CREEK NEAR RIMROCK, AZ

**LOCATION**--Lat 34°43'43", long 111°46'30", in NE1/4NW1/4 sec. 1, T.15 N., R.5 E., Yavapai County, Hydrologic Unit 15060202, in Coconino National Forest, on left upstream abutment of abandoned highway bridge, 1,000 ft upstream from present State Highway 179, and 5.5 mi north of Rimrock.

**DRAINAGE AREA**--142 mi<sup>2</sup>.

**PERIOD OF RECORD**--Oct. 1960 to current year.

**REVISED RECORDS**--WRD Ariz. 1969: Drainage area.

**GAGE**--Water-stage recorder and concrete control. Datum of gage is 3,694.38 ft above sea level (AZ Highway Department benchmark).

**REMARKS**--Records good except for estimated daily discharges, which are fair. No known diversions above station.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 26,600 ft<sup>3</sup>/s Sept. 5, 1970, gage height, 14.35 ft, from rating curve extended above 6,000 ft<sup>3</sup>/s on basis of computation of peak flow over weir at gage height 9.07 ft and 9.69 ft and slope-area measurement at gage height 14.35 ft; no flow for many days each year.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 600 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 22.....	0215	1,730	5.62	Feb. 19.....	0630	2,870	6.34
Dec. 29.....	1145	*11,800	*10.66	Mar. 5.....	1915	627	4.11
Jan. 3.....	2245	2,250	6.10	Mar. 20.....	1145	1,100	4.78
Jan. 11.....	2045	3,320	6.91	Aug. 2.....	1715	982	4.63
Jan. 27.....	0730	1,870	5.76	Aug. 8.....	1715	655	4.16
Feb. 12.....	0345	6,760	8.77	Aug. 23.....	2245	2,420	6.02
Feb. 16.....	0245	1,760	5.47				

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	7.9	12	179	151	76	36	31	0.00	0.00	0.22	e0.00
2	0.00	2.2	7.2	e109	98	70	30	17	0.00	0.00	48	e0.00
3	0.00	0.81	2.9	e322	57	77	45	9.7	0.00	0.00	7.6	e0.00
4	0.00	0.16	1.9	913	40	72	59	4.6	0.00	0.00	0.26	e0.00
5	0.00	0.02	1.8	262	39	284	43	2.1	0.00	0.00	e0.03	e0.00
6	0.00	0.01	1.6	146	46	261	26	1.1	0.00	0.00	e0.00	e0.00
7	0.00	0.00	2.2	e93	126	122	21	0.56	0.00	0.00	e0.00	e0.00
8	0.00	2.0	5.2	e53	147	93	22	0.25	0.00	0.00	35	e0.00
9	0.00	0.71	14	239	105	122	25	0.16	0.00	0.00	2.9	e0.00
10	0.00	0.09	62	497	72	160	23	0.12	0.00	0.00	0.30	e0.00
11	0.00	0.02	111	1640	827	179	21	0.09	0.00	0.00	85	e0.00
12	0.00	0.01	130	838	3520	169	19	0.07	0.00	0.00	102	e0.00
13	0.00	0.00	106	274	920	175	13	0.06	0.00	0.00	17	0.00
14	0.00	0.00	84	157	471	214	9.7	0.05	0.00	0.00	6.2	0.00
15	0.00	0.00	65	90	360	97	6.0	0.04	0.00	0.00	81	0.00
16	0.00	0.00	46	88	840	75	3.8	0.04	0.00	0.00	16	0.00
17	0.00	0.00	28	111	343	49	2.3	0.03	0.00	0.00	4.2	0.00
18	0.00	0.00	18	126	762	39	1.4	0.02	0.00	0.00	1.1	0.00
19	0.00	0.00	12	148	1800	61	0.80	0.02	0.00	0.00	0.80	0.00
20	0.00	0.00	9.3	180	887	800	0.40	0.02	0.00	0.00	4.5	0.00
21	0.00	220	6.0	192	406	314	0.21	0.01	0.00	0.00	e0.23	0.00
22	3.5	954	3.4	171	907	159	0.14	0.01	0.00	0.00	e0.05	0.00
23	0.02	239	2.1	172	457	116	0.11	0.00	0.00	0.00	120	0.00
24	0.00	115	1.4	153	252	99	113	0.00	0.00	0.00	144	0.00
25	0.00	59	0.76	132	163	75	264	0.00	0.00	0.00	9.3	0.00
26	0.00	33	0.42	132	111	160	117	0.00	0.00	0.00	1.7	0.00
27	0.00	24	0.23	985	151	178	45	0.00	0.00	0.00	0.46	0.00
28	26	37	0.16	421	139	126	23	0.00	0.00	0.00	0.16	0.00
29	2.7	62	4370	238	---	82	100	0.00	0.00	0.00	e0.05	0.00
30	0.20	24	933	192	---	74	68	0.00	0.00	10	e0.01	0.00
31	0.42	---	322	237	---	53	---	0.00	---	1.4	e0.01	---
TOTAL	32.84	1780.93	6359.57	9490	14197	4631	1137.86	67.05	0.00	11.40	688.08	0.00
MEAN	1.06	59.4	205	306	507	149	37.9	2.16	0.00	0.37	22.2	0.00
MAX	26	954	4370	1640	3520	800	264	31	0.00	10	144	0.00
MIN	0.00	0.00	0.16	53	39	39	0.11	0.00	0.00	0.00	0.00	0.00
MED	0.00	0.43	9.3	179	208	116	22	0.04	0.00	0.00	1.7	0.00
AC-FT	65	3530	12610	18820	28160	9190	2260	133	0.00	23	1360	0.00
CFSM	0.01	0.42	1.44	2.16	3.57	1.05	0.27	0.02	0.00	0.00	0.16	0.00
IN.	0.01	0.47	1.67	2.49	3.72	1.21	0.30	0.02	0.00	0.00	0.18	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2005, BY WATER YEAR (WY)

MEAN	7.62	16.9	57.1	59.2	113	155	97.2	7.33	0.00	0.43	2.14	10.7
MAX	246	251	602	814	850	678	598	208	0.17	10.6	34.9	224
(WY)	1973	1966	1979	1993	1980	1978	1973	1973	1979	1999	1992	1970
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1961	1961	1961	1961	1961	1967	1972	1961	1961	1965	1962	1962

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1961 - 2005

ANNUAL TOTAL	11211.08	38395.73	
ANNUAL MEAN	30.6	105	43.5
HIGHEST ANNUAL MEAN			144
LOWEST ANNUAL MEAN			0.32
HIGHEST DAILY MEAN	4370	Dec 29	4370
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	22240		76160
ANNUAL RUNOFF (CFSM)	0.216		0.741
ANNUAL RUNOFF (INCHES)	2.94		10.06
10 PERCENT EXCEEDS	36		227
50 PERCENT EXCEEDS	0.00		1.1
90 PERCENT EXCEEDS	0.00		0.00



## 09505400 BEAVER CREEK NEAR LAKE MONTEZUMA, AZ--CONTINUED

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	36	25	389	360	131	78	66	4.4	0.74	56	2.8
2	2.9	24	16	e236	247	118	60	41	3.9	0.76	18	3.0
3	2.5	17	13	e227	164	118	63	28	3.2	0.74	12	2.6
4	2.9	13	12	e1200	131	118	86	20	3.1	0.71	9.2	2.5
5	2.2	11	13	553	124	191	86	16	2.3	0.70	5.4	2.9
6	1.6	10	12	338	127	409	61	13	1.9	0.66	10	2.9
7	1.9	9.8	13	244	154	190	48	12	2.1	0.65	75	2.5
8	2.5	18	14	187	298	140	42	11	1.7	0.62	55	2.4
9	2.0	15	12	355	270	154	44	11	1.5	0.62	48	1.9
10	2.8	11	14	745	171	189	44	11	1.5	0.59	59	1.4
11	2.0	9.9	121	1550	521	209	41	11	1.3	0.56	107	1.6
12	1.3	9.5	153	1320	5140	205	37	11	1.4	0.53	103	1.7
13	1.2	9.4	139	484	1360	206	32	9.8	1.3	0.47	58	1.7
14	1.2	9.6	112	319	636	237	26	10	1.2	0.44	35	1.9
15	2.4	8.6	89	224	450	167	20	7.4	1.2	0.39	69	2.5
16	3.1	8.5	65	196	756	125	16	6.7	1.0	0.41	48	2.8
17	3.5	8.9	44	209	441	95	13	8.2	1.0	0.43	24	2.8
18	3.8	9.0	31	233	494	84	11	9.2	0.98	0.42	13	2.6
19	4.1	8.9	23	259	2220	79	10	9.6	0.90	0.53	10	2.6
20	4.1	8.9	18	301	1170	538	10	9.7	0.84	0.56	8.2	2.2
21	4.3	184	16	324	606	454	10	7.4	0.80	0.49	7.2	1.7
22	7.4	1570	14	316	908	206	9.7	6.1	0.78	0.43	6.9	2.3
23	6.9	537	12	310	613	145	9.0	6.4	0.77	0.55	77	2.3
24	5.8	220	11	286	321	137	78	6.5	0.79	0.67	286	2.3
25	5.9	127	10	262	211	108	363	6.1	0.72	0.58	64	1.7
26	5.4	71	10	225	160	157	195	5.9	0.71	0.62	27	1.4
27	5.5	47	10	1010	155	235	115	5.5	0.73	3.4	14	1.4
28	65	36	10	712	192	188	64	5.6	0.76	11	9.2	2.0
29	147	68	4840	485	---	140	56	5.4	0.80	3.1	6.4	2.4
30	134	41	2130	340	---	114	100	5.0	0.78	3.0	5.4	2.4
31	57	---	642	406	---	96	---	4.6	---	36	3.9	---
TOTAL	495.4	3157.0	8644	14245	18400	5683	1827.7	386.1	44.36	71.37	1329.8	67.2
MEAN	16.0	105	279	460	657	183	60.9	12.5	1.48	2.30	42.9	2.24
MAX	147	1570	4840	1550	5140	538	363	66	4.4	36	286	3.0
MIN	1.2	8.5	10	187	124	79	9.0	4.6	0.71	0.39	3.9	1.4
MED	3.2	14	16	319	341	154	44	9.6	1.1	0.62	24	2.4
AC-FT	983	6260	17150	28250	36500	11270	3630	766	88	142	2640	133

WTR YR 2005 TOTAL 54350.93 MEAN 149 MAX 5140 MIN 0.39 MED 12 AC-FT 107800

e Estimated

## 09505800 WEST CLEAR CREEK NEAR CAMP VERDE, AZ

**LOCATION.**--Lat 34°32'19", long 111°41'36", in NW1/4NW1/4 sec. 11, T.13 N., R.6 E., Yavapai County, Hydrologic Unit 15060203, in Coconino National Forest, on left bank at Bull Pen Ranch, 9 mi east of Camp Verde, and 11 mi upstream from mouth.

**DRAINAGE AREA.**--241 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--Dec. 1964 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 3,630 ft above sea level, from topographic map.

**REMARKS.**--Records good except for estimated daily discharges which are poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 24,800 ft<sup>3</sup>/s Jan. 8, 1993, gage height, 13.22 ft, from floodmarks and rating curve extended above 2,700 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 8.3 ft, 10.15 ft, and 13.22 ft; minimum daily, 11 ft<sup>3</sup>/s Aug. 1 and 22, 1986.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 21 .....	2015	3,470	5.13	Jan. 27 .....	0800	2,860	4.71
Dec. 29 .....	1622	*15,300	*10.43	Feb. 12 .....	0515	8,650	7.92
Jan. 3 .....	2100	6,090	6.69	Feb. 19 .....	0630	5,250	6.23
Jan. 11 .....	2200	4,910	6.03	Aug. 14 .....	2045	1,140	3.14

Minimum daily discharge, 13 ft<sup>3</sup>/s on Oct. 3--10, 12--17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	e19	e32	e100	157	112	52	31	19	15	25	15
2	14	e16	e30	e75	e86	97	46	29	19	15	19	16
3	13	e15	e28	e800	66	89	44	29	19	15	17	16
4	13	15	e27	1310	47	90	41	27	19	15	16	16
5	13	15	e26	385	43	166	e43	25	18	15	16	16
6	13	15	e22	198	40	290	e41	24	18	14	18	15
7	13	15	e22	117	87	140	e40	24	18	14	46	15
8	13	15	e22	87	134	114	35	23	18	15	48	16
9	13	15	e22	384	131	103	36	23	18	15	27	15
10	13	15	e22	709	57	103	39	22	19	14	56	16
11	14	15	e22	1890	514	115	38	21	18	15	49	16
12	13	15	e22	1390	6360	112	36	21	18	15	29	15
13	13	15	e22	488	2860	108	34	21	18	15	54	15
14	13	15	22	239	809	112	32	21	17	15	149	15
15	13	15	21	e170	472	115	32	20	17	15	91	15
16	13	15	20	e147	527	77	31	21	16	15	37	15
17	13	15	20	e150	380	73	31	21	16	15	31	15
18	14	15	24	e150	368	65	30	20	16	15	25	15
19	14	15	26	e144	3160	59	30	20	16	16	e29	15
20	14	15	25	e186	1770	72	30	20	16	16	e28	15
21	15	640	23	233	970	291	29	19	16	16	e28	16
22	16	751	22	367	1510	121	29	19	16	16	e22	16
23	15	163	21	382	1160	87	29	19	16	16	e19	16
24	15	108	19	306	391	72	110	19	16	17	e19	16
25	14	87	20	279	166	71	95	19	15	19	e19	16
26	14	61	20	195	132	81	94	19	15	16	e19	16
27	15	53	20	1790	125	80	81	19	15	21	16	16
28	273	47	20	1010	120	110	48	19	15	17	15	16
29	161	e41	6180	448	---	100	38	19	15	17	15	15
30	79	e36	3060	156	---	70	35	20	15	17	15	15
31	30	---	579	210	---	60	---	19	---	20	15	---
TOTAL	913	2292	10461	14495	22642	3355	1329	673	507	491	1012	465
MEAN	29.5	76.4	337	468	809	108	44.3	21.7	16.9	15.8	32.6	15.5
MAX	273	751	6180	1890	6360	291	110	31	19	21	149	16
MIN	13	15	19	75	40	59	29	19	15	14	15	15
AC-FT	1810	4550	20750	28750	44910	6650	2640	1330	1010	974	2010	922

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2005, BY WATER YEAR (WY)

	MEAN	30.6	28.0	81.5	83.3	148	194	107	24.3	16.2	17.5	22.0	21.7
MAX (WY)	458	110	758	1136	956	886	923	157	24.8	34.9	102	113	1983
MIN (WY)	1973	1973	1979	1993	1980	1978	1973	1973	1984	1999	1992	1983	1983
MIN (WY)	13.8	15.2	15.7	16.3	14.8	15.3	15.4	14.3	12.9	13.3	13.3	14.0	14.0
(WY)	1977	1969	1970	1981	1974	1967	1967	2000	2002	2002	2002	2001	2001

## SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1965 - 2005
ANNUAL TOTAL	18694	58635	
ANNUAL MEAN	51.1	161	64.3
HIGHEST ANNUAL MEAN			199
LOWEST ANNUAL MEAN			15.3
HIGHEST DAILY MEAN	6180	Dec 29	6360
LOWEST DAILY MEAN	13	Sep 27	13
ANNUAL SEVEN-DAY MINIMUM	13	Oct 3	13
ANNUAL RUNOFF (AC-FT)	37080	116300	46550
10 PERCENT EXCEEDS	26	275	95
50 PERCENT EXCEEDS	16	22	18
90 PERCENT EXCEEDS	14	15	14

e Estimated

09505800 WEST CLEAR CREEK NEAR CAMP VERDE, AZ—CONTINUED

(NATIONAL WATER-QUALITY ASSESSMENT STATION)

WATER-QUALITY RECORDS

PERIOD OF RECORD--Feb. 1996 to current year.

PERIOD OF DAILY RECORD--

SPECIFIC CONDUCTANCE: Oct. 1996 to Apr. 1997.

WATER TEMPERATURE: Oct. 1996 to Apr. 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd, std units (00400)	Specific conductance, wat unfltrd, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)
OCT													
27...	1130	15	667	8.7	98	8.3	388	15.5	14.4	201	230	7	3.52
DEC													
14...	1155	22	679	10.2	100	8.2	350	11.5	9.3	177	207	5	3.42
FEB													
23...	1215	1000	682	11.3	105	7.4	88	13.0	7.5	39	47	--	1.14
MAY													
02...	1135	29	672	8.5	97	8.3	289	21.5	15.7	148	168	6	3.26
JUN													
28...	1200	15	671	8.0	104	8.4	385	31.5	21.6	194	219	9	3.78
AUG													
23...	1130	E19	672	7.6	99	8.2	332	26.0	22.0	174	200	6	2.95

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, wat unfltrd, by analysis, mg/L (62855)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT									
27...	2.0	<.04	<.06	<.008	.006	.015	E.06n	3	.12
DEC									
14...	2.4	<.04	<.06	<.008	E.005n	.014	.08	2	.12
FEB									
23...	1.0r	<.04	<.06	<.008	.049	.23oc	.28	50	135
MAY									
02...	2.2	<.04	<.06	<.008	.026	.048	.17	3	.23
JUN									
28...	2.4	<.04	<.06	<.008	.014	.027	.08	8	.32
AUG									
23...	1.8	<.04	<.06	<.008	.014	.036	.18	10	--

Remark codes used in this table:

- < -- Less than.
- E -- Estimated.

Value qualifier codes used in this table:

- c -- See laboratory comment
- n -- Below the LRL and above the LT-MDL
- o -- Result determined by alternate method
- r -- Value verified by rerun, same method



## GILA RIVER BASIN

## 09506000 VERDE RIVER NEAR CAMP VERDE, AZ

**LOCATION.**--Lat 34°26'54", long 111°47'21", in NW<sub>1/4</sub> sec. 11, T.12 N., R.5 E. (unsurveyed), Yavapai County, Hydrologic Unit 15060203, in Prescott National Forest, on right bank 600 ft upstream from Chasm Creek, 9 mi southeast of Camp Verde, and 9.7 mi downstream from West Clear Creek.

**DRAINAGE AREA.**--5,009 mi<sup>2</sup>, of which 365 mi<sup>2</sup> is noncontributing, including 357 mi<sup>2</sup> in Aubrey Valley Playa, a closed basin.

**PERIOD OF RECORD.**--Apr. 1934 to Sept. 1945 and Oct. 1988 to current year.

**REVISED RECORDS.**--WDR AZ--89--1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 2,874.11 ft above sea level.

**REMARKS.**--Records good. Several diversions above station for irrigation.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 119,000 ft<sup>3</sup>/s Feb. 20, 1993, gage height, 28.36 ft from floodmarks from rating curve extended above 17,000 ft<sup>3</sup>/s; minimum daily discharge, 25 ft<sup>3</sup>/s July 5, 12, 14, 2004.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 9 .....	1100	5,050	9.80	Jan. 12 .....	0800	36,700	18.22
Nov. 23 .....	0730	5,600	10.11	Jan. 27 .....	2300	9,080	11.18
Dec. 30 .....	0400	58,100	21.61	Feb. 12 .....	1545	*62,000	*22.15
Jan. 4 .....	1315	10,000	11.55	Feb. 19 .....	1315	20,800	14.87

Minimum daily discharge, 47 ft<sup>3</sup>/s July 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	727	300	3140	1700	1080	477	420	108	81	265	83
2	140	477	260	1790	1270	883	409	321	105	82	239	89
3	138	369	233	1270	939	787	367	265	103	85	206	115
4	131	308	219	8130	728	733	361	233	104	86	201	123
5	127	270	220	5700	612	722	354	213	110	84	198	118
6	121	247	215	2900	547	1460	320	201	116	78	178	116
7	116	221	211	1780	535	1230	287	193	106	72	196	110
8	110	255	212	1240	813	887	246	187	105	68	265	106
9	101	2300	200	1130	827	756	217	183	102	71	298	94
10	110	1810	189	2920	626	762	224	178	97	65	321	86
11	108	1320	206	11100	903	799	213	179	101	64	369	93
12	104	712	307	26000	35600	796	209	183	102	74	392	99
13	100	431	353	10200	23200	762	198	183	93	67	407	96
14	100	334	343	4540	9180	762	188	173	91	57	322	93
15	101	280	314	2500	4430	834	178	169	90	47	402	96
16	103	242	285	1640	4830	659	165	161	92	58	321	93
17	114	224	259	1360	4390	587	160	167	90	57	251	91
18	123	205	233	1350	2800	531	158	156	87	62	210	95
19	121	193	216	1410	13800	497	157	145	84	68	182	98
20	125	184	202	1540	12800	1020	152	130	87	77	161	97
21	129	193	192	1710	7840	3070	150	123	77	98	150	91
22	134	3300	185	1840	5630	1480	150	127	71	93	141	92
23	182	4600	179	1890	6470	926	150	134	63	90	129	93
24	702	2840	174	1650	4190	749	186	134	70	105	498	95
25	619	1890	171	1490	2780	808	629	130	104	128	304	91
26	386	1030	170	1240	1840	845	657	131	113	130	194	87
27	298	634	169	4190	1410	1070	524	128	105	131	164	81
28	342	465	167	6080	1300	1030	401	125	96	127	137	90
29	861	386	7430	2990	---	846	315	114	101	120	121	92
30	1230	369	28700	2010	---	658	458	118	89	116	113	77
31	1180	---	6900	1840	---	552	---	114	---	223	97	---
TOTAL	8394	26816	49414	118570	151990	28581	8660	5418	2862	2764	7432	2880
MEAN	271	894	1594	3825	5428	922	289	175	95.4	89.2	240	96.0
MAX	1230	4600	28700	26000	35600	3070	657	420	116	223	498	123
MIN	100	184	167	1130	535	497	150	114	63	47	97	77
AC-FT	16650	53190	98010	235200	301500	56690	17180	10750	5680	5480	14740	5710
CFSM	0.06	0.19	0.34	0.82	1.17	0.20	0.06	0.04	0.02	0.02	0.05	0.02
IN.	0.07	0.21	0.40	0.95	1.22	0.23	0.07	0.04	0.02	0.02	0.06	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2005, BY WATER YEAR (WY)

	184	229	329	670	1142	1265	599	128	80.1	105	190	238
MEAN	184	229	329	670	1142	1265	599	128	80.1	105	190	238
MAX	551	894	1594	7156	6160	4028	3050	337	123	232	616	1152
(WY)	1941	2005	2005	1993	1993	1938	1941	1941	1992	1999	1992	1939
MIN	103	167	189	188	164	153	118	64.2	38.4	48.4	59.8	83.0
(WY)	2004	2002	2001	2002	2002	2002	1996	2004	2004	1997	2002	1989

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1935 - 2005
ANNUAL TOTAL	137396	413781	
ANNUAL MEAN	375	1134	
HIGHEST ANNUAL MEAN			1403
LOWEST ANNUAL MEAN			137
HIGHEST DAILY MEAN	28700	Dec 30	35600
LOWEST DAILY MEAN	25	Jul 5	47
ANNUAL SEVEN-DAY MINIMUM	27	Jul 9	59
ANNUAL RUNOFF (AC-FT)	272500	820700	308700
ANNUAL RUNOFF (CFSM)	0.081	0.244	0.092
ANNUAL RUNOFF (INCHES)	1.10	3.31	1.25
10 PERCENT EXCEEDS	467	1940	678
50 PERCENT EXCEEDS	158	206	182
90 PERCENT EXCEEDS	40	90	75

09507500 FOSSIL CREEK DIVERSIONS TO CHILDS POWERPLANT, NEAR CAMP VERDE, AZ

**LOCATION.**--Lat 34°22'06", long 111°39'56", in NE1/4SW1/4 sec. 20, T.11 N., R.7 E. (unsurveyed), Yavapai County, Hydrologic Unit 15060203, at head of Stehr Lake, 2.3 mi northeast of Childs powerplant, 4.4 mi by flume downstream from Irving powerplant, and 17 mi southeast of Camp Verde.

**PERIOD OF RECORD.**--Jan. 1952 to Dec. 31, 2004 (discontinued).

**GAGE.**--Water-stage recorder and weir in concrete flume. Datum of gage is 3,716.2 ft above sea level.

**REMARKS.**--No estimated daily discharge. Records good. Record is obtained at the head of Stehr Lake, a regulatory basin, and shows the water used by Childs powerplant. Most of the flow originates at Fossil Springs, which are fairly constant. Diversion is made from Fossil Creek 8 mi upstream from this station and is first used by Irving powerplant. A second diversion from Fossil Creek enters the flume below Irving powerplant. Based on estimates and records for previous years, the flow through the Irving powerplant is estimated to be about 99 percent of the record published herewith.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 58 ft<sup>3</sup>/s Aug. 1 and 2, 1982; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	26	35	---	---	---	---	---	---	---	---	---
2	35	29	35	---	---	---	---	---	---	---	---	---
3	35	35	35	---	---	---	---	---	---	---	---	---
4	35	35	36	---	---	---	---	---	---	---	---	---
5	34	35	35	---	---	---	---	---	---	---	---	---
6	33	35	36	---	---	---	---	---	---	---	---	---
7	34	36	36	---	---	---	---	---	---	---	---	---
8	34	36	36	---	---	---	---	---	---	---	---	---
9	34	32	36	---	---	---	---	---	---	---	---	---
10	33	36	36	---	---	---	---	---	---	---	---	---
11	34	36	36	---	---	---	---	---	---	---	---	---
12	35	36	36	---	---	---	---	---	---	---	---	---
13	34	36	36	---	---	---	---	---	---	---	---	---
14	34	36	36	---	---	---	---	---	---	---	---	---
15	35	36	36	---	---	---	---	---	---	---	---	---
16	35	36	36	---	---	---	---	---	---	---	---	---
17	35	36	36	---	---	---	---	---	---	---	---	---
18	35	36	36	---	---	---	---	---	---	---	---	---
19	35	36	36	---	---	---	---	---	---	---	---	---
20	35	36	36	---	---	---	---	---	---	---	---	---
21	34	35	36	---	---	---	---	---	---	---	---	---
22	26	34	36	---	---	---	---	---	---	---	---	---
23	36	33	36	---	---	---	---	---	---	---	---	---
24	36	34	36	---	---	---	---	---	---	---	---	---
25	36	35	36	---	---	---	---	---	---	---	---	---
26	36	34	36	---	---	---	---	---	---	---	---	---
27	36	35	36	---	---	---	---	---	---	---	---	---
28	35	35	36	---	---	---	---	---	---	---	---	---
29	33	35	32	---	---	---	---	---	---	---	---	---
30	33	35	33	---	---	---	---	---	---	---	---	---
31	29	---	31	---	---	---	---	---	---	---	---	---
TOTAL	1059	1040	1100	---	---	---	---	---	---	---	---	---
MEAN	34.2	34.7	35.5	---	---	---	---	---	---	---	---	---
MAX	36	36	36	---	---	---	---	---	---	---	---	---
MIN	26	26	31	---	---	---	---	---	---	---	---	---
MED	35	35	36	---	---	---	---	---	---	---	---	---
AC-FT	2100	2060	2180	---	---	---	---	---	---	---	---	---

CAL YR 2004 TOTAL 13304.88 MEAN 36.4 MAX 39 MIN 0.44 MED 37 AC-FT 26390

## GILA RIVER BASIN

## 09507580 EAST VERDE RIVER DIVERSION FROM EAST CLEAR CREEK, NEAR PINE, AZ

**LOCATION**--Lat 34°25'04", long 111°15'47", in NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 23, T.12 N., R.10 E. (unsurveyed), Gila County, Hydrologic Unit 15060203, on East Verde River at mouth of Mail Creek, 0.4 mi southeast of Washington Park, and 11 mi east of Pine.

**PERIOD OF RECORD**--Oct. 1965 to current year.

**GAGE**--Water-stage recorder and weir in concrete flume. Datum of gage is 5,774 ft above sea level (Phelps Dodge Corporation reference mark).

**REMARKS**--No estimated daily discharges. Records good. Diversion is 9.5 mi northeast from Blue Ridge Reservoir on East Clear Creek, in the Little Colorado River basin, to the East Verde River in the Gila River basin.

**EXTREMES FOR PERIOD OF RECORD**--Maximum daily discharge, 34 ft<sup>3</sup>/s Apr. 19 and 29, May 5-7, 10, 12, 15, 18, and June 2, 1969; no flow for long periods most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.2	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	9.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.4	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	1.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.6	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.4	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	6.3	---	0.00	0.00	---
TOTAL	43.20	0.00	0.00	0.00	0.00	0.00	0.00	20.00	19.20	0.00	2.61	0.00
MEAN	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.64	0.00	0.08	0.00
MAX	21	0.00	0.00	0.00	0.00	0.00	0.00	6.3	14	0.00	2.4	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	86	0.00	0.00	0.00	0.00	0.00	0.00	40	38	0.00	5.2	0.00
CAL YR 2004	TOTAL 73.35	MEAN 0.20	MAX 21	MIN 0.00	AC-FT 145							
WTR YR 2005	TOTAL 85.01	MEAN 0.23	MAX 21	MIN 0.00	AC-FT 169							

09507980 EAST VERDE RIVER NEAR CHILDS, AZ

**LOCATION**--Lat 34°16'35", long 111°38'17", in sec. 21, T.11 N., R.7 E. (unsurveyed), Gila County Hydrologic Unit 15060203, in Tonto National Forest, on left bank 1.6 mi upstream from mouth and 6 mi southeast of Childs.

**DRAINAGE AREA**--331 mi<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD**--Sept. 1961 to Dec. 1965 and May 1967 to current year.

**REVISED RECORDS**--WDR AZ-89-1: Drainage area.

**GAGE**--Water-stage recorder. Elevation of gage is 2,500 ft above sea level, from topographic map. Sept. 1, 1961, to Dec. 15, 1965, at site 1 mi upstream at elevation of 2,600 ft above sea level, datum raised 0.38 ft Oct. 4, 1963. May 25, 1967, to July 20, 1972, at present site at datum 3.29 ft higher, datum lowered 2.00 ft Jan. 7, 1993.

**REMARKS**--Records fair, except estimated daily discharges, which are poor. Since Sept. 30, 1965, records include transbasin diversions from East Clear Creek to headwaters of East Verde River. (See sta 09507580 and 09398300.)

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 23,500 ft<sup>3</sup>/s Sept. 5, 1970, gage height, 22.5 ft, present datum, from profile past gage, from rating curve extended above 960 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 12.11 and 22.5 ft, present datum; no flow for many days each year.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 600 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 28.....	1930	689	3.52	Jan. 27.....	0730	3,500	7.98
Nov. 22.....	1530	2,190	4.78	Feb. 12.....	0710	8,310	12.01
Dec. 29.....	1815	*9,750	*13.21	Feb. 19.....	1100	5,740	9.87
Jan. 4.....	0215	8,590	12.25	Aug. 8.....	1655	3,830	6.17
Jan. 12.....	0515	961	6.00	Aug. 13.....	0210	739	3.20

Minimum daily discharge, 0.21 ft<sup>3</sup>/s July 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	15	14	118	101	146	52	36	9.9	1.3	41	e1.5
2	1.8	9.4	13	95	91	140	45	32	9.3	1.2	27	e1.4
3	1.4	6.3	11	1290	81	134	43	31	9.3	1.1	103	e1.4
4	1.2	4.9	10	5710	75	129	41	30	12	0.95	18	e27
5	0.97	3.9	13	769	71	280	39	29	13	0.83	5.8	e19
6	0.90	3.1	14	199	68	230	36	27	10	0.69	2.5	e5.0
7	0.90	2.7	15	150	70	194	34	28	8.9	0.61	15	e3.0
8	0.85	2.8	18	121	95	163	32	28	7.8	0.55	327	e1.7
9	0.79	3.2	21	143	76	152	33	27	7.2	0.47	294	e1.9
10	0.69	2.8	24	169	70	145	32	27	7.2	0.40	27	e1.8
11	0.67	2.3	20	186	1200	142	31	26	7.1	0.35	5.6	e1.8
12	0.76	2.2	19	366	5990	138	29	19	6.4	0.31	92	e1.7
13	0.69	2.3	17	148	1600	134	28	19	5.8	0.26	303	e1.7
14	0.65	2.4	16	115	232	131	27	20	5.2	0.25	e184	e1.7
15	0.44	2.4	16	99	157	119	27	20	4.2	0.24	e95	e1.6
16	0.41	2.4	14	88	134	95	28	19	3.3	0.24	e40	e1.6
17	0.43	2.5	12	82	118	89	29	19	2.8	0.36	e21	e1.6
18	0.43	2.4	11	79	155	80	29	18	2.5	0.24	e9.0	e1.6
19	0.46	2.5	10	76	3550	78	29	18	2.1	0.21	e6.6	e1.6
20	0.43	2.4	9.2	75	2600	111	30	17	2.0	186	e4.8	e1.6
21	0.53	208	8.7	78	e952	166	31	16	1.9	38	e4.9	e1.6
22	7.5	1680	8.2	78	e1640	133	32	15	1.7	18	e4.4	e1.6
23	4.0	616	7.4	79	e1100	108	35	14	1.5	16	e3.9	e1.6
24	1.6	134	6.4	77	e295	104	80	13	1.5	71	e3.3	e1.6
25	1.1	62	6.3	75	e220	102	67	12	3.3	16	e3.1	e1.6
26	1.0	38	6.8	79	e189	145	50	11	2.2	8.0	e2.7	e1.6
27	1.1	29	6.8	1670	e171	130	43	11	1.7	6.3	e2.6	e1.6
28	194	23	6.9	247	e154	113	40	11	1.5	4.8	e2.0	e1.6
29	216	21	3630	139	---	93	38	11	1.3	3.8	e2.3	e1.7
30	42	17	2060	138	---	77	38	12	1.3	5.2	e1.8	e1.9
31	24	---	173	120	---	62	---	11	---	33	e1.5	---
TOTAL	510.40	2905.9	6217.7	12858	21255	4063	1128	627	153.9	416.66	1653.8	96.6
MEAN	16.5	96.9	201	415	759	131	37.6	20.2	5.13	13.4	53.3	3.22
MAX	216	1680	3630	5710	5990	280	80	36	13	186	327	27
MIN	0.41	2.2	6.3	75	68	62	27	11	1.3	0.21	1.5	1.4
AC-FT	1010	5760	12330	25500	42160	8060	2240	1240	305	826	3280	192
CFSM	0.05	0.29	0.61	1.25	2.29	0.40	0.11	0.06	0.02	0.04	0.16	0.01
IN.	0.06	0.33	0.70	1.45	2.39	0.46	0.13	0.07	0.02	0.05	0.19	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2005, BY WATER YEAR (WY)

	MEAN	27.9	32.9	56.9	126	168	175	79.8	26.1	15.9	19.4	32.3	28.6
MAX	308	157	443	1819	1147	968	421	115	48.8	60.9	203	282	
(WY)	1973	1979	1979	1993	1980	1978	1998	1973	1980	1999	1992	1970	
MIN	0.37	0.83	1.42	2.25	3.69	4.15	2.51	0.37	0.00	0.00	0.00	0.73	
(WY)	2003	1963	1963	1963	1964	2002	2002	2000	2002	2002	2002	1972	

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1961 - 2005
ANNUAL TOTAL	11799.15	51885.96	
ANNUAL MEAN	32.2	142	65.3
HIGHEST ANNUAL MEAN			290
LOWEST ANNUAL MEAN			3.98
HIGHEST DAILY MEAN	3630	Dec 29	11000
LOWEST DAILY MEAN	0.00	Jun 3	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 3	0.00
ANNUAL RUNOFF (AC-FT)	23400	102900	47310
ANNUAL RUNOFF (CFSM)	0.097	0.429	0.197
ANNUAL RUNOFF (INCHES)	1.33	5.83	2.68
10 PERCENT EXCEEDS	15	172	100
50 PERCENT EXCEEDS	3.3	17	21
90 PERCENT EXCEEDS	0.00	1.1	1.5

e Estimated

**GILA RIVER BASIN**  
**09507980 EAST VERDE RIVER NEAR CHILDS, AZ—CONTINUED**

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.—Dec. 1990 to April 2005 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
NOV 18...	1550	2.4	7.4	703	9.3	98	8.0	547	22.0	14.1	280	--	64.5
JAN 27...	1545	2050	470d	697	11.0	105	8.0	112	15.0	9.2	68	.0	18.9r
APR 28...	1520	41	11	696	8.7	101	8.5	463	18.0	18.0	230	--	56.2
Date	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, unfltrd recover-able, mg/L (00927)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
NOV 18...	63.3	28.9	31.0	4.08	1	43.0	337	411	<1	24.9	.6	9.2	377
JAN 27...	44.3d	5.14r	36.5d	1.39	.1	2.63	68	83	<1	2.27	E.1n	3.2	75
APR 28...	59.9	21.9	21.5	1.87	.4	12.6	236	278	5	8.84	.2	8.4	252
Date	Residue water, fltrd, tons/acre-ft (70303)	Residue evap. at 180degC wat flt pending, mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, unfltrd as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate, fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/100 mL (31633)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd, ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water, unfltrd, ug/L (01002)
NOV 18...	.54	395	<10	.30	<.04	<.06	.05	--	67	E.13n	<.2	71.2	75d
JAN 27...	.14	102	535d	1.6	<.04	.20	.60	1.8	E900k	<.20	<.2	1.1	3
APR 28...	.38	278	<10	.26	<.04	<.06	.05	--	26	E.12n	<.2	13.0	11
Date	Barium, water, unfltrd recover-able, ug/L (01007)	Beryllium, water, unfltrd recover-able, ug/L (01010)	Beryllium, water, unfltrd recover-able, ug/L (01012)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd, ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)	Copper, water, unfltrd recover-able, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)
NOV 18...	77	<.06	<.06	311	<.04	<.04	<.8	1.1	2.6	<.08	.20	33	<.01
JAN 27...	195	<.06	.79	15	<.04	.23	21.8r	4.5	26.0r	.10	13.1	584r	<.01
APR 28...	61	<.06	<.06	54	E.02n	E.04n	E.5n	1.8	3.1	<.08	.87	52	<.01
Date	Mercury water, unfltrd recover-able, ug/L (71900)	Selenium, water, unfltrd, ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)							
NOV 18...	<.01	1.2	E.6n	<2	29	.19							
JAN 27...	.03	.7	15.4	42	694	3840							
APR 28...	<.01	.6	4.7	3	15	1.7							

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

d -- Diluted sample: method hi range exceeded  
k -- Counts outside acceptable range  
n -- Below the LRL and above the LT-MDL  
r -- Value verified by rerun, same method

**09508300 WET BOTTOM CREEK NEAR CHILDS, AZ  
(HYDROLOGIC BENCHMARK STATION)**

**LOCATION**--Lat 34°09'39", long 111°41'32", in sec. 36, T.9 N., R.6 E. (unsurveyed), Gila County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 1.4 mi upstream from mouth and 13 mi south of Childs.

**DRAINAGE AREA**--36.4 mi<sup>2</sup>.

**PERIOD OF RECORD**--June 1967 to current year.

**REVISED RECORDS**--WRD Ariz. 1970: 1968(M).

**GAGE**--Water-stage recorder. Elevation of gage is 2,320 ft above sea level, from topographic map.

**REMARKS**--Records fair, except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 7,380 ft<sup>3</sup>/s Jan. 8, 1993, gage height, 18.36 ft, from slope-area measurement of peak flow; no flow for many days most years.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 28 .....	0700	1,520e	8.06e	Feb. 19 .....	0520	2,230	8.65
Nov. 21 .....	1345	642	6.86	Mar. 5 .....	0845	601	6.59
Dec. 29 .....	1435	*6,970	*16.73	Apr. 24 .....	0115	1,040	7.33
Jan. 4 .....	0210	4,100	10.23	July 23 .....	2325	2,120	8.63
Jan. 11 .....	2145	624	6.63	Aug. 2 .....	1910	6,610	15.50
Jan. 27 .....	0410	2,620	8.98	Aug. 14 .....	2205	1,930	8.46
Feb. 12 .....	0205	4,680	10.99				

Minimum daily discharge, no flow May 29--July 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	e74	5.4	46	49	31	3.8	3.5	0.00	0.00	4.9	0.28
2	1.0	e48	4.5	28	35	24	3.5	3.1	0.00	0.00	298	0.27
3	0.82	e25	3.9	731	25	20	3.3	2.8	0.00	0.00	44	0.28
4	0.66	e14	3.4	1850	20	16	3.1	2.4	0.00	0.00	24	5.3
5	0.58	e8.4	5.2	375	17	139	2.9	2.1	0.00	0.00	8.2	1.5
6	0.50	e5.4	28	149	14	72	2.8	1.8	0.00	0.00	17	0.74
7	0.46	e3.8	57	93	20	46	2.6	1.6	0.00	0.00	5.3	0.47
8	0.41	e2.9	44	73	22	33	2.5	1.4	0.00	0.00	20	1.2
9	0.39	e2.2	40	105	16	25	2.3	1.2	0.00	0.00	6.4	1.8
10	0.37	e1.7	30	102	14	20	2.2	1.1	0.00	0.00	9.6	0.57
11	0.35	e1.3	25	122	697	16	2.2	0.96	0.00	0.00	22	0.37
12	0.35	e1.1	19	104	2090	13	2.1	0.79	0.00	0.00	10	0.28
13	0.34	e1.0	14	47	297	12	2.0	0.66	0.00	0.00	4.3	0.26
14	0.33	e0.94	11	32	105	9.9	1.8	0.59	0.00	0.00	80	0.25
15	0.34	e0.87	8.7	24	65	8.6	1.7	0.51	0.00	0.00	46	0.25
16	0.34	e0.83	6.7	19	50	7.6	1.6	0.42	0.00	0.00	8.0	0.25
17	0.35	e0.83	5.4	15	36	6.7	1.4	0.34	0.00	0.00	4.6	0.24
18	0.35	e0.85	4.5	13	46	6.2	1.3	0.30	0.00	0.00	3.0	0.24
19	0.35	e0.86	3.9	11	956	6.2	1.2	0.26	0.00	0.00	2.1	0.24
20	0.35	e0.85	3.3	9.4	497	16	1.2	0.23	0.00	0.00	2.8	0.24
21	1.1	117	2.9	8.7	139	13	1.1	0.19	0.00	22	2.2	0.23
22	30	232	2.6	8.2	342	9.0	1.1	0.15	0.00	1.8	1.3	0.21
23	4.8	115	2.3	7.7	192	7.6	1.1	0.12	0.00	47	1.1	0.21
24	2.8	58	2.0	6.6	129	6.6	198	0.09	0.00	95	10	0.21
25	1.9	34	1.7	6.2	105	7.4	20	0.06	0.00	4.6	2.7	0.20
26	1.4	23	1.5	25	78	9.4	12	0.03	0.00	2.4	1.3	0.21
27	e9.8	16	1.4	644	57	6.0	7.7	0.01	0.00	1.5	0.81	0.21
28	e953	11	1.5	185	42	5.4	6.0	0.01	0.00	0.92	0.53	0.21
29	e630	9.9	1670	102	---	4.9	5.0	0.00	0.00	0.65	0.43	0.20
30	e257	7.0	433	103	---	4.5	4.2	0.00	0.00	14	0.35	0.21
31	e105	---	90	74	---	4.1	---	0.00	---	5.1	0.30	---
TOTAL	2006.94	817.73	2531.8	5118.8	6155	606.1	301.7	26.72	0.00	194.97	641.22	17.13
MEAN	64.7	27.3	81.7	165	220	19.6	10.1	0.86	0.00	6.29	20.7	0.57
MAX	953	232	1670	1850	2090	139	198	3.5	0.00	95	298	5.3
MIN	0.33	0.83	1.4	6.2	14	4.1	1.1	0.00	0.00	0.00	0.30	0.20
AC-FT	3980	1620	5020	10150	12210	1200	598	53	0.00	387	1270	34
CFSM	1.78	0.75	2.24	4.54	6.04	0.54	0.28	0.02	0.00	0.17	0.57	0.02
IN.	2.05	0.84	2.59	5.23	6.29	0.62	0.31	0.03	0.00	0.20	0.66	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)
	6.59	103	1973	0.00	2004	7.58	52.0	1979	0.06	2002	19.5	111	1968	0.28	2002
	38.4	373	1993	0.26	1970	45.0	345	1980	0.28	2002	43.5	321	1978	0.26	2002
	9.72	56.6	1998	0.08	2002	0.55	2.07	1983	0.00	1972	1.13	12.0	1985	0.00	1970
	4.30	48.3	1992	0.00	1972	4.30	48.3	1992	0.00	1972	4.30	48.3	1992	0.00	1972

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1967 - 2005
ANNUAL TOTAL	5999.34	18418.11	
ANNUAL MEAN	16.4	50.5	14.8
HIGHEST ANNUAL MEAN			50.5
LOWEST ANNUAL MEAN			0.11
HIGHEST DAILY MEAN	1670	2090	3410
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
ANNUAL RUNOFF (AC-FT)	11900	36530	10750
ANNUAL RUNOFF (CFSM)	0.450	1.39	0.408
ANNUAL RUNOFF (INCHES)	6.13	18.82	5.54
10 PERCENT EXCEEDS	13	94	22
50 PERCENT EXCEEDS	0.41	2.8	0.46
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

## GILA RIVER BASIN

## 09508500 VERDE RIVER BELOW TANGLE CREEK, ABOVE HORSESHOE DAM, AZ

**LOCATION.**--Lat 34°04'23", long 111°42'56", in sec. 35, T.9 N., R.6 E. (unsurveyed), Yavapai County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 1.3 mi downstream from Tangle Creek and 9 mi upstream from Horseshoe Dam.

**DRAINAGE AREA.**--5,858 mi<sup>2</sup>, of which 365 mi<sup>2</sup> is noncontributing, including 357 mi<sup>2</sup> in Aubrey Valley Playa, a closed basin.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--Aug. 1945 to current year.

**REVISED RECORDS.**--WDR AZ--89--1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 2,029.0 ft above sea level.

**REMARKS.**--Records good, except for estimated daily discharges, which are poor. About 12,500 acres above station are irrigated by surface water and ground water. Low flow slightly regulated by powerplant 32 mi above station, using water from Fossil Creek. This station is above all major reservoirs on Verde River.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 145,000 ft<sup>3</sup>/s Jan. 8, 1993, gage height 23.4 ft, from slope-area measurement of peak flow; minimum, 48 ft<sup>3</sup>/s June 17, 1956, July 18 and 19, 1958, caused by power regulation on Fossil Creek; minimum daily, 58 ft<sup>3</sup>/s Aug. 15 and 18, 2002.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge since at least 1888, 150,000 ft<sup>3</sup>/s Feb. 24, 1891, based on comparison with peak discharge at other stations on Verde River.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and (or) maximum (\*)

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 10.....	0015	4,520	11.65	Jan. 28.....	0445	12,600	13.29
Nov. 23.....	1830	6,510	12.79	Feb. 12.....	1630	65,000	20.94
Dec. 30.....	0815	*66,500	*21.05	Feb. 19.....	1800	27,200	16.26
Jan. 4.....	1040	30,200	16.76	Aug. 11.....	1400	6,750	12.29
Jan. 12.....	1225	36,400	17.82				

Minimum daily discharge, 113 ft<sup>3</sup>/s Sept. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	209	1480	494	5030	2560	e2700	724	601	171	145	297	153
2	197	811	450	2790	1780	e2500	651	540	166	140	467	150
3	193	491	397	2870	1420	e2200	578	478	165	138	312	152
4	188	390	377	19300	1030	e2000	526	437	164	136	160	150
5	175	363	375	11900	749	2120	499	406	164	137	141	174
6	173	328	407	6100	618	2750	490	381	164	137	134	158
7	170	307	454	3430	584	2760	469	365	162	136	120	147
8	163	286	423	2060	1020	2270	445	352	160	133	244	143
9	154	485	413	1770	971	1830	422	338	162	132	250	141
10	142	3400	396	3560	855	1630	409	325	161	130	188	131
11	146	2120	389	9110	3590	1500	408	313	162	129	487	124
12	147	1500	425	27500	40400	1400	400	e280	162	127	138	122
13	143	788	557	15400	29700	1260	394	e270	162	127	253	123
14	140	487	584	7420	13700	1130	380	e260	159	131	191	123
15	135	397	566	3980	6900	1090	368	e250	157	127	372	122
16	136	372	469	2630	4170	1040	359	e240	157	124	207	121
17	140	350	420	1900	6200	910	350	e230	157	126	167	121
18	148	330	379	1640	3030	807	344	e225	157	127	147	119
19	166	304	336	1640	16700	761	338	e220	156	125	131	119
20	165	286	313	1720	e19500	749	336	e215	151	129	149	122
21	165	372	298	1980	11600	2520	333	e210	150	167	128	123
22	205	3010	287	2120	9470	2020	330	e205	151	144	122	121
23	187	5540	279	2260	10600	1400	330	e200	147	145	124	119
24	209	4640	272	2120	7560	1100	515	e194	145	312	133	119
25	845	3290	276	1800	e5000	1050	554	e190	142	170	264	121
26	582	2230	283	1640	e3800	1060	835	e187	148	152	200	121
27	388	1360	289	6140	e3200	1220	739	184	154	139	170	119
28	959	827	290	10500	e2900	1310	627	182	152	130	162	114
29	1740	616	6320	5410	---	1160	559	184	147	122	157	113
30	1490	535	36900	3640	---	989	508	172	147	316	155	117
31	1990	---	10900	2960	---	827	---	172	---	190	158	---
TOTAL	11990	37695	65018	172320	209607	48063	14220	8806	4702	4623	6328	3902
MEAN	387	1256	2097	5559	7486	1550	474	284	157	149	204	130
MAX	1990	5540	36900	27500	40400	2760	835	601	171	316	487	174
MIN	135	286	272	1640	584	749	330	172	142	122	120	113
AC-FT	23780	74770	129000	341800	415800	95330	28210	17470	9330	9170	12550	7740
CFSM	0.07	0.23	0.38	1.01	1.36	0.28	0.09	0.05	0.03	0.03	0.04	0.02
IN.	0.08	0.26	0.44	1.17	1.42	0.33	0.10	0.06	0.03	0.03	0.04	0.03

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2005, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
MEAN	319	623	769	1361	1951	1005	388	208	143	186	202	283									
MAX	433	1256	2097	5559	7486	1560	566	284	181	298	255	407									
(WY)	1987	2005	2005	2005	2005	1986	1986	2005	1986	1986	1986	1996									
MIN	221	262	289	291	283	228	177	123	102	131	165	130									
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996									

## SUMMARY STATISTICS

	FOR 2005 WATER YEAR	WATER YEARS 1986 - 2005
ANNUAL TOTAL	587274	
ANNUAL MEAN	1609	669
HIGHEST ANNUAL MEAN		1609
LOWEST ANNUAL MEAN		226
HIGHEST DAILY MEAN	40400	40400
LOWEST DAILY MEAN	113	71
ANNUAL SEVEN-DAY MINIMUM	118	82
ANNUAL RUNOFF (AC-FT)	1165000	484800
ANNUAL RUNOFF (CFSM)	0.293	0.122
ANNUAL RUNOFF (INCHES)	3.98	1.66
10 PERCENT EXCEEDS	3330	985
50 PERCENT EXCEEDS	333	268
90 PERCENT EXCEEDS	131	128

e Estimated

09508500 VERDE RIVER BELOW TANGLE CREEK ABOVE HORSESHOE DAM, AZ—CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD--Oct. 1980 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrcrtd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
DEC 09...	1045	417	7.6	718	10.8	103	8.4	555	15.0	10.6	250	7	53.1
MAR 28...	1245	1350	8.9	706	9.4	99	8.3	361	19.5	14.2	170	13	37.3
AUG 25...	1210	292	270	710	6.8	92	8.3	685	33.5	26.7	280	34	53.2
Date	Calcium water unfltrd recover-able, mg/L (00916)	Magnesium water, fltrd, mg/L (00925)	Magnesium water, unfltrd recover-able, mg/L (00927)	Potassium water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., mg/L (00453)	Carbonate, wat flt incrm. titr., mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
DEC 09...	53.0	28.5r	26.2r	2.34	.8	29.4	243	288	4	19.9	.3	43.9	326
MAR 28...	41.2	18.1	18.3	1.64	.5	14.2	156	177	6	9.25	.2	21.5	195
AUG 25...	63.5	35.2	41.2	3.39	1	38.6	244	283	7	27.5	.3	72.1	377
Date	Residue water, fltrd, tons/ acre-ft (70303)	Residue evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)
DEC 09...	.44	325	<10	.20	<.04	.63	.04	.83	E2k	<.20	<.2	15.4	16
MAR 28...	.31	229	10	.20	<.04	<.06	.04	--	E5k	<.20	<.2	9.8	9
AUG 25...	.57	418	398c	1.2	<.04	.09	.45	1.3	E250k	E.14n	E.2n	19.9	18.8oc
Date	Barium, water, unfltrd recover-able, ug/L (01007)	Beryllium water, unfltrd recover-able, ug/L (01010)	Beryllium water, unfltrd recover-able, ug/L (01012)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, unfltrd recover-able, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)
DEC 09...	94	<.06	<.06	120	<.04	<.04	1.1	1.1	2.7	E.04n	.34	21	<.01
MAR 28...	63	<.06	<.06	67	<.04	<.04	.9	1.5	2.7	<.08	.36	18	<.01
AUG 25...	188r	<.06	.45	185d	<.04	.19	8.7oc	2.0	16.2	.26	9.21	524r	<.01
Date	Mercury water, unfltrd recover-able, ug/L (71900)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)							
DEC 09...	<.01	1.1	.9	2	15	17							
MAR 28...	<.01	.5	1.8	3	53	193							
AUG 25...	.02	.7	1.5	27	447	352							

Remark codes used in this table:  
 < -- Less than.  
 E -- Estimated.

Value qualifier codes used in this table:  
 c -- See laboratory comment  
 d -- Diluted sample: method hi range exceeded  
 k -- Counts outside acceptable range  
 n -- Below the LRL and above the LT-MDL  
 o -- Result determined by alternate method  
 r -- Value verified by rerun, same method



## 09509500 RESERVOIR SYSTEM ON VERDE RIVER AT AND BELOW HORSESHOE DAM, AZ

**LOCATION.**--This system comprises two storage reservoirs created by Horseshoe and Bartlett Dams on Verde River, Maricopa and Yavapai Counties, Hydrologic Unit 15060203. Gages on Horseshoe Reservoir, formed by Horseshoe Dam, lat 33°59'05", long 111°42'35", in sec. 2, T.7 N., R.6 E. (unsurveyed); and Bartlett Reservoir, formed by Bartlett Dam, lat 33°49'05", long 111°37'52", in sec. 34, T.6 N., R.7 E. (unsurveyed).

**DRAINAGE AREA.**--6,157 mi<sup>2</sup> (at Bartlett Dam), of which 365 mi<sup>2</sup> is noncontributing, including 357 mi<sup>2</sup> in Aubrey Valley Playa, a closed basin.

**PERIOD OF RECORD.**--July 1939 to current year. Prior to 1946 published as "Bartlett Reservoir at Bartlett Dam."

**REVISED RECORDS.**--WDR AZ-89-1: Drainage area.

**GAGE.**--Water-stage recorders on dam structures. Datum of gage on Horseshoe Reservoir is 1,900.00 ft and on Bartlett Reservoir 1,599.46 ft above sea level. Prior to Oct. 14, 1964, Bartlett Reservoir gage datum was 10.00 ft higher.

**REMARKS.**--Horseshoe Reservoir is formed by earthfill and rockfill dam; dam completed and storage began Nov. 15, 1945. Bartlett Reservoir is formed by concrete multiple-arch dam; dam completed May 1939 and storage began Feb. 5, 1939. Total capacity of the two reservoirs is 287,400 acre-ft divided as follows: Horseshoe Reservoir, 109,200 acre-ft between elevations 1,915.00 ft (sill of outlet gate) and 2,026.00 ft (top of spillway gates) based on capacity table derived from survey in April, 2002; Bartlett Reservoir, 178,200 acre-ft between elevations 1,619.46 ft (10 ft above sill of outlet gates) and 1,797.46 ft (top of spillway gates) based on capacity table dated 1978, based on survey in 1977-78. No dead storage. Records given herein represent usable contents. Water is used for irrigation of Salt River Valley and for municipal supply.

**COOPERATION.**--Capacity tables furnished by Salt River Valley Water Users' Association.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum contents of system, 318,000 acre-ft May 9, 1973; no storage at times when natural flow of river was passed through reservoir system.

**EXTREMES FOR CURRENT YEAR.**--Maximum contents of system, 288,500 acre-ft Feb. 13; minimum, 137,100 acre-ft Oct. 20--22.

RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140100	147400	195100	232600	252900	285800	284800	286000	257200	215500	181900	174200
2	140100	147800	195400	208000	252800	285400	284700	286500	256200	214200	181800	173800
3	140100	147900	195400	186800	252600	286600	284600	286700	254700	212900	181800	173800
4	140200	148000	195200	200200	252100	284900	284900	286800	252900	211500	181500	173600
5	140200	148100	195400	213400	252100	283900	284900	286600	251000	210000	181000	173400
6	140200	148200	195700	214900	251700	284900	285200	286200	249000	208400	180500	173200
7	140200	148400	196100	209800	251400	285700	285300	285900	247600	206900	179900	173000
8	140300	148200	196000	206600	251200	285000	285000	285500	246100	205600	179500	172600
9	140300	148400	195900	197600	249700	285900	284700	285200	244700	204200	179600	172200
10	140100	152300	195800	199000	239800	286100	284300	284500	243000	202900	179400	171800
11	139700	154700	195700	206200	229000	285400	284500	283800	241700	201500	179900	171500
12	139400	156500	195600	235900	261600	285000	285000	283000	240500	200200	179800	171100
13	139000	157600	195600	253900	288500	286000	285500	282000	239200	198900	179800	170700
14	138500	158200	195600	261300	277900	285400	285900	281000	238000	197600	179800	170200
15	138200	158600	195700	265500	256200	285600	286200	280000	236800	196400	180300	169700
16	137800	158700	195800	267600	236800	286800	286400	278600	235400	195100	180200	169300
17	137600	159200	195700	268500	220100	286500	286500	277200	234000	193700	179500	168900
18	137400	159700	195600	269100	211600	286700	286400	275600	232700	192300	178700	168500
19	137200	160100	195200	269600	239600	286400	286300	274200	231400	191100	177700	168300
20	137100	160300	194600	270300	263800	284500	286600	272800	230300	189600	176900	168000
21	137100	161000	194000	270400	268600	285500	286500	271200	229000	188600	176100	167800
22	137100	164800	193200	269600	267300	286100	286700	269700	227700	187200	175000	167500
23	137300	175000	192500	269400	270800	286700	286900	268400	226300	186300	174800	167200
24	137400	182600	192000	269100	275100	286400	286500	267200	224900	185500	174700	166800
25	138200	187300	191800	265500	280600	285800	285900	266100	223600	184600	175200	166500
26	139200	190200	191500	254100	284400	285200	286300	264900	222200	183500	175500	166300
27	139600	192100	191100	246600	285900	285700	286300	263700	220900	183000	175500	166000
28	141000	193100	190800	250700	284700	286300	286300	262400	219600	182800	175500	165500
29	143000	194400	206000	252800	---	286400	286200	261300	218200	182500	175400	165100
30	144500	194900	253300	251800	---	286400	285800	260000	216800	182500	175000	164800
31	146300	---	250500	252100	---	285600	---	258600	---	182300	174500	---
MAX	146300	194900	253300	270400	288500	286800	286900	286800	257200	215500	181900	174200
MIN	137100	147400	190800	186800	211600	283900	284300	258600	216800	182300	174500	164800
(*)	+6500	+48600	+55600	+1600	+32600	+900	+200	-27200	-41800	-34500	-7800	-9700
CAL YR 2004	MAX 253300	MIN 112600 (*)	+138000									
WTR YR 2005	MAX 288500	MIN 137100 (*)	+25000									

(\*) Change in contents, in acre-feet.

09510000 VERDE RIVER BELOW BARTLETT DAM, AZ

**LOCATION.**--Lat 33°48'30", long 111°39'46", in NW<sup>1</sup>/<sub>4</sub> sec. 5, T.5 N., R.7 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 2.1 mi downstream from Bartlett Dam, 4.0 mi upstream from Camp Creek, and 16 mi east of town of Cave Creek.

**DRAINAGE AREA.**--6,161 mi<sup>2</sup>, of which 365 mi<sup>2</sup> is noncontributing, including 357 mi<sup>2</sup> in Aubrey Valley Playa, a closed basin.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD.**--Aug. 1888 to current year. (Monthly discharge only Aug. 1888 to Dec. 1903, and Jan. 1910 to Sept. 1913. For some periods prior to Dec. 1903 gage heights, discharge measurements, and daily discharge hydrographs are published in reports of the Geological Survey.) Prior to Oct. 1941, published under different names as follows: "near Fort McDowell," "at mouth," "above Salt River," "at McDowell," "at McDowell near Lehi," "near McDowell," and "above Camp Creek, near McDowell."

**REVISED RECORDS.**--WSP 1049: 1893, 1913-14, 1917-18, 1926-27, 1929. WSP 1213: 1915-16. WDR AZ-89-1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 1,570.34 ft above sea level. Gage at present site and datum 2.00 ft higher Jan. 1, 1942, to Sept. 30, 1961, Dec. 30, 1965, to Mar. 10, 1971, and Oct. 1, 1978, to Jan. 4, 1993; Mar. 2 to Sept. 30, 1978, used as supplementary gage, and Feb. 18, 1975, to Feb. 28, 1978, supplementary water-stage recorder at site 30 ft upstream at same datum. Oct. 1, 1961, to Dec. 29, 1965, and Mar. 11, 1971, to Sept. 30, 1973, water-stage recorder at site 1.9 mi upstream at datum 1,600 ft, from topographic map; at same site at datum 4.00 ft higher, Oct. 1, 1973, to Mar. 3, 1975, and 5.00 ft higher, Oct. 1, 1961, to Dec. 29, 1965, and Mar. 11, 1971, to Sept. 30, 1973. Feb. 17, 1925, to Dec. 31, 1941, water-stage recorder at two sites within 0.5 mi upstream from Camp Creek, at various datums. Prior to Feb. 17, 1925, nonrecording gages at several sites about 20 mi downstream from present location at various datums.

**REMARKS.**--Records good, except for estimated daily discharges, which are poor. About 12,500 acres above station are irrigated by surface water and ground water. Flow completely regulated by Bartlett Reservoir since Feb. 5, 1939, and Horseshoe Reservoir since Nov. 15, 1945, except during periods of spill. Water diverted downstream for municipal supply for the city of Phoenix, and for irrigation in Fort McDowell Indian Reservation. Remainder (except during infrequent periods of extreme flooding) is diverted at Granite Reef Dam on Salt River 27 mi downstream for irrigation in Salt River Valley, and for municipal use by the city of Phoenix.

**AVERAGE DISCHARGE** (adjusted for storage in Bartlett and Horseshoe Reservoirs)--117 years, 666 ft<sup>3</sup>/s, 482,500 acre-ft/yr; median of yearly mean discharge, 520 ft<sup>3</sup>/s, 377,000 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD.**--1888-1939: Maximum discharge not determined, probably over 150,000 ft<sup>3</sup>/s Feb. 24, 1891; minimum daily, 29 ft<sup>3</sup>/s July 11 and 13, 1901. Floods of Nov. 27, 1905 and Mar. 4, 1938, reached maximum discharges of 96,000 ft<sup>3</sup>/s and 95,000 ft<sup>3</sup>/s, respectively.

1939-2005: Maximum discharge, 110,000 ft<sup>3</sup>/s Jan. 8, 1993; no flow at Bartlett Dam at times when gates in dam were closed.

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 25,100 ft<sup>3</sup>/s Feb. 13. Minimum daily discharge, 93 ft<sup>3</sup>/s Nov. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	623	379	15100	2670	2120	1220	790	1050	782	927	e290
2	155	622	369	17300	2270	1800	860	326	1040	780	927	e290
3	156	518	483	16100	1890	1300	735	351	1080	779	935	e295
4	157	469	497	17500	1660	2150	575	402	1110	779	929	e295
5	160	327	413	6810	1360	2730	537	402	1110	778	828	e295
6	162	325	344	5630	1360	2320	544	359	1100	790	772	e295
7	162	279	327	6880	1360	2170	536	400	1060	810	783	e290
8	162	243	567	7840	1660	2500	542	422	955	846	628	e290
9	161	263	616	4230	2270	1470	548	466	855	863	603	e290
10	264	339	551	3090	5470	1280	547	641	840	879	627	e285
11	382	331	492	4190	11300	1820	372	734	829	894	643	e285
12	351	278	507	10500	24300	1830	173	786	820	907	639	e285
13	368	233	551	7530	25100	1110	110	858	813	925	634	e280
14	376	211	576	3950	20000	1430	108	964	805	942	629	e280
15	369	308	553	2130	17500	1370	144	1010	804	959	624	e280
16	312	357	411	1570	14600	1150	195	1080	803	974	624	e280
17	268	224	459	1570	14700	1020	260	1110	799	991	719	e280
18	269	109	581	1570	9550	1060	320	1130	798	1000	793	e275
19	270	157	671	1570	5280	1260	225	1150	797	1010	793	e275
20	225	219	711	1570	7970	1880	102	1150	797	1000	794	e275
21	205	222	783	2140	10500	2400	102	1150	794	1000	794	e275
22	181	183	862	2660	10800	2540	122	1140	792	1010	794	e275
23	99	111	761	2680	9430	1360	700	1120	791	1010	e300	e275
24	97	94	509	2680	5410	1380	841	e990	789	1010	e300	e275
25	97	93	439	3840	2760	1570	894	e975	788	1010	e300	e275
26	112	116	479	8010	1970	1580	933	e960	785	1010	e300	e275
27	185	181	528	10400	2250	1230	795	e945	785	985	e295	e275
28	243	205	546	8290	3250	1220	622	e935	785	929	e295	e275
29	201	204	558	4520	---	1220	736	e915	783	929	e295	e275
30	232	332	11100	4580	---	1210	794	e900	783	928	e295	e275
31	454	---	13100	3560	---	1320	---	930	---	926	e290	---
TOTAL	6960	8176	39723	189990	218640	50800	15192	25491	26140	28435	19109	8460
MEAN	225	273	1281	6129	7809	1639	506	822	871	917	616	282
MAX	454	623	13100	17500	25100	2730	1220	1150	1110	1010	935	295
MIN	97	93	327	1570	1360	1020	102	326	783	778	290	275
AC-FT	13810	16220	78790	376800	433700	100800	30130	50560	51850	56400	37900	16780

CAL YR 2004 TOTAL 95712 MEAN 262 MAX 13100 MIN 80 AC-FT 189800  
WTR YR 2005 TOTAL 637116 MEAN 1746 MAX 25100 MIN 93 AC-FT 1264000

e Estimated

## 09510000 VERDE RIVER BELOW BARTLETT DAM, AZ—CONTINUED

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Dec. 1950 to Aug. 1992, June 1999 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1964 to Dec. 1981, Mar. 1982 to Sept. 1982, Apr. 1983 to Sept. 1990.

WATER TEMPERATURE: Dec. 1950 to Dec. 1981, Mar. 1982 to Sept. 1982, Apr. 1983 to Sept. 1990.

REMARKS.--Unpublished daily specific conductance measurements for period Dec. 1950 to Sept. 1964 available from Arizona Water Science Center in Tucson, AZ.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, CaCO3 mg/L as (00900)	Noncarbohardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)
NOV 30...	1000	374	28	733	9.9	99	8.2	569	8.5	13.5	200	6	38.9r
JAN 04...	1230	25900	240	719	12.5	117	8.1	272	10.0	9.7	120	2	26.4
MAY 04...	1225	430	51	719	10.1	103	7.9	226	29.0	13.5	99	.0	25.6
JUL 20...	1115	1200	13	720	9.4	107	8.0	344	41.5	19.0	160	12	37.8
Date	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium water, unfltrd recoverable, mg/L (00925)	Magnesium water, unfltrd recoverable, mg/L (00927)	Potassium water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
NOV 30...	41.1c	25.4r	25.0c	3.69	.9	28.8	195	224	7	18.3	.3	42.7	276
JAN 04...	33.0	13.1	16.3	2.70	.5	13.6	118	142	1	8.14	.2	19.9	156
MAY 04...	29.0	8.47	9.11	1.76	.3	7.07	98	120	<1	4.09	.1	7.4	115
JUL 20...	37.6	15.2	14.4	1.95	.4	12.2	145	177	<1	7.62	.2	16.2	178
Date	Residue water, fltrd, tons/acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Organic nitrogen, water, unfltrd mg/L (00605)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/100 mL (31633)	Anti-mony, water, fltrd, ug/L (01095)	Anti-mony, water, unfltrd, ug/L (01097)	Arsenic water, fltrd, ug/L (01000)
NOV 30...	.39	288	16	.48	E.03n	.23	--	.10	.70	E62k	E.14n	E.1n	13.3
JAN 04...	.25	184	133d	.89	.04	.37	.85	.35	1.3	<3k	E.13n	E.1n	8.3
MAY 04...	.21	152	23	.33	<.04	.29	--	.13	.62	E10k	<.20	<.2	5.4
JUL 20...	.27	197	<10	.24	<.04	E.04n	--	.06	--	E15k	E.10n	<.2	8.1
Date	Arsenic water unfltrd ug/L (01002)	Barium water, unfltrd recoverable, ug/L (01007)	Beryllium water, fltrd, ug/L (01010)	Beryllium water, unfltrd recoverable, ug/L (01012)	Boron water, unfltrd recoverable, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium water, unfltrd recoverable, ug/L (01034)	Copper water, fltrd, ug/L (01040)	Copper water, unfltrd recoverable, ug/L (01042)	Lead water, fltrd, ug/L (01049)	Lead water, unfltrd recoverable, ug/L (01051)	Manganese water, unfltrd recoverable, ug/L (01055)
NOV 30...	14	59	<.06	E.03n	131	<.04	E.04n	1.4	1.3	3.2	<.08	.89	65
JAN 04...	10	110	<.06	.32	67	<.04	.21	7.1	2.5	11.0	E.05n	6.38	145
MAY 04...	6	52	<.06	.07	26	<.04	.05	1.9	2.3	4.7	.14	1.48	55
JUL 20...	8	49	<.06	<.06	55	<.04	<.04	E.5n	1.9	1.7	<.08	.38	68

**GILA RIVER BASIN**  
**09510000 VERDE RIVER BELOW BARTLETT DAM, AZ—CONTINUED**  
**WATER-QUALITY RECORDS**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Mercury water, unfltrd water, recovery fltrd, ug/L (71890)	Mercury water, unfltrd recover- able, ug/L (71900)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover- able, ug/L (01092)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
NOV 30...	<.01	<.01	.7	.7	3	27	27
JAN 04...	<.01	.01	.7	E.5n	20	262	18300
MAY 04...	<.01	<.01	.7	3.0	6	40	46
JUL 20...	<.01	<.01	.6	1.2	E1n	11	36

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

c -- See laboratory comment  
d -- Diluted sample: method hi range exceeded  
k -- Counts outside acceptable range  
n -- Below the LRL and above the LT-MDL  
r -- Value verified by rerun, same method

## GILA RIVER BASIN

## 09510000 VERDE RIVER BELOW BARTLETT DAM, AZ—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Water-quality measurements in the following table were made as part of the ADEQ fixed-station Network Program. The following analyses are quality-assurance samples processed during the 2005 sampling period and are defined in the introductory text section titled "Water-Quality Control Data."

Date	Time	Sample type	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Ammonia + org-N, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd, mg/L (00665)	Beryllium, water, fltrd, ug/L (01010)	Cadmium, water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)
MAY													
04...	1030	2	5.3	1	29.0	26.0	<.10	<.04	<.06	<.02	<.06	<.04	<.4

Date	Lead, water, fltrd, ug/L (01049)	Mercury, water, fltrd, ug/L (71890)	Zinc, water, fltrd, ug/L (01090)
MAY			
04...	<.08	<.01	E.5nc

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

c -- See laboratory comment  
n -- Below the LRL and above the LT-MDL

09510200 SYCAMORE CREEK NEAR FORT MCDOWELL, AZ

**LOCATION**--Lat 33°41'39", long 111°32'28", in sec. 16, T.4 N., R.8 E. (unsurveyed), Maricopa County, Hydrologic Unit 15060203, in Tonto National Forest, on right bank 0.7 mi southwest of Sugarloaf Mountain, 9 mi northeast of Fort McDowell, 10 mi upstream from mouth, and 25 mi northeast of Scottsdale.

**DRAINAGE AREA**--164 mi<sup>2</sup>.

**PERIOD OF RECORD**--Dec. 1960 to current year. Prior to Oct. 1, 1963, published as "near McDowell."

**REVISED RECORDS**--WRD Ariz. 1970: Drainage area.

**GAGE**--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 1,759.33 ft above sea level. Prior to Oct. 1, 1970, at datum 0.16 ft lower.

**REMARKS**--Records fair except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 24,200 ft<sup>3</sup>/s Sept. 5, 1970, gage height, 19.7 ft, from profile past gage, from rating curve extended above 3,600 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 15.0, 16.0, and 19.7 ft; no flow at times in most years.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30.....	0330	2,180	4.83	Feb. 12.....	0315	*11,000	*11.93
Jan. 4.....	1330	6,950	9.15	Feb. 20.....	0829	3,630	6.36

Minimum daily discharge, 0.01 ft<sup>3</sup>/s Sept. 15-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.11	e0.12	78	119	148	27	18	5.7	1.1	2.2	0.04
2	0.02	0.11	e0.08	40	100	141	26	17	5.7	1.1	2.8	0.03
3	0.02	0.11	0.07	665	e86	127	25	16	6.0	0.98	8.3	0.03
4	0.03	0.11	0.08	3580	e59	113	24	16	4.8	0.88	2.2	0.04
5	0.03	0.11	0.09	995	47	157	23	15	4.6	0.84	1.6	0.03
6	0.03	0.12	1.1	339	41	144	23	14	4.1	0.72	0.96	0.02
7	0.03	0.13	43	196	43	121	23	15	3.7	0.65	0.69	0.03
8	0.03	0.15	9.7	137	45	105	22	15	3.7	0.59	0.69	0.03
9	0.04	0.15	4.4	109	36	92	22	14	3.7	0.52	21	1.9
10	0.04	0.14	3.7	100	32	83	22	14	3.8	0.48	36	4.2
11	0.05	0.14	3.4	100	1720	77	21	12	3.6	0.45	6.5	0.68
12	0.06	0.14	3.4	143	5500	72	e21	11	3.5	0.39	7.2	0.15
13	0.06	0.14	2.6	98	1610	68	e20	11	3.4	0.33	27	0.03
14	0.05	0.14	1.9	77	596	62	e19	11	3.1	0.29	6.7	0.02
15	0.06	0.14	1.7	61	323	55	e18	10	2.9	0.26	3.4	0.01
16	0.05	0.14	1.6	48	265	52	18	9.9	2.7	0.21	2.0	0.01
17	0.06	0.14	1.4	39	208	50	18	9.5	e1.4	0.18	1.1	0.02
18	0.07	0.15	1.4	e32	279	49	17	9.3	e1.3	0.22	0.76	0.04
19	0.07	0.15	1.3	e24	1910	47	e17	9.0	e1.2	0.25	0.54	0.05
20	0.05	0.17	1.2	e19	1960	49	e17	8.8	e1.1	0.20	e0.43	0.09
21	0.08	0.19	1.2	17	e670	47	e16	8.3	e1.0	0.15	e0.28	0.21
22	0.08	0.21	e0.93	15	e594	42	17	7.9	2.0	0.09	e0.17	0.23
23	0.07	0.25	e0.82	13	e416	41	21	7.4	1.9	0.10	e0.09	0.31
24	0.07	0.29	e0.80	12	351	39	98	7.2	1.8	9.6	e0.05	0.21
25	0.07	0.31	e0.70	11	299	45	40	6.5	1.7	0.85	e0.05	0.13
26	0.07	e0.32	e0.65	15	241	45	27	6.1	1.5	34	e0.04	0.03
27	0.07	e0.28	e0.63	182	201	39	22	6.5	1.4	58	e0.03	0.03
28	0.09	e0.24	0.80	159	169	36	20	7.1	1.4	11	e0.03	0.03
29	0.09	e0.20	775	115	---	35	20	7.1	1.3	4.7	e0.03	0.02
30	0.10	e0.16	961	168	---	33	19	6.6	1.2	3.0	e0.02	0.04
31	0.11	---	179	143	---	30	---	6.1	---	4.1	0.04	---
TOTAL	1.77	5.14	2003.77	7730	17920	2244	723	332.3	85.2	136.23	132.90	8.69
MEAN	0.06	0.17	64.6	249	640	72.4	24.1	10.7	2.84	4.39	4.29	0.29
MAX	0.11	0.32	961	3580	5500	157	98	18	6.0	58	36	4.2
MIN	0.02	0.11	0.07	11	32	30	16	6.1	1.0	0.09	0.02	0.01
AC-FT	3.5	10	3970	15330	35540	4450	1430	659	169	270	264	17
CFSM	0.00	0.00	0.39	1.52	3.90	0.44	0.15	0.07	0.02	0.03	0.03	0.00
IN.	0.00	0.00	0.45	1.75	4.06	0.51	0.16	0.08	0.02	0.03	0.03	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
	6.32	6.35	40.3	61.8	88.0
	194	72.3	426	1065	852
	1973	1973	1966	1993	1978
	0.00	0.00	0.00	0.00	0.02
	1961	1961	1963	1963	1990
					2002
					2002
					1961
					1961
					1962
					1961
					1962
					1961
					1962

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1961 - 2005
ANNUAL TOTAL	2263.30	31323.00	
ANNUAL MEAN	6.18	85.8	27.4
HIGHEST ANNUAL MEAN			155
LOWEST ANNUAL MEAN			0.06
HIGHEST DAILY MEAN	961	5500	8300
LOWEST DAILY MEAN	0.00	0.01	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.03	0.00
ANNUAL RUNOFF (AC-FT)	4490	62130	19840
ANNUAL RUNOFF (CFSM)	0.038	0.523	0.167
ANNUAL RUNOFF (INCHES)	0.51	7.10	2.27
10 PERCENT EXCEEDS	0.81	131	40
50 PERCENT EXCEEDS	0.05	3.6	0.49
90 PERCENT EXCEEDS	0.00	0.05	0.00

e Estimated

## GILA RIVER BASIN

## 09511300 VERDE RIVER NEAR SCOTTSDALE, AZ

**LOCATION.**--Lat 33°33'31", long 111°40'07", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 31, T.3 N., R.7 E., Maricopa County, Hydrologic Unit 15060203, in Salt River Indian Reservation, on right bank, 0.75 mi north of city of Phoenix water-treatment plant, 1 mi upstream from mouth, 1.7 mi downstream from State Highway 87, and 16 mi northeast of Scottsdale.

**DRAINAGE AREA.**--6,615 mi<sup>2</sup>, of which 365 mi<sup>2</sup> is noncontributing, including 357 mi<sup>2</sup> in Aubrey Valley Playa, a closed basin.

**PERIOD OF RECORD.**--Feb. 1961 to current year.

**REVISED RECORDS.**--WDR AZ--89--1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 1,320.31 ft above sea level. Prior to Oct. 1, 1980, and Jan. 4 to Oct. 3, 1988, at site 1.7 mi upstream on State Highway 87 bridge at datum 31.04 ft higher. Oct. 1, 1980, to Jan. 3, 1988, at Verde Plant intake structure 0.1 mi upstream at same datum.

**REMARKS.**--Records good, except estimated daily discharges, which are poor. Flow regulated by Bartlett and Horseshoe Reservoirs (see sta 09509500) except during periods of spill or floodflow below Bartlett Dam. About 12,500 acres above reservoirs are irrigated by surface water and ground water. Below reservoirs water is diverted for municipal supply for the city of Phoenix, and for irrigation of an undetermined acreage in Fort McDowell Indian Reservation. Remainder (except during infrequent period of extreme flooding) is diverted at Granite Reef Dam on Salt River, 6 mi downstream, for irrigation in Salt River Valley and for municipal use by the city of Phoenix.

**AVERAGE DISCHARGE.**--44 years, 625 ft<sup>3</sup>/s, 452,500 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 127,000 ft<sup>3</sup>/s Jan. 8, 1993, from slope-area measurement of peak flow, gage height, 25.37 ft recorded; no flow at times some years.

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 27,700 ft<sup>3</sup>/s, Feb. 13; Minimum daily discharge, 67 ft<sup>3</sup>/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	407	330	13700	2120	2590	1260	625	841	722	408	248
2	89	498	311	16800	1950	1460	935	349	876	737	449	250
3	120	454	362	16100	1560	2020	734	289	893	747	661	249
4	115	432	430	20800	1460	1570	637	290	993	784	615	331
5	120	341	416	e7500	1100	2320	569	335	1000	729	558	301
6	124	278	379	e5700	1060	2250	538	362	982	709	561	283
7	111	291	317	e6800	1050	1650	520	377	967	712	570	274
8	111	246	359	8510	1120	2160	517	380	835	739	575	280
9	115	232	500	5200	1560	1610	516	380	734	730	612	277
10	138	259	475	3540	2780	1130	509	413	723	742	665	273
11	230	303	450	3190	9990	1520	476	546	722	732	610	272
12	252	272	434	8220	25300	1680	312	560	766	720	590	266
13	265	250	450	7900	27700	1160	223	585	752	720	596	265
14	277	211	476	4400	21200	1050	189	726	754	721	585	254
15	302	219	489	2510	19600	1370	173	767	743	723	551	237
16	293	298	434	e2000	16600	1010	195	752	765	725	550	237
17	248	293	384	e1980	16100	884	203	815	764	723	535	246
18	223	185	437	1780	13100	847	247	837	762	721	631	252
19	219	138	523	1760	7400	946	259	910	764	721	630	241
20	216	165	576	1720	8780	1200	179	906	749	718	633	236
21	193	197	598	1770	11300	1900	135	909	738	744	654	231
22	198	216	678	e2130	11400	2050	125	921	731	749	641	233
23	159	182	711	2090	10900	1510	152	908	711	752	615	230
24	120	148	554	2060	7440	1110	287	739	706	761	290	225
25	110	133	445	2230	3900	1300	694	733	714	759	252	241
26	100	125	424	5070	2720	1350	680	710	732	767	255	238
27	107	140	470	8610	2350	1180	701	708	721	739	268	240
28	177	186	484	8450	3310	1100	570	733	736	485	284	243
29	207	197	756	3940	---	1090	490	765	740	415	254	250
30	187	204	2030	3610	---	1090	581	734	736	404	247	258
31	228	---	e13000	3160	---	1240	---	735	---	418	251	---
TOTAL	5421	7500	28682	183230	234850	45347	13606	19799	23650	21568	15596	7661
MEAN	175	250	925	5911	8388	1463	454	639	788	696	503	255
MAX	302	498	13000	20800	27700	2590	1260	921	1000	784	665	331
MIN	67	125	311	1720	1050	847	125	289	706	404	247	225
AC-FT	10750	14880	56890	363400	465800	89950	26990	39270	46910	42780	30930	15200
CAL YR 2004	TOTAL	75952	MEAN	208	MAX	13000	MIN	48	AC-FT	150700		
WTR YR 2005	TOTAL	606910	MEAN	1663	MAX	27700	MIN	67	AC-FT	1204000		

e Estimated

09512162 INDIAN BEND WASH AT CURRY ROAD, TEMPE, AZ

LOCATION--Lat 33°26'25", long 111°54'52", in NW1/4SE1/4 sec. 11, T.1 N., R.4 E., Maricopa County Hydrologic Unit 15060106, on upstream side of Curry Road bridge, 2 mi northeast of downtown Tempe, AZ.

DRAINAGE AREA--82 mi<sup>2</sup>.

PERIOD OF RECORD--Oct. 1992 to current year.

GAGE--Water-stage recorder. Datum of gage is 1,162.45 ft above sea level.

REMARKS--Records fair, except for estimated daily discharges, which are poor. FCDMC provided daily values prior to installation of gage in Apr. 1993. Natural flow of wash affected by urbanization and partly regulated by artificial lakes upstream. Gage located .25 mi upstream from Tempe Town Lake.

EXTREMES FOR PERIOD OF RECORD--Maximum daily discharge 1,970 ft<sup>3</sup>/s, Jan. 11, 1993. Minimum daily discharge, no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD--Maximum discharge 21,000 ft<sup>3</sup>/s June 22, 1972, at gage 7 mi upstream (09512100).

EXTREMES FOR CURRENT YEAR--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 3 .....	0245	*3,040	*4.03

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	1.9	0.01	0.00	0.00	0.00	0.00	0.00	0.65	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.9	0.00
3	0.00	0.00	0.00	19	0.00	0.00	0.00	0.00	0.00	0.00	590	0.00
4	0.00	0.00	0.00	262	0.00	0.00	0.00	0.00	0.00	0.00	41	0.00
5	0.00	0.00	0.00	92	0.00	0.00	0.00	0.00	0.00	0.00	3.8	0.80
6	0.00	0.00	1.7	16	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
7	0.00	0.00	0.00	1.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	3.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	176	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	77	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	1.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	6.5	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
19	0.00	0.00	0.00	0.00	254	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
20	0.00	0.00	0.00	0.00	86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	1.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	2.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	6.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	3.2	0.85	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	78	0.28	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	18	0.31	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	101.07	445.94	640.57	0.00	0.00	0.00	0.00	0.00	658.34	0.80
MEAN	0.00	0.00	3.26	14.4	22.9	0.00	0.00	0.00	0.00	0.00	21.2	0.03
MAX	0.00	0.00	78	262	254	0.00	0.00	0.00	0.00	0.00	590	0.80
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	200	885	1270	0.00	0.00	0.00	0.00	0.00	1310	1.6
CFSM	0.00	0.00	0.04	0.18	0.28	0.00	0.00	0.00	0.00	0.00	0.26	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2005, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	4.20	2.65	4.12	19.3	7.41	3.90	1.03	0.03	0.05	0.67	2.10	2.20	
MAX	46.8	29.9	39.5	225	27.2	16.9	10.1	0.39	0.55	6.17	21.2	21.9	
(WY)	1994	1994	1993	1993	2003	1993	2004	1995	1994	1999	2005	1995	
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1993	1993	1994	1996	1999	1999	1993	1993	1993	1993	1994	1993	1993

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1993 - 2005

ANNUAL TOTAL	673.48	1846.72	
ANNUAL MEAN	1.84	5.06	3.98
HIGHEST ANNUAL MEAN			25.8 1993
LOWEST ANNUAL MEAN			0.14 2002
HIGHEST DAILY MEAN	181 Apr 2	590 Aug 3	1970 Jan 11 1993
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1992
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1992
ANNUAL RUNOFF (AC-FT)	1340	3660	2880
ANNUAL RUNOFF (CFSM)	0.022	0.062	0.048
10 PERCENT EXCEEDS	0.00	0.10	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated



## GILA RIVER BASIN

## 09512165 SALT RIVER AT PRIEST DRIVE NEAR PHOENIX, AZ

**LOCATION.**--Lat 33°26'22", long 111°57'37", in NE<sub>1/4</sub>NE<sub>1/4</sub> sec. 17, T.1 N., R.4 E., Maricopa County, Hydrologic Unit 15060106, on left bank at downstream side of Priest Road bridge, 1.3 mi southeast of Phoenix main post office.

**DRAINAGE AREA.**--13,223 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Dec. 1993 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 1,135 ft above sea level, from topographic map.

**REMARKS.**--No estimated daily discharges, records fair.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 81,400 ft<sup>3</sup>/s Feb. 16, 1995, gage height 12.73 ft, from rating curve adjusted for drawdown based on highwater mark profile at gage; no flow for many days each year.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge since 1871, 300,000 ft<sup>3</sup>/s in Feb. 1891.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 41,000 ft<sup>3</sup>/s on Feb. 12 at 2145, gage height 9.83 ft. Minimum daily discharge, no flow May 25--30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.46	1.3	0.54	12200	2640	2440	3.7	0.08	0.07	1.7	16	0.68
2	0.48	1.2	0.55	15900	2200	1300	50	0.10	0.05	1.7	12	1.1
3	0.51	1.1	0.60	15900	1660	1250	12	0.11	0.04	1.6	603	0.88
4	0.69	1.0	1.0	18000	1400	597	25	0.12	0.05	2.9	92	0.77
5	1.0	0.97	1.0	12300	985	1530	21	0.12	0.02	1.9	43	1.2
6	0.67	0.93	3.4	5680	664	2000	4.5	0.14	0.03	1.7	23	11
7	0.67	0.93	1.2	5540	547	1180	2.6	0.19	0.06	19	11	15
8	0.67	1.2	1.0	8000	571	1410	2.3	0.16	0.15	2.0	54	16
9	0.70	0.97	0.93	5480	801	1480	2.1	0.13	0.15	2.0	51	12
10	0.71	1.2	0.86	3290	1310	532	1.9	0.11	0.23	20	127	11
11	1.4	1.4	0.80	2880	7080	271	1.8	0.16	0.26	10	64	15
12	1.3	0.89	0.71	6200	22000	689	1.7	0.07	0.30	4.0	52	18
13	1.2	0.74	0.64	9280	26400	756	1.5	0.05	0.37	3.8	48	18
14	1.4	0.73	0.59	5460	20700	286	1.4	0.06	0.49	6.2	31	12
15	1.1	0.76	0.54	2630	19600	329	1.3	0.10	0.59	11	15	9.4
16	1.0	0.78	0.55	1460	16800	429	1.2	0.11	0.66	4.0	13	11
17	0.97	0.80	0.52	906	16200	152	1.1	0.16	0.65	2.4	16	13
18	1.3	0.83	0.49	829	14900	73	0.94	0.18	0.69	4.3	7.0	13
19	2.1	0.84	0.46	722	10000	33	0.83	0.11	0.73	3.8	4.2	15
20	1.9	0.84	0.52	641	10800	12	0.74	0.07	0.75	1.8	1.9	11
21	3.5	0.89	0.50	662	15000	240	0.61	0.04	2.6	1.7	0.82	10
22	2.6	1.6	0.45	1350	14200	1020	0.52	0.02	4.0	1.5	1.3	8.9
23	1.8	0.95	0.45	1960	12600	1180	0.41	0.04	17	2.2	7.3	9.4
24	1.3	0.93	0.48	1950	8410	287	0.40	0.04	16	2.2	1.0	10
25	1.8	0.81	0.45	1950	4040	97	0.24	0.00	2.0	2.0	0.61	9.3
26	2.6	0.77	0.45	3970	2450	227	0.19	0.00	2.4	1.9	0.53	11
27	1.7	0.74	0.45	9280	1720	321	0.10	0.00	3.5	1.3	0.47	6.9
28	3.7	0.69	0.50	9730	2530	196	0.10	0.00	2.1	1.3	0.43	6.1
29	55	0.62	4.4	5780	---	109	0.10	0.00	2.7	1.8	0.61	4.0
30	2.0	0.58	42	4260	---	43	0.09	0.00	1.4	2.0	0.97	3.3
31	1.6	---	7230	4240	---	8.7	---	0.04	---	2.6	0.57	---
TOTAL	97.83	27.99	7297.03	178430	238208	20477.7	140.37	2.51	60.04	126.3	1298.71	283.93
MEAN	3.16	0.93	235	5756	8507	661	4.68	0.08	2.00	4.07	41.9	9.46
MAX	55	1.6	7230	18000	26400	2440	50	0.19	17	20	603	18
MIN	0.46	0.58	0.45	641	547	8.7	0.09	0.00	0.02	1.3	0.43	0.68
AC-FT	194	56	14470	353900	472500	40620	278	5.0	119	251	2580	563
CFSM	0.00	0.00	0.02	0.44	0.64	0.05	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2005, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	1.60	1.08	22.6	496	1144	687	114	0.51	0.53	1.81	4.22	3.73
MAX	9.39	3.17	235	5756	8507	7555	968	1.82	2.00	7.38	41.9	21.8
(WY)	2001	2001	2005	2005	2005	1995	1998	2001	2005	1999	2005	1995
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1995	1995	1996	1994	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1994 - 2005	
ANNUAL TOTAL	8177.76		446450.41			
ANNUAL MEAN	22.3		1223		219	
HIGHEST ANNUAL MEAN					1223	
LOWEST ANNUAL MEAN					0.00	
HIGHEST DAILY MEAN	7230 Dec 31		26400 Feb 13		40600 Mar 7 1995	
LOWEST DAILY MEAN	0.18 Apr 29		0.00 May 25		0.00 Dec 7 1993	
ANNUAL SEVEN-DAY MINIMUM	0.24 May 3		0.01 May 24		0.00 Dec 7 1993	
ANNUAL RUNOFF (AC-FT)	16220		885500		158900	
ANNUAL RUNOFF (CFSM)	0.002		0.093		0.017	
10 PERCENT EXCEEDS	1.9		2740		2.9	
50 PERCENT EXCEEDS	0.73		2.0		0.60	
90 PERCENT EXCEEDS	0.37		0.14		0.00	

09512280 CAVE CREEK BELOW COTTONWOOD CREEK, NEAR CAVE CREEK, AZ

LOCATION--Lat 33°53'14", long 111°57'12", in SE1/4SE1/4SW1/4 sec .4, T.6 N., R.4 E., Maricopa County, Hydrologic Unit 15060106, on left bank 1,500 ft downstream from Cottonwood Creek and 3.7 mi north of town of Cave Creek.

DRAINAGE AREA--82.7 mi<sup>2</sup>.

PERIOD OF RECORD--Oct. 1980 to current year. Prior to Oct. 1989, published as "below Cottonwood Wash."

GAGE--Water-stage recorder. Elevation of gage is 2,280 ft above sea level, from topographic map. Prior to Jan. 8, 1993, at datum 2.00 ft higher.

REMARKS--Records fair, except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD--Maximum discharge, 14,000 ft<sup>3</sup>/s Sept. 3, 2005, gage height, 16.40 ft on basis of slope-area measurement; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD--Flood of Feb. 19, 1980, reached a stage of 10.4 ft, from flood marks, discharge, 7,020 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR--Peak discharges greater than base discharge of 700 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29.....	1445	2,250	8.56	Feb. 12.....	0215	3,390	9.85
Jan. 4.....	unk	1,530	7.42 (a)	Feb. 19.....	0630	948	6.33
Jan. 27.....	0645	732	6.00	Sept. 3.....	1900	*14,000	*16.40

a-from floodmark

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	3.1	5.9	21	4.0	2.3	0.05	0.00	20	0.00
2	0.00	0.00	0.00	1.2	4.5	18	4.2	2.1	0.05	0.00	1.1	0.00
3	0.00	0.00	0.00	e207	3.7	16	4.0	2.0	0.06	0.00	0.41	340
4	0.00	0.00	0.00	e673	e3.5	15	3.7	1.8	0.05	0.00	e0.23	31
5	0.00	0.00	0.00	e152	e2.8	18	3.3	1.7	0.05	0.00	e0.14	5.8
6	0.00	0.00	0.00	e48	e2.1	16	3.0	1.5	0.05	0.00	e1.5	2.4
7	0.00	0.00	0.00	15	e4.2	13	2.8	1.5	0.06	0.00	e0.36	1.2
8	0.00	0.00	0.00	5.5	e6.1	12	2.7	1.5	0.05	0.00	e2.7	2.1
9	0.00	0.00	0.00	2.4	4.4	11	2.5	1.4	0.05	0.00	e53	0.32
10	0.00	0.00	0.00	1.4	3.6	9.8	2.4	1.3	0.05	0.00	e23	0.13
11	0.00	0.00	0.00	1.1	790	8.8	2.3	1.2	0.04	0.00	74	0.06
12	0.00	0.00	0.00	1.9	1230	8.3	2.1	1.0	0.04	0.00	18	0.02
13	0.00	0.00	0.00	1.1	165	8.0	2.0	0.97	0.04	0.00	8.7	0.00
14	0.00	0.00	0.00	0.69	65	7.9	1.9	0.91	0.04	0.00	1.9	0.00
15	0.00	0.00	0.00	0.49	38	7.3	1.7	0.88	0.03	0.00	1.1	0.00
16	0.00	0.00	0.00	0.39	27	7.0	1.7	0.74	0.03	0.00	0.72	0.00
17	0.00	0.00	0.00	0.33	20	7.0	1.6	0.58	0.03	0.00	0.54	0.00
18	0.00	0.00	0.00	0.28	79	7.0	1.7	0.52	0.02	0.00	0.41	0.00
19	0.00	0.00	0.00	0.26	442	8.0	1.7	0.42	0.01	0.00	0.30	0.00
20	0.00	0.00	0.00	0.25	202	9.0	1.9	0.35	0.00	0.00	1.3	0.00
21	0.00	0.00	0.00	0.23	91	7.5	1.9	0.26	0.00	0.00	0.53	0.00
22	0.00	0.00	0.00	0.21	118	6.5	2.0	0.21	0.00	0.00	0.32	0.00
23	0.00	0.00	0.00	0.19	116	6.4	2.2	0.18	0.00	0.00	0.22	e0.00
24	0.00	0.00	0.00	0.19	68	6.0	5.2	0.14	0.00	0.84	0.18	e0.00
25	0.00	0.00	0.00	0.19	54	6.4	3.2	0.10	0.00	0.05	0.09	e0.00
26	0.00	0.00	0.00	0.70	39	5.7	2.5	0.09	0.00	0.00	0.08	e0.00
27	0.00	0.00	0.00	173	31	5.3	2.4	0.08	0.00	0.00	0.07	e0.00
28	0.00	0.00	0.00	e29	25	5.3	2.4	0.07	0.00	0.00	0.05	e0.00
29	0.00	0.00	297	12	---	5.0	2.6	0.07	0.00	0.00	0.03	e0.00
30	0.00	0.00	140	15	---	4.6	2.5	0.06	0.00	28	0.01	e0.00
31	0.00	---	13	8.9	---	4.1	---	0.06	---	39	0.00	---
TOTAL	0.00	0.00	450.00	1355.00	3640.8	290.9	78.1	25.99	0.80	67.89	210.99	383.03
MEAN	0.00	0.00	14.5	43.7	130	9.38	2.60	0.84	0.03	2.19	6.81	12.8
MAX	0.00	0.00	297	673	1230	21	5.2	2.3	0.06	39	74	340
MIN	0.00	0.00	0.00	0.19	2.1	4.1	1.6	0.06	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	893	2690	7220	577	155	52	1.6	135	418	760
CFSM	0.00	0.00	0.18	0.53	1.57	0.11	0.03	0.01	0.00	0.03	0.08	0.15
IN.	0.00	0.00	0.20	0.61	1.64	0.13	0.04	0.01	0.00	0.03	0.09	0.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2005, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005		
MEAN	1.83	2.49	6.40	22.9	21.3	16.0	2.85	0.83	0.26	0.74	1.95	2.05																
MAX	17.2	12.9	48.3	370	164	123	14.0	6.54	3.27	10.5	19.3	12.8																
(WY)	2001	1994	1983	1993	1993	1991	1983	1983	1993	1999	1992	2005																
MIN	0.00	0.00	0.00	0.00	0.00	0.06	0.05	0.00	0.00	0.00	0.00	0.00																
(WY)	1991	1990	1990	2002	2004	1999	2002	1989	1984	1982	1994	1981																

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1980 - 2005
ANNUAL TOTAL	527.08	6503.50	
ANNUAL MEAN	1.44	17.8	6.57
HIGHEST ANNUAL MEAN			51.5
LOWEST ANNUAL MEAN			0.02
HIGHEST DAILY MEAN	297	Dec 29	1230
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	1050	12900	4760
ANNUAL RUNOFF (CFSM)	0.017	0.215	0.079
ANNUAL RUNOFF (INCHES)	0.24	2.93	1.08
10 PERCENT EXCEEDS	0.16	18	4.7
50 PERCENT EXCEEDS	0.00	0.10	0.19
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

## GILA RIVER BASIN

## 09512406 SALT RIVER AT 51ST AVENUE, PHOENIX, AZ

**LOCATION.**--Lat 33°23'59", long 112°20'07", in SE1/4NE1/4 sec. 29, T.1 N., R.2 E., Maricopa County, Hydrologic Unit 15060106, on left bank at downstream side of 51st Ave. bridge, 4.1 mi south of Interstate 10.

**DRAINAGE AREA.**--Undetermined.

**PERIOD OF RECORD.**--Oct. 30, 2002 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 1,050 ft above sea level, from topographic map.

**REMARKS.**--Records fair, except for estimated daily discharges, which are poor.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 36,340 ft<sup>3</sup>/s, gage height 14.30 ft @ 2315, Feb. 12. No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	11900	2593	2298	8.7	0.00	0.00	e0.00	0.00	0.00
2	0.00	0.00	0.00	14430	1992	1572	4.7	0.00	0.00	e0.00	5.8	0.00
3	0.00	0.00	0.00	13440	1729	1008	3.4	0.00	0.00	e0.00	27.0	0.00
4	0.00	0.00	0.00	17480	1355	874.5	2.0	0.00	0.00	e0.00	2.3	0.30
5	0.00	0.00	0.00	15610	1088	979.1	0.81	0.00	0.00	e0.00	5.7	0.00
6	0.00	0.00	0.00	5772	657.8	1695	0.27	0.00	0.00	e0.00	4.7	0.00
7	0.00	0.00	0.00	5202	e545.4	1415	0.00	0.00	0.00	e0.00	0.61	0.00
8	0.00	0.00	0.00	e6146	e468.5	982.2	0.00	0.00	0.00	e0.00	5.4	0.00
9	0.00	0.00	0.00	e5172	536.8	1401	0.00	0.00	0.00	e0.00	0.00	0.00
10	0.00	0.00	0.00	e3545	908.6	791.2	0.00	0.00	0.00	e0.00	0.00	0.00
11	0.00	0.00	0.00	e2781	4903	339.0	0.00	0.00	0.00	e0.00	0.00	0.00
12	0.00	0.00	0.00	e5109	20360	425.2	0.00	0.00	0.00	e0.00	0.00	1.5
13	0.00	0.00	0.00	10060	29610	853.1	0.00	0.00	0.00	e0.00	0.00	4.2
14	0.00	0.00	0.00	5490	21670	377.5	0.00	0.00	0.00	0.00	0.00	4.0
15	0.00	0.00	0.00	2876	21070	268.2	0.00	0.00	0.00	0.00	0.00	4.9
16	0.00	0.00	0.00	1605	17630	e433.0	0.00	0.00	0.00	0.00	0.00	4.9
17	0.00	0.00	0.00	953.2	16020	e228.6	0.00	0.00	0.00	0.68	0.00	4.8
18	0.00	0.00	0.00	780.5	16220	e106.1	0.00	0.00	0.00	0.56	0.00	5.2
19	0.00	0.00	0.00	677.9	10820	e35.4	0.00	0.00	0.00	2.4	0.00	7.1
20	0.00	0.00	0.00	670.4	e9770	e14.4	0.00	0.00	e0.00	0.05	0.00	8.0
21	0.00	0.00	0.00	655.9	e13070	e8.7	0.00	0.00	e0.00	0.30	0.00	7.6
22	0.00	0.00	0.00	874.6	e13820	e524.2	0.00	0.00	e0.00	0.00	0.00	7.1
23	0.00	0.00	0.00	1674	11880	982.9	0.00	0.00	e0.05	0.06	0.00	7.9
24	0.00	0.00	0.00	1736	8121	534.8	0.00	0.00	e0.00	0.39	0.00	7.4
25	0.00	0.00	0.00	1744	4308	e156.0	0.00	0.00	0.00	1.2	0.00	7.6
26	0.00	0.00	0.00	2856	2588	63.7	0.00	0.00	0.00	0.00	0.00	8.7
27	0.00	0.00	0.00	8304	1835	243.3	0.00	0.00	e0.00	0.00	0.00	9.2
28	0.00	0.00	0.00	9395	1871	258.3	0.00	0.00	e0.00	0.00	0.00	9.6
29	0.00	0.00	0.00	6148	---	114.3	0.00	0.00	e0.00	0.00	0.00	9.3
30	0.00	0.00	0.00	3513	---	45.1	0.00	0.00	e0.00	0.00	0.00	8.0
31	0.00	---	2205	3394	---	17.0	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	2205.00	169994.5	237440.1	19044.8	19.88	0.00	0.05	5.64	51.51	127.30
MEAN	0.00	0.00	71.1	5484	8480	614	0.66	0.00	0.00	0.18	1.66	4.24
MAX	0.00	0.00	2205	17480	29610	2298	8.7	0.00	0.05	2.4	27.0	9.6
MIN	0.00	0.00	0.00	655.9	468.5	8.7	0.00	0.00	0.00	0.00	0.00	0.00
MED	0.00	0.00	0.00	3545	4606	425.2	0.00	0.00	0.00	0.00	0.00	4.8
AC-FT	0.00	0.00	4370	337200	471000	37780	39	0.00	0.1	11	102	252

CAL YR 2004 TOTAL 2219.31 MEAN 6.06 MAX 2205 MIN 0.00 MED 0.00 AC-FT 4400  
WTR YR 2005 TOTAL 428888.78 MEAN 1175 MAX 29610 MIN 0.00 MED 0.00 AC-FT 850700

e Estimated

09512450 AGUA FRIA RIVER NEAR HUMBOLDT, AZ

**LOCATION**--Lat 34°29'07", long 112°14'15", in SW1/4NW1/4 sec. 22, T.16 N., R.1 E., Yavapai County, Hydrologic Unit 15070102, on right bank 0.9 mi southeast from Humboldt.

**DRAINAGE AREA**--Undetermined.

**PERIOD OF RECORD**--Jan. 2000 to current year.

**GAGE**--Water-stage recorder and crest-stage gage. Elevation of gage is 4,400 ft above sea level, from topographic map.

**REMARKS**--Records poor. No diversion upstream from station.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 11,900 ft<sup>3</sup>/s, based on an extension of the rating curve, Sept. 8, 2002 at 1815, gage height 15.18 ft; minimum daily discharge, no flow for many days.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29.....	1600	*1,410	*8.79
Feb. 12.....	unk	1,190	8.62 a

Minimum daily discharge, 1.1 ft<sup>3</sup>/s on Oct. 15.

a- from floodmark

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.9	2.4	26	22	21	7.1	4.7	3.5	2.6	3.2	6.3
2	1.2	1.9	2.5	23	21	20	6.8	4.7	3.3	2.7	3.8	3.9
3	1.2	1.8	2.9	48	19	20	6.7	4.6	3.2	2.7	3.7	6.3
4	1.2	1.8	2.5	258	18	20	6.7	4.5	3.2	2.9	2.3	3.9
5	1.3	1.8	2.5	e90	18	20	6.7	4.6	3.2	2.9	2.3	3.5
6	1.3	1.8	2.4	25	18	20	6.6	4.8	3.3	2.7	9.6	3.3
7	1.2	2.0	2.4	21	18	20	6.4	5.0	3.2	2.8	1.8	3.1
8	1.2	74	2.5	20	18	20	6.3	4.8	3.2	2.9	4.5	3.3
9	1.2	5.1	2.5	22	17	19	6.3	4.7	3.4	2.7	2.1	3.4
10	1.2	e3.2	2.5	122	17	18	6.1	4.9	3.4	2.8	5.7	3.6
11	1.2	e3.1	2.5	246	e538	16	5.8	4.8	3.4	2.8	2.5	3.6
12	1.2	3.1	2.5	183	e974	16	5.6	4.7	3.4	2.8	1.8	3.7
13	1.2	2.9	2.5	e81	91	14	5.5	4.8	3.3	2.7	2.2	3.7
14	1.2	2.8	2.5	e40	43	15	5.4	4.7	3.3	2.7	2.8	3.7
15	1.1	2.8	2.5	e30	30	14	5.3	4.3	3.4	2.6	18	3.8
16	1.2	2.7	2.5	e20	26	13	5.2	4.3	3.2	2.7	6.0	3.9
17	1.2	2.7	2.5	e15	23	12	4.9	4.5	3.1	2.6	4.8	4.1
18	1.3	2.7	2.5	e10	57	12	4.8	4.5	3.1	2.6	4.8	4.4
19	1.4	2.6	2.5	e10	75	12	4.8	4.4	3.1	6.3	4.9	4.5
20	1.4	2.7	2.5	e10	50	12	5.0	4.4	3.2	3.0	4.9	4.6
21	12	3.2	2.5	10	36	11	4.9	4.5	3.1	2.6	4.8	4.6
22	3.6	8.3	2.5	11	37	11	4.9	4.3	3.3	2.6	4.9	4.4
23	1.9	11	2.5	12	36	11	5.0	4.4	3.7	4.6	4.8	4.4
24	1.9	9.6	2.5	14	30	10	5.1	4.5	3.6	4.5	5.1	4.3
25	1.9	7.4	2.5	16	26	9.6	5.0	4.6	3.2	7.3	4.3	4.4
26	1.9	5.8	2.5	18	24	9.1	4.9	4.6	3.0	3.3	4.1	4.1
27	2.0	4.8	2.5	27	23	8.7	4.9	4.7	2.7	2.3	3.9	4.3
28	9.6	e3.5	2.7	27	22	8.3	4.9	4.8	2.5	2.2	3.9	4.0
29	3.1	e2.5	494	27	---	7.9	4.8	4.9	2.6	2.4	3.7	4.0
30	2.0	e2.3	336	25	---	7.5	4.7	4.1	2.6	3.9	3.6	3.9
31	2.0	---	60	23	---	7.3	---	3.4	---	5.0	3.5	---
TOTAL	66.6	181.8	960.3	1510	2327	435.4	167.1	141.5	95.7	99.2	138.3	123.0
MEAN	2.15	6.06	31.0	48.7	83.1	14.0	5.57	4.56	3.19	3.20	4.46	4.10
MAX	12	74	494	258	974	21	7.1	5.0	3.7	7.3	18	6.3
MIN	1.1	1.8	2.4	10	17	7.3	4.7	3.4	2.5	2.2	1.8	3.1
MED	1.3	2.8	2.5	23	25	13	5.3	4.6	3.2	2.7	3.9	4.0
AC-FT	132	361	1900	3000	4620	864	331	281	190	197	274	244
CAL YR 2004	TOTAL	2644.23	MEAN	7.22	MAX	494	MIN	0.00	MED	1.8	AC-FT	5240
WTR YR 2005	TOTAL	6245.9	MEAN	17.1	MAX	974	MIN	1.1	MED	4.4	AC-FT	12390

e Estimated

## GILA RIVER BASIN

## 09512500 AGUA FRIA RIVER NEAR MAYER, AZ

**LOCATION.**--Lat 34°18'55", long 112°03'48", in NW1/4SE1/4 sec. 20, T.11 N., R.3 E., Yavapai County, Hydrologic Unit 15070102, on left bank at Sycamore damsite, 700 ft downstream from Big Bug Creek and 12 mi southeast of Mayer.

**DRAINAGE AREA.**--585 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Jan. 1940 to current year.

**REVISED RECORDS.**--WDR AZ--88--1: 1987. WDR AZ--89--1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 3,434 ft above sea level.

**REMARKS.**--Records fair, except for estimated daily discharges, which are poor. Diversions above station for mining and irrigation of about 600 acres.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 33,100 ft<sup>3</sup>/s Feb. 19, 1980, from rating curve extended above 3,400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow, gage height, 15.76 ft, from mean of surge, inside highwater mark 16.03 ft, floodmark 18.97 ft; negligible flow at times during the summer months in most previous years when entire flow was diverted to Perry Canal above station and flow past gage was seepage only.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 2,300 ft<sup>3</sup>/s from rating curve extended as explained above, and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29.....	1130	11,800	11.36	Feb. 12.....	0300	*16,700	*12.86
Jan. 3.....	2345	10,300	10.84	Aug. 13.....	2015	2,490	6.67

Minimum daily discharge, 0.33 ft<sup>3</sup>/s Oct. 1--2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.33	0.63	2.9	e74	e33	113	e21	9.7	3.0	1.8	e19	2.1
2	0.33	0.61	2.8	e31	e23	93	e20	9.1	3.0	1.8	e9.3	2.1
3	0.36	0.64	2.7	e750	e18	77	e20	8.8	3.0	1.8	e171	2.2
4	0.46	0.65	3.2	3790	e16	71	e19	8.3	3.0	1.8	e9.7	3.5
5	0.45	0.65	3.8	608	e15	90	e18	7.9	2.8	1.7	23	2.0
6	0.45	0.66	4.4	e290	e14	93	e17	7.5	2.8	1.6	4.7	1.9
7	0.46	0.76	3.7	e243	e14	74	16	7.5	2.8	1.7	18	1.8
8	0.46	259	3.2	e219	e38	66	15	7.3	2.8	1.7	10	1.8
9	0.47	35	2.9	e206	e23	58	15	6.9	2.7	1.7	14	1.7
10	0.48	11	2.8	e203	e16	55	16	6.8	2.8	1.6	9.0	1.7
11	0.51	4.7	2.8	390	1310	48	13	6.5	2.6	1.5	32	1.6
12	0.51	2.8	2.7	504	8240	45	12	6.2	2.6	1.5	15	1.6
13	0.47	2.2	2.7	e220	934	41	12	5.9	e2.5	1.5	154	1.5
14	0.46	2.1	2.7	e140	545	42	11	5.7	e2.5	1.5	74	1.5
15	0.45	2.1	2.6	e88	355	40	11	5.4	e2.4	1.5	94	1.4
16	0.46	2.0	2.2	e47	274	35	10	4.9	e2.4	1.5	e60	1.4
17	0.48	2.0	2.2	e27	204	33	10	4.4	e2.3	2.4	e26	1.4
18	0.48	2.0	2.2	e16	518	32	9.3	4.2	e2.3	1.3	e12	1.4
19	0.48	2.0	2.2	e13	1170	38	9.1	3.9	e2.2	1.3	e7.3	1.4
20	0.46	2.0	2.2	12	843	48	9.2	3.7	e2.2	1.3	e5.6	1.4
21	0.63	23	2.2	11	450	52	9.1	3.5	e2.1	1.2	e4.3	1.4
22	2.2	123	2.5	10	578	45	9.2	3.2	e2.1	1.2	e3.6	1.3
23	0.45	99	2.5	9.8	473	43	9.6	3.1	e2.0	1.2	e3.0	1.3
24	0.40	22	2.3	9.5	316	40	58	3.1	e2.0	1.3	e2.8	1.3
25	0.39	11	2.2	e12	240	39	16	2.9	1.9	2.9	e2.9	1.3
26	0.36	6.9	2.2	e33	189	35	14	2.9	1.9	e2.1	e2.5	1.3
27	0.38	5.0	2.2	e81	178	31	13	3.0	1.9	e1.3	e2.4	1.4
28	7.4	4.2	2.8	e62	139	31	12	3.0	1.9	e1.1	e2.3	1.2
29	15	3.5	3500	e75	---	28	12	3.1	1.8	e1.00	e2.2	1.2
30	0.87	3.1	970	e91	---	26	11	3.2	1.8	e0.99	e2.1	1.1
31	0.72	---	228	e52	---	23	---	3.1	---	e162	2.1	---
TOTAL	37.81	634.20	4773.8	8317.3	17166	1585	447.5	164.7	72.1	208.79	797.8	48.2
MEAN	1.22	21.1	154	268	613	51.1	14.9	5.31	2.40	6.74	25.7	1.61
MAX	15	259	3500	3790	8240	113	58	9.7	3.0	162	171	3.5
MIN	0.33	0.61	2.2	9.5	14	23	9.1	2.9	1.8	0.99	2.1	1.1
AC-FT	75	1260	9470	16500	34050	3140	888	327	143	414	1580	96
CFSM	0.00	0.04	0.26	0.46	1.05	0.09	0.03	0.01	0.00	0.01	0.04	0.00
IN.	0.00	0.04	0.30	0.53	1.09	0.10	0.03	0.01	0.00	0.01	0.05	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

	MEAN	8.80	9.14	29.4	34.4	67.8	48.1	19.0	3.28	2.50	10.6	30.7	16.9
MAX	223	146	453	718	1179	389	314	19.6	29.7	48.2	244	187	
(WY)	1973	1988	1966	1993	1980	1991	1941	1941	1940	1955	1951	1970	
MIN	0.14	0.10	0.08	0.07	0.02	0.01	0.00	0.03	0.01	0.15	0.31	0.16	
(WY)	1951	1950	1951	1951	1951	1951	1951	1951	1965	1960	1962	2001	

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

WATER YEARS 1940 - 2005

ANNUAL TOTAL		6741.55		34253.20								
ANNUAL MEAN		18.4		93.8						23.3		
HIGHEST ANNUAL MEAN										143		1993
LOWEST ANNUAL MEAN										1.45		1962
HIGHEST DAILY MEAN			3500	Dec 29		8240	Feb 12		8240	Feb 12	2005	
LOWEST DAILY MEAN			0.02	Jun 27		0.33	Oct 1		0.00	Dec 2	1950	
ANNUAL SEVEN-DAY MINIMUM			0.03	Jun 27		0.41	Oct 1		0.00	Dec 2	1950	
ANNUAL RUNOFF (AC-FT)		13370		67940					16890			
ANNUAL RUNOFF (CFSM)		0.031		0.160					0.040			
ANNUAL RUNOFF (INCHES)		0.43		2.18					0.54			
10 PERCENT EXCEEDS		5.9		139					19			
50 PERCENT EXCEEDS		1.6		3.6					2.1			
90 PERCENT EXCEEDS		0.14		1.00					0.30			

e Estimated

09512800 AGUA FRIA RIVER NEAR ROCK SPRINGS, AZ

**LOCATION**--Lat 34°00'56", long 112°10'02", in NW1/4NW1/4 sec. 28, T.8 N., R.2 E., Yavapai County, Hydrologic Unit 15070102, on right bank 2.5 mi southwest of Rock Springs and 10 mi upstream from Lake Pleasant.

**DRAINAGE AREA**--1,111 mi<sup>2</sup>.

**PERIOD OF RECORD**--Jan. 1970 to current year (monthly discharge only, Oct. 1973 to Sept. 1974). Low-flow records not equivalent prior to Oct. 1, 1974, due to spring flow in streambed between sites in use.

**REVISED RECORDS**--WDR AZ-89-1: Drainage area.

**GAGE**--Water-stage recorder and crest-stage gage. Elevation of gage is 1,800 ft above sea level, from topographic map. Prior to Oct. 1, 1974, at site 600 ft upstream at datum 10.00 ft higher.

**REMARKS**--Records fair, except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 59,500 ft<sup>3</sup>/s Feb. 19, 1980, gage height, 21.08 ft recorded, 28.15 ft from floodmark, from rating curve extended above 21,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 27.2 ft; no flow at times each year prior to Oct. 1974; since Oct. 1974, no flow May 27 to July 12, 1977, and for many days in 1990.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 1,800 ft<sup>3</sup>/s and (or) maximum (\*), from rating curve extended on basis of slope-area measurement:

Date	Time	Discharge(ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge(ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29.....	1445	24,000	21.55	Feb. 12.....	0630	*26,600	*22.41 a
Jan. 4.....	0359	15,800	18.38	Feb. 19.....	1520	4,340	11.55
Jan. 12.....	0744	2,010	9.40	July 31.....	1950	5,570	12.50

Minimum daily discharge, no flow Oct. 1-28; Nov. 5 (estimated).

a-from floodmark

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	e7.3	25	429	241	496	67	34	4.1	0.93	189	1.7
2	e0.00	e3.0	20	253	195	422	66	32	3.8	0.91	50	1.6
3	e0.00	e1.1	18	295	160	368	64	30	3.3	0.80	116	68
4	e0.00	e0.19	17	11000	136	332	61	28	3.3	0.86	39	52
5	e0.00	e0.00	21	4210	122	366	58	27	3.0	0.99	16	14
6	e0.00	e0.27	42	1500	109	323	55	25	2.7	0.83	30	8.4
7	e0.00	1.7	82	803	119	289	53	24	2.9	0.75	27	5.8
8	e0.00	187	63	466	163	252	51	23	2.8	0.74	26	4.6
9	e0.00	404	56	361	157	218	49	22	2.6	0.67	357	3.8
10	e0.00	113	54	466	136	194	48	22	3.2	0.81	205	3.3
11	e0.00	e63	55	678	5400	171	47	21	2.6	0.79	315	2.9
12	e0.00	e43	58	1490	17300	148	45	20	2.5	0.67	206	2.4
13	e0.00	e34	53	641	3160	134	42	19	2.4	0.57	148	2.3
14	e0.00	e31	46	391	1340	124	40	19	2.0	0.54	232	2.1
15	e0.00	e27	41	277	870	117	38	18	1.7	0.37	179	1.8
16	e0.00	e23	35	214	685	107	36	16	1.5	0.33	72	1.7
17	e0.00	e19	31	176	551	99	35	15	1.3	0.39	44	1.4
18	e0.00	e16	26	147	1420	95	34	15	1.2	0.44	26	0.44
19	e0.00	e14	22	126	2930	99	32	14	1.4	0.38	19	0.51
20	e0.00	e13	21	111	2620	132	31	13	1.2	0.42	14	0.64
21	e0.00	16	20	103	1330	150	30	12	1.3	0.56	17	0.84
22	e0.00	228	18	97	1560	128	29	10	1.3	0.43	15	0.92
23	e0.00	430	16	89	1530	113	29	9.6	1.4	0.54	10	1.1
24	e0.00	186	14	83	1030	105	89	8.6	1.1	7.2	7.7	1.1
25	e0.00	107	12	79	905	100	87	7.9	1.1	11	5.6	0.88
26	e0.00	74	12	80	734	97	55	7.2	1.3	6.5	4.4	0.72
27	e0.00	58	11	247	691	89	45	6.6	1.2	3.4	3.4	0.97
28	e0.00	47	11	341	594	85	39	6.2	1.2	2.1	2.3	1.2
29	93	37	9200	278	---	81	37	5.8	1.1	3.2	2.0	1.1
30	e39	31	5690	404	---	77	36	5.0	1.0	4.8	2.0	0.96
31	e17	---	1160	291	---	71	---	4.7	---	579	1.9	---
TOTAL	149.00	2214.56	16950	26126	46188	5582	1428	520.6	61.5	631.92	2381.3	189.18
MEAN	4.81	73.8	547	843	1650	180	47.6	16.8	2.05	20.4	76.8	6.31
MAX	93	430	9200	11000	17300	496	89	34	4.1	579	357	68
MIN	0.00	0.00	11	79	109	71	29	4.7	1.0	0.33	1.9	0.44
AC-FT	296	4390	33620	51820	91610	11070	2830	1030	122	1250	4720	375
CFSM	0.00	0.07	0.49	0.76	1.48	0.16	0.04	0.02	0.00	0.02	0.07	0.01
IN.	0.00	0.07	0.57	0.87	1.55	0.19	0.05	0.02	0.00	0.02	0.08	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2005, BY WATER YEAR (WY)

	21.5	20.3	82.2	194	335	244	51.3	10.9	4.02	10.5	29.0	31.3
MEAN	21.5	20.3	82.2	194	335	244	51.3	10.9	4.02	10.5	29.0	31.3
MAX	381	176	943	3301	3320	1967	338	70.7	46.1	51.4	164	360
(WY)	1973	1979	1979	1993	1980	1978	1973	1979	1979	1999	1988	1970
MIN	0.00	0.00	0.00	0.00	0.10	0.13	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	2002	2002	2002	2003	2002	2002	1972	1972	1971	1971	2002	2001

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1970 - 2005
ANNUAL TOTAL	20293.63	102422.06	
ANNUAL MEAN	55.4	281	85.5
HIGHEST ANNUAL MEAN			499
LOWEST ANNUAL MEAN			2.58
HIGHEST DAILY MEAN	9200	Dec 29	17300
LOWEST DAILY MEAN	0.00	May 6	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	May 6	0.00
ANNUAL RUNOFF (AC-FT)	40250		203200
ANNUAL RUNOFF (CFSM)	0.050		0.253
ANNUAL RUNOFF (INCHES)	0.68		3.43
10 PERCENT EXCEEDS	33		404
50 PERCENT EXCEEDS	0.19		24
90 PERCENT EXCEEDS	0.00		0.43

e Estimated

GILA RIVER BASIN

09513780 NEW RIVER NEAR ROCK SPRINGS, AZ

**LOCATION.**--Lat 33°58'27", long 112°05'54", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec. 6, T.7 N., R.3 E., Maricopa County, Hydrologic Unit 15070102, on right bank 180 ft upstream from road crossing and 6 mi southeast of Rock Springs.

**DRAINAGE AREA.**--68.3 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Water years 1962-65 (annual maximums only), Oct. 1965 to current year.

**REVISED RECORDS.**--WDR AZ-89-1: Drainage area.

**GAGE.**--Water-stage recorder. Elevation of gage is 2,310 ft above sea level, from topographic map. Jan. 2, 1964, to Sept. 30, 1965, crest-stage gage, and Oct. 28, 1965, to Nov. 16, 1967, water-stage recorder, at same site at datum 1.00 ft higher.

**REMARKS.**--Records good, except estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 18,600 ft<sup>3</sup>/s Sept. 5, 1970, gage height, 13.5 ft, from profile past gage, from rating curve extended above 380 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 3.6, 4.73, 7.3, 10.7, and 13.5 ft; no flow for many days in most years.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 6.....	0925	392	3.16	Feb. 19.....	0615	1,710	5.23
Dec. 29.....	1045	2,150	5.85	Jul. 31.....	unk	*15,000	*11.00 a
Jan. 4.....	1610	1,740	5.38	Aug. 9.....	1515	3,250	6.25
Jan. 27.....	0415	1,140	4.56	Aug. 11.....	1515	8,830	9.00
Feb. 12.....	0330	3,700	7.18				

a-from floodmark

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	2.3	37	33	49	7.7	4.0	0.06	0.00	e193	0.66
2	0.00	0.00	2.0	26	26	42	7.7	3.8	0.03	0.00	e23	0.61
3	0.00	0.00	1.8	212	21	37	7.6	3.4	0.01	0.00	15	10
4	0.00	0.00	1.9	1010	18	33	7.2	3.1	0.01	0.00	11	17
5	0.00	0.00	2.8	395	16	36	6.8	2.8	0.00	0.00	9.2	4.3
6	0.00	0.00	128	149	14	31	6.7	2.7	0.00	e0.00	43	2.3
7	0.00	0.00	70	78	21	28	6.3	2.8	0.00	e0.00	15	e1.6
8	0.00	0.00	30	51	36	26	5.9	2.7	0.00	0.00	15	e1.3
9	0.00	0.00	20	40	18	23	5.5	2.4	0.00	0.00	300	e1.1
10	0.00	0.00	14	31	15	22	5.6	2.4	0.00	0.00	38	0.84
11	0.00	0.00	11	26	1220	20	5.5	2.2	0.00	0.00	e724	0.79
12	0.00	0.00	8.7	26	1910	18	5.3	2.3	0.00	0.00	e75	0.72
13	0.00	0.00	7.1	20	342	17	5.2	2.4	0.00	0.00	23	0.65
14	0.00	0.00	5.9	17	141	16	5.0	2.2	0.00	0.00	11	0.60
15	0.00	0.00	5.0	14	89	15	4.8	1.9	0.00	0.00	7.8	e0.55
16	0.00	0.00	4.2	12	67	14	4.6	1.7	0.00	0.00	6.3	e0.51
17	0.00	0.00	3.6	11	53	14	4.5	1.6	0.00	0.00	5.3	e0.44
18	0.00	0.00	3.2	9.3	309	13	4.3	1.5	0.00	0.00	4.5	e0.40
19	0.00	0.00	2.9	8.3	767	14	4.3	1.4	0.00	0.00	3.9	e0.36
20	0.00	0.00	2.6	7.4	288	17	4.2	1.2	0.00	0.00	3.5	e0.31
21	0.00	0.00	2.4	7.0	143	15	4.0	1.1	0.00	0.00	2.9	e0.27
22	0.00	53	2.1	6.4	227	13	4.0	0.94	0.00	0.00	2.6	e0.23
23	0.00	49	1.9	5.8	128	12	4.2	0.78	0.00	0.00	2.3	e0.21
24	0.00	17	1.7	5.4	110	11	7.0	0.68	0.00	0.00	2.3	0.17
25	0.00	10	1.6	5.1	112	11	6.5	0.55	0.00	0.00	2.0	0.13
26	0.00	6.8	1.5	6.0	83	11	4.9	0.44	0.00	0.00	1.7	0.12
27	0.00	5.1	1.4	279	76	9.9	4.4	0.34	0.00	6.0	1.4	0.11
28	0.00	4.1	1.4	45	59	9.8	4.3	0.32	0.00	7.6	1.2	0.09
29	0.00	3.0	712	46	---	9.4	4.4	0.25	0.00	3.7	0.99	0.05
30	0.00	2.5	222	85	---	8.8	4.3	0.17	0.00	6.4	0.82	0.06
31	0.00	---	63	46	---	8.0	---	0.11	---	e677	0.74	---
TOTAL	0.00	150.50	1338.0	2716.7	6342	603.9	162.7	54.18	0.11	700.70	1545.45	46.48
MEAN	0.00	5.02	43.2	87.6	226	19.5	5.42	1.75	0.00	22.6	49.9	1.55
MAX	0.00	53	712	1010	1910	49	7.7	4.0	0.06	677	724	17
MIN	0.00	0.00	1.4	5.1	14	8.0	4.0	0.11	0.00	0.00	0.74	0.05
AC-FT	0.00	299	2650	5390	12580	1200	323	107	0.2	1390	3070	92
CFSM	0.00	0.07	0.63	1.28	3.32	0.29	0.08	0.03	0.00	0.33	0.73	0.02
IN.	0.00	0.08	0.73	1.48	3.45	0.33	0.09	0.03	0.00	0.38	0.84	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2005, BY WATER YEAR (WY)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
MEAN	2.32	4.91	18.0	34.2	43.3	38.4	4.67	1.08	0.23	1.20	2.40	3.21
MAX	51.1	52.4	218	573	348	444	29.5	10.5	2.17	22.6	49.9	104
(WY)	2001	1979	1979	1993	1980	1978	1992	1979	1980	2005	2005	1970
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1966	1968	1969	1970	1970	1971	1971	1966	1966	1966	1967	1968

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1966 - 2005
ANNUAL TOTAL	1764.60	13660.72	
ANNUAL MEAN	4.82	37.4	12.9
HIGHEST ANNUAL MEAN			71.7
LOWEST ANNUAL MEAN			0.00
HIGHEST DAILY MEAN	712	Dec 29	1910
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	3500	27100	9350
ANNUAL RUNOFF (CFSM)	0.071	0.548	0.189
ANNUAL RUNOFF (INCHES)	0.96	7.44	2.57
10 PERCENT EXCEEDS	2.9	52	10
50 PERCENT EXCEEDS	0.00	2.7	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

09513860 SKUNK CREEK NEAR PHOENIX, AZ

**LOCATION**--Lat 33°43'45", long 112°07'09", in NW1/4SE1/4SE1/4 sec. 35, T.5 N., R.2 E., Maricopa County, Hydrologic Unit 15070102, on right bank dike of Skunk Creek flood control channel, 300 ft east of frontage road of Interstate Highway 17, 3 mi north of Adobe and 20 mi north of City Hall in Phoenix.

**DRAINAGE AREA**--64.9 mi<sup>2</sup>.

**PERIOD OF RECORD**--Water years 1960-67 (annual maximums only), Oct. 1967 to current year.

**REVISED RECORDS**--WDR-89-1: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 1,472.60 ft above sea level. May 1961 to Sept. 30, 1967, crest-stage gage at site 400 ft downstream at datum 6.67 ft lower, and Oct. 1, 1967, to Dec. 29, 1984, water-stage recorder at site 300 ft downstream at datum 12.66 ft lower.

**REMARKS**--Records good. No estimated daily discharges.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 11,500 ft<sup>3</sup>/s Aug. 1, 1964, gage height, 10.48 ft, present datum, from rating curve extended above 6,200 ft<sup>3</sup>/s; maximum gage height, 12.24 ft Sept. 5, 1970; no flow for most of each year.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5 .....	0000	127	1.90	Feb. 12.....	1825	403	2.30
Jan. 27 .....	0400	450*	2.36*	Feb. 18.....	0540	349	2.24

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	3.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.01	0.00	0.00	46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.01	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.04	0.03	0.01	71.66	222.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	0.00	2.31	7.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0.03	0.03	0.01	46	105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.08	0.06	0.02	142	441	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFSM	0.00	0.00	0.00	0.04	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IN.	0.00	0.00	0.00	0.04	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	2000	2001	2002	2003	2004	2005
MEAN	1.83	1.52	2.72	2.55	2.21	1.75	0.00	0.00	0.01	1.20	2.85	1.69						
MAX	25.6	41.4	60.0	55.7	24.1	45.7	0.16	0.03	0.26	18.2	38.4	42.8						
(WY)	1973	1983	1983	1993	1978	1978	2004	1976	1972	1990	1990	1970						
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
(WY)	1968	1968	1969	1968	1969	1968	1968	1968	1968	1968	1969	1968						

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1968 - 2005
ANNUAL TOTAL	213.23	294.14	
ANNUAL MEAN	0.58	0.81	1.53
HIGHEST ANNUAL MEAN			8.58 1983
LOWEST ANNUAL MEAN			0.00 1969
HIGHEST DAILY MEAN	158 Mar 5	105 Feb 12	1170 Sep 5 1970
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1967
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1967
ANNUAL RUNOFF (AC-FT)	423	583	1110
ANNUAL RUNOFF (CFSM)	0.009	0.012	0.024
ANNUAL RUNOFF (INCHES)	0.12	0.17	0.32
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00



## 09514100 GILA RIVER AT ESTRELLA PARKWAY, NEAR GOODYEAR, AZ

**LOCATION**--Lat 33°23'15", long 112°23'30" in SE1/4NE1/4, sec. 31, T.1 N., R.1 W., Maricopa County, Hydrologic Unit 15070101, at downstream side of bridge, 3 mi southwest of Goodyear.

**DRAINAGE AREA**--45,585 mi<sup>2</sup>.

**PERIOD OF RECORD**--Aug. 1992 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 883 ft above sea level, from topographic map.

**REMARKS**--Records fair, except estimated daily discharges, which are poor.

**AVERAGE DISCHARGE**--13 years, 838 ft<sup>3</sup>/s, 607,000 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 162,000 ft<sup>3</sup>/s Jan. 9, 1993, gage height, 19.15 ft, from rating curve extended above 122,000 ft<sup>3</sup>/s; no flow at times.

**EXTREMES FOR CURRENT YEAR**--Maximum daily discharge, 29,900 ft<sup>3</sup>/s Feb. 13. Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	320	2600	e2670	26	6.2	0.19	0.00	0.00	0.00
2	0.00	0.00	0.00	7760	1770	e2100	24	5.3	0.19	0.00	0.00	0.00
3	0.00	0.00	0.00	15400	1620	1950	57	1.3	0.17	0.00	464	0.00
4	0.00	0.00	0.00	16200	1300	1740	42	2.4	0.17	0.00	157	0.00
5	0.00	0.00	0.00	15300	1190	1300	25	1.4	0.26	0.00	0.00	0.00
6	0.00	0.00	0.00	5790	910	2280	13	0.60	7.1	0.00	0.00	0.00
7	0.00	11	0.00	3670	745	2350	4.1	0.46	9.0	0.00	0.00	0.00
8	0.00	66	0.00	4610	606	1780	3.2	0.75	0.74	0.00	0.00	0.00
9	0.00	43	0.00	5650	567	1770	3.8	0.94	0.51	0.00	0.00	0.00
10	0.00	40	0.00	2990	700	1580	8.0	0.67	0.44	0.00	84	0.00
11	0.00	76	0.00	1970	2680	1350	19	0.60	0.50	0.00	0.00	0.00
12	0.00	73	0.00	2180	15200	979	14	0.76	0.60	0.00	0.00	0.00
13	0.00	56	0.00	7460	29900	1250	8.6	1.6	1.1	0.00	0.00	0.00
14	0.00	51	0.00	5430	23600	1220	5.5	1.3	2.0	0.00	0.00	0.00
15	0.00	59	0.00	2870	24200	930	3.1	1.1	1.1	0.00	0.00	0.00
16	0.00	66	0.00	1550	18400	869	2.5	1.2	0.91	0.00	0.00	0.00
17	0.00	116	0.00	1180	16800	984	14	0.66	0.72	0.00	0.00	0.00
18	0.00	144	0.00	981	16700	e849	103	0.53	0.74	0.00	0.00	0.00
19	0.00	155	0.00	876	13200	e750	48	0.49	0.78	0.00	0.00	0.00
20	0.00	156	0.00	834	11900	e669	66	0.31	1.5	0.00	0.00	0.00
21	0.00	184	0.00	789	14800	e584	81	0.22	0.51	0.00	0.00	0.00
22	0.00	197	0.00	776	17100	546	64	0.19	0.67	0.00	0.00	0.00
23	0.00	95	0.00	1150	14000	1070	53	0.17	0.29	0.00	0.00	0.00
24	0.00	0.01	0.00	1340	11400	1250	110	0.13	0.14	0.00	0.00	0.00
25	0.00	0.00	0.00	1320	4110	927	111	0.13	0.10	0.00	0.00	0.00
26	0.00	0.00	0.00	1510	e3870	707	67	0.13	0.02	0.00	0.00	0.00
27	0.00	0.00	0.00	5520	e3580	622	15	0.14	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	9400	e3200	641	3.2	0.15	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	7810	---	558	3.1	0.47	0.00	0.00	0.00	0.00
30	0.00	0.00	126	3270	---	210	4.2	0.22	0.00	0.00	0.00	0.00
31	0.00	---	214	3020	---	45	---	0.26	---	0.00	0.00	---
TOTAL	0.00	1588.01	340.00	138926	256648	36530	1001.3	30.78	30.45	0.00	705.00	0.00
MEAN	0.00	52.9	11.0	4481	9166	1178	33.4	0.99	1.01	0.00	22.7	0.00
MAX	0.00	197	214	16200	29900	2670	111	6.2	9.0	0.00	464	0.00
MIN	0.00	0.00	0.00	320	567	45	2.5	0.13	0.00	0.00	0.00	0.00
AC-FT	0.00	3150	674	275600	509100	72460	1990	61	60	0.00	1400	0.00
CAL YR 2004	TOTAL	3397.83	MEAN	9.28	MAX	273	MIN	0.00	AC-FT	6740		
WTR YR 2005	TOTAL	435799.54	MEAN	1194	MAX	29900	MIN	0.00	AC-FT	864400		

e Estimated

09516500 HASSAYAMPA RIVER NEAR MORRISTOWN, AZ

**LOCATION**--Lat 33°53'06", long 112°39'41", in SW1/4SE1/4 sec. 3, T.6 N., R.4 W., Maricopa County, Hydrologic Unit 15070103, on left bank 600 ft downstream from mouth of San Domingo Wash, 3.0 mi northwest of Morristown, and 6 mi southeast of Wickenburg.

**DRAINAGE AREA**--796 mi<sup>2</sup>.

**PERIOD OF RECORD**--Oct. 1938 to June 1947 (continuous-record), water years 1954, 1956, and 1964-81 (annual maximums only), Oct. 1981 to Sept. 1991 (discharge above 500 ft<sup>3</sup>/s only), and Oct. 1991 to current year (continuous-record).

**REVISED RECORDS**--WDR AZ-89-1: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 1,831.16 ft above sea level. Crest-stage gage at same site and datum water years 1954, 1956, and 1964-81.

**REMARKS**--Records poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 47,500 ft<sup>3</sup>/s Sept. 5, 1970, gage height, 19.0 ft, from highwater profile past gage and on basis of slope-area measurement of peak flow; no flow for most of each year.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29.....	2000	5,980	11.37	Jan. 29.....	1345	1,010	8.67
Jan. 4.....	0845	2,400	9.78	Feb. 12.....	1030	*14,500	*14.05
Jan. 26.....	2330	789	8.46	July 30.....	2115	882	8.81

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	e1.0	e2.0	e59	e145	e23	75	e4.0	e1.0	0.00	5.0	e0.00
2	0.00	e1.0	e2.0	e3.0	e90	e27	72	e3.0	e1.0	0.00	e4.0	e0.00
3	0.00	e1.0	e2.0	e157	e45	e82	70	e3.0	e1.0	0.00	29	e0.00
4	0.00	e1.0	e2.0	1680	e30	e148	67	e2.0	e1.0	0.00	e2.0	e0.00
5	0.00	e1.0	e2.0	1100	e20	208	63	e2.0	e1.0	0.00	e2.0	e0.00
6	0.00	e1.0	e2.0	352	e18	225	59	e2.0	e1.0	0.00	e2.0	0.00
7	0.00	e1.0	e2.0	e195	e15	217	58	e2.0	e1.0	0.00	e2.0	0.00
8	0.00	e1.0	e2.0	e90	e12	197	55	e2.0	e1.0	0.00	e2.0	0.00
9	0.00	e1.0	e2.0	e50	e8.0	185	51	e2.0	e1.0	0.00	e2.0	0.00
10	0.00	e1.0	e2.0	e30	e5.0	175	48	e2.0	e1.0	0.00	e2.0	0.00
11	0.00	e1.0	e2.0	e20	949	155	47	e2.0	e1.0	0.00	e2.0	0.00
12	0.00	e2.0	e2.0	e15	e8560	140	e37	e1.0	e0.00	0.00	e2.0	0.00
13	0.00	e2.0	e2.0	e10	e2690	131	e33	e1.0	e0.00	0.00	e2.0	0.00
14	0.00	e2.0	e2.0	e9.0	e1580	110	e31	e1.0	e0.00	0.00	e2.0	0.00
15	0.00	e2.0	e2.0	e9.0	1220	97	e27	e1.0	e0.00	0.00	e2.0	0.00
16	0.00	e2.0	e2.0	e8.0	1160	93	e24	e1.0	e0.00	0.00	e2.0	0.00
17	0.00	e2.0	e2.0	e8.0	990	97	e22	e1.0	e0.00	0.00	e2.0	0.00
18	0.00	e2.0	e2.0	e8.0	1060	98	e20	e1.0	e0.00	0.00	e1.0	0.00
19	0.00	e2.0	e2.0	e7.0	1250	99	e19	e1.0	e0.00	0.00	e1.0	0.00
20	0.00	e2.0	e2.0	e7.0	1000	113	e16	e1.0	e0.00	0.00	e1.0	0.00
21	0.00	e2.0	e2.0	e6.0	650	119	e15	e1.0	e0.00	0.00	e1.0	0.00
22	e1.0	e2.0	e2.0	e6.0	726	117	e13	e1.0	0.00	0.00	e1.0	0.00
23	e1.0	e2.0	e2.0	e6.0	893	114	e12	e1.0	0.00	0.00	e1.0	0.00
24	e1.0	e2.0	e2.0	e5.0	715	104	e11	e1.0	0.00	0.00	e1.0	0.00
25	e1.0	e2.0	e2.0	e5.0	e430	98	e9.0	e1.0	0.00	0.00	e1.0	0.00
26	e1.0	e2.0	e2.0	e195	e146	95	e8.0	e1.0	0.00	0.00	e1.0	0.00
27	e1.0	e2.0	e2.0	470	e73	92	e7.0	e1.0	0.00	0.00	e1.0	0.00
28	e1.0	e2.0	e2.0	254	e36	90	e6.0	e1.0	0.00	0.00	e1.0	0.00
29	e1.0	e2.0	1320	464	---	88	e5.0	e1.0	0.00	0.00	e0.00	0.00
30	e1.0	e2.0	e2050	423	---	86	e4.0	e1.0	0.00	37	e0.00	0.00
31	e1.0	---	e445	264	---	79	---	e1.0	---	78	e0.00	---
TOTAL	10.00	49.0	3871.0	5915.0	24516.0	3702	984.0	46.0	11.00	115.00	77.00	0.00
MEAN	0.32	1.63	125	191	876	119	32.8	1.48	0.37	3.71	2.48	0.00
MAX	1.0	2.0	2050	1680	8560	225	75	4.0	1.0	78	29	0.00
MIN	0.00	1.0	2.0	3.0	5.0	23	4.0	1.0	0.00	0.00	0.00	0.00
AC-FT	20	97	7680	11730	48630	7340	1950	91	22	228	153	0.00
CFSM	0.00	0.00	0.16	0.24	1.10	0.15	0.04	0.00	0.00	0.00	0.00	0.00
IN.	0.00	0.00	0.18	0.28	1.15	0.17	0.05	0.00	0.00	0.01	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
	7.27	140	2001	0.00	1943
	0.70	4.83	2001	0.00	1943
	8.65	125	2005	0.00	1995
	60.2	1084	1993	0.00	1996
	131	1290	1993	0.00	1996
	68.4	445	1941	0.00	2002
	36.5	424	1941	0.00	1996
	4.11	44.2	1941	0.00	1939
	0.30	1.97	2000	0.00	1939
	1.46	10.4	1941	0.00	1940
	7.87	39.7	2000	0.00	1940
	12.0	71.0	1997	0.00	1942

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1939 - 2005
ANNUAL TOTAL	3930.00	39296.00	
ANNUAL MEAN	10.7	108	28.8
HIGHEST ANNUAL MEAN			220 1993
LOWEST ANNUAL MEAN			0.00 2004
HIGHEST DAILY MEAN	2050 Dec 30	8560 Feb 12	8560 Feb 12 2005
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Nov 25 1938
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Apr 27 1939
ANNUAL RUNOFF (AC-FT)	7800	77940	20830
ANNUAL RUNOFF (CFSM)	0.013	0.135	0.036
ANNUAL RUNOFF (INCHES)	0.18	1.84	0.49
10 PERCENT EXCEEDS	2.0	151	14
50 PERCENT EXCEEDS	0.00	2.0	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

GILA RIVER BASIN

09517000 HASSAYAMPA RIVER NEAR ARLINGTON, AZ

**LOCATION.**--Lat 33°20'50", long 112°43'30", in NW<sup>1</sup>/<sub>4</sub> sec. 13, T.1 S., R.5 W., Maricopa County, Hydrologic Unit 15070103, at former U.S. Highway 80, 1.8 mi upstream from mouth and 2.8 mi northeast of Arlington.

**DRAINAGE AREA.**--1,471 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Water years 1961--77 (annual maximums only), Oct. 1977 to Sept. 1990 (discharge above 500 ft<sup>3</sup>/s only), and Oct. 1990 to current year.

**REVISED RECORDS.**--WDR AZ--81--1: 1969(M). WDR AZ--89--1: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 824.75 ft above sea level. May 15, 1985, to Nov. 11, 1993, at 822.68 ft above sea level. Prior to May 15, 1985, at 9.23 ft higher.

**REMARKS.**--Records poor. Records include irrigation return flow past station. Small diversions above station for irrigation and livestock.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 39,000 ft<sup>3</sup>/s Sept. 5, 1970, gage height, 8.40 ft, result of slope-area measurement of peak flow; no natural flow for most of time each year.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge(ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30 .....	0400	5,950	11.77
Jan. 4 .....	1130	2,130	9.02
Feb. 12.....	1830	*10,600	*13.82

Minimum daily discharge, no flow Nov. 8--22 (estimated), May 28, and June 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	e40	115	e179	30	e6.2	e8.7	e17	5.3	14	22	45
2	50	e40	127	e152	15	e6.4	e10	e16	6.4	12	25	49
3	36	e40	108	73	12	e6.8	e9.7	e16	2.9	8.4	89	51
4	42	e40	96	825	14	e7.2	e11	e15	2.7	15	26	53
5	44	e40	73	562	17	e7.6	e10	e14	2.8	17	49	56
6	31	e40	84	76	29	e8.1	e10	e13	1.5	14	37	58
7	31	e40	98	59	23	e8.7	e11	e13	3.7	17	40	63
8	e35	e0.00	111	45	23	e9.4	e12	e12	0.00	13	27	67
9	e41	e0.00	98	41	17	e10	e12	e11	0.48	21	20	57
10	e44	e0.00	179	39	24	e10	e13	e11	4.2	19	22	44
11	e46	e0.00	135	44	21	e11	e14	e10	4.4	11	9.2	57
12	e50	e0.00	136	37	5400	e10	e14	e9.8	4.0	23	13	51
13	e49	e0.00	148	85	1130	e10	e15	e9.4	7.8	18	14	35
14	59	e0.00	139	75	31	e9.3	e16	e9.0	3.0	22	21	62
15	60	e0.00	82	68	e11	e9.8	e17	e8.6	1.4	18	25	65
16	81	e0.00	97	39	e20	e9.4	e18	e8.3	5.6	21	24	67
17	104	e0.00	77	44	e16	e8.8	e20	e3.8	4.8	30	20	68
18	133	e0.00	103	44	e15	e8.9	e21	0.84	2.9	43	19	53
19	75	e0.00	78	54	e18	e8.5	e23	1.9	7.8	48	26	52
20	48	e0.00	88	47	e24	e8.9	e25	4.1	6.3	26	21	53
21	62	e0.00	91	44	e8.3	e8.6	e28	2.2	0.34	26	30	51
22	e60	e0.00	97	39	e8.8	e8.5	e30	8.9	3.9	29	29	68
23	e40	e22	78	43	e7.9	e8.5	e28	6.0	2.0	24	34	70
24	e40	97	42	54	e7.7	e8.6	e26	1.6	0.46	36	41	63
25	e40	140	54	24	e5.8	e8.7	e25	0.19	6.7	45	36	61
26	e40	90	67	36	e5.6	e9.3	e23	1.1	1.7	36	33	61
27	e40	84	38	59	e5.8	e9.9	e22	0.70	3.3	30	37	54
28	e40	84	37	39	e6.0	e10	e21	0.00	8.8	24	44	64
29	e40	103	79	30	---	e11	e20	1.6	0.60	19	50	72
30	e40	102	e2190	12	---	e10	e19	0.79	4.5	21	45	57
31	e40	---	e278	25	---	e13	---	1.1	---	23	49	---
TOTAL	1601	1002.00	5223	2993	6945.9	281.1	532.4	227.92	110.28	723.4	977.2	1727
MEAN	51.6	33.4	168	96.5	248	9.07	17.7	7.35	3.68	23.3	31.5	57.6
MAX	133	140	2190	825	5400	13	30	17	8.8	48	89	72
MIN	31	0.00	37	12	5.6	6.2	8.7	0.00	0.00	8.4	9.2	35
AC-FT	3180	1990	10360	5940	13780	558	1060	452	219	1430	1940	3430
CFSM	0.04	0.02	0.11	0.07	0.17	0.01	0.01	0.00	0.00	0.02	0.02	0.04
IN.	0.04	0.03	0.13	0.08	0.18	0.01	0.01	0.01	0.00	0.02	0.02	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2005, BY WATER YEAR (WY)

	MEAN	82.8	49.5	91.6	87.7	115	62.8	42.9	42.4	34.5	46.5	47.2	55.9
MAX	312	109	168	146	336	131	65.3	80.7	50.3	121	69.1	86.1	
(WY)	2001	1996	2005	1993	1993	1991	1999	1995	1991	1999	1999	1999	1992
MIN	37.5	16.9	48.9	46.2	40.0	9.07	15.7	7.35	3.68	18.7	15.4	28.1	
(WY)	2004	2002	2003	2003	2004	2005	1994	2005	2005	1994	1994	2004	

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1990 - 2005
ANNUAL TOTAL	17565.70	22344.20	
ANNUAL MEAN	48.0	61.2	63.1
HIGHEST ANNUAL MEAN			92.7
LOWEST ANNUAL MEAN			38.5
HIGHEST DAILY MEAN	2190	Dec 30	5400
LOWEST DAILY MEAN	0.00	Nov 8	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Nov 8	0.00
ANNUAL RUNOFF (AC-FT)	34840	Feb 12	44320
ANNUAL RUNOFF (CFSM)	0.033	Nov 8	0.042
ANNUAL RUNOFF (INCHES)	0.44	Nov 8	0.57
10 PERCENT EXCEEDS	81	Nov 8	111
50 PERCENT EXCEEDS	37	Nov 8	48
90 PERCENT EXCEEDS	15	Nov 8	14

e Estimated

**09517490 CENTENNIAL WASH AT SOUTHERN PACIFIC RAILROAD BRIDGE NEAR ARLINGTON, AZ**

**LOCATION**--Lat 33°18'37", long 112°52'52", in SW1/4NW1/4SW1/4 sec. 28, T.1 S., R.6 W., Maricopa County, Hydrologic Unit 15070104, on downstream side of bridge, 7.2 mi northwest of Arlington and 9.0 mi upstream from Gillespie Dam.

**DRAINAGE AREA**--1,817 mi<sup>2</sup>.

**PERIOD OF RECORD**--May 1980 to Sept. 1984, Oct. 1984 to Sept. 1985 (daily discharges greater than 300 ft<sup>3</sup>/s only), and Oct. 1989 to current year.

**REVISED RECORDS**--WDR AZ-91-1: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 837.12 ft above sea level (Flood Control District of Maricopa County benchmark). Oct. 1, 1990 through May 13, 1999, at 4.00 ft higher. Datum of gage prior to Oct. 1, 1990, 841.06 ft, revised.

**REMARKS**--No estimated daily discharges. Records poor. Flow regulated by several small retention dams in upper end of basin. Small diversions above station for irrigation.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 15,600 ft<sup>3</sup>/s Sept. 2, 1984, gage height, 11.34 ft, from rating curve extended above 200 ft<sup>3</sup>/s on basis of step-back water analysis; no flow for many days each year.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge(ft <sup>3</sup> /s)	Gage height (ft)
Nov. 12.....	1615	*787	*6.08

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	291	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	77	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	0.00
11	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.40	0.00
12	0.00	70	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	2.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	28	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.81	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	15.92	70.41	28.81	401.00	0.54	0.01	0.00	0.00	0.00	19.00	17.90	0.00
MEAN	0.51	2.35	0.93	12.9	0.02	0.00	0.00	0.00	0.00	0.61	0.58	0.00
MAX	13	70	28	291	0.52	0.01	0.00	0.00	0.00	19	17	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	32	140	57	795	1.1	0.02	0.00	0.00	0.00	38	36	0.00
CFSM	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IN.	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2005, BY WATER YEAR (WY)

MEAN	1.11	0.22	0.35	5.19	2.38	0.79	0.20	0.50	0.41	2.65	6.16	7.82
MAX	21.1	2.35	4.41	84.8	22.5	10.4	2.79	4.41	4.47	18.0	38.3	117
(WY)	2001	2005	1998	1993	1992	1992	1982	1981	1981	1996	1997	1984
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1983	1981	1981	1981	1983	1983	1990	1990	1990	1983	1993	1991

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1981 - 2005
ANNUAL TOTAL	133.94	553.59	
ANNUAL MEAN	0.37	1.52	2.32
HIGHEST ANNUAL MEAN			9.60 1984
LOWEST ANNUAL MEAN			0.00 2002
HIGHEST DAILY MEAN	70 Nov 12	291 Jan 4	3320 Sep 2 1984
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1980
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 6 1980
ANNUAL RUNOFF (AC-FT)	266	1100	1680
ANNUAL RUNOFF (CFSM)	0.000	0.001	0.001
ANNUAL RUNOFF (INCHES)	0.00	0.01	0.02
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## GILA RIVER BASIN

## 09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, AZ

**LOCATION.**--Lat 33°13'45", long 112°46'00", in SE¼/NE¼ sec.28, T.2 S., R.5 W., Maricopa County, Hydrologic Unit 15070101, at Gillespie Dam, 8 mi downstream from Hassayampa River. Gila Bend Canal diverts from left end, and Enterprise Canal diverts from right end, of Gillespie Dam.

**DRAINAGE AREA.**--49,650 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--June 1935 to Nov. 1939 (monthly discharge only published in WSP 1313), Dec. 1939 to Sept. 1971 (published with records for sta 09519500, Gila River below Gillespie Dam), 1972 and 1973 (water year estimates only, listed in REMARKS for sta 09519500), Oct. 1973 to current year. Low-flow records prior to Oct. 1970 are not equivalent as leakage less than 5 ft<sup>3</sup>/s is not included.

09518500. Gila Bend Canal: May 1935 to Sept. 1971, Oct. 1973 to current year (since Oct. 1941, monthly discharge only). Published as "Gillespie Canal" prior to 1951. 09519000. Enterprise Canal: June 1935 to Sept. 1939 (discharge measurements and monthly estimates only), Oct. 1939 to Sept. 1971, Apr. 1974 to current year (since Oct. 1941, monthly discharge only).

**GAGE.**--Gila Bend Canal: Water-stage recorder 200 ft downstream from headgates. Enterprise Canal: Water-stage recorder 600 ft downstream from intake at dam.

**REMARKS.**--Records fair, no estimated daily discharges. Record is obtained by combining, on a daily basis, the flows of Gila Bend Canal, Enterprise Canal, and Gila River below Gillespie Dam.

Many large diversions above station for irrigation, municipal, and industrial use. Flow of Gila River and tributaries above this station is regulated: by San Carlos Reservoir on Gila River - capacity, 1,073,600 acre-ft; by a series of reservoirs on Salt River - capacity, 1,755,000 acre-ft; by Bartlett and Horseshoe Reservoirs on Verde River - capacity, 317,700 acre-ft; and by Waddell Dam (1992) on Agua Fria River - capacity, 816,000 acre-ft.

**AVERAGE DISCHARGE.**--70 years, 966 ft<sup>3</sup>/s, 360,800 acre-ft/yr; median of yearly mean discharges, 140 ft<sup>3</sup>/s, 101,000 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 130,000 ft<sup>3</sup>/s, estimated, Jan. 9, 1993; no flow except for possible leakage of less than 5 ft<sup>3</sup>/s Nov. 24--27, 1966, July 14, 1967.

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 16,700 ft<sup>3</sup>/s, Feb. 14. Minimum daily discharge, 20 ft<sup>3</sup>/s, April 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	182	162	50	2100	2260	242	133	78	42	76	104
2	75	140	158	96	1950	2500	144	120	86	47	87	64
3	56	101	152	162	1640	2220	44	106	88	50	267	97
4	58	101	169	6110	1530	1890	40	114	86	41	94	95
5	53	108	170	16100	1400	1860	35	104	92	64	110	87
6	52	150	168	15100	1300	1700	32	114	89	50	104	88
7	52	95	157	3830	1200	1940	21	119	84	44	99	151
8	51	93	131	2790	1050	1970	20	127	79	43	132	146
9	59	91	108	3210	925	1740	23	127	71	52	139	129
10	64	97	76	3390	851	1800	22	132	80	58	256	89
11	61	60	94	2360	912	1730	30	134	60	56	225	92
12	61	60	87	1940	2120	1540	24	134	70	49	127	104
13	74	106	93	1970	15200	1350	21	121	68	77	129	56
14	80	64	104	4020	16700	1430	25	110	62	64	150	52
15	78	58	88	3180	15300	1420	46	103	62	68	147	74
16	104	59	99	2280	13200	1140	125	104	64	58	154	133
17	129	61	101	1660	11400	931	135	87	82	55	188	100
18	150	65	121	1400	11200	1000	130	85	105	91	116	138
19	145	63	137	1250	12000	900	99	88	119	115	136	88
20	103	66	141	1160	9130	819	121	107	117	116	152	94
21	78	71	134	1090	9580	761	155	122	92	77	150	92
22	138	82	132	1030	14500	717	151	93	65	84	151	122
23	161	87	124	974	14300	676	139	124	60	102	130	176
24	149	93	105	1130	12900	852	166	102	48	154	115	177
25	137	162	90	1290	8740	1320	157	82	58	147	132	120
26	134	165	113	1310	4340	1010	144	87	63	117	93	117
27	113	160	128	1380	2960	808	175	77	56	91	73	134
28	155	154	118	2760	2460	740	150	79	55	71	103	108
29	176	156	113	3890	---	729	149	73	58	82	117	94
30	171	172	155	3360	---	719	149	77	42	69	96	90
31	168	---	79	2240	---	596	---	83	---	82	74	---
TOTAL	3145	3122	3807	92512	190888	41068	2914	3268	2239	2316	4122	3211
MEAN	101	104	123	2984	6817	1325	97.1	105	74.6	74.7	133	107
MAX	176	182	170	16100	16700	2500	242	134	119	154	267	177
MIN	51	58	76	50	851	596	20	73	42	41	73	52
AC-FT	6240	6190	7550	183500	378600	81460	5780	6480	4440	4590	8180	6370
(*)	2820	1830	3980	958	1590	2070	3990	5420	3460	3780	5590	4470
(**)	1010	940	942	1640	1230	895	1010	972	746	809	1070	790

CAL YR 2004 TOTAL 35861 MEAN 98.0 MAX 224 MIN 20 AC-FT 71130 (\*) 39560 (\*\*) 10960  
WTR YR 2005 TOTAL 352612 MEAN 966 MAX 16700 MIN 20 AC-FT 699400 (\*) 39970 (\*\*) 12050

(\*) Diversions in acre-feet to Gila Bend Canal (09518500)

(\*\*) Diversions in acre-feet to enterprise Canal (09519000)

09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, AZ—CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Feb. 1926 to June 1927 and Mar. 1946 (partial-record station), Dec. 1950 to Sept. 1971, Dec. 1971 to June 1973 (partial-record station), Mar. 1974 to Jan. 2005 (discontinued). Prior to Oct. 1967, published as 09519500, "Gila River below Gillespie Dam."

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1964 to June 1968, Aug. to Sept. 1968, Feb. to Sept. 1969, Oct. 1970 to Sept. 1971, and Apr. 1974 to July 1981.

WATER TEMPERATURE: Dec. 1950 to Feb. 1968, May to Aug. 1969, Oct. 1970 to Sept. 1971, and Apr. 1974 to July 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instan- taneous dis- charge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, percent of sat- uration mg/L (00300)	Dis- solved oxygen, percent of sat- uration mg/L (00301)	pH, water, unfltrd std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Noncarb hard- ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	
DEC	16...	1045	65	19	752	10.1	97	8.0	3500	20.0	12.4	760	490	173d
JAN	05...	1310	15300	1150d	752	8.6	81	8.0	525	14.9	11.7	170	9	38.3
Date	Time	Calcium water unfltrd recover- able, mg/L (00916)	Magnes- ium, water, unfltrd recover- able, mg/L (00925)	Magnes- ium, water, unfltrd recover- able, mg/L (00927)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio mg/L (00931)	Sodium, water, fltrd, mg/L (00930)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)
DEC	16...	171d	80.5dp	76.9dcp	15.1d	10	625d	272	331	<1	867d	1.8	561d	2520
JAN	05...	85.4	18.1	36.5	4.13	1	38.4	161	196	<1	34.9	.3	47.1	280
Date	Time	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Organic nitro- gen, water, unfltrd mg/L (00605)	Phos- phorus, water, unfltrd mg/L (00665)	Total nitro- gen, water, unfltrd mg/L (00600)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Anti- mony, water, fltrd, ug/L (01095)	Anti- mony, water, unfltrd ug/L (01097)	Arsenic water, fltrd, ug/L (01000)
DEC	16...	3.60	2640	24	.97	.11	7.85d	.85	1.63	8.8	230	E.32nd	E.2nd	6.3d
JAN	05...	.42	307	740d	3.8	.17	.51	3.7	2.06d	4.3	E200k	.25	E.2n	8.8
Date	Time	Arsenic water, unfltrd ug/L (01002)	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01010)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Boron, water, unfltrd recover- able, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom- ium, water, unfltrd recover- able, ug/L (01034)	Copper, water, unfltrd recover- able, ug/L (01040)	Copper, water, unfltrd recover- able, ug/L (01042)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover- able, ug/L (01051)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)
DEC	16...	6	51d	<.12d	<.12d	1580d	.08d	.09d	1.8	3.0d	12.0d	E.13nd	.87d	69d
JAN	05...	17	466	<.06	2.18	162	E.03n	.89	33.6d	1.6	95.5	E.05n	863dr	1890dc
Date	Time	Mercury water, fltrd, ug/L (71890)	Mercury unfltrd recover- able, ug/L (71900)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover- able, ug/L (01092)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)						
DEC	16...	<.01	<.01	6.7d	8.4d	13d	24	4.2						
JAN	05...	<.01	.13d	1.2	.8	146	2050	84700						

Remark codes used in this table:

< -- Less than.  
E -- Estimated.

Value qualifier codes used in this table:

c -- See laboratory comment  
d -- Diluted sample: method hi range exceeded  
k -- Counts outside acceptable range  
n -- Below the LRL and above the LT-MDL  
p -- Value reported is preferred  
r -- Value verified by rerun, same method

## GILA RIVER BASIN

## 09519500 GILA RIVER BELOW GILLESPIE DAM, AZ

**LOCATION.**--Lat 33°13'45", long 112°46'00", in SE1/4NE1/4 sec.28, T.2 S., R.5 W., Maricopa County, Hydrologic Unit 15070101, at left end of Gillespie Dam, 8 mi downstream from Hassayampa River.

**DRAINAGE AREA.**--49,650 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Aug. 1921 to current year. Low-flow records prior to Oct. 1970 are not equivalent as leakage of less than 5 ft<sup>3</sup>/s not included, and from Oct. 1971 to Sept. 1973, when no leakage was included. Annual estimate of leakage was listed in REMARKS for the 1972 water year. Prior to 1939, published as "at Gillespie Dam."

**REVISED RECORDS.**--WSP 1213: 1939. WSP 1243: 1924(M). WSP 1926: Drainage area.

**GAGE.**--Water-stage recorder since July 28, 1924. Datum of gage is 9.95 ft below average elevation of crest of dam, which is 753.46 ft above sea level. Prior to Nov. 11, 1924, depth of water read on crest at left end of dam. Nov. 11, 1924, to July 22, 1932, datum of gage was at average elevation of dam crest. July 23, 1932, to Apr. 27, 1955, datum of gage was 5.00 ft below average elevation of crest of dam. Apr. 2, 1974 to Jan. 31, 1986, supplementary water-stage recorder and concrete control 70 ft downstream from crest of dam at datum 5.64 ft lower than datum of base gage. Since Jan. 31, 1986, supplementary water-stage recorder at bridge 0.1 mi downstream at different datum.

**REMARKS.**--Records fair, no estimated daily discharges. On Jan. 9, 1993 the dam breached causing all the flow to go through an opening about 150 ft wide. Flow does not include water diverted to Gila Bend or Enterprise Canals. See sta 09518000, Gila River above diversions, at Gillespie Dam, for records of flow reaching dam, and of diversions to Gila Bend and Enterprise Canals. For diversions and regulation above station, see REMARKS for sta 09518000.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 178,000 ft<sup>3</sup>/s Feb. 16, 1980, gage height, 18.81 ft, present datum; no flow at times.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge since at least 1891, 250,000 ft<sup>3</sup>/s, estimated, in Feb. 1891.

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 16,600 ft<sup>3</sup>/s, Feb. 14; minimum daily, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	110	67	38	2020	2240	e202	e0.50	e2.1	e0.00	0.00	e13
2	19	41	68	83	1870	2480	e106	e0.50	e2.7	e0.01	0.00	e0.36
3	2.2	6.9	84	121	1550	2210	e10	e0.50	e1.8	e0.05	143	e21
4	2.6	4.2	123	6060	1440	1880	e8.0	e0.50	e2.2	e0.01	e2.2	e15
5	0.30	8.8	123	16000	1310	1850	e6.0	e0.50	e7.1	e0.00	e18	e7.8
6	0.51	52	116	15000	1220	1690	e5.0	e0.50	e4.6	e0.00	e0.31	e5.4
7	0.00	1.3	106	3790	1130	1930	e4.0	e0.50	e3.5	e0.00	e0.46	e55
8	0.00	0.00	78	2760	994	1960	e4.0	e0.50	e2.1	e0.00	e0.43	e47
9	2.5	e0.00	75	3180	862	1720	e3.0	e0.50	e1.5	e0.00	e1.1	e6.3
10	8.0	e0.00	37	3360	775	1790	e2.0	e0.50	e2.8	e0.00	e196	e3.5
11	5.4	0.13	38	2330	830	1720	e2.0	e0.50	e1.9	e0.00	e146	e3.4
12	5.7	11	31	1910	2030	1520	e1.0	e0.50	e1.1	e0.00	e24	e2.5
13	19	90	37	1940	15100	1330	e1.0	e0.50	e0.19	e0.00	e21	e1.3
14	24	48	47	3990	16600	1410	e1.0	e0.50	e0.15	0.00	e6.6	e0.76
15	22	42	31	3150	15300	1390	e2.0	e0.50	e0.19	0.00	e5.9	e0.77
16	48	43	42	2230	13200	1100	e2.0	e0.50	e0.90	0.00	e7.9	e28
17	75	45	44	1620	11400	881	e3.0	e0.50	e6.0	0.00	e69	e1.3
18	71	49	41	1360	11200	912	e3.0	e0.50	e20	0.00	e14	e9.9
19	46	47	19	1210	12000	807	e3.0	e0.50	e27	0.00	e12	e8.5
20	2.8	50	0.00	1120	9110	735	e4.0	e0.50	e23	0.00	e10	e1.3
21	8.5	55	0.11	1060	9560	689	e4.0	e0.50	e8.9	0.00	e10	e0.62
22	85	66	0.00	1000	14500	652	e4.0	e0.50	e0.50	0.00	e11	e30
23	110	71	6.3	945	14300	614	e3.0	e0.50	e0.07	0.39	e8.5	e85
24	98	64	15	1090	12900	746	e3.0	e0.50	e0.01	1.2	e5.8	e85
25	57	137	0.08	1250	8720	1180	e2.0	e0.18	e0.04	0.00	e4.2	e32
26	36	149	5.3	1270	4320	915	e1.0	e3.4	e0.05	0.00	e13	e25
27	15	144	0.04	1340	2940	732	e1.0	e1.9	e0.04	0.00	e11	e42
28	85	138	0.00	2720	2440	669	e1.0	e14	e0.03	0.00	e5.6	e21
29	124	140	0.00	3840	---	659	e1.0	e5.9	e0.02	0.00	e5.4	e6.4
30	120	114	76	3310	---	639	e1.0	e2.2	e0.01	0.00	e1.8	e0.50
31	116	---	16	2180	---	528	---	e3.0	---	0.00	e11	---
TOTAL	1214.61	1727.33	1325.83	91257	189621	39578	393.0	42.58	120.50	1.66	765.20	559.61
MEAN	39.2	57.6	42.8	2944	6772	1277	13.1	1.37	4.02	0.05	24.7	18.7
MAX	124	149	123	16000	16600	2480	202	14	27	1.2	196	85
MIN	0.00	0.00	0.00	38	775	528	1.0	0.18	0.01	0.00	0.00	0.36
AC-FT	2410	3430	2630	181000	376100	78500	780	84	239	3.3	1520	1110
CAL YR 2004	TOTAL	10395.88	MEAN	28.4	MAX	149	MIN	0.00	AC-FT	20620		
WTR YR 2005	TOTAL	326606.32	MEAN	895	MAX	16600	MIN	0.00	AC-FT	647800		

e Estimated

## 09519800 GILA RIVER BELOW PAINTED ROCK DAM, AZ

**LOCATION**--Lat 33°04'30", long 113°00'50", in SE1/4 sec. 18, T.4 S., R.7 W., Maricopa County, Hydrologic Unit 15070201, on left bank 0.3 mi downstream from Painted Rock Dam and 19 mi northeast of Sentinel.

**DRAINAGE AREA**--50,910 mi<sup>2</sup>, approximately.

**PERIOD OF RECORD**--Oct. 1959 to current year.

**GAGE**--Water-stage recorder. Datum of gage is 518.69 ft above sea level (levels by Army Corps of Engineers). Auxiliary gage at site 0.3 mi upstream: May 5, 1969, to Mar. 30, 1973, at datum 2.87 ft higher; Feb. 8, 1979 to Jan. 21, 1993, at same datum.

**REMARKS**--Records good, except for estimated daily discharges, which are poor. Many diversions above station for irrigation. Flow above station regulated by many reservoirs, the largest of which is Painted Rock Reservoir—capacity, 2,492,000 acre-ft. (See REMARKS for sta 09518000, Gila River above diversions, at Gillespie Dam.)

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 32,000 ft<sup>3</sup>/s, Feb. 26, 1993, before dike broke, gage height, 16.79 ft; no flow for many days in most years.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, 2,770 ft<sup>3</sup>/s Mar. 1, gage height 5.02 ft. Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	e0.00	0.00	0.00	1860	2570	2190	1580	104	1170	278	12
2	0.00	e0.00	0.00	0.00	1880	2290	2180	1550	1050	812	289	11
3	0.00	e0.00	0.00	0.00	1880	2280	2160	1450	1040	676	298	11
4	0.00	e0.00	0.00	0.00	1910	2250	2140	1310	1020	667	308	10
5	0.00	e0.00	0.00	0.00	1940	2220	2140	1160	1020	655	320	10
6	0.00	e0.00	0.00	0.00	1920	2200	2150	1070	1010	636	308	10
7	e0.00	e0.00	0.00	141	1900	2240	2160	1020	1060	632	296	11
8	e0.00	e0.00	0.00	726	1790	2270	2150	979	1140	532	287	12
9	e0.00	e0.00	0.00	1340	1430	2240	2140	1020	1140	359	269	12
10	e0.00	e0.00	0.00	1900	1390	2230	2140	1040	1130	350	292	11
11	e0.00	e0.00	0.00	2350	1350	2220	2150	1010	1130	341	296	10
12	e0.00	e0.00	0.00	2640	1320	2190	2160	1010	1120	326	277	9.8
13	e0.00	e0.00	0.00	2610	1280	2170	2150	1040	1100	317	265	9.4
14	e0.00	e0.00	0.00	2550	1370	2210	2120	1020	1110	312	255	8.3
15	e0.00	e0.00	0.00	2490	1470	2210	2100	988	1110	305	219	7.4
16	e0.00	e0.00	0.00	2480	1420	2180	2120	911	1130	293	127	7.5
17	e0.00	e0.00	0.00	2470	1450	2240	2110	870	1140	285	31	7.5
18	e0.00	e0.00	0.00	2210	1440	2290	2080	864	1140	305	25	7.5
19	e0.00	e0.00	0.00	2040	1890	2270	2180	860	1140	319	25	7.5
20	e0.00	e0.00	0.00	2000	2520	2230	2230	852	1140	312	23	7.5
21	e0.00	e0.00	0.00	1950	2520	2230	2230	844	1140	301	21	7.8
22	e0.00	0.00	0.00	1910	2520	2230	2230	836	1130	292	21	6.8
23	e0.00	0.00	0.00	1860	2560	2200	2210	828	1140	284	23	6.2
24	e0.00	0.00	0.00	1870	2570	2220	2170	822	1140	278	25	6.4
25	e0.00	0.00	0.00	1860	2580	2230	2130	881	1140	321	22	7.7
26	e0.00	0.00	0.00	1810	2600	2210	2120	942	1130	337	21	8.1
27	e0.00	0.00	0.00	1790	2600	2180	1990	942	1140	327	20	8.2
28	e0.00	0.00	0.00	1780	2610	2190	1870	942	1140	316	17	8.6
29	e0.00	0.00	0.00	1770	---	2160	1760	942	1140	306	15	8.3
30	e0.00	0.00	0.00	1780	---	2180	1620	932	1160	291	14	7.2
31	e0.00	---	0.00	1810	---	2200	---	680	---	285	12	---
TOTAL	0.00	0.00	0.00	48137	53970	69230	63280	31195	32374	12942	4699	267.7
MEAN	0.00	0.00	0.00	1553	1928	2233	2109	1006	1079	417	152	8.92
MAX	0.00	0.00	0.00	2640	2610	2570	2230	1580	1160	1170	320	12
MIN	0.00	0.00	0.00	0.00	1280	2160	1620	680	104	278	12	6.2
AC-FT	0.00	0.00	0.00	95480	107000	137300	125500	61880	64210	25670	9320	531
(*)	0.00	0.00	0.00	23575	329374	237596	130073	73743	23009	4360	0.00	0.00
(**)	0.00	0.00	0.00	+23575	+305799	-91778	-107523	-56330	-50734	-18649	-4360	0.00
CAL YR 2004	TOTAL	0.00	MEAN	0.00	MAX	0.00	MIN	0.00	AC-FT	0.00	(**)	0.00
WTR YR 2005	TOTAL	316094.70	MEAN	866	MAX	2640	MIN	0.00	AC-FT	627000	(**)	0.00

(\*) Contents, in acre-feet, at end of month in Painted Rock Reservoir, furnished by Corp of Engineers

(\*\*) Change in contents, in acre feet

e Estimated



## GILA RIVER BASIN

## 09520280 GILA RIVER NEAR DATELAND, AZ

**LOCATION.**--Lat 32°52'56", long 113°32'26", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec. 25, T.6 S., R.13 W., Yuma County, Hydrologic Unit 15070201, in center of channel on downstream side of bridge on Hyder Road, (Ave 64E), and 5.5 mi north of Dateland, AZ.

**DRAINAGE AREA.**--55,000 mi<sup>2</sup>, approximately.

**PERIOD OF RECORD.**--Oct. 1993 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 363.33 ft above sea level, from Highway Department bridge pin. Prior to Oct. 1, 1993, gage site was located downstream at Ave 51E.

**REMARKS.**--Records fair except for estimated days which are poor. The flow is regulated by Painted Rock Dam. Capacity of the reservoir at Painted Rock Dam is 2,492,000 acre-ft. (See remarks for sta 09519800.)

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 3,320 ft<sup>3</sup>/s July 3, 1995. No flow for many days.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 2,230 ft<sup>3</sup>/s April 1 at 1130, gage height, 7.80 ft. No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	1030	1820	1530	1150	549	547	105	0.00
2	0.00	0.00	0.00	0.00	1080	1840	1580	1100	420	551	102	0.00
3	0.00	0.00	0.00	0.00	1140	1660	1580	1070	311	530	96	0.00
4	0.00	0.00	0.00	18	1170	1550	1530	1050	526	447	103	0.00
5	0.00	0.00	0.00	0.02	1190	1650	1500	921	642	404	103	0.00
6	0.00	0.00	13	0.00	1240	1630	1510	838	637	366	107	0.00
7	0.00	0.00	0.01	0.00	1240	1660	1540	755	583	338	110	0.00
8	0.00	0.00	0.00	0.00	1240	1700	1550	712	522	323	120	0.00
9	0.00	0.00	0.00	0.00	1230	1660	1520	679	546	301	106	0.00
10	0.00	0.00	0.00	0.00	e1220	1690	1480	664	558	249	81	0.00
11	0.00	0.00	0.00	0.00	e950	1660	1440	696	562	197	147	0.00
12	0.00	0.00	0.00	0.00	e900	1650	1460	680	556	167	106	0.00
13	0.00	0.00	0.00	0.00	e850	1740	1530	664	555	148	80	0.00
14	0.00	0.00	0.00	0.00	e800	1650	1510	677	553	134	68	0.00
15	0.00	0.00	0.00	0.00	773	1520	1480	690	547	124	56	0.00
16	0.00	0.00	0.00	0.00	890	1570	1480	657	549	114	46	0.00
17	0.00	0.00	0.00	7.0	887	1650	1520	615	547	106	37	0.00
18	0.00	0.00	0.00	197	909	1800	1500	578	559	99	25	0.00
19	0.00	0.00	0.00	420	946	1950	1470	559	560	93	12	0.00
20	0.00	0.00	0.00	521	972	1960	1520	547	559	94	5.4	0.00
21	0.00	0.00	0.00	583	1360	1910	1620	532	554	96	2.4	0.00
22	0.00	0.00	0.00	636	1620	1930	1620	524	548	95	0.86	0.00
23	0.00	0.00	0.00	680	1640	1770	1620	515	543	94	0.17	0.00
24	0.00	0.00	0.00	717	1770	1650	1600	503	549	94	0.00	0.00
25	0.00	0.00	0.00	758	1720	1630	1550	498	547	93	0.00	0.00
26	0.00	0.00	0.00	816	1750	1660	1530	496	541	89	0.00	0.00
27	0.00	0.00	0.00	851	1770	1620	1540	542	537	96	0.00	0.00
28	0.00	0.00	0.00	862	1790	1610	1460	553	535	104	0.00	0.00
29	0.00	0.00	0.00	901	---	1650	1310	549	545	102	0.00	0.00
30	0.00	0.00	0.15	929	---	1750	1250	523	548	100	0.00	0.00
31	0.00	---	0.00	956	---	1700	---	533	---	109	0.00	---
TOTAL	0.00	0.00	13.16	9852.02	34077	52890	45330	21070	16288	6404	1618.83	0.00
MEAN	0.00	0.00	0.42	318	1217	1706	1511	680	543	207	52.2	0.00
MAX	0.00	0.00	13	956	1790	1960	1620	1150	642	551	147	0.00
MIN	0.00	0.00	0.00	0.00	773	1520	1250	496	311	89	0.00	0.00
AC-FT	0.00	0.00	26	19540	67590	104900	89910	41790	32310	12700	3210	0.00
CFSM	0.00	0.00	0.00	0.01	0.02	0.03	0.03	0.01	0.01	0.00	0.00	0.00
CAL YR 2004	TOTAL	13.16	MEAN	0.04	MAX	13	MIN	0.00	AC-FT	26	CFSM	0.00
WTR YR 2005	TOTAL	187543.01	MEAN	514	MAX	1960	MIN	0.00	AC-FT	372000	CFSM	0.01

e Estimated

09520500 GILA RIVER NEAR DOME, AZ

**LOCATION**--Lat 35°45'39", long 114°25'11", in SW<sup>1</sup>/<sub>4</sub> sec. 4, T.8 S., R.21 E., Yuma County, Hydrologic Unit 15070201, on right bank 440 ft upstream from McPhaul bridge on old route of State Highway 95, 3 mi west of Dome, and 12 mi upstream from mouth.

**DRAINAGE AREA**--57,850 mi<sup>2</sup>, approximately, includes 373 mi<sup>2</sup> in Aubrey Valley Playa, a closed basin, but excludes all other closed basins.

**PERIOD OF RECORD**--Jan. 1903 to current year. Monthly total, maximum, and minimum daily discharges only for Jan. 1903 to Dec. 1904 and Jan. 1906 to July 1929 in WSP 918 or WSP 1313. Published as "at Yuma and Gila City" 1903, as "near Dome" 1904, and as "at Dome (Gila City)" 1905-06. Records for 1907-29 are published in WSP 918 as "at Yuma and at and near Dome."

**REVISED RECORDS**--WSP 918: 1905. WSP 1733: July 1942. WSP 1926: Drainage area.

**GAGE**--Water-stage recorder. Datum of gage is 139.18 ft above sea level. Prior to Oct. 1903 and Jan. 1907 to Apr. 1929, no gage; discharge estimated. Oct. 1903 to Dec. 1906, principal nonrecording gage 4 mi upstream at datum 19.19 ft higher, supplemented by many nonrecording gages at different datums. May 1929 to May 31, 1981, at datum 9.00 ft higher.

**REMARKS**--No estimated daily discharge. Records poor. Many diversions above station for irrigation. Flow above station regulated by reservoirs at and above Painted Rock Dam; capacity of reservoir at Painted Rock Dam is 2,492,000 acre-ft. Painted Rock Reservoir, which is for flood control only, was completed in Oct. 1959 (see also REMARKS for sta 09518000).

**EXTREMES FOR PERIOD OF RECORD**--1903-29: Maximum daily discharge, 200,000 ft<sup>3</sup>/s, roughly estimated, Jan. 22, 1916.

1929-59: Maximum discharge, 20,700 ft<sup>3</sup>/s Feb. 15, 1932, gage height, 25.75 ft, present datum; no flow for part or all of most years.

1959-2002: Maximum discharge 28,900 ft<sup>3</sup>/s Mar. 3, 1993, maximum gage height, 26.81 ft; no flow for part or all of most years.

**EXTREMES FOR CURRENT YEAR**--Maximum instantaneous discharge, 1,430 ft<sup>3</sup>/s March 2 at 1545, gage height, 18.83 ft, March 3 at 1800, gage height 18.81 ft., March 4 at 0930, gage height 18.79 ft. Minimum daily discharge, 4.1 ft<sup>3</sup>/s October 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	20	29	43	23	1390	1150	969	463	414	57	16
2	5.2	13	26	40	94	1420	1150	919	463	407	58	14
3	8.4	14	26	35	290	1420	1160	877	469	405	55	12
4	8.0	14	25	286	365	1420	1160	854	409	403	57	11
5	7.3	15	27	81	434	1330	1140	845	346	388	52	10
6	6.4	20	50	47	489	1250	1100	829	380	334	45	11
7	6.2	14	44	37	539	1210	1070	781	426	297	43	13
8	4.2	13	37	34	584	1160	1070	747	443	271	117	11
9	4.9	12	33	32	640	1120	1090	712	441	257	308	8.9
10	4.1	13	31	30	661	1130	1080	690	448	248	191	19
11	6.4	20	32	30	719	1180	1060	653	456	235	121	15
12	11	18	32	29	738	1190	1030	632	466	208	174	14
13	8.2	16	32	28	615	1170	999	628	474	172	105	14
14	5.9	14	32	26	545	1180	996	617	472	158	92	13
15	7.5	15	30	26	520	1160	1040	605	468	146	75	13
16	6.2	16	25	27	495	1150	1030	601	457	140	64	11
17	5.6	16	26	27	472	1140	1000	600	452	131	58	13
18	6.5	24	24	25	509	1200	993	586	455	105	50	15
19	13	23	27	24	561	1210	1010	561	455	103	42	14
20	15	20	27	24	651	1210	1010	539	452	102	39	16
21	239	20	27	24	602	1280	991	520	451	90	35	14
22	22	19	25	24	681	1300	1010	510	451	85	33	10
23	13	14	28	25	801	1280	1090	495	442	85	24	12
24	17	13	28	25	1290	1270	1100	479	434	84	23	15
25	19	18	27	23	1230	1290	1100	468	423	84	20	11
26	19	24	29	27	1330	1240	1090	459	421	83	17	12
27	17	25	29	25	1350	1220	1070	458	422	78	15	12
28	17	27	27	24	1350	1220	1060	452	417	71	14	13
29	12	31	26	25	---	1220	1070	469	407	65	15	14
30	16	33	30	26	---	1190	1040	479	403	61	14	12
31	25	---	32	25	---	1140	---	477	---	59	15	---
TOTAL	561.2	554	923	1204	18578	38290	31959	19511	13166	5769	2028	388.9
MEAN	18.1	18.5	29.8	38.8	664	1235	1065	629	439	186	65.4	13.0
MAX	239	33	50	286	1350	1420	1160	969	474	414	308	19
MIN	4.1	12	24	23	23	1120	991	452	346	59	14	8.9
AC-FT	1110	1100	1830	2390	36850	75950	63390	38700	26110	11440	4020	771
CAL YR 2004	TOTAL	6332.5	MEAN	17.3	MAX	396	MIN	1.5	AC-FT	12560		
WTR YR 2005	TOTAL	132932.1	MEAN	364	MAX	1420	MIN	4.1	AC-FT	263700		

## COLORADO RIVER MAIN STEM

09521100 COLORADO RIVER BELOW YUMA MAIN CANAL  
WASTEWAY, AT YUMA, AZ

**LOCATION.**--Lat 32°43'54", long 114°37'55", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec. 26, T.16 S., R.22 E., San Bernardino meridian, in Imperial County, CA, Hydrologic Unit 15030107, on right bank 1,000 ft downstream from Yuma Main Canal wasteway, 0.6 mi downstream from former gaging station on Colorado River at Yuma, 1.1 mi northwest of downtown post office in Yuma, 5.2 mi downstream from Gila River, and 6.4 mi upstream from northerly international boundary.

**DRAINAGE AREA.**--246,500 mi<sup>2</sup>, approximately, including all closed basins entirely within the drainage boundary, also 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming.

**PERIOD OF RECORD.**--Oct. 1963 to current year. If records for Yuma Main Canal wasteway at Yuma (sta 09525000) and Reservation Main Drain No. 4 (sta 09530000) are subtracted from records at this station, records equivalent to those published 1902-64 as "Colorado River at Yuma" (sta 09521000) can be obtained.

**GAGE.**--Water-stage recorder. Datum of gage is 101.99 ft above sea level.

**REMARKS.**--Records good except for estimated days which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, municipal, and industrial uses, and return flows from irrigated areas.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 31,600 ft<sup>3</sup>/s Aug. 19, 1983, gage height, 26.67 ft; maximum gage height, 27.67 ft July 4, 1983; minimum daily discharge, 260 ft<sup>3</sup>/s Jan. 17, 1970.

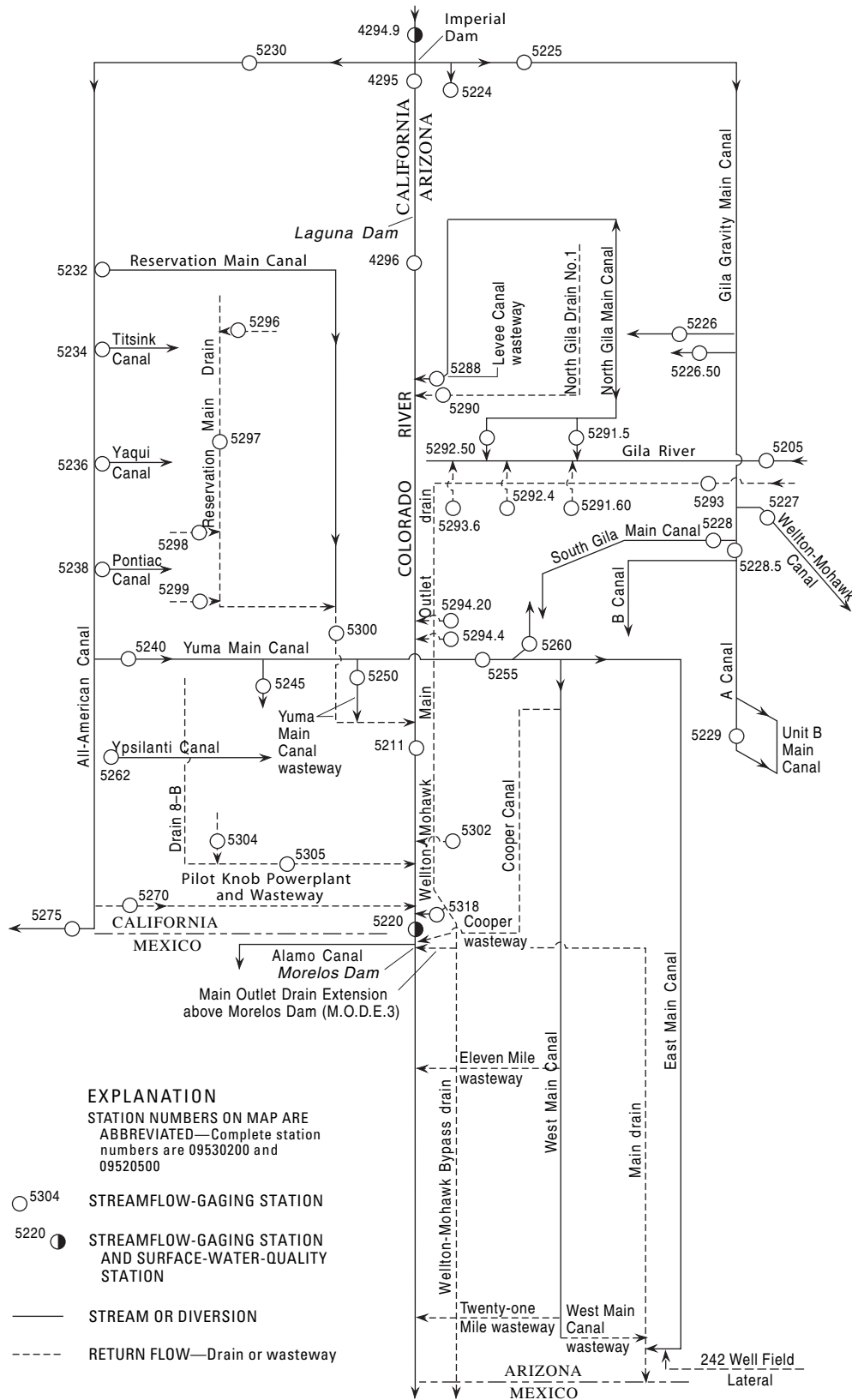
**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum gage height since at least 1878, 34.0 ft Jan. 22, 1916, discharge, 250,000 ft<sup>3</sup>/s, at former gaging station at Yuma.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 4,290 ft<sup>3</sup>/s August 11 at 1600, gage height, 15.58 ft. Minimum daily discharge, 433 ft<sup>3</sup>/s January 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	718	1020	868	879	659	2880	2140	2160	1400	1680	1370	988
2	749	961	617	833	624	2470	2060	2230	1450	1670	1460	1010
3	869	941	658	920	546	2420	1990	1780	1380	1640	1840	1040
4	850	973	639	1590	885	2440	2000	1640	1410	1640	1600	966
5	706	914	666	e2990	836	2490	2120	1560	1350	1680	1330	938
6	766	922	848	e2040	864	2720	2060	1540	1450	1450	1370	957
7	772	897	1120	e2330	940	2550	1940	1520	1440	925	1360	1050
8	711	909	2300	1780	997	2610	1930	1440	1440	940	1160	1190
9	719	906	2110	1400	1030	2540	1950	1370	1390	940	987	1040
10	729	891	1270	e1200	1190	2290	2010	1540	1440	969	2450	959
11	761	977	987	1370	1570	1640	2170	2070	1480	902	3800	919
12	706	976	981	1330	2970	1900	2350	1800	1490	814	2690	915
13	767	995	947	1340	2700	1900	2340	1220	1480	791	1710	916
14	856	991	929	1230	1510	1860	2550	1150	1460	822	1190	923
15	711	1070	904	1210	1280	1840	2050	1160	1440	790	998	964
16	718	1070	1130	1060	e1310	1860	1960	1260	1420	697	1070	1050
17	737	1050	962	566	e1280	1870	1950	1070	1400	698	1140	1460
18	996	1100	555	495	e1240	1830	1910	1090	1370	691	1160	1440
19	624	1140	609	515	1270	1790	1880	1090	1370	669	1170	1200
20	713	1140	652	469	1770	1830	1900	1070	1370	691	1130	866
21	1110	1150	908	450	1590	1840	1890	1070	1400	748	1110	868
22	3180	1430	1210	433	1440	1910	1880	1120	1390	705	1100	906
23	3920	2520	1250	471	1530	2890	1940	1270	1440	665	1020	866
24	3930	2600	1240	537	3270	2250	2060	1290	1510	746	1010	871
25	3010	1990	1170	568	3340	1960	2060	1410	1500	928	1040	905
26	2810	1420	1180	681	3240	1940	2230	1480	1510	1760	1080	873
27	2430	1180	1200	e1260	3800	1920	2370	1460	1460	1790	1070	903
28	1010	1300	1240	934	3620	2530	2500	1480	1430	1390	1030	857
29	1180	1270	1100	862	---	2330	2320	1460	1430	1350	1080	810
30	1800	1050	617	794	---	2120	2270	1380	1440	1450	1150	845
31	1200	---	915	738	---	2010	---	1350	---	1350	1110	---
TOTAL	40758	35753	31782	33275	47301	67430	62780	44530	42940	33981	42785	29495
MEAN	1315	1192	1025	1073	1689	2175	2093	1436	1431	1096	1380	983
MAX	3930	2600	2300	2990	3800	2890	2550	2230	1510	1790	3800	1460
MIN	624	891	555	433	546	1640	1880	1070	1350	665	987	810
AC-FT	80840	70920	63040	66000	93820	133700	124500	88330	85170	67400	84860	58500
CAL YR 2004	TOTAL 394164	MEAN 1077	MAX 3930	MIN 543	AC-FT 781800							
WTR YR 2005	TOTAL 512810	MEAN 1405	MAX 3930	MIN 433	AC-FT 1017000							

e Estimated



**Figure 5.** Streamflow-gaging stations and water-quality stations on streams, diversions, and return flows through Imperial Dam and the southerly international boundary.

## COLORADO RIVER MAIN STEM

**09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA  
(NATIONAL STREAM-QUALITY ACCOUNTING NETWORK)**

**LOCATION.**--Lat 32°43'07", long 114°43'05", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec. 21, T.8 S., R.24 W., Gila and Salt River meridian, in Yuma County, AZ, Hydrologic Unit 15030108, on left bank at northerly international boundary, 0.5 mi east of Andrade, 1.1 mi upstream from Morelos Dam, 1.1 mi downstream from Rockwood Gate, and 6.4 mi downstream from gaging station on Colorado River below Yuma Main Canal wasteway.

**DRAINAGE AREA.**--246,700 mi<sup>2</sup>, approximately, including all closed basins entirely within the drainage boundary, also 3,959 mi<sup>2</sup> in Great Divide Basin in southern Wyoming.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD.**--Jan. 1950 to current year. Prior to Oct. 1958 published as "at international boundary."

**GAGE.**--Water-stage recorder. Datum of gage is mean sea level. Supplementary water-stage recorder 1,680 ft upstream at same datum.

**REMARKS.**--No estimated daily discharges. This record shows water passing northerly international boundary. Minor diversions to the United States below this station by pumping from ground water for irrigation in the floodway between river and Yuma levee.

**COOPERATION.**--Records furnished by International Boundary and Water Commission, U.S. Section (discharge figures rounded in accordance with U.S. Geological Survey standard practice).

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 40,600 ft<sup>3</sup>/s Aug. 20, 1983; maximum elevation, 115.65 ft Aug. 18 and 19, 1983; minimum discharge, 495 ft<sup>3</sup>/s Sept. 28, 1970; minimum elevation, 101.72 ft, Nov. 2, 1981.

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 6,320 ft<sup>3</sup>/s Feb. 27. Minimum daily discharge, 848 ft<sup>3</sup>/s Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	1380	1530	1940	2420	5260	3360	2270	1560	1810	1580	1330
2	975	1360	1840	1880	2330	3460	3370	2340	1610	1850	1640	1350
3	1100	1300	1870	1690	2310	2640	3380	1970	1560	1830	1910	1370
4	1060	1360	1860	1880	2300	2590	3350	1840	1590	1830	1900	1310
5	848	1300	1900	3380	2280	2660	3480	1780	1540	1870	1550	1270
6	904	1320	2110	3570	2270	3000	3430	1750	1610	1850	1580	1300
7	964	1260	2100	2800	2380	2740	3390	1740	1650	1890	1580	1380
8	918	1280	3600	2280	2360	2780	3410	1680	1650	1880	1580	1470
9	957	1300	3510	2020	2370	2740	3440	1620	1620	1870	1840	1390
10	932	1390	2330	1890	2480	2800	3460	1720	1670	1890	3210	1320
11	1000	1590	2070	1840	2740	3020	3440	2050	1700	1850	4940	1300
12	911	1370	2060	1790	4270	3130	3400	2040	1700	1840	4270	1300
13	1010	1350	2000	1780	4240	3080	3390	1520	1700	1850	2830	1320
14	1170	1360	1940	1710	2960	3400	3570	1470	1660	1860	1790	1320
15	946	1400	1810	1620	2580	3370	3410	1490	1660	1820	1300	1350
16	936	1440	1620	1680	2590	3390	3390	1590	1660	1830	1310	1410
17	953	1450	1610	1910	2660	3340	3430	1440	1650	1830	1360	1680
18	1560	1450	1710	1900	2670	3430	3210	1440	1640	1780	1370	1760
19	1110	1470	1730	1920	2670	3440	3220	1430	1640	1770	1380	1590
20	950	1500	1580	1910	2900	3400	3170	1420	1640	1790	1350	1290
21	1210	1510	1710	1900	2750	3440	3040	1420	1670	1750	1340	1300
22	3010	1660	1610	1840	2630	3410	3030	1430	1670	1720	1350	1320
23	4100	2560	1650	1880	2770	4770	2870	1550	1680	1700	1300	1280
24	4200	2860	1660	2120	4630	4660	2940	1550	1760	1740	1260	1290
25	3120	2160	1600	2090	5510	3470	2930	1590	1740	1840	1290	1320
26	3160	1940	1610	2160	5540	3390	2610	1580	1740	2480	1330	1280
27	4200	1770	1630	3100	6320	3410	2390	1590	1720	2030	1340	1320
28	1790	1780	1660	3050	5760	3530	2590	1600	1710	1660	1320	1280
29	1420	1800	1680	2170	---	3430	2390	1590	1730	1590	1330	1230
30	2030	1360	1730	2150	---	3390	2350	1550	1670	1670	1380	1260
31	1580	---	1940	2390	---	3380	---	1510	---	1590	1390	---
TOTAL	50064	47030	59260	66240	89690	103950	94840	51560	49800	56560	54900	40690
MEAN	1615	1568	1912	2137	3203	3353	3161	1663	1660	1825	1771	1356
MAX	4200	2860	3600	3570	6320	5260	3570	2340	1760	2480	4940	1760
MIN	848	1260	1530	1620	2270	2590	2350	1420	1540	1590	1260	1230
AC-FT	99300	93280	117500	131400	177900	206200	188100	102300	98780	112200	108900	80710
CAL YR 2004	TOTAL 737092	MEAN 2014	MAX 5510	MIN 848	AC-FT 1462000							
WTR YR 2005	TOTAL 764584	MEAN 2095	MAX 6320	MIN 848	AC-FT 1517000							

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA—CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Oct. 1968 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1969 to Sept. 1984.

REMARKS.--Discharge reported by International Boundary and Water Commission. Unpublished chemical analyses for water years 1961-68 available from Arizona Water Science Center in Tucson, AZ.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat un/25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
DEC													
16...	0830	9	1500	.055	.039	769	9.4	95	8.1	1720	15.0	16.0	450
16...	0831	9	1500	--	--	769	9.4	95	8.1	1720	15.0	16.0	450
MAR													
22...	0900	9	3440	.165	.123	762	7.2	76	7.8	837	18.0	18.0	240
22...	0901	9	3440	--	--	762	7.2	76	7.8	837	18.0	18.0	240
MAY													
31...	0800	9	1510	.086	.061	757	6.1	75	7.8	1470	20.0	25.0	390
31...	0810	7	--	.088	.063	--	--	--	--	--	--	--	390
JUL													
25...	0830	9	1820	.056	.040	757	5.5	74	8.0	1490	32.0	30.0	380
25...	0831	9	1820	--	--	757	5.5	74	8.0	1490	32.0	30.0	380
AUG													
25...	0840	9	1290	.057	.040	758	4.7	62	7.9	1570	33.0	29.0	420
25...	0841	9	1290	--	--	758	4.7	62	7.9	1570	33.0	29.0	430

Date	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, unfltrd, recover, mg/L (00915)	Calcium water, unfltrd, recover, mg/L (00916)	Magnesium, water, fltrd, recover, mg/L (00925)	Magnesium, water, unfltrd, recover, mg/L (00927)	Potassium, water, fltrd, recover, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)	Bicarbonate, wat flt Gran, titr., mg/L (63786)	Carbonate, wat flt Gran, titr., mg/L (63788)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
DEC													
16...	240	114	--	39.3	--	5.77	4	201	210	252	<1	203d	.6
16...	240	116	103	38.8	36.1	5.72	4	206	210	252	<1	206d	.6
MAR													
22...	100	60.4	--	21.0	--	4.26	3	100	136	166	<1	105	.5
22...	100	60.8	62.0	21.2	21.4	4.37	3	101	136	166	<1	104	.5
MAY													
31...	220	94.7	--	35.9	--	5.78	4	179	165	200	<1	184	.6
31...	--	95.7	--	36.8	--	5.92	4	180	--	--	--	184	.6
JUL													
25...	230	94.0	--	34.6	--	5.44	4	162	151	184	<1	164	.5
25...	230	94.5	97.1	35.3	36.1	5.47	4	161	151	184	<1	165	.5
AUG													
25...	260	104	--	38.3	--	5.73	4	185	157	192	<1	181	.5
25...	270	104	101	40.0	40.2	5.79	4	178	157	192	<1	184	.5

Date	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents, mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue on evap. at 105 deg C, wat flt mg/L (70300)	Residue total at 105 deg C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrate, water, fltrd, mg/L (71851)	Nitrate, water, fltrd, mg/L as N (00618)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)
DEC													
16...	16.2	369d	1080	1.55	1140	--	.35	.46	.208	2.72	.61	.641	.026
16...	--	370d	1070	1.54	1130	<10	--	.46	.19	--	--	.64	--
MAR													
22...	15.7	140	532	.75	550	--	.43	.61	.092	2.17	.49	.502	.012
22...	--	138	514	.74	545	32	--	.59	.09	--	--	.51	--
MAY													
31...	13.5	284	901	1.29	948	--	.48	.53	.172	1.94	.44	.463	.024
31...	13.8	282	910	1.28	943	--	.47	.56	.171	1.97	.44	.467	.023
JUL													
25...	12.3	328d	895	1.27	933	--	.36	.48	.130	2.00	.45	.470	.019
25...	--	328d	882	1.28	943	17	--	.50+c	.12	--	--	.46	--
AUG													
25...	14.2	342d	969	1.39	1020	--	.33	.40	.087	2.59	.59	.603	.017
25...	--	344d	954	1.40	1030	14	--	.39	.08	--	--	.62	--

## COLORADO RIVER MAIN STEM

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA—CONTINUED

## WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd, mg/L (00605)	Particulate nitrogen, susp, water, mg/L (49570)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd, mg/L (00600)	Ortho-phosphate, water, fltrd, mg/L (00660)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	Total carbon, suspnd, sedimnt, mg/L (00694)	Inorganic carbon, suspnd, sedimnt, mg/L (00688)	Organic carbon, suspnd, sedimnt, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)
DEC													
16...	.14	.25	.06	.99	1.1	.028	.009	.021	.033	.6	<.1	.5	2.5
16...	--	.27	--	--	1.1	--	--	--	.04	--	--	--	--
MAR													
22...	.34	.52	.38	.93	1.1	.156	.051	.064	.172	3.4	<.1	2.8	4.9
22...	--	.50	--	--	1.1	--	--	--	.15	--	--	--	--
MAY													
31...	.30	.36	.17	.94	.99	.095	.031	.043	.094	1.5c	<.1	1.5c	3.5c
31...	.30	.39	.14	.94	1.0	.092	.030	.043	.093	1.4	<.1	1.3	3.4
JUL													
25...	.23	.35	.10	.83	.95	.028	.009	.021	.051	1.0	<.1	.9	2.6
25...	--	.38	--	--	.96	--	--	--	.04+c	--	--	--	--
AUG													
25...	.24	.32	.09	.93	1.0	.034	.011	.019	.051	1.0	<.1	.9	2.7
25...	--	.31	--	--	1.0	--	--	--	.04	--	--	--	--
Date	E coli, m-TEC, water, col/100 mL (31633)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Antimony, water, unfltrd, ug/L (01097)	Arsenic, water, fltrd, ug/L (01000)	Arsenic, water, unfltrd, ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, unfltrd, recover, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, unfltrd, recover, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Boron, unfltrd, recover, ug/L (01022)	Cadmium, water, fltrd, ug/L (01025)
DEC													
16...	47	Mn	E.16n	--	3.0	--	112	--	<.06	--	240	--	E.03n
16...	47	--	E.17n	E.1n	3.2	3	--	111	<.06	<.06	--	267	E.03n
MAR													
22...	42	2	.24	--	5.8	--	76	--	<.06	--	209	--	<.04
22...	42	--	.24	E.2n	5.9	7	--	90	<.06	.10	--	151	E.02n
MAY													
31...	--	2	.28	--	5.2	--	108	--	<.06	--	256	--	E.03n
31...	--	2	.30	--	4.8	--	113	--	<.06	--	241	--	E.03n
JUL													
25...	>4k	2	.32	--	2.8	--	134	--	<.06	--	229	--	E.03n
25...	>4k	--	.33	.3	3.0	3	--	133	<.06	<.06	--	204	E.03n
AUG													
25...	36k	2	.30	--	3.5	--	130	--	<.06	--	264	--	<.04
25...	36k	--	.29	.3	3.5	3.3oc	--	119	<.06	<.06	--	281d	E.03n
Date	Cadmium, water, unfltrd, ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, unfltrd, recover, ug/L (01034)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Copper, unfltrd, recover, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lead, unfltrd, recover, ug/L (01051)	Lithium, water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Manganese, unfltrd, recover, ug/L (01055)	Mercury, water, fltrd, ug/L (71890)
DEC													
16...	--	<.8	--	.354	1.5	--	E4n	<.08	--	70.2	25.4	--	--
16...	E.03n	--	<.8	--	1.6	7.5	--	E.06n	.28	--	--	73	E.01n
MAR													
22...	--	<.8	--	.224	2.8	--	E5n	<.08	--	42.8	6.8	--	--
22...	E.04n	--	1.3	--	2.6	8.6	--	E.04n	2.10	--	--	110	<.01
MAY													
31...	--	<.8	--	.315	3.5	--	7	E.06n	--	64.5	9.3	--	--
31...	--	<.8	--	.273	3.1	--	E6n	E.05n	--	62.2	11.3	--	--
JUL													
25...	--	<.8	--	.203	2.3	--	<6	.12	--	69.5	15.0	--	--
25...	E.04n	--	E.4n	--	2.3	2.2	--	.11	.53	--	--	116	<.01
AUG													
25...	--	<.8	--	.185	1.9	--	<6	E.06n	--	70.5	14.2	--	--
25...	E.03n	--	.09oc	--	2.3	2.0	--	E.06n	.85	--	--	15	E.01n





## COLORADO RIVER MAIN STEM

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA—CONTINUED

## WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Metri- buzin, water, fltrd, ug/L (82630)	Moli- nate, water, fltrd 0.7u GF ug/L (82671)	Naprop- amide, water, fltrd 0.7u GF ug/L (82684)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, water, fltrd, ug/L (39542)	Peb- ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water, fltrd 0.7u GF ug/L (82664)	Prome- ton, water, fltrd, ug/L (04037)	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)	Propa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF ug/L (82679)	Propar- gite, water, fltrd 0.7u GF ug/L (82685)
DEC													
16...	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
22...	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
31...	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.005	<.025	<.011	<.02
31...	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.005	<.025	<.011	<.02
JUL													
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water, fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water, fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Uranium natural water, fltrd, ug/L (22703)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)	Data base number	Medium code
DEC													
16...	<.005	<.02	<.034mc	<.02	<.010	<.006	<.009	4.54	95	50	202	01	9
16...	--	--	--	--	--	--	--	--	95	50	202	01	9
MAR													
22...	<.010	<.02	<.034mc	<.02	<.010	<.006	<.009	3.54	98	77	715	01	9
22...	--	--	--	--	--	--	--	--	98	77	715	01	9
MAY													
31...	<.010	<.02	<.034mc	<.02	<.010	<.006	<.009	4.04	97	35	143	01	9
31...	E.005n	<.02	<.034mc	<.02	<.010	<.006	<.009	3.75	--	--	--	09	R
JUL													
25...	--	--	--	--	--	--	--	4.20	97	34	167	01	9
25...	--	--	--	--	--	--	--	--	97	34	167	01	9
AUG													
25...	--	--	--	--	--	--	--	3.80	93	30	104	01	9
25...	--	--	--	--	--	--	--	--	93	30	104	01	9

Remark codes used in this table:

< -- Less than.  
 > -- Greater than.  
 E -- Estimated.  
 M -- Presence verified but not quantified.

Value qualifier codes used in this table:

+ -- Improper preservation  
 c -- See laboratory comment  
 d -- Diluted sample: method hi range exceeded  
 k -- Counts outside acceptable range  
 m -- Value is highly variable by this method  
 n -- Below the LRL and above the LT-MDL  
 o -- Result determined by alternate method  
 t -- Below the long-term MDL

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Water-quality measurements in the following table were made as part of the National Stream-Quality Accounting Network. The following analyses are quality-assurance samples processed during the 2005 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

Date	Time	Sample type	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Calcium water, fltrd, mg/L (00915)	Magnesium water, fltrd, mg/L (00925)	Sodium water, fltrd, mg/L (00930)	Silica water, fltrd, mg/L (00955)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)
DEC 16...	0838	2	<.004	<.004	<.02	<.008	<.20	.06	<.010	<.016	<.002	<.02	<.006
Date	Total carbon, suspnd total, mg/L (00694)	Inorganic carbon, suspnd total, mg/L (00688)	Organic carbon, suspnd total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)
DEC 16...	<.1	<.1	<.1	<.3	<2	<.20	<.2	<.2	<.06	<8	<.04	<.8	<.014
Date	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)
DEC 16...	<.4	<6	<.08	<.6	<.2	<.4	<.06	<.4	<.2	<.40	<.04	.1	<.6
Date	Uranium natural water, fltrd, ug/L (22703)												
DEC 16...	<.04												

Remark codes used in this table:  
 < -- Less than.

## DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

Two major diversions for irrigation water are located at Imperial Dam, the Gila Gravity Main Canal, and the All-American Canal. The Gila Gravity Main Canal diverts water for irrigation in the Gila Project, which is located entirely in Arizona. The All-American Canal diverts water for irrigation in Imperial Valley in California and the Yuma Project in Arizona and California. Between Imperial Dam and the northerly international boundary with Mexico, water is diverted from these principal canals for the individual diversions of the Gila and Yuma Projects.

Between Imperial Dam and the northerly international boundary with Mexico, flows from irrigated areas enter the Colorado River through many drains and wasteways in Arizona and California. Other return flows enter the Gila River below the gaging station near Dome (09520500).

See figure 5 on p. 267 for schematic diagram showing location of diversions and return flows.

### Diversions at and below Imperial Dam, AZ-CA

#### **09522500. GILA GRAVITY MAIN CANAL AT IMPERIAL DAM.--See p. 277**

##### **09522600. NORTH GILA MAIN CANAL.**

LOCATION.--Water-stage recorder and sharp-crested weir, in SW $_{1/4}$ SW $_{1/4}$  sec.23, T.7 S., R.22 W., Yuma County, Hydrologic Unit 15030107, about 700 ft downstream from turnout from Gila Gravity Main Canal and 1.2 mi south of Laguna Dam.

PERIOD OF RECORD.--Oct. 1965 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation in North Gila Valley.

##### **09522650. NORTH GILA MAIN CANAL NO. 2.**

LOCATION.--Water-stage recorder in SW $_{1/4}$ NW $_{1/4}$  sec.11, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, at turnout from Gila Gravity Main Canal and 3.5 mi downstream from turnout to North Gila Main Canal.

PERIOD OF RECORD.--June 1969 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation in North Gila Valley.

##### **09522700. WELLTON-MOHAWK CANAL.**

LOCATION.--Three water-stage recorders to record forebay and tailrace elevations and gate openings since June 1, 1974, in NW $_{1/4}$ NE $_{1/4}$  sec.17, T.8 S., R.21 W., Yuma County, Hydrologic Unit 15070201, at turnout from Gila Gravity Main Canal.

PERIOD OF RECORD.--Oct. 1965 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation in the Dome, Wellton, and Mohawk areas of the lower Gila Valley.

COOPERATION.--Supplementary record of gate openings furnished by Wellton-Mohawk Irrigation District.

##### **09522800. SOUTH GILA MAIN CANAL.**

LOCATION.--Sparling flowmeter, in SE $_{1/4}$ SW $_{1/4}$  sec.36, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 110 ft downstream from turnout from Gila Gravity Main Canal.

PERIOD OF RECORD.--Oct. 1965 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation in South Gila Valley.

COOPERATION.--Daily discharges furnished by Yuma Irrigation District.

##### **09522850. GILA GRAVITY MAIN CANAL AT PUMPING PLANT.**

LOCATION.--Intake consisting of five pumps, in NE $_{1/4}$ NW $_{1/4}$  sec.1, T.9 S., R.22 W., Yuma County, Hydrologic Unit 15070201, at end of Gila Gravity Main Canal and head of Yuma Mesa canals.

PERIOD OF RECORD.--Oct. 1965 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation on Yuma Mesa and in Yuma Auxiliary Division of Yuma Valley.

COOPERATION.--Records furnished by Yuma Mesa Irrigation and Drainage District.

##### **09522900. UNIT B MAIN CANAL.**

LOCATION.--Headworks in NW $_{1/4}$ SW $_{1/4}$  sec.28, T.9 S., R.23 W., Yuma County, Hydrologic Unit 15030108, 5 mi northeast of Somerton.

PERIOD OF RECORD.--Oct. 1965 to current year (monthly discharge only).

REMARKS.--Record shows water available for irrigation in Yuma Auxiliary Division of the Yuma Project.

COOPERATION.--Records furnished by Yuma Mesa Irrigation and Drainage District.

##### **09523000. ALL-AMERICAN CANAL NEAR IMPERIAL DAM.--See p. 278**

##### **09523200. RESERVATION MAIN CANAL.**

LOCATION.--Water-stage recorder and, since Sept. 5, 1975, gate-opening recorder, in NE $_{1/4}$ NE $_{1/4}$  sec.35, T.15 S., R.23 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, at turnout from All-American Canal and 5.8 mi downstream from Imperial Dam.

PERIOD OF RECORD.--Aug. 1950 to current year (monthly discharge only). Prior to Oct. 1965 included in total diversions from All-American Canal and Yuma Main Canal above siphon-drop powerplant and published as part of sta 09524000.

REMARKS.--Record computed from rated gate on turnout from All-American Canal and shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

COOPERATION.--Record of gate openings furnished by Bard Water District.

##### **09523400. TITSINK CANAL.**

LOCATION.--Water-stage recorder and Parshall flume in NE $_{1/4}$ SW $_{1/4}$  sec.27, T.15 S., R.23 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 0.6 mi downstream from turnout from All-American Canal and 7.2 mi downstream from Imperial Dam.

PERIOD OF RECORD.--Aug. 1950 to current year (monthly discharge only). Prior to Oct. 1965 included in total diversions from All-American Canal and Yuma Main Canal above siphon-drop powerplant and published as part of sta 09524000.

REMARKS.--Record shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

## Diversions at and below Imperial Dam, AZ-CA—Continued

**09523600. YAQUI CANAL.**

LOCATION.--Water-stage recorder and Parshall flume in NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.31, T.15 S., R.23 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 700 ft downstream from turnout from All-American Canal and 11.1 mi downstream from Imperial Dam.

PERIOD OF RECORD.--June 1950 to current year (monthly discharge only). Prior to Oct. 1965 included in total diversions from All-American Canal and Yuma Main Canal above siphon-drop powerplant and published as part of sta 09524000.

REMARKS.--Record shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

**09523800. PONTIAC CANAL.**

LOCATION.--Water-stage recorder and Parshall flume in NW<sup>1</sup>/<sub>4</sub>W<sup>1</sup>/<sub>4</sub> sec.1, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 500 ft downstream from turnout from All-American Canal and 13.1 mi downstream from Imperial Dam.

PERIOD OF RECORD.--Aug. 1950 to current year (monthly discharge only). Prior to Oct. 1965 included in total diversions from All-American Canal and Yuma Main Canal above siphon-drop powerplant and published as part of sta 09524000.

REMARKS.--Record shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

**09524000. YUMA MAIN CANAL AT SIPHON-DROP POWERPLANT.--See p. 279****09524500. DIVERSIONS FROM YUMA MAIN CANAL BETWEEN SIPHON-DROP POWERPLANT AND YUMA MAIN CANAL WASTEWAY.**

LOCATION.--Turnouts for several canals diverting from Yuma Main Canal between siphon-drop powerplant, 4 mi north of Yuma, and Yuma Main Canal wasteway, 1,600 ft upstream from Colorado River siphon, in Imperial County.

PERIOD OF RECORD.--Oct. 1940 to current year (monthly discharge only). Prior to Oct. 1947 in WSP 1313.Oct. 1947 to Sept. 1965 published as supplemental table with records for Yuma Main Canal at siphon-drop powerplant.

REMARKS.--Record shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

COOPERATION.--Record furnished by Bard Water District.

**09525500. YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON.--See p. 281****09526000. DIVERSION FROM YUMA MAIN CANAL FOR MUNICIPAL SUPPLY FOR YUMA.**

LOCATION.--Sparling and Venturi flowmeters, in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.35, T.16 S., R.22 E., San Bernardino meridian, Yuma County, Hydrologic Unit 15030107, on two pipelines, respectively, about 1,000 ft downstream from intake, which is at outlet of Colorado River siphon of Yuma Main Canal, on Arizona side of Colorado River at Yuma.

PERIOD OF RECORD.--June 1945 to current year (monthly discharge only). Prior to Oct. 1973 published as a supplemental table with records for Yuma Main Canal below Colorado River siphon.

REMARKS.--Record shows water for Yuma municipal supply. Figures shown in table herewith are also included in record for Yuma Main Canal below Colorado River siphon (sta 09525500).

COOPERATION.--Records furnished by Yuma County Water Users' Association.

**09526200. YPSILANTI CANAL NEAR WINTERHAVEN, CA.**

LOCATION.--Water-stage recorder and Cippoletti weir in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.16, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 700 ft downstream from turnout from All-American Canal and 1.5 mi northwest of Winterhaven, CA.

PERIOD OF RECORD.--Apr. 1995 to current year (monthly discharge only).

REMARKS.--Records shows water available for irrigation in parts of Reservation Division of Yuma Project in California.

**09527500. ALL-AMERICAN CANAL BELOW PILOT KNOB WASTEWAY.--See p. 287**

## DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

## DIVERSIONS AT AND BELOW IMPERIAL DAM, AZ-CA--CONTINUED

## MONTHLY DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Month	North Gila Main Canal 09522600	North Gila Main Canal No. 2 09522650	Wellton-Mohawk Canal 09522700	South Gila Main Canal 09522800	Gila Gravity Main Canal at pumping plant 09522850
October .....	2,770	727	27,190	3,220	13,015
November .....	2,050	494	12,170	2,340	10,129
December .....	1,360	450	11,570	1,890	6,263
CAL YR 2004	33,520	7,800	371,100	39,050	205,121
January .....	1,150	429	7,110	1,450	6,518
February .....	1,170	312	8,340	1,770	5,488
March .....	3,630	514	32,580	4,240	15,523
April .....	3,390	623	41,330	5,230	19,270
May.....	4,290	792	42,970	3,820	24,630
June.....	3,190	949	44,870	2,980	28,100
July .....	3,980	930	42,500	2,780	27,195
August .....	2,060	836	28,140	2,440	25,246
September .....	2,980	773	35,690	3,200	23,639
WTR YR 2005	32,010	7,830	334,500	35,360	205,016

Month	Unit B Main Canal 09522900	Reservation Main Canal 09523200	Titsink Canal 09523400	Yaqui Canal 09523600	Pontiac Canal 09523800
October .....	1,546	4,630	17	534	841
November .....	1,197	3,850	11	521	799
December .....	1,027	1,900	41	244	293
CAL YR 2004	23,718	49,300	469	7,660	7,090
January .....	757	1,720	29	256	283
February .....	554	1,070	9.6	270	164
March .....	1,853	4,560	17	572	567
April .....	2,481	6,070	40	941	897
May.....	2,807	7,080	73	1,080	1,050
June.....	3,178	4,650	43	639	630
July .....	3,580	4,410	12	831	241
August .....	3,473	2,580	41	461	353
September .....	2,734	3,940	8.7	604	508
WTR YR 2005	25,178	46,440	341	6,960	6,630

Month	Diversions from Yuma Main Canal 09524500	Division from Yuma Main Canal for Yuma supply 09526000	Ypsilanti Canal near Winterhaven, CA 09526200
October .....	1,010	2,288	1,370
November .....	610	1,786	1,140
December .....	469	1,795	557
CAL YR 2004	8,570	27,540	11,560
January .....	346	1,848	458
February .....	242	1,772	393
March .....	1,210	1,755	1,770
April .....	1,570	1,946	1,920
May.....	1,440	2,350	1,650
June.....	809	2,618	449
July .....	515	2,749	648
August .....	577	2,743	841
September .....	830	2,756	498
WTR YR 2005	9,630	26,406	11,690

NOTE.--Yearly totals given above have been computed from total cfs-days and may differ slightly from the summation of monthly total acre-feet on occasion.

**DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM**

**09522500 GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, AZ-CA**

**LOCATION**--Lat 32°52'34", long 114°27'18", in SE1/4SW1/4 sec. 30, T.6 S., R.21 W., Gila and Salt River meridian, Yuma County, Hydrologic Unit 15030107, on right bank 3,200 ft downstream from intake at east end of Imperial Dam.

**PERIOD OF RECORD**--Aug. 1943 to current year.

**GAGE**--Water-stage recorder. Datum of gage is 160.00 ft above sea level.

**REMARKS**--Records good except those below 500 ft<sup>3</sup>/s, and estimated days which are fair. Gila Gravity Main Canal diverts water from Colorado River at left end of Imperial Dam for irrigation of lands in the Gila Project area in Arizona. Diversions to this canal began Aug. 17, 1943. Diversions to North Gila Valley from this canal began Dec. 16, 1954.

**EXTREMES FOR PERIOD OF RECORD**--Maximum daily discharge, 2,240 ft<sup>3</sup>/s May 25, 1965; no flow at canal intake at times in several years when intake gates were closed.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1480	487	1240	96	541	601	1060	470	1800	1610	1320	1170
2	1060	570	1160	217	775	717	739	1590	1780	1000	1540	1460
3	758	584	697	381	542	777	512	1430	1700	622	1490	1060
4	1350	642	579	173	650	763	1380	1510	873	1430	1340	793
5	1100	537	372	125	537	418	1480	1600	700	1550	1330	1190
6	1360	464	209	177	310	385	1590	1580	1570	1810	716	1340
7	1400	267	260	125	1130	986	1410	798	1550	1590	470	1370
8	1090	640	400	115	964	1010	1110	632	1710	1410	1060	1330
9	901	568	273	202	725	1080	506	1560	1710	870	1020	1220
10	739	615	423	232	567	1010	494	1610	1560	798	1140	1060
11	1280	667	159	178	110	901	1420	1600	874	1550	820	909
12	1520	353	287	388	110	675	1510	1620	645	1630	704	1350
13	1360	268	549	473	188	e600	1330	1400	1550	1700	387	1520
14	1440	353	470	426	355	e895	1400	751	1560	1870	285	1540
15	1180	702	538	328	267	e1190	1150	602	1750	1730	1080	1450
16	690	814	406	290	451	1380	690	1670	1700	831	1100	1300
17	532	840	434	738	450	1180	540	1750	1450	681	1290	1020
18	1260	947	440	744	223	1160	1650	1690	591	1900	1320	993
19	1340	723	296	732	143	522	1640	1740	589	2030	1370	1410
20	1210	565	782	695	170	448	1640	1760	1770	1890	995	1390
21	590	457	755	401	375	1200	1680	1020	2010	1700	832	1510
22	323	580	839	413	287	1650	1130	772	1870	1730	1290	1540
23	298	473	782	172	288	1500	586	1690	1700	884	1380	1410
24	202	536	241	728	186	1410	423	1890	1570	730	1430	1170
25	653	344	78	698	144	707	1560	1830	847	1660	1420	1080
26	533	475	282	455	204	479	1870	1690	625	1790	1180	1350
27	552	483	662	309	182	409	1340	1240	1520	1710	441	1480
28	271	401	670	216	468	1220	1390	780	1640	1590	791	1620
29	182	961	474	204	---	1480	1050	672	1910	1320	1360	1670
30	153	1050	292	159	---	1530	593	1540	2000	690	1350	1480
31	233	---	236	425	---	1410	---	1710	---	504	1330	---
TOTAL	27040	17366	15285	11015	11342	29693	34873	42197	43124	42810	33581	39185
MEAN	872	579	493	355	405	958	1162	1361	1437	1381	1083	1306
MAX	1520	1050	1240	744	1130	1650	1870	1890	2010	2030	1540	1670
MIN	153	267	78	96	110	385	423	470	589	504	285	793
AC-FT	53630	34450	30320	21850	22500	58900	69170	83700	85540	84910	66610	77720
CAL YR 2004	TOTAL 375827	MEAN 1027	MAX 2160	MIN 78	AC-FT 745500							
WTR YR 2005	TOTAL 347511	MEAN 952	MAX 2030	MIN 78	AC-FT 689300							

e Estimated

## DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

## 09523000 ALL-AMERICAN CANAL NEAR IMPERIAL DAM, AZ-CA

**LOCATION.**--Lat 32°52'17", long 114°28'47", in SE<sub>1/4</sub>NW<sub>1/4</sub> sec. 17, T.15 S., R.24 E., San Bernardino meridian, in Imperial County, CA, Hydrologic Unit 15030107, on left bank 6,000 ft downstream from intake at west end of Imperial Dam and 13.7 mi upstream from turnout to Yuma Main Canal.

**PERIOD OF RECORD.**--Oct. 1938 to current year. Prior to Oct. 1939 monthly discharge only, published in WSP 1313.

**GAGE.**--Water-stage recorder. Datum of gage is 150.00 ft above sea level (subject to undetermined changes caused by earthquake of May 18, 1940). Since Aug. 21, 1952, auxiliary water-stage recorder 18.5 mi downstream from base gage.

**REMARKS.**--No estimated daily discharges. Records excellent. All-American Canal diverts water from Colorado River at Imperial Dam. Water is used for power development and for irrigation in Yuma, Coachella, and Imperial Valleys. Water can be released back to the river through Pilot Knob powerplant and wasteway for power, regulatory purposes, or for downstream use in Mexico. First diversion to All-American Canal began Oct. 1938, but prior to Oct. 1940 was used only for priming canal.

**COOPERATION.**--Daily discharge figures furnished by Imperial Irrigation District.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 14,400 ft<sup>3</sup>/s, Apr. 17, July 15, 16, 1980; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	5740	4280	3790	2920	4240	5760	7870	5960	6190	7830	6780	6500	
2	5700	4000	4490	3000	4610	5570	7820	6720	6630	7570	7470	6450	
3	5360	3980	4410	3000	4670	5510	7600	7080	6560	7400	6880	5790	
4	5600	3920	4270	2590	4620	5540	8090	7420	6370	7120	6920	5330	
5	5920	4080	3770	2370	4560	5360	8490	7780	6240	7470	6770	5520	
6	6130	3930	3380	2350	4420	5070	8390	8080	6770	7770	6400	5940	
7	6110	3720	3110	2230	4750	5580	8800	7350	6670	7820	5870	5890	
8	6000	4030	2720	2160	4940	5390	8610	6940	7070	7940	6020	6170	
9	5840	4140	2520	2130	4950	5650	8230	7530	6970	7820	5310	6290	
10	5560	4380	2600	2230	4720	6020	7430	7910	6990	7510	4890	6200	
11	5600	4620	2550	2280	3530	6470	8140	7580	6750	7780	4920	5620	
12	5750	4590	2710	2440	3700	6550	8480	7500	6420	8160	5640	5910	
13	5750	4480	2730	2960	2850	5770	8360	6970	7130	7850	5050	6430	
14	5650	4090	2740	2960	2570	6870	8500	6490	7280	8490	4260	6300	
15	5620	4430	2700	3170	2760	7700	8430	6120	7330	8490	5150	6400	
16	5310	4690	2720	3050	3080	7580	7890	6990	7630	8120	5310	5980	
17	5180	4800	2840	3960	2950	8000	7550	7320	7430	7840	6080	5250	
18	5040	5000	2970	4190	2830	7740	8040	7360	7340	7820	5890	4940	
19	5030	4930	3020	4310	2690	7340	8570	7430	6640	7860	6020	4920	
20	4940	4690	3510	4350	2510	6190	8550	7220	6810	8080	6080	5360	
21	3900	3860	3980	4330	2440	7390	8390	6750	7070	8070	5790	5720	
22	3620	3120	4060	4380	2510	7400	8250	6640	7120	7850	6380	5850	
23	3580	2710	4220	4100	2910	8100	7440	7480	7310	7210	6220	5990	
24	3460	2560	3410	4410	3210	8550	6600	7550	7220	6760	6210	5900	
25	3430	2300	2600	4470	3410	8200	7750	7620	7240	6400	6240	5760	
26	3680	2330	2770	4000	3900	6990	7730	7530	6790	6910	6190	6100	
27	4460	2560	3280	3370	4220	6340	7160	7170	7360	6930	5980	6070	
28	3730	2590	3320	3390	4950	7220	7250	7030	7500	7310	5370	6200	
29	3580	2850	3230	3460	---	8040	7040	6520	7610	7190	5770	6440	
30	4160	3420	3330	3380	---	8280	6580	6520	7490	6910	6140	6510	
31	4150	---	2680	4010	---	8400	---	6330	---	6890	6140	---	
TOTAL	153580	115080	100430	101950	103500	210570	238030	220890	209930	235170	184140	177730	
MEAN	4954	3836	3240	3289	3696	6793	7934	7125	6998	7586	5940	5924	
MAX	6130	5000	4490	4470	4950	8550	8800	8080	7630	8490	7470	6510	
MIN	3430	2300	2520	2130	2440	5070	6580	5960	6190	6400	4260	4920	
AC-FT	304600	228300	199200	202200	205300	417700	472100	438100	416400	466500	365200	352500	
CAL YR 2004	TOTAL 2214020	MEAN 6049	MAX 9910	MIN 2300	AC-FT 4392000								
WTR YR 2005	TOTAL 2051000	MEAN 5619	MAX 8800	MIN 2130	AC-FT 4068000								

**DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM**

**09524000 YUMA MAIN CANAL AT SIPHON-DROP POWERPLANT, NEAR YUMA, AZ**

**LOCATION.**--Lat 32°46'36", long 114°38'05", in SE1/4SE1/4 sec. 10, T.16 S., R.22 E., San Bernardino meridian, in Imperial County, CA, Hydrologic Unit 15030107, 500 ft from turnout from All-American Canal to Yuma Main Canal, 4.0 mi north of Yuma, and 14.9 mi downstream from intake of All-American Canal at Imperial Dam.

**PERIOD OF RECORD.**--July 1926 to current year. Prior to Oct. 1938, monthly discharge only published in WSP 1313. Diversions from All-American Canal and Yuma Main Canal previously published with this record are listed separately in this report.

**GAGE.**--Accusonic flowmeters.

**REMARKS.**--Records are good above 100 ft<sup>3</sup>/s and poor below. New powerplant began operation Sept. 14, 1987, replacing former powerplant located 500 ft downstream that ended operation Dec. 8, 1972. A weir, installed in forebay of former powerplant, is used to measure flow bypassing the new powerplant. Separate gates on the All-American Canal to powerplant and bypass weir are controlled automatically on signal from the powerplant accusonic flowmeters on the two generators. Records of daily discharge show quantity of water diverted from All-American Canal to Yuma Main Canal (powerplant and bypass), except that diverted from forebay of former powerplant to Walapai Canal (see sta. 09523900).

**COOPERATION.**--Daily discharge record furnished by Yuma County Water Users' Association.

**EXTREMES FOR PERIOD OF RECORD.**--1930 to current year: Maximum daily discharge, 2,040 ft<sup>3</sup>/s Nov. 11, 1943; no flow for several days in 1937-39, 1945.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	804	872	824	465	465	535	703	778	948	1410	1150	850
2	817	968	559	484	513	907	741	670	932	1270	1190	890
3	682	1030	557	704	476	1040	597	781	867	1190	1200	876
4	742	808	510	812	545	1080	655	900	839	1150	892	680
5	841	862	465	856	550	811	822	906	695	1270	959	732
6	1050	818	443	854	520	542	840	889	960	1080	1060	812
7	1040	834	450	829	470	1060	895	784	1050	662	996	716
8	1030	896	450	785	452	1060	900	572	1040	559	611	691
9	968	938	452	734	510	980	861	636	859	476	60	725
10	881	869	442	721	522	918	819	798	926	470	60	723
11	795	957	453	706	503	800	796	863	919	482	358	715
12	897	962	460	812	461	759	1080	813	801	560	554	861
13	865	997	460	1090	470	642	1050	839	804	576	512	895
14	803	897	460	794	473	688	950	756	948	574	670	911
15	814	1020	594	1230	470	744	920	603	1000	602	664	938
16	925	985	854	1030	512	832	884	652	1000	533	802	826
17	917	1100	839	487	495	869	619	689	877	491	916	783
18	863	1130	551	463	471	881	708	764	809	582	978	788
19	868	1110	480	513	470	768	862	817	600	587	844	737
20	939	994	484	501	474	613	885	816	679	548	885	799
21	709	636	1030	496	471	660	866	703	851	559	818	836
22	637	461	1370	595	474	793	840	535	923	587	927	928
23	630	478	1290	489	470	870	676	757	990	519	880	944
24	601	439	1060	443	482	824	479	840	959	468	806	966
25	628	448	878	462	520	722	587	897	793	494	878	896
26	647	660	943	455	522	687	1010	864	831	514	994	927
27	575	676	1160	456	520	529	1100	694	799	652	940	946
28	574	660	1230	464	526	621	910	643	887	997	851	851
29	681	627	981	485	---	748	1150	601	1010	1180	852	943
30	655	1020	510	495	---	830	943	662	1170	981	983	977
31	618	---	470	483	---	811	---	833	---	1020	939	---
TOTAL	24496	25152	21709	20193	13807	24624	25148	23355	26766	23043	25229	25162
MEAN	790	838	700	651	493	794	838	753	892	743	814	839
MAX	1050	1130	1370	1230	550	1080	1150	906	1170	1410	1200	977
MIN	574	439	442	443	452	529	479	535	600	468	60	680
AC-FT	48590	49890	43060	40050	27390	48840	49880	46320	53090	45710	50040	49910
CAL YR 2004	TOTAL	275895.00	MEAN	754	MAX	1510	MIN	0.00	AC-FT	547200		
WTR YR 2005	TOTAL	278684	MEAN	764	MAX	1410	MIN	60	AC-FT	552800		



## DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

## 09525000 YUMA MAIN CANAL WASTEWAY AT YUMA, AZ

**LOCATION.**--Lat 32°44'00", long 114°37'20", in SW1/4SE1/4 sec. 26, T.16 S., R.22 E., San Bernardino meridian, in Imperial County, CA, Hydrologic Unit 15030107, 45 ft downstream from wasteway gates from Yuma Main Canal, which are 1,645 ft upstream from intake of Colorado River siphon on Yuma Main Canal, 0.5 mi north of Yuma, and 3.2 mi downstream from siphon-drop powerplant on Yuma Main Canal.

**PERIOD OF RECORD.**--Apr. 1913 to current year. Monthly discharge only for some periods, published in WSP 1313.

**GAGE.**--Water-stage recorder for low flows only prior to Jan. 29, 1988. Datum of gage is 122.51 ft above sea level. Prior to Apr. 1, 1968, gate-opening record used for low flows only.

**REMARKS.**--Records fair except for estimated days and flows below 100 ft<sup>3</sup>/s which are poor. The wasteway discharges into Colorado River 1,000 ft upstream from station on Colorado River below Yuma Main Canal wasteway at Yuma. Discharges are computed as difference between discharge of Yuma Main Canal at siphon-drop powerplant and Yuma Main Canal below Colorado River siphon, with deductions for small irrigation diversions from canal between these stations. Records do not include flow of Reservation Main Drain No. 4.

**EXTREMES FOR PERIOD OF RECORD.**--1930 to current year: Maximum daily discharge, 2,020 ft<sup>3</sup>/s Dec. 24, 25, 1948; no flow for several days in 1937-39, 1945, 1950, 1971, 1997 and 1999.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e58	e450	e255	330	204	126	14	220	361	704	724	486
2	e120	e424	e38	338	159	320	17	28	337	693	688	525
3	e10	e378	e30	464	61	375	14	33	267	709	653	541
4	e20	e110	e15	676	62	405	55	37	309	733	414	448
5	e43	e184	e63	695	12	323	35	43	340	751	506	446
6	e195	e200	e246	702	83	214	48	28	506	518	689	484
7	e179	e300	e295	628	65	612	43	29	452	71	699	411
8	e155	e275	e282	606	10	454	19	37	422	43	447	349
9	e107	e300	e285	603	12	296	16	66	410	47	10	250
10	e85	e308	e242	537	60	127	45	42	452	154	10	260
11	e55	e394	e253	550	195	10	37	34	478	122	267	295
12	e109	e405	e245	651	237	10	205	18	459	57	213	393
13	e46	e404	e250	908	278	15	133	31	392	35	74	430
14	e10	e405	e256	396	237	11	85	23	383	31	247	422
15	e15	e493	e357	827	227	21	36	35	379	50	250	392
16	e117	e383	e631	706	257	11	25	45	349	60	416	316
17	e124	e501	e421	134	234	10	26	28	319	55	535	260
18	e48	e541	e38	72	210	10	22	23	316	40	550	285
19	e56	e512	e86	107	267	10	34	33	284	34	347	268
20	e193	e412	e136	87	311	55	47	10	290	41	436	347
21	e219	e248	e486	81	302	35	42	37	339	42	467	335
22	e203	e148	e830	55	290	33	39	99	356	30	516	370
23	e197	e120	e871	96	244	25	43	227	398	58	453	372
24	e202	e105	e845	145	226	23	53	237	403	129	436	336
25	e209	e221	e748	213	277	21	23	282	313	140	498	367
26	e181	e294	e781	258	306	28	260	320	455	92	566	328
27	e133	e275	e846	276	336	41	261	256	447	169	461	357
28	e156	e332	e888	263	274	44	89	284	394	474	453	294
29	e212	e229	e671	264	---	10	345	376	363	685	501	314
30	e209	e472	e158	278	---	13	236	340	467	497	537	295
31	e189	---	e215	259	---	23	---	346	---	604	532	---
TOTAL	3855	9823	11763	12205	5436	3711	2347	3647	11440	7868	13595	10976
MEAN	124	327	379	394	194	120	78.2	118	381	254	439	366
MAX	219	541	888	908	336	612	345	376	506	751	724	541
MIN	10	105	15	55	10	10	14	10	267	30	10	250
AC-FT	7650	19480	23330	24210	10780	7360	4660	7230	22690	15610	26970	21770
CAL YR 2004	TOTAL 84905	MEAN 232	MAX 888	MIN 10	AC-FT 168400							
WTR YR 2005	TOTAL 96666	MEAN 265	MAX 908	MIN 10	AC-FT 191700							

e Estimated

09525500 YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON, AT YUMA, AZ

**LOCATION**--Two gages, one at each end of canal siphon passing under Colorado River. At intake, lat 32°43'49", long 114°37'09", in NE1/4NE1/4 sec. 35, T.16 S., R.22 E., San Bernardino meridian, in Imperial County, CA, Hydrologic Unit 15030107, on left bank 1,645 ft downstream from center of Yuma Main Canal wasteway gates and 3.5 mi downstream from siphon-drop powerplant. At outlet, in NW1/4NE1/4 sec. 35, T.16 S., R.22 E., San Bernardino meridian, in Yuma County, AZ, on right bank. Siphon crossing is 1,300 ft upstream from 4th Avenue bridge over Colorado River at Yuma.

**PERIOD OF RECORD**--Jan. 1924 to current year. Prior to Oct. 1938, monthly discharge only published in WSP 1313. Diversion from Yuma Main Canal for municipal supply for Yuma (sta 09526000), published with this record prior to Oct. 1973, is listed separately in this report.

**REVISED RECORDS**--WSP 1713: 1958, 1959 (Yuma municipal supply).

**GAGE**--Water-stage recorder at each end of siphon. Datum of each gage is 100.62 ft above sea level. Prior to Oct. 1, 1963, at datum 0.05 ft lower. Elevation of sill of inlet is 125.5 ft above sea level. Prior to Oct. 29, 1938, nonrecording gages at approximately same sites, read simultaneously.

**REMARKS**--Records good except those below 100 ft<sup>3</sup>/s and estimated days which are poor. Daily discharge computed from relation between discharge and head on siphon, which is the difference between intake and outlet gages. Records show quantity of water delivered through Colorado River siphon for irrigation in the Valley Division of the Yuma Project and for municipal supply for city of Yuma (see sta 09526000).

**EXTREMES FOR PERIOD OF RECORD**--1930 to current year: Maximum daily discharge, 984 ft<sup>3</sup>/s Oct. 9, 1992; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	729	421	557	123	256	404	669	547	556	669	415	364
2	694	537	499	146	342	570	687	642	580	569	491	365
3	677	625	516	235	415	641	543	730	594	481	535	327
4	722	678	479	136	483	e649	588	838	508	410	468	229
5	792	665	397	161	522	477	749	826	325	510	442	284
6	843	613	196	152	436	328	781	815	418	560	371	319
7	839	530	142	201	405	437	835	723	573	591	297	300
8	852	616	160	179	451	594	835	507	594	516	164	320
9	838	618	161	131	494	672	832	554	432	429	62	448
10	780	557	199	184	454	775	774	715	466	316	64	456
11	726	551	200	156	308	781	759	756	441	355	91	396
12	747	544	215	161	224	731	864	761	342	500	303	449
13	783	574	210	182	192	627	888	791	402	541	387	458
14	753	480	200	376	236	676	841	713	564	517	387	456
15	766	521	215	394	243	712	845	538	613	524	406	521
16	777	588	205	319	255	805	807	581	624	467	366	491
17	766	588	409	346	261	845	550	651	558	436	379	499
18	780	568	502	381	261	832	634	730	480	527	415	494
19	798	571	394	376	203	714	771	761	309	550	492	469
20	740	553	330	381	163	518	819	787	375	507	449	435
21	489	372	528	412	165	596	803	655	495	502	351	477
22	433	292	517	524	175	717	789	423	558	542	399	537
23	425	358	401	393	215	787	631	496	582	452	419	550
24	395	334	213	282	250	773	425	557	531	317	370	613
25	416	227	130	246	227	693	532	581	480	354	380	520
26	450	366	162	197	198	659	710	518	376	422	423	593
27	424	401	314	177	178	488	793	415	352	483	475	579
28	409	328	342	201	252	557	788	359	493	498	398	542
29	459	398	310	221	---	730	799	225	631	488	337	618
30	435	548	352	217	---	781	666	322	666	475	428	658
31	412	---	255	224	---	751	---	473	---	407	404	---
TOTAL	20149	15022	9710	7814	8264	20320	22007	18990	14918	14915	11368	13767
MEAN	650	501	313	252	295	655	734	613	497	481	367	459
MAX	852	678	557	524	522	845	888	838	666	669	535	658
MIN	395	227	130	123	163	328	425	225	309	316	62	229
AC-FT	39970	29800	19260	15500	16390	40300	43650	37670	29590	29580	22550	27310
CAL YR 2004	TOTAL	187408.00	MEAN	512	MAX	940	MIN	0.00	AC-FT	371700		
WTR YR 2005	TOTAL	177244	MEAN	486	MAX	888	MIN	62	AC-FT	351600		

e Estimated

## Return surface flows below Imperial Dam, AZ-CA

**09525000. YUMA MAIN CANAL WASTEWAY.--See p. 280****09527000. PILOT KNOB POWERPLANT AND WASTEWAY.--See p. 286****09528800. LEVEE CANAL WASTEWAY.**

LOCATION.--Water-stage recorder at sharp-crested weir, in SE<sub>1/4</sub>SW<sub>1/4</sub> sec.4, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15030107, 1,000 ft upstream from outlet to Colorado River.

PERIOD OF RECORD.--Oct. 1960 to current year (monthly discharge only).

REMARKS.--Record shows waste water from North Gila Valley Irrigation District.

**09529000. NORTH GILA DRAIN NO. 1.**

LOCATION.--Water-stage recorder, in SE<sub>1/4</sub>SW<sub>1/4</sub> sec.4, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15030107, 0.25 mi upstream from outlet to Colorado River and 5.5 mi downstream from Laguna Dam.

PERIOD OF RECORD.--Oct. 1960 to current year (monthly discharge only).

REMARKS.--Record shows waste water from North Gila Valley Irrigation District.

**09529150. NORTH GILA MAIN CANAL WASTEWAY.**

LOCATION.--Water-stage recorder, in NE<sub>1/4</sub>NW<sub>1/4</sub> sec.22, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 1,000 ft upstream from outlet to Gila River.

PERIOD OF RECORD.--Oct. 1960 to current year (monthly discharge only).

REMARKS.--Record shows waste water from North Gila Valley Irrigation District.

**09529160. SOUTH GILA PUMP OUTLET CHANNEL NO. 3.**

LOCATION.--In NW<sub>1/4</sub>SE<sub>1/4</sub> sec.22, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 0.5 mi upstream from outlet to Gila River.

PERIOD OF RECORD.--Jan. 1965 to current year (monthly discharge only).

REMARKS.--Record shows water pumped from wells in South Gila Valley.

COOPERATION.--Records furnished by Bureau of Reclamation.

**09529240. SOUTH GILA PUMP OUTLET CHANNEL NO. 2.**

LOCATION.--In SW<sub>1/4</sub>NW<sub>1/4</sub> sec.28, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 0.6 mi upstream from outlet to Gila River.

PERIOD OF RECORD.--Jan. 1962 to current year (monthly discharge only).

REMARKS.--Record shows water pumped from wells in South Gila Valley.

COOPERATION.--Record furnished by Bureau of Reclamation.

**09529250. BRUCE CHURCH WASTEWAY.**

LOCATION.--Water-stage recorder and sharp-crested weir, in SE<sub>1/4</sub>SE<sub>1/4</sub> sec.20, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 500 ft upstream from outlet to Gila River.

PERIOD OF RECORD.--Oct. 1960 to current year (monthly discharge only).

REMARKS.--Record shows waste water from North Gila Valley Irrigation District.

**09529300. WELLTON-MOHAWK MAIN OUTLET DRAIN (CONVEYANCE CHANNEL).**

LOCATION.--Water-stage recorder and Parshall flume in NE<sub>1/4</sub>NW<sub>1/4</sub> sec.17, T.8 S., R.21 W., Yuma County, Hydrologic Unit 15070201, 7.8 mi upstream from outlet to Gila River (M.O.D.E. 1), which is 0.6 mi upstream from mouth of Gila River.

PERIOD OF RECORD.--Oct. 1960 to current year (monthly discharge only).

REMARKS.--Record shows water pumped from numerous wells in Wellton-Mohawk Irrigation and Drainage District to lower the water table. Flow can be discharged to the Gila River or Colorado River by any one of or combination of four outlets. These outlets are: M.O.D.E. 1 (release to Gila River about 7.8 mi below station); an overflow flume about 11.3 mi below station releases water to Colorado River; M.O.D.E. 2 (see sta 09531800) releases water to Colorado River above Morelos Dam; and M.O.D.E. 3 releases water to Colorado River below Morelos Dam.

**09529360. SOUTH GILA PUMP OUTLET CHANNEL NO. 1.**

LOCATION.--In SW<sub>1/4</sub>NE<sub>1/4</sub> sec.30, T.8 S., R.22 W., Yuma County, Hydrologic Unit 15070201, 0.2 mi upstream from outlet to Gila River, which is 0.6 mi upstream from mouth of Gila River.

PERIOD OF RECORD.--Aug. 1961 to current year (monthly discharge only).

REMARKS.--Record shows water pumped from wells in South Gila Valley.

COOPERATION.--Record furnished by Bureau of Reclamation.

**09529420. SOUTH GILA TERMINAL WASTEWAY.**

LOCATION.--Water-stage recorder and Parshall flume, in SW<sub>1/4</sub>NW<sub>1/4</sub> sec.36, T.8 S., R.23 W., Yuma County, Hydrologic Unit 15030107, 2.0 mi upstream from outlet to Colorado River.

PERIOD OF RECORD.--Mar. 1965 to current year (monthly discharge only).

REMARKS.--Record shows waste water from South Gila Canal of South Gila Valley.

**09529440. SOUTH GILA PUMP OUTLET CHANNEL NO. 4.**

LOCATION.--In NW<sub>1/4</sub>NW<sub>1/4</sub> sec.26, T.8 S., R.23 W., Yuma County, Hydrologic Unit 15030107, 1.5 mi upstream from outlet to Colorado River.

PERIOD OF RECORD.--July 1965 to current year (monthly discharge only).

REMARKS.--Records show water pumped from wells in South Gila Valley.

COOPERATION.--Records furnished by Bureau of Reclamation.

## Return surface flows below Imperial Dam, AZ-CA--Continued

**09529600. RESERVATION DRAIN NO. 7.**

LOCATION.--At downstream end of culvert on State Road 24, in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.33, T.15 S., R.23 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 0.5 mi upstream from outlet to Reservation Main Drain.

PERIOD OF RECORD.--Mar. 1966 to current year (monthly discharge only).

REMARKS.--Record shows drainage water from sec.34, T.15 S., R.23 E., in Reservation Division.

**09529700. RESERVATION MAIN DRAIN NO. 6.**

LOCATION.--Nonrecording gage on upstream right piling of Stallnacker Road Bridge, SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.32, T.15 S., R.23 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107.

PERIOD OF RECORD.--Mar. 1966 to current year (monthly discharge only).

REMARKS.--Record shows waste and drainage water from the Reservation Division.

**09529800. RESERVATION DRAIN NO. 2.**

LOCATION.--At upstream side of bridge on White Road, in SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.6, T.16 S., R.23 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 0.9 mi upstream from outlet to Reservation Main Drain.

PERIOD OF RECORD.--Mar. 1966 to current year (monthly discharge only).

REMARKS.--Record shows drainage water from sec.31, T.15 S., R.22 E., in Reservation Division.

**09529900. RESERVATION DRAIN NO. 3.**

LOCATION.--At Jackson Road Bridge, in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.10, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 1.0 mi upstream from outlet to Reservation Main Drain.

PERIOD OF RECORD.--Mar. 1966 to current year (monthly discharge only).

REMARKS.--Record shows drainage water from Reservation Division upstream from Yuma Main Canal.

**09530000. RESERVATION MAIN DRAIN NO. 4.**

LOCATION.--Water-stage recorder in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.26, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 500 ft upstream from railroad culvert.

PERIOD OF RECORD.--Jan. 1913 to Apr. 1920, Oct. 1921 to Mar. 1925, Jan. 1934 to current year (monthly discharge only) (calendar year discharge only 1934-36). Prior to Oct. 1955, published as California drainage canal.

REMARKS.--Record shows waste and drainage water from area east of Yuma Main Canal on Reservation Division.

**09530200. YUMA MESA OUTLET DRAIN.**

LOCATION.--In SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.28, T.16 S., R.22 E., San Bernardino meridian, Yuma County, in Arizona, Hydrologic Unit 15030108, 0.3 mi from outlet to Colorado River.

PERIOD OF RECORD.--July 1970 to current year (monthly discharge only).

REMARKS.--Record shows water pumped from wells on the Yuma Mesa and conveyed by underground conduit to Colorado River.

COOPERATION.--Records furnished by Bureau of Reclamation.

**09530400. RESERVATION DRAIN NO. 11.**

LOCATION.--At outlet to Drain 8-B, in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.19, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107.

PERIOD OF RECORD.--Mar. 1966 to current year (monthly discharge only).

REMARKS.--Record shows drainage from sec.20, T.16 S., R.22 E. in Reservation Division.

**09530500. DRAIN 8-B.**

LOCATION.--Enters Colorado River in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.19, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 4 mi downstream from outlet of Yuma Main Canal wasteway.

PERIOD OF RECORD.--Mar. 1948 to current year (monthly discharge only). Prior to Oct. 1955, published as Araz Drain.

REMARKS.--Record shows waste and drainage water west of Yuma Main Canal on the Reservation Division.

**09531800. MAIN OUTLET DRAIN EXTENSION ABOVE MORELOS DAM (M.O.D.E. 2).**

LOCATION.--Nonrecording gage and Parshall flume, in NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.36, T.16 S., R.21 E., San Bernardino meridian, Yuma County in Arizona, Hydrologic Unit 15030107, at outlet to Colorado River, 1.7 mi upstream from Morelos Dam.

PERIOD OF RECORD.--Nov. 1965 to current year (monthly discharge only).

REMARKS.--Record shows water conveyed to Colorado River, 1.7 mi above Morelos Dam, from Wellton-Mohawk Main Outlet Drain (see sta 09529300).

COOPERATION.--Records furnished by Bureau of Reclamation.

## DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

## RETURN SURFACE FLOWS BELOW IMPERIAL DAM, AZ-CA--CONTINUED

## MONTHLY RETURN FLOWS, IN ACRE-FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Month	Levee Canal wasteway 09528800	North Gila Drain No. 1 09529000	North Gila Main Canal wasteway 09529150	South Gila Pump Outlet Channel No. 3 09529160	South Gila Pump Outlet Channel No. 2 09529240
October .....	149	578	67	959	2,330
November .....	91	415	88	1,000	1,750
December .....	35	357	38	1,410	2,460
CAL YR 2004	837	5,090	1,200	13,240	26,490
January .....	29	218	55	627	2,090
February .....	31	153	139	996	2,080
March .....	37	299	117	1,130	2,190
April .....	80	302	95	1,250	603
May.....	72	356	141	1,130	2,190
June.....	133	333	119	1,060	1,550
July.....	67	359	192	362	1,130
August .....	69	462	225	1,160	2,040
September .....	146	326	236	1,450	2,330
WTR YR 2005	938	4,160	1,510	12,540	22,750

Month	Bruce Church wasteway 09529250	Wellton-Mohawk Main Outlet Drain 09529300	South Gila Pump Outlet Channel No. 1 09529360	South Gila Terminal wasteway 09529420	South Gila Pump Outlet Channel No. 4 09529440
October .....	102	8,810	2,780	229	302
November .....	111	9,080	2,340	260	257
December .....	133	9,550	2,830	220	0.00
CAL YR 2004	1,470	105,900	30,370	2,890	708
January .....	127	9,510	2,140	233	227
February .....	93	8,450	2,270	263	275
March .....	94	10,090	2,820	270	314
April .....	42	9,770	2,500	266	303
May.....	23	9,780	2,420	237	314
June.....	33	9,950	2,310	166	263
July.....	24	10,050	2,820	128	184
August .....	26	9,070	1,490	175	57
September .....	30	9,170	1,910	147	0.00
WTR YR 2005	838	113,300	28,630	2,590	2,500

Month	Reservation Drain No. 7 09529600	Reservation Main Drain No. 6 09529700	Reservation Drain No. 2 09529800	Reservation Drain No. 3 09529900	Reservation Main Drain No. 4 09530000
October .....	165	1,080	47	352	4,240
November .....	159	1,100	48	417	4,200
December .....	149	1,060	72	384	3,330
CAL YR 2004	2,050	13,080	711	5,100	43,880
January .....	134	908	46	321	2,840
February .....	120	664	32	284	3,290
March .....	156	865	40	348	3,170
April .....	167	859	53	377	3,130
May.....	184	978	48	422	4,130
June.....	179	1,060	39	423	3,360
July.....	174	1,120	75	401	3,760
August .....	162	1,130	63	402	3,770
September .....	155	1,140	68	373	3,250
WTR YR 2005	1,900	11,980	632	4,510	42,480

NOTE.--Yearly totals given above have been computed from total cfs-days and may differ slightly from the summation of monthly total acre-feet on occasion.

**DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM**

**RETURN SURFACE FLOWS BELOW IMPERIAL DAM AZ-CA---CONTINUED**

**MONTHLY RETURN FLOWS, IN ACRE-FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005**

<b>Month</b>	<b>Yuma Mesa Outlet Drain 09530200</b>	<b>Reservation Drain No. 11 09530400</b>	<b>Drain 8-B 09530500</b>	<b>M.O.D.E. 2 (above) Morelos Dam 09531800</b>
October .....	2,370	246	901	0.00
November.....	2,570	260	871	0.00
December .....	2,710	200	809	0.00
<b>CAL YR 2004</b>	<b>27,350</b>	<b>2,170</b>	<b>8,970</b>	<b>0.00</b>
January .....	2,110	217	752	0.00
February.....	2,790	186	631	0.00
March.....	742	267	700	0.00
April.....	0.00	262	674	0.00
May.....	0.00	206	678	0.00
June.....	2,530	146	607	0.00
July.....	2,960	134	605	0.00
August.....	1,340	150	744	0.00
September .....	2,330	171	666	0.00
<b>WTR YR 2005</b>	<b>22,460</b>	<b>2,450</b>	<b>8,640</b>	<b>0.00</b>

NOTE.--Yearly totals given above have been computed from total cfs-days and may differ slightly from the summation of monthly total acre-feet on occasion.

## DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

## 09527000 PILOT KNOB POWERPLANT AND WASTEWAY NEAR PILOT KNOB, CA

**LOCATION.**--Lat 32°44'15", long 114°42'56", in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 25, T.16 S., R.21 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, 2 mi east of summit of Pilot Knob, 6 mi west of Yuma, AZ, and 20.8 mi downstream from intake of All-American Canal at Imperial Dam.

**PERIOD OF RECORD.**--Feb. 1939 to current year. Prior to Oct. 1943 monthly discharge only, published in WSP 1313. Prior to Oct. 1956, published as Pilot Knob wasteway near Pilot Knob.

**GAGE.**--Water-stage recorder in forebay on right bank of All-American Canal (also used as auxiliary gage for sta 09527500); tailrace gage with remote recorder logged hourly in control house; calibrated wicket gates for turbine flow and calibrated bypass gates for wasteway flow, which are logged for each change. Datum of forebay staff gage is 150.00 ft; that of tailrace staff gage is 0.00 ft; elevation of sill of bypass gates is 147.88 ft above sea level.

**REMARKS.**--No estimated daily discharges. Records good. Daily discharge computed from head and gate openings on wicket gates. Records show water released through Pilot Knob powerplant and wasteway from All-American Canal and returned to Colorado River through Rockwood gates. Pilot Knob wasteway was completed in summer of 1938 and first flow occurred Feb. 5, 1939. Pilot Knob powerplant was completed in Jan. 1957 and first flow occurred Jan. 14, 1957. See table below for monthly return flow by Pilot Knob wasteway only.

**COOPERATION.**--Daily discharges furnished by Imperial Irrigation District.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 9,930 ft<sup>3</sup>/s Dec. 6, 1985; no flow for long periods.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.00	418	847	1420	1630	1200	0.00	0.00	0.00	0.00	0.00
2	0.0	0.00	968	847	1390	737	1230	0.00	0.00	0.00	0.00	0.00
3	0.0	0.00	897	484	1420	0.00	1250	0.00	0.00	0.00	0.00	0.00
4	0.0	0.00	861	0.00	1270	0.00	1260	0.00	0.00	0.00	0.00	0.00
5	0.0	0.00	860	0.00	1280	0.00	1270	0.00	0.00	0.00	0.00	0.00
6	0.0	0.00	1020	0.00	1270	0.00	1270	0.00	0.00	133	0.00	0.00
7	0.0	0.00	940	0.00	1280	0.00	1430	0.00	0.00	797	0.00	0.00
8	0.0	0.00	925	0.00	1080	0.00	1430	0.00	0.00	762	157	0.00
9	0.0	0.00	925	0.00	1080	0.00	1420	0.00	0.00	758	801	0.00
10	0.0	0.00	895	0.00	1030	363	1420	0.00	0.00	762	785	0.00
11	0.0	0.00	845	0.00	960	1240	1250	0.00	0.00	782	958	0.00
12	0.0	0.00	846	0.00	923	1190	1010	0.00	0.00	877	1040	0.00
13	0.0	0.00	769	0.00	923	1170	1030	0.00	0.00	940	992	0.00
14	0.0	0.00	676	0.00	928	1290	912	0.00	0.00	926	546	0.00
15	0.0	0.00	550	0.00	1030	1339	1225	0.00	0.00	911	0.00	0.00
16	0.0	0.00	0.0	161	1060	1310	1160	0.00	0.00	967	0.00	0.00
17	0.0	0.00	179	1080	1090	1290	1180	0.00	0.00	968	0.00	0.00
18	0.0	0.00	896	1090	1110	1320	1240	0.00	0.00	941	0.00	0.00
19	0.0	0.00	871	1090	1090	1240	1250	0.00	0.00	929	0.00	0.00
20	0.0	0.00	716	1090	986	1310	1230	0.00	0.00	924	0.00	0.00
21	0.0	0.00	613	1090	887	1470	1050	0.00	0.00	807	0.00	0.00
22	0.0	0.00	0.00	1080	987	1430	1050	0.00	0.00	754	0.00	0.00
23	0.0	0.00	0.00	1080	1050	1540	940	0.00	0.00	773	0.00	0.00
24	0.0	0.00	0.00	1130	1060	1850	936	0.00	0.00	794	0.00	0.00
25	0.0	0.00	0.00	1110	1430	1430	921	0.00	0.00	754	0.00	0.00
26	407	0.00	0.00	1110	1616	1410	362	0.00	0.00	641	0.00	0.00
27	1220	0.00	0.00	1100	1590	1440	0.00	0.00	0.00	0.00	0.00	0.00
28	509	0.00	0.00	1100	1710	1020	0.00	0.00	0.00	0.00	0.00	0.00
29	0.0	0.00	170	1090	---	1030	0.00	0.00	0.00	0.00	0.00	0.00
30	0.0	0.00	974	1100	---	1130	0.00	0.00	0.00	0.00	0.00	0.00
31	0.0	---	841	1200	---	1170	---	0.00	---	0.00	0.00	---
TOTAL	2136.0	0.00	17655.00	18879.00	32950	30349.00	29926.00	0.00	0.00	16900.00	5279.00	0.00
MEAN	68.9	0.00	570	609	1177	979	998	0.00	0.00	545	170	0.00
MAX	1220	0.00	1020	1200	1710	1850	1430	0.00	0.00	968	1040	0.00
MIN	0.00	0.00	0.00	0.00	887	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	4240	0.00	35020	37450	65360	60200	59360	0.00	0.00	33520	10470	0.00
CAL YR 2004	TOTAL	282789.00	MEAN	773	MAX	2520	MIN	0.00	AC-FT	560900		
WTR YR 2005	TOTAL	154074.00	MEAN	422	MAX	1850	MIN	0.00	AC-FT	305600		

**DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM**

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**09527500 ALL-AMERICAN CANAL BELOW PILOT KNOB WASTEWAY, CA**

**LOCATION**--Lat 32°44'07", long 114°43'25", in NE1/4SE1/4 sec. 26, T.16 S., R.21 E., San Bernardino meridian, Imperial County, Hydrologic Unit 15030107, on left bank 0.4 mi downstream from Pilot Knob wasteway, 6 mi west of Yuma, AZ, 15 mi upstream from turnout to Coachella Canal, and 21.2 mi downstream from intake at Imperial Dam.

**PERIOD OF RECORD**--Oct. 1961 to current year.

**GAGE**--Water-stage recorder. Datum of gage is 150.00 ft above sea level. Auxiliary water-stage recorder on right bank 0.4 mi upstream, used to determine head on Pilot Knob check gates (also used as forebay gage for sta 09527000, Pilot Knob powerplant and wasteway). Datum of auxiliary gage is 150.00 ft above NGVD.

**REMARKS**--No estimated daily discharges. Records good. Water is used for power development at four sites below station and for irrigation in Coachella and Imperial Valleys.

**COOPERATION**--Daily discharges furnished by Imperial Irrigation District.

**EXTREMES FOR PERIOD OF RECORD**--Maximum daily discharge, 7,610 ft<sup>3</sup>/s Apr. 27, 28, 1976; no flow Jan. 4, 1967.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4620	3040	2340	1530	1960	3260	5800	4800	5120	5880	5190	5220
2	4570	2660	3100	1610	2480	3840	5700	5510	5510	5780	5730	5180
3	4370	2530	3170	1910	2580	4270	5570	5690	5570	5690	5290	4620
4	4380	2650	3080	1630	2840	4300	5750	5890	5440	5670	5500	4310
5	4640	2800	2540	1230	2710	4400	5970	6230	5390	5880	5270	4530
6	4700	2660	1900	1220	2630	4290	5930	6480	5540	6130	4940	4820
7	4690	2450	1670	1120	3150	4100	6100	6030	5440	5980	4440	4890
8	4610	2760	1190	1070	3470	3220	5930	5800	5730	6190	4760	5150
9	4490	2860	940	1060	3460	4160	5730	6250	5730	6140	4080	5230
10	4260	3180	1040	1180	3360	4450	5080	6400	5830	5920	3680	5190
11	4370	3410	1020	1130	2050	4550	5730	6090	5670	6150	3180	4680
12	4420	3370	1150	1250	906	4880	6020	6070	5450	6330	3630	4740
13	4460	3230	1360	1740	953	4190	5880	5720	5880	6040	3440	5140
14	4440	2870	1410	2020	1100	4710	6200	5360	5900	6580	2840	5060
15	4450	3170	1330	1910	1240	5380	5910	5080	5920	6570	4010	5070
16	4060	3500	1530	1800	1550	5340	5510	5830	6190	6290	4190	4800
17	3830	3520	1510	1960	1360	5790	5310	6140	6110	6020	4850	4250
18	3900	3720	1430	2200	1160	5560	5780	6130	6090	5900	4660	3850
19	3890	3730	1580	2250	986	5380	6110	6120	5640	5930	4890	4350
20	3760	3530	2000	2350	1010	4300	6160	5960	5870	6200	4960	4630
21	2840	2930	2280	2340	792	5330	6160	5730	5940	6230	4780	4680
22	2440	2480	2640	2290	742	5150	6020	5700	5920	6050	5260	4730
23	2450	1860	2970	2130	1570	5430	5540	6140	6040	5660	5160	4670
24	2300	1670	2200	2590	2020	5790	5060	6130	6050	5270	5180	4500
25	2380	1320	1230	2740	1810	6180	5860	6200	6150	4890	5350	4410
26	2190	1170	1370	2160	1510	5210	5900	6130	5790	5460	5020	4740
27	2510	1400	2090	1310	2320	4570	5660	6040	6000	5770	4910	4700
28	2540	1450	2220	1320	2540	5330	5550	5950	5980	5890	4340	4870
29	2520	1760	2160	1380	---	5990	5480	5600	6020	5660	4610	5020
30	3260	2070	2150	1270	---	5950	5280	5630	5750	5600	4850	5030
31	3250	---	1310	1820	---	6060	---	5330	---	5550	4870	---
TOTAL	115590	79750	57910	53520	54259	151360	172680	182160	173660	183300	143860	143060
MEAN	3729	2658	1868	1726	1938	4883	5756	5876	5789	5913	4641	4769
MAX	4700	3730	3170	2740	3470	6180	6200	6480	6190	6580	5730	5230
MIN	2190	1170	940	1060	742	3220	5060	4800	5120	4890	2840	3850
AC-FT	229300	158200	114900	106200	107600	300200	342500	361300	344500	363600	285300	283800
CAL YR 2004	TOTAL 1556466	MEAN 4253	MAX 6490	MIN 940	AC-FT 3087000							
WTR YR 2005	TOTAL 1511109	MEAN 4140	MAX 6580	MIN 742	AC-FT 2997000							



**RIO SONOYTA BASIN  
SAN SIMON WASH BASIN**

**09535100 SAN SIMON WASH NEAR PISINIMO, AZ**

**LOCATION.**--Lat 32°02'39", long 112°22'13", in SE1/4 sec. 9, T.16 S., R.1 W. (unsurveyed), Pima County, Hydrologic Unit 15080101, in Tohono O'Odham Indian Reservation, on right bank about 100 ft downstream from road, just upstream from Gu Vo Wash, and 3.2 mi west of Pisinimo.

**DRAINAGE AREA.**--569 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Feb. 1972 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 1,830 ft above sea level, from topographic map. Prior to Oct. 1, 1980, at site 120 ft upstream at same datum.

**REMARKS.**--Records fair, except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 12,500 ft<sup>3</sup>/s Sept. 24, 1976, gage height, 10.82 ft, from rating curve extended above 1,700 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow for most of each year.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 4.....	0015	*943	*7.15

Minimum daily discharge, no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
3	0.00	0.00	0.00	41	0.00	0.00	0.00	0.00	0.00	0.00	161	e0.00
4	0.00	0.00	0.76	52	0.00	0.00	0.00	0.00	0.00	0.00	287	e0.00
5	0.00	0.00	0.04	0.54	0.00	0.00	0.00	0.00	0.00	0.00	e3.3	e0.00
6	0.00	0.00	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e21	e0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23	e0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e4.2	e0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.39	e0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e8.8	e0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e13	e0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e8.8	e0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e12	e0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
22	1.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
23	0.00	0.00	0.00	2.8	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
24	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.06	e0.00	e0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
26	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
28	7.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
29	0.16	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.01	e0.00	e0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	1.2	e0.00	---
TOTAL	9.26	0.00	13.80	96.54	0.00	0.00	0.00	0.00	0.00	1.27	559.49	0.00
MEAN	0.30	0.00	0.45	3.11	0.00	0.00	0.00	0.00	0.00	0.04	18.0	0.00
MAX	7.9	0.00	13	52	0.00	0.00	0.00	0.00	0.00	1.2	287	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	18	0.00	27	191	0.00	0.00	0.00	0.00	0.00	2.5	1110	0.00
CFSM	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
IN.	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2005, BY WATER YEAR (WY)

	1973	1974	1975	1976	1977	1978	1979	2000	2001	2002	2003	2004	2005
MEAN	3.97	1.01	1.70	2.11	1.63	1.09	0.04	0.06	0.02	7.03	15.4	10.2	
MAX	44.2	14.3	21.1	39.0	26.0	8.50	0.45	1.97	0.50	39.5	124	140	
(WY)	1984	1979	1998	1993	1998	1983	2004	1976	2000	1976	2004	1976	
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	
(WY)	1974	1978	1973	1973	1974	1977	1973	1973	1973	1979	1975	1973	

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

WATER YEARS 1973 - 2005

ANNUAL TOTAL	4771.19	680.36		
ANNUAL MEAN	13.0	1.86	3.72	
HIGHEST ANNUAL MEAN			15.2	1976
LOWEST ANNUAL MEAN			0.13	1980
HIGHEST DAILY MEAN	2480	Aug 14	287	Aug 4
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1
ANNUAL RUNOFF (AC-FT)	9460	1350	2690	
ANNUAL RUNOFF (CFSM)	0.023	0.003	0.007	
ANNUAL RUNOFF (INCHES)	0.31	0.04	0.09	
10 PERCENT EXCEEDS	0.00	0.00	0.00	
50 PERCENT EXCEEDS	0.00	0.00	0.00	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

e Estimated

**RIO SONOYA BASIN  
SAN SIMON WASH BASIN**

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**09535300 VAMORI WASH AT KOM VO, AZ**

**LOCATION**--Lat 31°57'04", long 112°20'50", in NW1/4 sec. 14, T.17 S., R.1 W (unsurveyed), Pima County, Hydrologic Unit 15080101, in Tohono O'Odham Indian Reservation, on right bank 200 ft downstream from road crossing, 0.6 mi south of Kom Vo (Santa Cruz Village) and 5 mi upstream from mouth.

**DRAINAGE AREA**--1,250 mi<sup>2</sup>, approximately, of which about 250 mi<sup>2</sup> is in Mexico.

**PERIOD OF RECORD**--Feb. 1972 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 1,770 ft above sea level, from topographic map.

**REMARKS**--Records fair except for estimated daily discharges, which are poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 10,400 ft<sup>3</sup>/s Oct. 3, 1983, gage height, 10.54 ft, from rating curve extended above 550 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow for most of each year.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5.....	1700	855	9.52	Aug. 7.....	1730	788	9.42
Aug. 4.....	1100	*1,190	*9.76	Aug. 11.....	0930	597	9.20

Minimum daily discharge, no flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.8	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43	0.00
3	0.00	0.00	0.00	41	0.00	0.00	0.00	0.00	0.00	0.00	142	0.00
4	0.00	0.00	0.00	103	0.00	0.00	0.00	0.00	0.00	0.00	885	0.00
5	0.00	0.00	0.00	566	0.00	0.00	0.00	0.00	0.00	0.00	e148	0.00
6	0.00	0.00	73	334	0.00	0.00	0.00	0.00	0.00	0.00	26	0.00
7	0.00	0.00	91	41	0.00	0.00	0.00	0.00	0.00	0.00	536	0.00
8	0.00	0.00	63	3.8	0.00	0.00	0.00	0.00	0.00	0.00	361	0.00
9	0.00	0.00	2.4	0.22	0.00	0.00	0.00	0.00	0.00	0.00	56	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	319	0.00
12	0.00	0.00	0.00	0.00	4.8	0.00	0.00	0.00	0.00	0.00	1.8	0.00
13	0.00	0.00	0.00	0.00	123	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	17	0.00	0.00	0.00	0.00	0.00	21	0.00
15	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00	20	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	5.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	3.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.45	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	229.40	1098.42	145.26	0.00	0.00	0.00	0.00	0.45	2692.60	0.00
MEAN	0.00	0.00	7.40	35.4	5.19	0.00	0.00	0.00	0.00	0.01	86.9	0.00
MAX	0.00	0.00	91	566	123	0.00	0.00	0.00	0.00	0.45	885	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	455	2180	288	0.00	0.00	0.00	0.00	0.9	5340	0.00
CFSM	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00
IN.	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2005, BY WATER YEAR (WY)

	MEAN	27.0	3.06	4.41	7.60	3.74	2.07	0.40	0.03	0.00	21.1	32.2	13.5
MAX	463	36.7	26.4	61.3	33.1	27.8	10.2	0.49	0.07	194	106	103	
(WY)	1984	1973	1983	1993	1983	1983	1992	1987	1984	2003	1984	1976	
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	
(WY)	1974	1974	1973	1973	1974	1974	1973	1973	1973	1977	1985	1973	

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1973 - 2005
ANNUAL TOTAL	1840.49	4166.13	
ANNUAL MEAN	5.03	11.4	9.85
HIGHEST ANNUAL MEAN			52.3
LOWEST ANNUAL MEAN			0.97
HIGHEST DAILY MEAN	563	Aug 15	885
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	3650	8260	7140
ANNUAL RUNOFF (CFSM)	0.004	0.009	0.008
ANNUAL RUNOFF (INCHES)	0.05	0.12	0.11
10 PERCENT EXCEEDS	0.98	0.00	4.2
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

**SULPHUR SPRING VALLEY  
WHITEWATER DRAW BASIN**

**09537200 LESLIE CREEK NEAR MCNEAL, AZ**

**LOCATION**--Lat 31°35'24", long 109°30'30", in SE1/4NE1/4 sec. 20, T.21 S., R.28 E., Cochise County, Hydrologic Unit 15080301, on right bank 10 mi east of McNeal.

**DRAINAGE AREA**--79.1 mi<sup>2</sup>.

**PERIOD OF RECORD**--Oct. 1969 to Sept. 1977, July 1982 to current year.

**GAGE**--Water-stage recorder and concrete control with shallow sharp-crested V-notch weir. Elevation of gage is 4,620 ft above sea level, from topographic map.

**REMARKS**--Records poor.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 5,200 ft<sup>3</sup>/s Sept. 1, 1994, gage height, 9.00 ft, from rating curve extended above 12 ft<sup>3</sup>/s on basis of slope-area measurements of peak flow at gage height 7.33 ft and 8.54 ft; no flow for many days in 1976, 1977, 1990, and 1999.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Maximum discharge, Oct. 1977 to July 1982, 468 ft<sup>3</sup>/s, date unknown, gage height, 4.76 ft in gage well.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 12 .....	2315	*13.1	*3.48

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.06
2	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.06
3	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.06
4	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.06
5	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.07
6	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.06
7	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.03
8	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.03
9	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.03
10	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.02
11	0.00	0.00	0.00	0.00	0.01	0.04	0.02	0.00	0.00	0.00	0.00	0.03
12	0.00	0.00	0.00	0.00	0.03	0.04	0.02	0.00	0.00	0.00	0.43	0.03
13	0.00	0.00	0.00	0.00	0.02	0.04	0.02	0.00	0.00	0.00	0.38	0.02
14	0.00	0.00	0.00	0.00	0.02	0.03	e0.01	0.00	0.00	0.00	0.09	0.02
15	0.00	0.00	0.00	0.00	0.02	0.03	0.01	0.00	0.00	0.00	0.06	0.03
16	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.05	0.03
17	0.00	0.00	0.00	0.00	0.02	0.02	e0.00	0.00	0.00	0.00	0.05	0.03
18	0.00	0.00	0.00	0.00	0.02	0.02	e0.00	0.00	0.00	0.00	0.05	0.03
19	0.00	0.00	0.00	0.00	0.02	0.02	e0.00	0.00	0.00	0.00	0.08	0.04
20	0.00	0.00	0.00	0.00	0.02	0.02	e0.00	0.00	0.00	0.00	0.10	0.07
21	0.00	0.00	0.00	0.00	0.02	0.02	e0.00	0.00	0.00	0.00	0.11	0.05
22	0.00	0.00	0.00	0.00	0.02	0.02	e0.00	0.00	0.00	0.00	0.10	0.04
23	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.09	0.07
24	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.07	0.09
25	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.04	0.08
26	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.11	0.05	0.05
27	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.03	0.05
28	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.05	0.05
29	0.00	0.00	0.00	0.00	---	0.02	0.00	0.00	0.00	0.00	0.06	0.08
30	0.00	0.00	0.00	0.00	---	0.02	0.00	0.00	0.00	0.00	0.06	0.14
31	0.00	---	0.00	0.00	---	0.02	---	0.00	---	0.00	0.06	---
TOTAL	0.00	0.00	0.00	0.00	0.36	0.76	0.26	0.00	0.00	0.11	2.01	1.51
MEAN	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.00	0.06	0.05
MAX	0.00	0.00	0.00	0.00	0.03	0.04	0.02	0.00	0.00	0.11	0.43	0.14
MIN	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02
AC-FT	0.00	0.00	0.00	0.00	0.7	1.5	0.5	0.00	0.00	0.2	4.0	3.0
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IN.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

MEAN	1.77	0.28	0.19	0.20	0.22	0.23	0.21	0.17	0.12	1.54	5.15	0.56
MAX	13.4	1.35	0.35	0.46	0.57	0.55	0.52	0.50	0.41	5.47	34.8	3.99
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2003	1999	1999
MIN	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.00
(WY)	2005	2005	2005	2005	2005	2005	2005	2005	2004	2004	2004	2004

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1998 - 2005

ANNUAL TOTAL	11.27	5.01	
ANNUAL MEAN	0.03	0.01	0.90
HIGHEST ANNUAL MEAN			3.55 1999
LOWEST ANNUAL MEAN			0.01 2005
HIGHEST DAILY MEAN	0.19 Feb 4	0.43 Aug 12	611 Aug 15 1999
LOWEST DAILY MEAN	0.00 May 22	0.00 Oct 1	0.00 Jun 5 1999
ANNUAL SEVEN-DAY MINIMUM	0.00 May 28	0.00 Oct 1	0.00 Jun 18 2002
ANNUAL RUNOFF (AC-FT)	22	9.9	650
ANNUAL RUNOFF (CFSM)	0.000	0.000	0.011
ANNUAL RUNOFF (INCHES)	0.01	0.00	0.15
10 PERCENT EXCEEDS	0.09	0.04	0.38
50 PERCENT EXCEEDS	0.00	0.00	0.14
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

WHITEWATER DRAW BASIN

09537500 WHITEWATER DRAW NEAR DOUGLAS, AZ

**LOCATION**--Lat 31°21'08", long 109°35'04", in SE1/4SE1/4 sec. 10, T.24 S., R.27 E., Cochise County, Hydrologic Unit 15080301, on downstream side of pier of bridge on U.S. Highway 80, 1.5 mi upstream from international boundary and 2 mi west of Douglas.

**DRAINAGE AREA**--1,023 mi<sup>2</sup>.

**PERIOD OF RECORD**--Aug. to Oct. 1911 (gage heights and discharge measurements only), July to Oct. 1912, Jan. to June 1913, Oct. 1913, Dec. 1913 to June 1914, Feb. to June 1915, Oct. 1915 to Sept. 1919, Oct. 1919 to April 1922 (gage heights and discharge measurements only), June 1930 to Dec. 1933, May 1935 to July 1947, Oct. 1947 to Sept. 1982, Oct. 1983 to Sept. 1990 (crest-stage gage), Oct. 2002 to current year.

**GAGE**--Water-stage recorder. Elevation of gage is 3,909.14 ft above sea level.

**REMARKS**--Records fair except for estimated daily discharge, which is poor. Diversions upstream by pumping from ground water. Records show flow at international boundary except for smelter wastewater, which enters stream below station.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 5,060 ft<sup>3</sup>/s Aug. 7, 1955, gage height of 16.55 ft. Minimum daily discharge, no flow for many days.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, 143 ft<sup>3</sup>/s Aug. 14 at 2145, gage height, 7.48 ft. Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.7
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
3	0.00	0.00	0.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
4	0.00	0.00	0.00	10	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.29
5	0.00	0.00	0.00	13	0.16	0.00	0.00	0.00	0.00	0.00	0.04	1.1
6	0.00	0.00	0.00	0.95	8.8	0.00	0.00	0.00	0.00	0.00	0.00	1.1
7	0.00	0.00	0.00	0.06	2.6	0.00	0.00	0.00	0.00	0.00	2.9	0.02
8	0.00	0.00	0.00	0.01	0.24	0.00	0.00	0.00	0.00	0.00	0.04	0.00
9	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.39	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00
12	0.00	0.00	0.00	0.00	8.5	0.00	0.00	0.00	0.00	0.00	4.6	0.00
13	0.00	0.00	0.00	0.00	13	0.00	0.00	0.00	0.00	0.00	34	0.00
14	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.00	0.00	0.00	44	0.00
15	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	40	0.00
16	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	3.7	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.1	0.01	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.0	7.2	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.29	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.2	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43	0.00
26	3.2	0.00	0.00	1.7	0.00	0.00	0.00	0.00	0.00	e15	0.39	0.00
27	0.42	0.00	0.00	3.7	0.00	0.00	0.00	0.00	0.00	1.3	0.02	0.00
28	0.02	0.00	0.00	5.2	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
29	0.00	0.00	0.00	0.46	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.04	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.01	---	0.00	---	0.00	---	0.00	0.74	---
TOTAL	3.64	0.00	0.00	36.00	34.27	0.00	0.00	0.00	0.00	20.42	266.37	4.22
MEAN	0.12	0.00	0.00	1.16	1.22	0.00	0.00	0.00	0.00	0.66	8.59	0.14
MAX	3.2	0.00	0.00	13	13	0.00	0.00	0.00	0.00	15	76	1.7
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	7.2	0.00	0.00	71	68	0.00	0.00	0.00	0.00	41	528	8.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1912	4.65	99.2	1978	0.00	1914
1913	0.80	9.89	1936	0.00	1971
1914	1.86	38.4	1968	0.00	1971
1915	0.63	7.34	1960	0.00	1913
1916	0.94	22.2	1913	0.00	1964
1917	0.49	4.80	1973	0.00	1964
1918	0.35	2.91	1958	0.00	1913
1919	0.27	2.24	1957	0.00	1913
1920	2.00	26.8	1940	0.00	1913
1921	36.3	342	1919	0.00	1980
1922	46.7	235	1955	0.00	1973
1923	12.7	64.6	1935	0.00	1973

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1912 - 2005
ANNUAL TOTAL	472.08	364.92	
ANNUAL MEAN	1.29	1.00	9.32
HIGHEST ANNUAL MEAN			40.2 1912
LOWEST ANNUAL MEAN			0.00 1983
HIGHEST DAILY MEAN	83 Sep 21	76 Aug 24	2330 Aug 7 1955
LOWEST DAILY MEAN	0.00 Jan 7	0.00 Oct 1	0.00 Jul 1 1912
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 7	0.00 Oct 1	0.00 Jul 1 1912
ANNUAL RUNOFF (AC-FT)	936	724	6750
10 PERCENT EXCEEDS	0.11	0.33	3.2
50 PERCENT EXCEEDS	0.00	0.00	0.20
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at low-flow partial-record sites and at miscellaneous sites and for special studies are given in separate tables.

## Crest-stage partial-record stations

The following table contains annual maximum discharges of independent peaks at crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

## Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area (mi <sup>2</sup> )	Period of record	Water year 2005 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
<b>Gila River Basin</b>								
Vekol Wash near Stanfield, AZ (09488650)	Lat 32°50'30", long 112°15'04", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.3, T.7 S., R.1 E., Maricopa County, Hydrologic Unit 15050303, on left bank 400 ft downstream from I-8 highway bridge. Drainage area, 150 mi <sup>2</sup> .	1991-96* 1997-2005	08-10-05	7.34	2,335	07-25-96	9.77	7,780
Tortilla Creek at Tortilla Flat, AZ (09501300)	Lat 33°31'38", long 111°23'13", in NW <sup>1</sup> / <sub>4</sub> sec. 13, T.2 N., R.9 E (unsurveyed), Maricopa County, Hydrologic Unit 15060106, 600 ft upstream from State Highway 88 and Tortilla Flat Store, and 3.7 mi southeast of Mormon Flat Dam. Drainage area, 24.3 mi <sup>2</sup> .	1966-83, 1991-2005	08-09-05	9.88	3,841	09-01-71	13.23	7,500
Camp Creek near Sunflower, AZ (09510170)	Lat 33°45'35", long 111°29'44", in SW <sup>1</sup> / <sub>4</sub> sec.24, T.5 N., R.8 E Maricopa County, Hydrologic Unit 15060203, on right bank at upstream side of culvert on State Highway 87, half a mile upstream from mouth and 7 mi south of Sunflower. Drainage area, 2.6 mi <sup>2</sup> .	1963-66*, 1967-79, 1991-2005	02-10-05	2.23	111	03-02-78	5.05	402
Rock Creek near Sunflower, AZ (09510180)	Lat 33°43'49", long 111°30'28", in SW <sup>1</sup> / <sub>4</sub> sec.24, T.5 N., R.8 E., Maricopa County, Hydrologic Unit 15060203, on left bank 300 ft from culvert on State Highway 87, 0.3 mi upstream from mouth, and 10 mi south of Sunflower. Drainage area, 15.2 mi <sup>2</sup> .	1963-72 1991-2005	02-10-05	6.82	1,826	01-08-93	7.30	2,550
Indian Bend Wash at Shea Boulevard at Phoenix, AZ (09512090)	Lat 33°35'05", long 111°58'10", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.20, T.3 N., R.4 E., Maricopa County, Hydrologic Unit 15060106, on left bank 500 ft upstream from Shea Boulevard bridge. Drainage area, 24.5 mi <sup>2</sup> .	1984-2005	08-02-05	3.97	4,917	08-02-05	3.97	4,917
Salt River tributary in South Mountain Park at Phoenix, AZ (09512200)	Lat 33°20'49", long 112°05'03", in NE <sup>1</sup> / <sub>4</sub> sec.18, T.1 N., R.3 E., Maricopa County, Hydrologic Unit 15060106, in South Mountain Park, on left bank 7.4 mi south of Phoenix main post office. Drainage area, 1.75 mi <sup>2</sup> .	1961-98*, 1999-2005	--	a	--	08-15-90	10.31	1,210

See footnotes at end of table.

Station name and number	Location and drainage area (mi <sup>2</sup> )	Period of record	Water year 2005 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
<b>Gila River Basin—Continued</b>								
Agua Fria River tributary No. 2 near Rock Springs, AZ (09512700)	Lat 33°02'00", long 112°08'42", in SW <sup>1</sup> / <sub>4</sub> sec.14, T.8 N., R.2 E., Maricopa County, Hydrologic Unit 15070102, at culvert on Interstate Highway 17 (southbound lane), 1 mi south of Rock Springs, and 9 mi north of New River. Drainage area, 1.07 mi <sup>2</sup> .	1963–80 1991–2005	07-31-05	<sup>f</sup> 9.90	674	08–02–64	19.54	1,200
Deadman Wash near New River, AZ (09513820)	Lat 33°50'30", long 112°08'40", in NW <sup>1</sup> / <sub>4</sub> sec.27, T.6 N., R.2 E., Maricopa County, Hydrologic Unit 15070102, 300 ft down-stream from bridge on Interstate Highway 17, 4.5 mi south of New River. Drainage area, 11.1 mi <sup>2</sup> .	1960–79, 1991–2005	02-18-05	4.99	83.2	12–25–59	7.00	1,850
Waterman Wash near Buckeye, AZ (09514200)	Lat 33°19'49", long 112°30'33", in SW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.24, T.1 S., R.3 W., Maricopa County, Hydrologic Unit 15070101, 2.4 mi above mouth, 5.2 mi southeast of Buckeye. Drainage area, 420 mi <sup>2</sup> .	1964–2005	08-09-05	3.24	108	08–08–97	7.80	9,400
Hartman Wash near Wickenburg, AZ (09515800)	Lat 33°57'46", long 112°49'40", in SW <sup>1</sup> / <sub>4</sub> sec.12, T.7 S., R.6 W., Maricopa County, Hydrologic Unit 15070103, at U.S. Highway 60, 5.7 mi west of Wickenburg. Drainage area, 5.57 mi <sup>2</sup> .	1964–79, 1983, 1991–2005	07-30-05	<sup>f</sup> 9.38	3,428	07--30-05	<sup>f</sup> 9.38	3,428
Ox Wash near Morristown, AZ (09516600)	Lat 33°53'00", long 112°39'00", in NW <sup>1</sup> / <sub>4</sub> sec.11, T.6 N., R.4 W., Maricopa County, Hydrologic Unit 15070103, at U.S. Highway 60, 2.4 mi northwest of Morristown, and 7.6 mi southeast of Wickenburg. Drainage area, 6.31 mi <sup>2</sup> .	1960, 1963–79, 1991–2005	11-12-04	3.03	451	09-07-02	12.24	3,840
Star Wash near Tonopah, AZ (09516790)	<u>Main Gage:</u> Lat 33°37'59", long 112°46'44", in SW <sup>1</sup> / <sub>4</sub> , NW <sup>1</sup> / <sub>4</sub> , sec.4, T.3 N., R.5 W., Maricopa County, Hydrologic Unit 15070104 on left bank 0.3 mi. SW from Star Well, 12 NE of Tonopah, AZ. <u>Secondary Gage:</u> approximately 500 ft NE of main gage on left bank in secondary channel. Drainage area 158 mi <sup>2</sup>	2000-2005	08-03-05	<sup>b</sup> 6.22 <sup>c</sup> 7.51	<sup>d</sup> 596	08-28-03	<sup>b</sup> 8.11 <sup>c</sup> 8.39	<sup>d</sup> 2,051
Jack Rabbit Wash near Tonopah, AZ (09516800)	Lat 33°39'32", long 112°49'40", in NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.25, T.4 N., R.6 W., Maricopa County, Hydrologic Unit 15070103, 35 ft downstream from Wickenburg-Hassayampa Road, 4.5 mi upstream from Star Wash, and 14 mi northeast of Tonopah. Drainage area, 137 mi <sup>2</sup> .	1964–79, e1983, 1991–2005	01-04-05	9.81	1,517	10–27–00	15.11	27,000
Centennial Wash tributary near Wenden, AZ (09517200)	Lat 33°50'40", long 113°28'00", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.24, T.6 N., R.12 W., La Paz County, Hydrologic Unit 15070104, at U.S. Highway 60, 5 mi northeast of Wenden. Drainage area, 2.79 mi <sup>2</sup> .	1963–79, 1983, 1991–2005	08-11-05	1.81	15.4	09–05–70	4.66	790
Tiger Wash near Aguila, AZ (09517280)	Lat 33°44'30", long 113°16'43", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.26, T.5 N., R.10 W., Maricopa County, Hydrologic Unit 15070104, 17 mi south of Aguila. Drainage area, 85.2 mi <sup>2</sup> .	1963–79, 1983, 1991–2005	12-29-04	8.83	5,500	09–26–97	10.17	8,070

See footnotes at end of table.

Station name and number	Location and drainage area (mi <sup>2</sup> )	Period of record	Water year 2005 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
<b>Gila River Basin—Continued</b>								
Winter's Wash near Tonopah, AZ (09517400)	Lat 33°29'22", long 112°55'05", in SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.30, T.2 N., R.6 W., Maricopa County, Hydrologic Unit 15070104, on right bank 0.3 mi downstream from Interstate 10 and 1 mi east of Tonopah. Drainage area, 47.8 mi <sup>2</sup> .	1963–79, 1999–2005	--	a	--	09–25–76	10.10	3,640
Rainbow Wash tributary near Buckeye, AZ (09519600)	Lat 33°14'35", long 112°38'15", in NE <sup>1</sup> / <sub>4</sub> sec.23, T.2 S., R.4 W., Maricopa County, Hydrologic Unit 15070101, at U.S. Highway 85, 9.5 mi southwest of Buckeye. Drainage area, 3.45 (1.02) mi <sup>2</sup> .	1963–79, 1983, 1991–2005	08-09-05	5.57	628	09–03–67	7.42	1,430
Bender Wash near Gila Bend, AZ (09519750)	Lat 32°54'25", long 112°33'05", in NE <sup>1</sup> / <sub>4</sub> sec.15, T.6 S., R.3 W., Maricopa County, Hydrologic Unit 15070101, along side of Interstate 8, 10 mi southeast of Gila Bend. Prior to Aug. 26, 1966, at site 0.65 mi downstream. Drainage area, 68.8 mi <sup>2</sup> .	1963–79, 1983, 1991–2005	--	a	--	09-07-02	10.78	8,250
Sauceda Wash near Gila Bend, AZ (09519760)	Lat 32°52'14", long 112°45'30", in SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.27, T.6 S., R.5 W., Black Gap Quadrangle, Maricopa County, Hydrologic Unit 15070101 on the east side of State Highway 85, 5.3 mi south of Gila Bend at Mile Marker 5.3. Drainage area, 126 mi <sup>2</sup> .	1963–79, 1990–94*, 1995–2005	08-03-05	f 2.73	520	09–25–76	6.30	3,153
Military Wash near Sentinel, AZ (09520100)	Lat 32°50'43", long 113°16'44", in SW <sup>1</sup> / <sub>4</sub> sec.3, T.7 S., R.10 W., Maricopa County, Hydrologic Unit 15070201, at Interstate Highway 8, 4.1 mi west of Sentinel. Drainage area, 8.70 mi <sup>2</sup> .	1963–79, 1983, 1991–2005	01-03-05	2.54	144	10-07-01	5.31	1,670
Crater Range Wash near Ajo, AZ (09520230)	Lat 32°33'44", long 112°52'37", in NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.15, T.10 S., R.6 W., Maricopa County, Hydrologic Unit 15070202, at State Highway 85, 4.1 mi north of Maricopa-Pima County line, and 13.5 mi north of Ajo. Drainage area, 1.49 mi <sup>2</sup> .	1963–79, 1983, 1991–2005	09-03-05	f 5.25	874	09-03-05	f 5.25	874

\* Operated as a continuous-record gaging station.

a No highwater marks recorded.

b Main channel gage height.

c Secondary channel gage height.

d Combined discharge of main and secondary channels.

e Portion of drainage basin is generally noncontributing.

f From floodmarks

## Discharge measurements at miscellaneous sites

Measurements of streamflow or spring flow at points other than gaging stations are given in the following table. Those that are measurements of base flow are designated by one asterisk (\*); measurements of peak flow by two asterisks (\*\*); NM, not measured; E, estimated.

## DISCHARGE MEASUREMENTS AT MISCELLANEOUS SITES

Stream or Spring	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
<b>Colorado River Basin</b>						
Little Colorado River, site 1	Colorado River	Lat 34°59'13", long 110°38'18", sec. 03, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	5.42*
Little Colorado River, site 2	Colorado River	Lat 34°59'13", long 110°38'17", sec. 03, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	0.06*
Clear Creek, site 3	Little Colorado River	Lat 34°58'16", long 110°38'28", sec. 10, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	5.42*
Bubbling Spring, site 4	Clear Creek	Lat 34°58'13", long 110°38'27", sec. 10, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	0.002*
Spring, site 5	Clear Creek	Lat 34°58'11", long 110°38'30", sec. 10, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	0.10*
Spring, site 6	Clear Creek	Lat 34°58'10", long 110°38'30", sec. 10, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	NM
Clear Creek diversion below aquaduct, site 7a	Clear Creek	Lat 34°58'14", long 110°38'29", sec. 10, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	0.31
Spring near Clear Creek diversion canal, site 7b	Clear Creek	Lat 34°58'12", long 110°38'31", sec. 10, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	0.002*
Marshy spring below McHood Dam, site 8	Clear Creek	Lat 34°58'08", long 110°38'33", sec. 10, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	0.0*
Clear Creek at aquaduct pipe, site 9	Little Colorado River	Lat 34°58'47", long 110°38'23", sec. 10, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	0.0*
Clear Creek about 2.0 mi. upstream of HWY 99, site 11	Little Colorado River	Lat 34°56'51", long 110°39'41", sec. 20, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	3.14*
Clear Creek about 2.3 mi. upstream of HWY 99, site 12	Little Colorado River	Lat 34°56'43", long 110°39'46", sec. 20, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	2.50*
Clear Creek about 2.6 mi. upstream of HWY 99, site 13	Little Colorado River	Lat 34°56'37", long 110°39'49", sec. 20, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		06-30-05	2.5*E
Clear Creek about 2.0 mi. downstream of the start of perennial flow, OBS1	Little Colorado River	Lat 34°55'30", long 110°41'15", sec. 30, T.18N., R.16E., Navajo County AZ, Hydrologic Unit 15020008	---		07-01-05	0.5*E
Clear Creek, start of perennial flow, OBS2	Little Colorado River	Lat 34°55'02", long 110°42'30", sec. 36, T.18N., R.15E., Navajo County AZ, Hydrologic Unit 15020008	---		07-01-05	0.0
Little Colorado River 1.3 mi. downstream of the mouth of Chevelon Creek, site 1a	Colorado river	Lat 34°57'32", long 110°32'34", sec. 16, T.18N., R.17E., Navajo County AZ, Hydrologic Unit 15020008	---		07-07-05	1.78*
Little Colorado River 2.7 mi. downstream of the mouth of Chevelon Creek, site 1b	Colorado River	Lat 34°58'05", long 110°33'14", sec. 09, T.18N., R.17E., Navajo County AZ, Hydrologic Unit 15020008	---		07-08-05	2.2*E
<b>Colorado River Basin—Continued</b>						
Little Colorado River 600 ft. downstream of the mouth of Chevelon Creek, site 1	Colorado River	Lat 34°57'06", long 110°31'53", sec. 15, T.18N., R.17E., Navajo County AZ, Hydrologic Unit 15020008	---		07-06-05	1.61*
Little Colorado River 400 ft. upstream of the mouth of Chevelon Creek, site 2	Colorado River	Lat 34°57'08", long 110°31'11", sec. 15, T.18N., R.17E., Navajo County AZ, Hydrologic Unit 15020008	---		07-06-05	0.0*





## DISCHARGE MEASUREMENTS AT MISCELLANEOUS SITES

Chevelon Creek about 1/2 mi. above the mouth with the Little Colorado River, site 3	Little Colorado River	Lat 34°56'58", long 110°31'11", sec. 22, T.18N., R.17E., Navajo County AZ, Hydrologic Unit 15020010	---	07-06-05	2.58*
Chevelon Creek 450 ft. downstream of the dam, site 4	Little Colorado River	Lat 34°56'38", long 110°30'53", sec. 23, T.18N., R.17E., Navajo County AZ, Hydrologic Unit 15020010	---	07-06-05	2.75*
Chevelon Creek 150 ft. downstream of the dam, site 5	Little Colorado River	Lat 34°56'36", long 110°30'54", sec. 23, T.18N., R.17E., Navajo County AZ, Hydrologic Unit 15020010	---	07-06-05	2.24*
Spring, right bank, 150 ft. upstream of HWY 99, site 6	Chevelon Creek	Lat 34°55'19", long 110°31'42", sec. 34, T.18N., R.17E., Navajo County AZ, Hydrologic Unit 15020010	---	07-06-05	0.11*
Chevelon Creek 0.5 mi. upstream HWY 99, site 7	Little Colorado River	Lat 34°55'10", long 110°31'32", sec. 34, T.18N., R.17E., Navajo County AZ, Hydrologic Unit 15020010	---	07-06-05	NM
Spring, right bank, 0.5 mi upstream HWY 99, site 8	Chevelon Creek	Lat 34°55'11", long 110°31'32", sec. 34, T.18N., R.17E., Navajo County AZ, Hydrologic Unit 15020010	---	07-06-05	0.001*E
Chevelon Creek about 1.0 mi. upstream of dam, site 9	Little Colorado River	Lat 34°55'58", long 110°30'56", sec. 26, T.18N., R.17E., Navajo County AZ, Hydrologic Unit 15020010	---	07-06-05	NM
Chevelon Creek above Bell Cow Canyon, site 10	Little Colorado River	Lat 34°52'51", long 110°30'57", sec. 11, T.17N., R.17E., Navajo County AZ, Hydrologic Unit 15020010	---	07-07-05	0.53*
Chevelon Creek at Rock Art Access, site 11	Little Colorado River	Lat 34°53'05", long 110°30'37", sec. 11, T.17N., R.17E., Navajo County AZ, Hydrologic Unit 15020010	---	07-07-05	0.36*
Chevelon Creek at Babbitt Tank Canyon	Little Colorado River	Lat 34°52'14", long 110°31'53", sec. 15, T.17N., R.17E., Navajo County AZ, Hydrologic Unit 15020010	---	07-07-05	0.10*E
Chevelon Creek, start of Perennial flow	Little Colorado River	Lat 34°50'26", long 110°32'23", sec. 28, T.17N., R.17E., Navajo County AZ, Hydrologic Unit 15020010	---	07-07-05	0.0

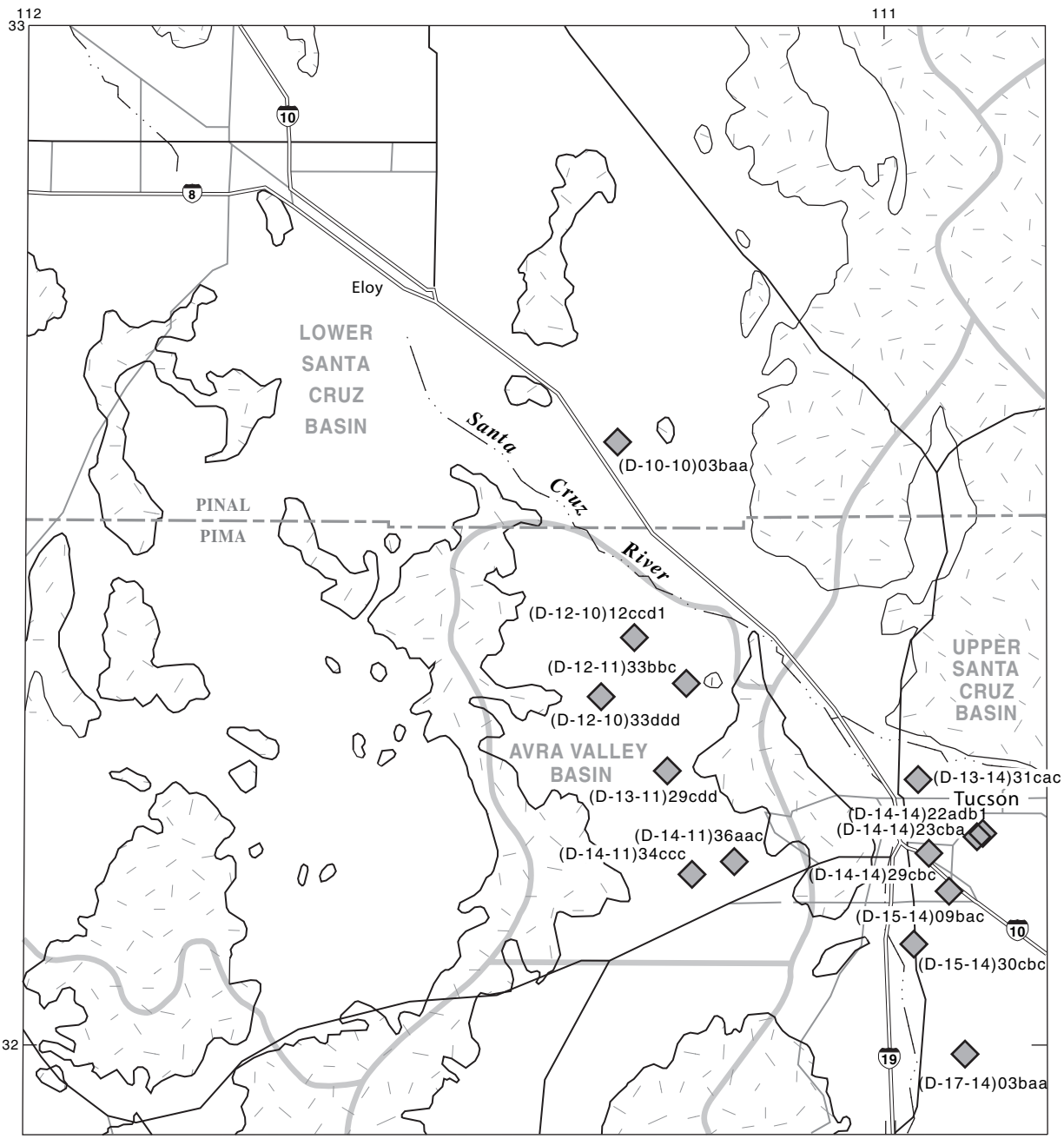


Base from U.S. Geological Survey State base maps, 1:500,000, Arizona, 1974; Nevada, 1965; New Mexico, 1965; and Utah, 1959

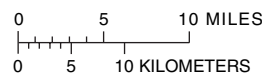
EXPLANATION

-  BOUNDARY OF GROUND-WATER BASIN OR SUBBASIN
-  BOUNDARY OF ACTIVE MANAGEMENT AREA (AMA)

**Figure 6.** Index map of Arizona Department of Water Resources ground-water basins, Active Management Areas, and Irrigation Non-Expansion Areas.



Base from U.S. Geological Survey digital data, 1:100,000, 1982  
 Universal Transverse Mercator projection, Zone 12



EXPLANATION

- BASIN SEDIMENTS AND SURFICIAL ALLUVIAL DEPOSITS
- BEDROCK
- BOUNDARY OF GROUND-WATER BASIN
- WELL AND EXTENSOMETER SITE CURRENTLY MONITORED BY U.S. GEOLOGICAL SURVEY—  
 (D-13-11)29cdd is local well number

**Figure 7.** Locations of wells and extensometer sites, south-central Arizona.

GROUND-WATER LEVELS AND COMPACTION VALUES

PINAL COUNTY

32351011181001. Local number, (D-10-10)03baa

LOCATION.--Lat 32°35'10", long 111°18'10", Hydrologic Unit 15050303, within the Picacho ground-water basin in Redrock, off Interstate 10 on Park Link Drive, along the CAP canal. Owner: U.S. Geological Survey.

WELL CHARACTERISTICS.--Drilled observation well fitted with a borehole, pipe extensometer, diameter 12 in., depth 1,400 ft, open throughout casing.

INSTRUMENTATION.--Water-level and compaction recorders.

DATUM.--Elevation of land surface is 1,920.0 ft above sea level, from topographic map. Measuring point: Top of casing 1.8 ft above land-surface datum.

REMARKS.--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

PERIOD OF RECORD.--Mar. 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 240.2 ft below land-surface datum, Jan. 31, 1990; lowest recorded, 247.6 ft below land-surface datum, July 31, Aug. 1, 2, 3, 5, 6, 7, 9, 10, 16, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245.6	245.5	245.3	245.1	244.8	244.8	244.7	245.0	245.1	245.1	245.3	245.3
2	245.5	245.5	245.3	245.1	244.8	244.7	244.7	245.0	245.1	245.1	245.3	245.3
3	245.5	245.5	245.2	245.1	244.7	244.7	244.7	245.0	245.1	245.1	245.3	245.3
4	245.5	245.5	245.2	245.1	244.7	244.7	244.7	245.0	245.2	245.1	245.3	245.3
5	245.5	245.5	245.2	245.1	244.8	244.7	244.7	245.0	245.1	245.1	245.3	245.3
6	245.5	245.5	245.2	245.1	244.9	244.8	244.7	245.0	245.0	245.1	245.3	245.3
7	245.5	245.5	245.2	245.1	244.8	244.8	244.7	245.0	245.0	245.1	245.3	245.3
8	245.5	245.5	245.1	245.1	244.8	244.8	244.7	245.0	245.0	245.1	245.3	245.3
9	245.5	245.5	245.2	245.1	244.8	244.7	244.8	245.0	245.0	245.1	245.3	245.3
10	245.5	245.4	245.2	245.1	244.8	244.7	244.7	245.0	245.0	245.1	245.3	245.3
11	245.5	245.4	245.1	245.1	244.8	244.7	244.7	245.0	245.0	245.1	245.3	245.3
12	245.5	245.4	245.2	245.1	244.8	244.7	244.8	245.0	245.0	245.1	245.4	245.3
13	245.5	245.4	245.2	245.1	244.8	244.7	244.8	245.1	245.0	245.2	245.4	245.3
14	245.5	245.4	245.2	245.0	244.8	244.7	244.8	245.1	245.0	245.2	245.4	245.2
15	245.5	245.4	245.2	245.0	244.8	244.7	244.8	245.1	245.0	245.2	245.4	245.3
16	245.5	245.3	245.2	245.0	244.9	244.7	244.8	245.1	245.0	245.2	245.4	245.3
17	245.6	245.3	245.2	245.0	244.9	244.7	244.8	245.1	245.0	245.2	245.4	245.3
18	245.6	245.4	245.2	245.0	244.8	244.7	244.9	245.1	245.0	245.2	245.4	245.2
19	245.5	245.4	245.2	245.0	244.8	244.7	244.9	245.1	245.0	245.2	245.4	245.2
20	245.5	245.3	245.2	244.9	244.8	244.7	244.9	245.2	245.0	245.2	245.4	245.2
21	245.6	245.3	245.2	244.9	244.8	244.7	244.8	245.2	245.0	245.2	245.4	245.3
22	245.5	245.3	245.2	244.9	244.8	244.7	244.8	245.2	245.0	245.2	245.3	245.3
23	245.5	245.3	245.2	244.9	244.7	244.7	244.8	245.2	245.1	245.2	245.3	245.3
24	245.6	245.3	245.1	244.8	244.8	244.7	244.9	245.2	245.1	245.3	245.3	245.3
25	245.6	245.2	245.1	244.8	244.8	244.7	244.9	245.1	245.1	245.3	245.3	245.2
26	245.6	245.2	245.1	244.9	244.8	244.7	244.9	245.1	245.0	245.3	245.3	245.3
27	245.6	245.3	245.2	244.9	244.7	244.7	244.9	245.2	245.0	245.3	245.3	245.2
28	245.5	245.4	245.2	244.8	244.7	244.7	244.9	245.2	245.0	245.3	245.3	245.2
29	245.5	245.3	245.2	244.8	244.8	244.7	244.9	245.1	245.1	245.3	245.3	245.2
30	245.5	245.3	245.1	244.8	---	244.7	244.9	245.2	245.1	245.3	245.3	---
31	245.5	---	245.1	244.7	---	244.7	---	245.2	---	245.2	245.3	---
MEAN	245.5	245.4	245.2	245.0	244.8	244.7	244.8	245.1	245.0	245.2	245.3	---
MAX	245.6	245.5	245.3	245.1	244.9	244.8	244.9	245.2	245.2	245.3	245.4	---
MIN	245.5	245.2	245.1	244.7	244.7	244.7	244.7	245.0	245.0	245.1	245.3	---

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.013	0.012	0.010	0.010	0.008	0.008	0.008	---	---	---	0.011	0.011
2	0.013	0.012	0.010	0.009	0.009	0.008	0.008	---	---	---	0.011	0.011
3	0.013	0.012	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.011
4	0.013	0.012	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.011
5	0.013	0.012	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.011
6	0.013	0.012	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.011
7	0.013	0.012	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.011
8	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.011
9	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.011
10	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.011
11	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.011
12	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.011
13	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.011
14	0.013	0.011	0.010	0.009	0.009	0.008	0.008	---	---	---	0.011	0.011
15	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	---
16	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	---
17	0.013	0.011	0.009	0.009	0.008	0.008	0.008	---	---	---	0.011	---
18	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.010
19	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.010
20	0.013	0.011	0.010	0.009	0.009	0.008	0.008	---	---	---	0.011	0.010
21	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.010
22	0.013	0.011	0.010	0.009	0.008	0.008	0.008	---	---	---	0.011	0.010
23	0.013	0.011	0.010	0.009	0.008	0.008	---	---	---	0.010	0.011	---
24	0.012	0.010	0.010	0.009	0.008	0.008	---	---	---	0.010	---	---
25	0.012	0.011	0.010	0.009	0.008	0.008	---	---	---	0.010	---	0.010
26	0.012	0.011	0.010	0.009	0.008	0.008	---	---	---	0.010	0.011	0.010
27	0.012	0.010	0.010	0.009	0.008	0.008	---	---	---	0.010	0.011	0.010
28	0.012	0.010	0.009	0.009	0.008	0.008	---	---	---	0.010	0.011	---
29	0.012	0.010	0.009	0.009	0.008	0.008	---	---	---	0.010	0.011	---
30	0.012	0.010	0.010	0.009	---	0.008	---	---	---	0.010	0.011	---
31	0.012	---	0.010	0.009	---	0.008	---	---	---	0.011	0.011	---
MEAN	0.013	0.011	0.010	0.009	0.008	0.008	---	---	---	---	---	---
MAX	0.013	0.012	0.010	0.010	0.009	0.008	---	---	---	---	---	---
MIN	0.012	0.010	0.009	0.009	0.008	0.008	---	---	---	---	---	---

## GROUND-WATER LEVELS AND COMPACTION VALUES

## PIMA COUNTY

## 32233911170001. Local Number, (D-12-10)12ccd1

**LOCATION**--Lat 32°23'39", long 111°17'00", Hydrologic Unit 15050304, within the Avra Valley ground-water basin, approximately 10 mi west of Interstate 10, on Avra Valley Road. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 20 in., depth 1,010 ft, open throughout casing.

**INSTRUMENTATION**--Water-level and compaction recorders.

**DATUM**--Elevation of land surface is 1,996.20 ft above sea level, from topographic map. Measuring point: Top of casing 1.0 ft above land-surface datum.

**REMARKS**--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

**PERIOD OF RECORD**--Aug. 1984 to current year.

**EXTREMES FOR PERIOD OF RECORD**--Highest water level recorded, 213.8 ft below land-surface datum, Sept. 30, 2005; lowest recorded, 300.8 ft below land-surface datum, Sept. 14, 1989.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	220.9	219.0	217.8	216.7	216.6	215.4	217.3	219.2	220.5	218.6	---	219.9
2	220.9	219.1	217.7	216.7	216.5	215.3	217.6	219.0	221.0	218.3	---	219.9
3	220.8	218.9	217.6	216.6	216.5	215.3	217.8	219.1	221.4	218.0	---	219.7
4	220.7	218.8	217.5	216.5	216.4	215.2	218.0	219.1	221.7	217.9	---	218.5
5	220.6	218.8	217.4	216.7	216.2	215.4	218.3	218.9	221.9	218.1	---	217.3
6	220.6	218.7	217.4	216.6	216.2	215.4	218.3	218.4	222.0	219.7	---	216.9
7	220.5	218.6	217.5	216.5	216.2	215.5	218.2	217.8	222.2	221.7	---	216.9
8	220.5	218.6	217.4	216.5	216.2	215.5	218.3	217.6	222.1	222.1	---	216.9
9	220.3	218.6	217.4	216.6	216.2	215.5	218.4	217.3	221.9	222.4	---	216.7
10	220.2	218.6	217.4	216.5	216.1	215.6	218.6	217.1	220.8	222.4	---	216.4
11	220.2	218.6	217.3	216.3	215.9	216.0	219.4	217.0	219.8	222.3	---	216.2
12	220.2	218.4	217.3	216.4	215.9	216.2	221.2	217.0	219.8	222.2	---	215.9
13	220.2	218.4	217.3	216.5	216.0	216.3	222.0	217.3	219.0	221.7	216.5	215.6
14	220.1	218.4	217.4	216.4	215.9	216.4	222.6	217.4	218.2	221.1	216.1	215.4
15	220.0	218.4	217.3	216.4	215.8	216.9	223.3	217.5	218.0	221.1	215.9	215.2
16	219.9	218.4	217.3	216.4	215.7	217.2	223.8	217.5	217.9	221.4	216.6	215.1
17	219.9	218.4	217.4	216.4	215.6	217.2	224.1	217.5	217.8	221.3	217.8	215.0
18	219.8	218.4	217.4	216.8	215.6	217.3	224.2	217.7	217.6	221.2	219.4	214.8
19	219.8	218.2	217.3	217.0	215.6	217.3	224.3	217.8	217.5	---	220.3	214.7
20	219.7	218.1	217.1	217.1	215.6	217.1	224.4	217.9	219.1	---	220.8	214.6
21	219.6	218.0	216.9	217.3	215.6	216.6	224.4	217.9	221.0	---	220.8	214.6
22	219.6	218.0	217.0	217.6	215.5	216.3	223.9	218.1	220.9	---	220.6	214.5
23	219.5	218.0	217.0	217.7	215.4	216.1	223.0	217.9	221.8	---	220.0	214.4
24	219.4	218.1	217.1	217.9	215.4	216.0	222.2	217.7	222.4	---	217.7	214.3
25	219.3	218.0	217.1	218.0	215.4	216.0	221.4	217.7	222.4	---	216.9	214.1
26	219.2	217.9	216.9	217.9	215.4	216.1	221.1	217.6	222.3	---	216.7	214.1
27	219.2	217.8	216.9	217.6	215.4	216.4	220.8	217.2	222.2	---	216.7	214.0
28	219.2	217.7	216.9	217.2	215.5	216.4	220.7	217.0	220.9	---	216.5	214.0
29	219.2	217.9	216.8	216.9	---	216.6	220.1	216.8	220.0	---	216.8	213.9
30	219.1	217.9	216.8	216.8	---	216.7	219.4	216.7	219.3	---	217.8	213.9
31	219.0	---	216.7	216.7	---	217.0	---	218.5	---	---	218.8	---
TOTAL MEAN	6818.1	6550.7	6734.3	6723.2	6044.3	6702.2	6627.1	6751.2	6613.4	---	---	6473.4
MEAN	219.9	218.4	217.2	216.9	215.9	216.2	220.9	217.8	220.4	---	---	215.8
MAX	220.9	219.1	217.8	218.0	216.6	217.3	224.4	219.2	222.4	---	---	219.9
MIN	219.0	217.7	216.7	216.3	215.4	215.2	217.3	216.7	217.5	---	---	213.9
MED	219.9	218.4	217.3	216.7	215.8	216.2	221.0	217.7	220.9	---	---	215.2

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-0.030	-0.031	-0.035	-0.037	-0.038	-0.039	-0.037	-0.031	-0.037	-0.035	-0.036	---
2	-0.030	-0.031	-0.035	-0.037	-0.038	-0.039	-0.037	-0.031	-0.037	-0.035	-0.036	---
3	-0.030	-0.031	-0.035	-0.039	-0.038	-0.039	-0.037	-0.031	-0.036	-0.034	-0.036	---
4	-0.030	-0.032	-0.035	-0.039	-0.038	-0.039	-0.037	-0.031	-0.036	-0.034	-0.036	---
5	-0.030	-0.032	-0.036	-0.039	-0.039	-0.039	-0.037	-0.031	-0.035	-0.034	-0.036	---
6	-0.030	-0.032	-0.036	-0.039	-0.039	-0.039	-0.037	-0.031	-0.034	-0.034	-0.035	---
7	-0.030	-0.032	-0.036	-0.039	-0.039	-0.039	-0.037	-0.031	-0.034	-0.034	-0.035	---
8	-0.030	-0.032	-0.036	-0.039	-0.039	-0.039	-0.037	-0.031	-0.033	-0.034	-0.035	---
9	-0.030	-0.032	-0.036	-0.039	-0.039	-0.039	-0.037	-0.031	-0.034	-0.034	-0.035	---
10	-0.029	-0.032	-0.036	-0.038	-0.039	-0.039	-0.037	-0.030	-0.034	-0.034	-0.035	---
11	-0.029	-0.032	-0.036	-0.038	-0.039	-0.039	-0.037	-0.030	-0.035	-0.034	-0.036	---
12	-0.030	-0.032	-0.037	-0.038	-0.039	-0.040	-0.037	-0.030	---	-0.035	-0.036	---
13	-0.030	-0.032	-0.037	-0.038	-0.039	-0.040	-0.037	-0.030	---	-0.035	-0.036	---
14	-0.030	-0.033	-0.037	-0.038	-0.039	-0.040	-0.036	-0.031	---	-0.035	-0.036	---
15	-0.030	-0.033	-0.037	-0.037	-0.039	-0.040	-0.036	-0.031	---	-0.035	-0.037	---
16	-0.030	-0.033	-0.037	-0.037	-0.039	-0.041	-0.036	-0.032	---	-0.035	-0.037	---
17	-0.030	-0.033	-0.037	-0.037	-0.039	-0.041	-0.036	-0.032	---	-0.036	-0.037	---
18	-0.030	-0.033	-0.037	-0.037	-0.039	-0.041	-0.036	-0.032	---	-0.036	-0.037	---
19	-0.030	-0.033	-0.037	-0.037	-0.039	-0.041	-0.036	-0.033	-0.035	-0.036	-0.037	-0.040
20	-0.030	-0.033	-0.037	-0.037	-0.039	-0.041	-0.035	-0.034	-0.036	-0.036	---	-0.040
21	-0.030	-0.034	-0.037	-0.037	-0.039	-0.041	-0.035	-0.034	-0.035	-0.036	---	-0.040
22	-0.030	-0.034	-0.037	-0.037	-0.039	-0.040	-0.033	-0.034	-0.035	-0.036	---	-0.040
23	-0.030	-0.034	-0.037	-0.037	-0.039	-0.040	-0.031	-0.034	-0.035	-0.035	---	-0.040
24	-0.030	-0.034	-0.037	-0.037	-0.039	-0.040	-0.031	-0.034	-0.036	-0.034	---	-0.040
25	-0.030	-0.034	-0.037	-0.037	-0.039	-0.040	-0.031	-0.034	-0.036	-0.034	---	-0.040
26	-0.030	-0.035	-0.037	-0.037	-0.039	-0.039	-0.031	-0.035	-0.036	-0.035	---	-0.040
27	-0.030	-0.035	-0.037	-0.037	-0.039	-0.039	-0.031	-0.035	-0.036	-0.035	---	-0.040
28	-0.031	-0.035	-0.038	-0.038	-0.039	-0.038	-0.031	-0.036	-0.036	-0.035	---	-0.040
29	-0.031	-0.035	-0.037	-0.038	-0.039	-0.038	-0.031	-0.036	-0.036	-0.036	---	-0.040
30	-0.031	-0.035	-0.037	-0.038	---	-0.038	-0.031	-0.037	-0.035	-0.036	---	-0.040
31	-0.031	---	-0.038	-0.038	---	-0.037	---	-0.037	---	-0.036	---	---
MEAN	-0.030	-0.033	-0.037	-0.038	-0.039	-0.039	-0.035	-0.033	-0.035	-0.035	-0.036	-0.040
MAX	-0.029	-0.031	-0.035	-0.037	-0.038	-0.037	-0.031	-0.030	-0.033	-0.034	-0.035	-0.040
MIN	-0.031	-0.035	-0.038	-0.039	-0.039	-0.041	-0.037	-0.037	-0.037	-0.036	-0.037	-0.040

**GROUND-WATER LEVELS AND COMPACTION VALUES**

**PIMA COUNTY**

**322057111134801. Local number, (D-12-11)33bbc**

**LOCATION.**--Lat 32°20'57", long 111°13'22", Hydrologic Unit 15050304, within the Avra Valley ground-water basin, on Magee Road next to CAP canal. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS.**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 15.0 in., depth 998 ft, open throughout casing.

**INSTRUMENTATION.**--Water-level and compaction recorders.

**DATUM.**--Elevation of land surface is 2,104.0 ft above sea level, from topographic map. Measuring point: Top of casing 1.7 ft above land-surface datum.

**REMARKS.**--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

**PERIOD OF RECORD.**--Mar. 1989 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 338.1 ft below land-surface datum, Aug. 28, 29, Sept. 26 - 30, 2005; lowest recorded, 354.5 ft below land-surface datum, Sept. 29, 1989.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	339.5	339.6	339.3	339.1	338.8	---	338.7	338.7	338.5	338.7	338.7	338.3
2	339.5	339.7	339.3	339.1	338.8	---	338.6	338.8	---	---	338.7	338.3
3	339.6	339.6	339.3	338.9	338.8	---	338.5	338.8	---	---	338.7	338.4
4	339.6	339.6	339.2	338.8	338.8	---	338.4	338.8	---	---	338.7	338.4
5	339.5	339.6	339.1	339.0	338.7	---	338.6	338.8	---	---	338.6	338.4
6	339.5	339.5	339.1	339.0	338.7	---	338.6	338.8	---	---	338.6	338.4
7	339.5	339.5	339.2	338.9	338.7	---	338.5	338.8	---	---	338.6	338.3
8	339.5	339.4	339.3	338.9	338.8	---	338.4	338.8	---	---	338.6	338.3
9	339.5	339.5	339.3	339.0	338.8	---	338.4	338.8	---	---	338.6	338.3
10	339.4	339.5	339.3	339.0	338.8	---	338.5	338.7	---	---	338.5	338.3
11	339.5	339.5	339.2	338.8	338.7	---	338.6	338.7	338.6	---	338.5	338.3
12	339.5	339.4	339.2	338.9	338.7	---	338.6	338.7	338.7	---	338.4	338.3
13	339.5	339.3	339.2	339.0	338.8	---	338.5	338.7	338.7	---	338.3	338.4
14	339.6	339.4	339.3	339.0	338.8	---	338.6	338.7	338.7	---	338.3	338.4
15	339.5	339.4	339.2	339.0	338.7	---	338.6	338.7	338.7	---	338.3	338.4
16	339.6	339.5	339.3	339.0	338.7	338.6	338.6	338.6	338.7	---	338.3	338.4
17	339.6	339.5	339.3	339.0	338.6	338.6	338.6	338.6	338.7	---	338.3	338.4
18	339.6	339.4	339.3	339.0	---	338.5	338.6	338.7	338.7	---	338.3	338.4
19	339.6	339.4	339.3	339.0	---	338.5	338.5	338.7	338.8	338.8	338.4	338.4
20	339.5	339.3	339.2	338.9	---	338.5	338.6	338.7	338.8	338.9	338.4	338.4
21	339.5	339.2	339.0	338.8	---	338.6	338.7	338.7	338.8	338.8	338.4	338.4
22	339.6	339.3	339.1	338.9	---	338.5	338.8	338.7	338.8	338.8	338.3	338.3
23	339.7	339.3	339.1	338.9	---	338.4	338.7	338.6	338.8	338.9	338.3	338.2
24	339.6	339.4	339.2	338.9	---	338.5	338.7	338.6	338.8	338.8	338.3	338.3
25	339.5	339.4	339.2	338.9	---	338.6	338.7	338.6	338.7	338.7	338.3	338.2
26	339.5	339.3	339.1	338.8	---	338.6	338.7	338.6	338.7	338.7	338.3	338.2
27	339.5	339.3	339.1	338.8	---	338.6	338.7	338.6	338.8	338.7	338.3	338.2
28	339.6	339.2	339.1	338.8	---	338.5	338.7	338.6	338.8	338.7	338.2	338.2
29	339.6	339.4	339.0	338.8	---	338.5	338.8	338.6	338.7	338.7	338.2	338.2
30	339.6	339.5	339.1	338.8	---	338.6	338.8	338.6	338.7	338.8	338.2	338.1
31	339.5	---	339.0	338.8	---	338.7	---	338.6	---	338.8	338.3	---
MEAN	339.5	339.4	339.2	338.9	---	---	338.6	338.7	---	---	338.4	338.3
MAX	339.7	339.7	339.3	339.1	---	---	338.8	338.8	---	---	338.7	338.4
MIN	339.4	339.2	339.0	338.8	---	---	338.4	338.6	---	---	338.2	338.1

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
2	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
3	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
4	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
5	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
6	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
7	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
8	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
9	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
10	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
11	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
12	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---
13	0.070	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	0.070	---
14	0.070	0.071	0.071	0.070	0.070	---	0.071	0.070	0.070	0.070	0.070	0.070
15	0.070	0.071	0.071	0.070	0.070	---	0.071	0.070	0.070	e0.070	0.070	0.070
16	0.070	0.071	0.071	0.070	0.070	---	0.071	0.070	0.070	0.070	0.070	0.070
17	0.070	0.071	0.071	---	0.070	0.071	0.071	0.070	0.070	0.070	0.070	0.070
18	0.070	0.071	0.071	---	---	0.071	0.071	0.070	0.070	0.070	0.070	0.070
19	0.070	0.071	0.071	---	---	0.071	0.071	0.070	0.070	0.070	0.070	0.070
20	0.070	0.071	0.071	---	---	0.071	0.071	0.070	0.070	0.070	0.070	0.070
21	0.070	0.071	0.071	0.070	---	0.071	0.071	0.070	0.070	---	0.070	0.070
22	0.070	0.071	0.071	0.070	---	0.071	0.071	0.070	0.070	---	0.070	0.070
23	0.070	e0.071	0.071	0.070	---	0.071	0.071	0.070	0.070	---	---	0.070
24	0.070	0.071	0.071	0.070	---	0.071	0.071	0.070	0.070	---	---	0.070
25	0.071	0.071	0.071	0.070	---	0.071	0.071	0.070	0.070	---	---	0.070
26	0.071	0.071	0.070	0.071	---	0.071	0.071	0.070	0.070	---	---	0.070
27	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---	0.070
28	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---	0.070
29	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---	0.070
30	0.071	0.071	0.070	0.071	---	0.071	0.070	0.070	0.070	---	---	0.070
31	0.071	---	0.070	0.071	---	0.071	---	0.070	---	---	---	---
MEAN	0.070	0.071	0.071	---	---	---	0.071	0.070	0.070	---	---	---
MAX	0.071	0.071	0.071	---	---	---	0.071	0.070	0.070	---	---	---
MIN	0.070	0.071	0.070	---	---	---	0.070	0.070	0.070	---	---	---

## GROUND-WATER LEVELS AND COMPACTION VALUES

## PIMA COUNTY

## 32200911191801. Local number, (D-12-10)33ddd

**LOCATION**--Lat 32°20'09", long 111°19'18", Hydrologic Unit 15050304, within the Avra Valley ground-water basin, approximately 12 mi west of Interstate 10, 3 mi south on corner of Anway and Tucker. Owner: U.S. Geological Survey

**WELL CHARACTERISTICS**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 20 in., depth 1,000 ft, open throughout casing.

**INSTRUMENTATION**--Water-level and compaction recorders.

**DATUM**--Elevation of land surface is 2,068 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

**REMARKS**--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

**PERIOD OF RECORD**--Aug. 1985 to current year.

**EXTREMES FOR PERIOD OF RECORD**--Highest water level recorded, 325.1 ft below land-surface datum, Feb. 22, 23, 24, 2005; lowest recorded, 349.8 ft below land-surface datum, Aug. 22, 1985.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	329.0	328.2	326.9	326.0	325.6	325.9	326.0	326.9	325.3	326.4	326.4	326.0
2	328.9	327.9	327.0	326.0	325.7	325.9	326.1	326.9	325.2	326.3	326.3	326.1
3	329.0	327.9	327.0	326.0	325.7	325.9	326.2	326.9	325.2	326.2	326.1	326.2
4	329.0	328.0	326.9	325.8	325.6	325.9	326.2	327.0	325.3	326.1	326.0	326.2
5	329.0	327.8	326.7	326.0	325.5	325.8	326.5	326.9	325.3	326.1	326.1	326.1
6	328.9	327.8	326.5	325.9	325.6	325.5	326.5	326.9	325.4	326.1	325.9	326.1
7	328.8	327.8	326.5	325.8	325.8	325.3	326.4	326.9	325.5	326.4	325.8	326.0
8	328.8	327.8	326.4	326.0	326.0	325.3	326.3	326.8	325.6	326.4	325.6	326.0
9	328.7	327.9	326.5	326.1	326.1	325.5	326.3	326.8	326.0	326.4	325.6	325.9
10	328.5	327.9	326.5	326.0	326.1	325.7	326.4	326.7	325.6	326.4	325.5	325.9
11	328.5	327.8	326.5	325.9	325.7	325.8	326.4	326.8	325.5	326.4	325.4	325.9
12	328.7	327.6	326.6	325.9	325.4	325.9	326.4	326.8	325.6	326.4	325.6	325.9
13	328.6	327.6	326.7	326.0	325.5	325.8	326.4	326.8	325.7	326.4	325.7	325.9
14	328.6	327.5	326.8	326.0	325.4	325.8	326.5	326.8	325.7	326.4	325.6	325.8
15	328.6	327.6	326.7	326.3	325.3	325.9	326.5	326.8	325.7	326.4	325.5	325.8
16	328.6	327.7	326.8	326.4	325.3	325.9	326.5	326.7	325.8	326.4	325.4	325.6
17	328.6	327.7	326.7	326.1	325.3	325.9	326.5	326.8	325.8	326.5	325.5	325.5
18	328.4	327.6	326.7	326.1	325.2	325.9	326.6	326.9	325.8	326.5	325.5	325.5
19	328.5	327.5	326.6	326.0	325.2	325.9	326.6	327.0	325.8	326.4	325.6	325.9
20	328.3	327.3	326.4	326.0	325.2	325.8	326.7	327.0	325.8	326.5	325.7	325.7
21	328.3	327.3	326.2	326.1	325.2	325.9	326.7	327.1	325.9	326.4	325.8	326.1
22	328.1	327.2	326.2	326.3	325.2	325.8	326.8	327.2	326.4	326.4	325.9	326.6
23	328.0	326.9	326.2	326.3	325.2	325.8	326.8	327.0	326.2	326.4	325.8	326.7
24	328.1	326.8	326.4	326.3	325.2	325.8	326.7	326.5	326.9	326.2	325.5	326.7
25	327.9	326.7	326.5	326.1	325.3	325.8	326.7	326.2	327.3	325.9	325.6	326.7
26	328.0	326.8	326.4	325.9	325.5	325.9	326.9	326.0	327.6	326.0	325.8	326.7
27	328.0	327.0	326.4	325.7	325.9	326.0	326.9	325.9	327.5	326.1	325.8	326.8
28	328.0	327.0	326.4	325.7	325.9	325.8	326.9	325.8	326.7	326.1	325.8	326.9
29	327.5	327.0	326.1	325.6	---	325.9	326.9	325.5	326.4	326.6	325.7	327.2
30	327.2	326.9	326.2	325.6	---	325.9	327.0	325.3	326.3	326.7	325.8	327.1
31	327.2	---	326.0	325.6	---	326.0	---	325.3	---	326.5	325.9	---
MEAN	328.4	327.5	326.5	326.0	325.5	325.8	326.5	326.6	326.0	326.3	325.7	326.2
MAX	329.0	328.2	327.0	326.4	326.1	326.0	327.0	327.2	327.6	326.7	326.4	327.2
MIN	327.2	326.7	326.0	325.6	325.2	325.3	326.0	325.3	325.2	325.9	325.4	325.5

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.174	0.173	0.174	0.176	0.177	0.179	0.179	0.180	0.181	0.180	0.181	0.180
2	0.174	0.172	0.174	0.176	0.177	0.179	0.180	0.180	0.180	0.180	0.181	0.180
3	0.174	0.174	0.175	0.177	0.177	0.179	0.180	0.180	0.180	0.180	0.181	0.180
4	0.175	0.174	0.176	0.177	0.179	0.180	0.179	0.180	0.180	0.180	0.181	0.180
5	0.175	0.175	0.173	0.174	0.179	0.179	0.178	0.180	0.180	0.180	0.181	0.180
6	0.175	0.175	0.173	0.177	0.178	0.179	0.179	0.181	0.180	0.180	0.181	0.180
7	0.175	0.175	0.173	0.176	0.178	0.179	0.180	0.181	0.180	0.180	0.181	0.180
8	0.175	0.174	0.173	0.175	0.177	0.179	0.180	0.181	0.180	0.180	0.181	0.180
9	0.175	0.174	0.174	0.176	0.178	0.179	0.181	0.181	0.180	0.180	0.181	0.180
10	0.175	0.174	0.175	0.177	0.178	0.180	0.180	0.181	0.181	0.180	0.181	0.180
11	0.175	0.175	0.174	0.177	0.179	0.179	0.179	0.181	0.181	0.180	0.181	0.180
12	0.175	0.175	0.174	0.175	0.177	0.180	0.180	0.180	0.181	0.180	0.181	0.180
13	0.175	0.175	0.174	0.174	0.177	0.180	0.180	0.180	0.181	0.180	0.181	0.180
14	0.175	0.174	0.174	0.175	0.178	0.180	0.180	0.180	0.181	0.180	0.181	0.180
15	0.175	0.174	0.174	0.174	0.178	0.178	0.180	0.180	0.181	0.180	0.181	0.180
16	0.175	0.174	---	0.176	0.179	0.179	0.180	0.181	0.181	0.180	0.181	0.180
17	0.175	0.174	---	0.176	0.179	0.180	0.180	0.181	0.181	0.180	0.181	0.180
18	0.175	0.175	0.175	0.176	0.179	0.180	0.180	0.180	0.181	0.180	0.181	0.180
19	0.175	0.175	0.175	0.177	0.179	0.180	0.180	0.180	0.181	0.180	0.181	0.180
20	0.175	0.176	0.177	0.178	0.178	0.180	0.179	0.180	0.181	0.181	0.181	0.180
21	0.175	0.175	0.177	0.178	0.179	0.180	0.179	0.180	0.181	0.181	0.181	0.180
22	0.174	0.174	0.176	0.177	0.179	0.180	0.179	0.181	0.181	0.181	0.181	0.180
23	0.175	0.173	0.175	0.177	0.180	0.181	0.180	0.180	0.181	0.181	0.181	0.180
24	0.175	0.174	0.174	0.177	0.180	0.180	0.180	0.180	0.181	0.181	0.181	0.180
25	0.175	0.175	0.176	0.178	0.180	0.179	0.180	0.181	0.181	0.181	0.181	0.180
26	0.175	0.175	0.177	0.178	0.179	0.179	0.180	0.181	0.180	0.181	0.180	0.180
27	0.175	0.176	0.175	0.177	0.178	0.179	0.180	0.180	0.180	0.181	0.180	0.180
28	0.174	0.173	0.177	0.178	0.178	0.181	0.180	0.180	0.180	0.181	0.180	0.180
29	0.174	0.171	0.176	0.178	---	0.180	0.179	0.180	0.180	0.181	0.180	0.181
30	0.175	0.173	0.176	0.178	---	0.179	0.179	0.180	0.180	0.181	0.180	0.181
31	0.175	---	0.177	0.178	---	0.178	---	0.181	---	0.181	0.180	---
MEAN	0.175	0.174	---	0.177	0.178	0.179	0.180	0.180	0.181	0.180	0.181	0.180
MAX	0.175	0.176	---	0.178	0.180	0.181	0.181	0.181	0.181	0.181	0.181	0.181
MIN	0.174	0.171	---	0.174	0.177	0.178	0.178	0.180	0.180	0.180	0.180	0.180

**GROUND-WATER LEVELS AND COMPACTION VALUES**

**PIMA COUNTY**

**321547111144001. Local number, (D-13-11)29cdd**

**LOCATION.**--Lat 32°15'47", long 111°14'40", Hydrologic Unit 15050304, within the Avra Valley ground-water basin on Mile Wide Road along CAP canal. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS.**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 10 in., depth 790 ft, open throughout casing.

**INSTRUMENTATION.**--Water-level and compaction recorders.

**DATUM.**--Elevation of land surface is 2,192.0 ft above sea level, from topographic map. Measuring point: Top of casing 1.0 ft above land-surface datum.

**REMARKS.**--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

**PERIOD OF RECORD.**--Mar. 1989 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 339.6 ft below land-surface datum, Sept. 30, 2005; lowest recorded, 361.5 ft below land-surface datum, Mar. 22, 1998.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	347.1	345.9	343.5	344.0	345.0	345.8	346.3	346.4	345.9	345.5	344.2	341.7
2	347.0	345.8	343.3	343.8	345.1	345.8	346.1	346.5	345.8	345.4	344.1	341.6
3	347.0	345.0	343.2	343.6	345.2	345.8	345.9	346.5	345.9	345.4	344.1	341.5
4	346.8	345.2	342.9	344.0	345.1	345.7	346.1	346.5	345.9	345.4	344.0	341.3
5	346.8	345.4	342.8	344.4	345.0	345.8	346.4	346.4	346.0	345.3	344.0	341.3
6	346.8	345.3	342.8	344.2	345.1	345.9	346.3	346.4	346.0	345.3	343.9	341.3
7	346.8	345.3	342.9	344.1	345.1	345.9	345.9	346.4	346.1	345.2	343.8	341.1
8	346.8	345.2	342.8	344.3	345.2	345.8	346.0	346.4	346.1	345.1	343.8	341.0
9	346.6	345.0	342.7	344.3	345.1	346.0	346.1	346.3	346.0	345.1	343.6	340.9
10	346.5	344.8	342.8	344.1	344.9	345.9	346.3	346.3	345.9	345.0	343.7	340.9
11	346.5	344.8	343.1	344.0	345.1	346.0	346.3	346.3	345.9	345.0	343.6	340.9
12	346.5	344.8	343.4	344.1	345.2	346.0	346.3	346.3	346.0	345.1	343.5	340.8
13	346.6	344.8	343.7	344.5	345.4	346.0	346.2	346.2	345.9	345.0	343.5	340.7
14	346.6	344.9	343.8	344.7	345.3	346.0	346.2	346.2	345.8	344.9	343.3	340.6
15	346.5	345.0	343.7	344.7	345.2	345.2	346.3	346.2	345.9	344.9	343.3	340.6
16	346.5	345.1	343.8	344.4	344.9	345.0	346.3	346.0	345.9	344.8	343.3	340.5
17	346.4	345.2	343.9	344.2	345.1	345.4	346.4	345.9	345.8	344.8	343.2	340.4
18	346.5	344.9	343.8	344.4	345.1	345.6	346.3	346.1	345.8	344.7	343.1	340.3
19	346.5	344.9	343.6	344.7	345.2	345.9	346.3	346.2	345.7	344.7	343.1	340.4
20	346.3	344.9	343.5	344.7	345.2	346.0	346.6	346.2	345.7	344.6	343.0	340.3
21	346.0	344.9	343.5	344.8	345.2	346.1	346.5	346.1	345.8	344.7	342.8	340.2
22	346.1	345.0	343.8	344.7	345.4	345.9	346.6	346.1	345.7	344.4	342.7	340.0
23	346.0	345.0	343.8	344.9	345.5	345.9	346.5	346.1	345.7	344.6	342.7	340.0
24	345.9	345.0	344.1	345.0	345.5	346.1	346.5	346.2	345.7	344.6	342.6	339.9
25	345.9	344.6	344.1	345.0	345.5	346.0	346.5	346.2	345.6	344.5	342.5	340.0
26	346.0	344.4	343.9	344.9	345.6	346.3	346.5	346.1	345.6	344.4	342.4	340.0
27	346.0	344.2	343.9	344.8	345.8	346.2	346.4	346.1	345.6	344.3	342.2	339.9
28	346.2	344.0	344.0	344.9	345.8	346.0	346.4	346.1	345.6	344.2	342.0	339.8
29	346.3	344.3	344.1	344.7	---	346.2	346.5	345.9	345.4	344.3	341.8	339.8
30	345.9	343.9	344.2	344.9	---	346.2	346.5	346.0	345.4	344.4	341.7	339.7
31	345.8	---	344.2	345.0	---	346.3	---	346.0	---	344.3	341.7	---
MEAN	346.4	344.9	343.5	344.5	345.2	345.9	346.3	346.2	345.8	344.8	343.1	340.6
MAX	347.1	345.9	344.2	345.0	345.8	346.3	346.6	346.5	346.1	345.5	344.2	341.7
MIN	345.8	343.9	342.7	343.6	344.9	345.0	345.9	345.9	345.4	344.2	341.7	339.7

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.002	0.003	0.005	0.006	0.007	0.007	0.006	0.008	0.008	0.006	0.006	0.006
2	0.002	0.001	0.005	0.006	0.006	0.007	0.008	0.008	0.008	0.006	0.006	0.005
3	0.002	0.002	0.006	0.007	0.006	0.007	0.008	0.007	0.007	0.006	0.006	0.005
4	0.002	0.003	0.007	0.007	0.008	0.007	0.008	0.008	0.007	0.006	0.006	0.006
5	0.002	0.003	0.007	0.004	0.009	0.007	0.006	0.008	0.007	0.006	0.006	0.006
6	0.002	0.003	0.003	0.006	0.007	0.007	0.007	0.008	0.007	0.006	0.006	0.006
7	0.002	0.003	0.005	0.006	0.007	0.007	0.008	0.008	0.007	0.006	0.007	0.006
8	0.002	0.003	0.004	0.005	0.006	0.007	0.009	0.007	0.007	0.006	0.006	0.006
9	0.002	0.003	0.004	0.005	0.006	0.007	0.009	0.008	0.007	0.006	0.006	0.006
10	0.003	0.003	0.005	0.006	0.007	0.008	0.007	0.008	0.007	0.006	0.006	0.006
11	0.003	0.003	0.006	0.008	0.007	0.007	0.007	0.007	0.008	0.006	0.006	0.005
12	0.002	0.004	0.006	0.005	0.006	0.008	0.007	0.007	0.007	0.006	0.007	0.005
13	0.002	0.004	0.005	0.004	0.006	0.008	0.008	0.007	0.007	0.006	0.007	0.005
14	0.002	0.003	0.005	0.005	0.007	0.009	0.007	0.008	0.007	0.006	0.007	0.005
15	0.002	0.002	0.006	0.004	0.007	0.006	0.007	0.008	0.007	0.006	0.006	0.005
16	0.003	0.003	0.005	0.005	0.007	0.006	0.007	0.009	0.007	0.006	0.007	0.005
17	0.003	0.003	0.005	0.006	0.008	0.007	0.007	0.007	0.007	0.006	0.007	0.005
18	0.003	0.004	0.006	0.005	0.008	0.008	0.008	0.008	0.007	0.006	0.007	0.005
19	0.003	0.005	0.006	0.006	0.007	0.007	0.008	0.008	0.007	0.006	0.006	0.005
20	0.003	0.006	---	0.007	0.007	0.007	0.007	0.008	0.007	0.007	0.006	0.005
21	0.004	0.005	---	0.007	0.007	0.007	0.007	0.008	0.007	0.007	0.006	0.005
22	0.003	0.004	0.006	0.006	0.007	0.008	0.007	0.008	0.007	0.006	0.006	0.005
23	0.003	0.003	0.005	0.007	0.008	0.008	0.008	0.008	0.006	0.006	0.006	0.005
24	0.003	0.003	0.004	0.006	0.007	0.007	0.008	0.008	0.006	0.007	0.006	0.005
25	0.004	0.004	0.006	0.007	0.008	0.007	0.007	0.008	0.006	0.007	0.006	0.005
26	0.003	0.004	0.007	0.008	0.007	0.006	0.007	0.008	0.006	0.007	0.006	0.005
27	0.004	0.005	0.006	0.007	0.006	0.007	0.007	0.008	0.006	0.007	0.006	0.005
28	0.002	0.006	0.006	0.007	0.006	0.009	0.007	0.008	0.006	0.006	0.006	0.005
29	0.002	0.002	0.007	0.008	---	0.007	0.007	0.008	0.006	0.006	0.006	0.005
30	0.002	0.001	0.005	0.007	---	0.007	0.008	0.008	0.006	0.006	0.006	0.005
31	0.003	---	0.007	0.007	---	0.006	---	0.008	---	0.006	0.006	---
MEAN	0.003	0.003	---	0.006	0.007	0.007	0.007	0.008	0.007	0.006	0.006	0.005
MAX	0.004	0.006	---	0.008	0.009	0.009	0.009	0.009	0.008	0.007	0.007	0.006
MIN	0.002	0.001	---	0.004	0.006	0.006	0.006	0.007	0.006	0.006	0.006	0.005



## GROUND-WATER LEVELS AND COMPACTION VALUES

## PIMA COUNTY

## 321517110571802. Local number, (D-13-14)31cac

**LOCATION**--Lat 32°15'17", long 110°57'18", Hydrologic Unit 15050301, within the Tucson ground-water basin, between Park Avenue and Mountain Avenue on Mitchell Street at Mitchell Park. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 6.0 in., depth 808 ft, open throughout casing.

**INSTRUMENTATION**--Water-level and compaction recorders.

**DATUM**--Elevation of land surface is 2,395.0 ft above sea level, from topographic map. Measuring point: Top of casing 1.5 ft above land-surface datum.

**REMARKS**--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

**PERIOD OF RECORD**--Sept. 1982 to current year.

**EXTREMES FOR PERIOD OF RECORD**--Highest water level recorded, 174.42 ft below land-surface datum, Dec. 1, 1982; lowest recorded, 253.43 ft below land-surface datum, Aug. 26, 2004.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252.6	---	252.9	249.4	247.6	248.8	249.2	250.2	251.6	---	252.3	252.2
2	252.6	252.7	252.9	250.0	247.7	248.6	249.0	250.6	251.6	---	252.2	251.8
3	252.7	252.7	252.9	250.5	247.8	248.6	248.9	250.8	251.8	---	252.1	251.7
4	252.7	252.7	252.8	249.7	247.6	247.7	248.9	250.9	251.9	---	251.9	251.6
5	252.7	252.8	252.8	249.6	247.3	247.3	248.7	251.0	252.0	---	251.7	251.5
6	252.7	252.2	252.9	249.6	247.3	247.1	248.9	251.0	252.0	252.7	251.7	251.5
7	252.8	251.2	252.7	249.3	247.3	247.0	249.6	251.0	252.1	252.7	251.0	251.5
8	252.7	251.1	252.6	249.3	247.3	247.4	249.4	251.1	252.1	252.2	250.7	251.5
9	252.6	251.7	252.8	249.2	247.8	247.3	249.6	251.2	252.2	252.3	250.6	251.5
10	252.5	252.2	252.4	249.2	247.7	247.9	250.0	251.1	252.2	252.5	250.5	251.7
11	252.7	252.4	251.2	249.6	247.3	247.4	250.3	251.2	252.1	252.6	250.4	251.5
12	252.7	252.4	250.8	249.5	247.1	247.9	250.3	251.2	252.3	252.7	250.1	251.6
13	252.7	252.5	250.7	249.3	247.2	248.3	250.4	251.3	252.4	252.7	250.0	251.5
14	252.7	252.7	250.5	249.1	247.8	248.8	250.3	251.3	252.4	252.7	249.9	251.4
15	---	252.8	250.4	249.0	248.2	249.2	249.8	251.2	252.4	252.7	249.8	251.4
16	---	252.9	251.1	248.8	248.6	249.5	249.8	251.2	252.4	252.7	249.7	251.5
17	---	253.0	250.5	248.6	248.6	249.6	250.2	251.2	252.4	252.7	249.8	252.1
18	---	252.9	250.5	248.6	248.3	249.4	250.4	251.4	252.5	252.8	250.6	251.9
19	---	252.9	250.1	248.5	248.2	249.5	250.1	251.4	252.5	252.8	250.9	252.0
20	---	252.8	250.6	248.4	248.2	249.2	250.4	251.4	252.6	253.0	251.0	251.9
21	---	252.8	250.7	248.3	248.3	249.1	250.6	251.4	252.6	252.9	251.1	251.5
22	---	252.7	250.2	248.2	248.2	248.9	250.8	251.5	252.6	253.0	251.2	251.3
23	---	252.1	250.5	248.1	248.0	248.8	250.7	251.5	252.7	253.0	251.4	251.5
24	---	251.5	250.9	248.1	248.0	248.7	250.5	251.5	---	253.1	251.4	251.5
25	---	251.8	250.9	248.0	247.9	248.4	250.0	251.6	---	253.1	251.3	251.5
26	---	251.9	250.7	247.8	247.8	248.4	249.9	251.6	---	253.0	251.3	251.6
27	---	251.9	250.1	248.0	247.9	248.7	249.9	251.6	---	252.8	251.4	251.8
28	---	251.9	250.4	247.9	248.3	249.3	249.9	251.6	---	252.8	251.8	251.7
29	---	252.5	250.0	247.7	---	249.5	249.9	251.3	---	253.0	251.9	251.6
30	---	252.9	249.7	247.7	---	249.1	249.9	251.5	---	253.1	252.2	251.6
31	---	---	249.3	247.7	---	249.2	---	251.6	---	252.4	252.4	---
MEAN	---	---	251.2	248.8	247.8	248.5	249.9	251.2	---	---	251.1	251.6
MAX	---	---	252.9	250.5	248.6	249.6	250.8	251.6	---	---	252.4	252.2
MIN	---	---	249.3	247.7	247.1	247.0	248.7	250.2	---	---	249.7	251.3

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	0.129	0.130	---	0.126	0.126	0.127	0.126	0.125	0.126	0.126	0.126
2	0.130	0.129	0.129	---	0.127	0.125	0.126	0.125	0.125	0.126	0.126	0.126
3	0.130	0.129	0.129	---	0.127	0.126	0.125	0.125	0.125	0.126	0.126	0.127
4	0.130	0.130	0.128	---	0.126	0.126	0.125	0.126	0.125	0.126	0.126	0.126
5	0.130	0.130	0.127	---	0.125	0.125	0.126	0.125	0.125	0.126	0.126	0.126
6	0.130	0.130	---	0.128	0.125	0.125	0.126	0.125	0.125	0.126	0.126	0.126
7	0.130	0.130	---	0.127	0.126	0.126	0.126	0.125	0.125	0.126	0.126	0.126
8	0.130	0.130	---	0.128	0.126	0.126	0.125	0.126	0.126	0.126	0.126	0.126
9	0.130	0.130	---	0.129	0.126	0.126	0.125	0.125	0.125	0.126	0.126	0.126
10	0.131	0.129	---	0.128	0.126	0.125	0.125	0.125	0.125	0.126	0.126	0.126
11	0.131	0.129	---	0.126	0.126	0.125	0.126	0.125	0.125	0.126	0.126	0.126
12	0.130	0.130	---	0.126	0.126	0.125	0.126	0.125	0.126	0.126	0.126	0.126
13	0.130	0.130	---	0.128	0.127	0.125	0.125	0.126	0.125	0.126	0.126	0.126
14	0.130	0.130	---	0.128	0.127	0.125	0.125	0.126	0.125	0.126	0.126	0.126
15	0.130	0.129	---	0.128	0.126	0.125	0.126	0.125	0.125	0.126	0.126	0.126
16	0.130	0.129	---	0.128	0.126	0.127	0.126	0.125	0.125	0.126	0.126	0.126
17	0.130	0.129	---	0.127	0.126	0.126	0.126	0.125	0.125	0.126	0.126	0.126
18	0.130	0.129	---	0.127	0.126	0.125	0.126	0.125	0.125	0.126	0.126	0.126
19	0.130	0.129	---	0.127	0.125	0.126	0.125	0.126	0.125	0.126	0.126	0.126
20	0.129	0.129	---	0.126	0.126	0.126	0.126	0.125	0.125	0.126	0.126	0.126
21	0.129	0.128	---	0.126	0.126	0.126	0.126	0.125	0.125	0.126	0.126	0.126
22	0.129	0.129	---	0.126	0.125	0.126	0.126	0.125	0.126	0.126	0.126	0.126
23	0.129	0.129	---	0.126	0.125	0.125	0.126	0.125	0.126	0.126	0.126	0.126
24	0.130	0.130	---	0.127	0.125	0.125	0.126	0.125	0.126	0.126	0.126	0.126
25	0.130	0.130	---	0.127	0.125	0.126	0.126	0.125	0.126	0.126	0.126	0.126
26	0.130	0.129	---	0.126	0.125	0.126	0.126	0.125	0.126	0.126	0.126	0.126
27	0.130	0.129	---	0.126	0.126	0.127	0.126	0.125	0.126	0.126	0.126	0.126
28	0.129	0.128	---	0.126	0.127	0.125	0.126	0.125	0.126	0.126	0.126	0.126
29	0.129	0.130	---	0.126	---	0.125	0.126	0.125	0.126	0.126	0.126	0.126
30	0.129	0.131	---	0.126	---	0.126	0.126	0.125	0.126	0.126	0.126	0.126
31	0.130	---	---	0.126	---	0.127	---	0.125	---	0.126	0.126	---
MEAN	---	0.129	---	---	0.126	0.126	0.126	0.125	0.125	0.126	0.126	0.126
MAX	---	0.131	---	---	0.127	0.127	0.127	0.126	0.126	0.126	0.126	0.127
MIN	---	0.128	---	---	0.125	0.125	0.125	0.125	0.125	0.126	0.126	0.126

GROUND-WATER LEVELS AND COMPACTION VALUES

PIMA COUNTY

321208110525001. Local number, (D-14-14)22adb1

LOCATION.--Lat 32°12'08", long 110°53'45", Hydrologic Unit 15050301, within the Tucson ground-water basin, on Belvedere Avenue south of 26th street. Owner: U.S. Geological Survey.

WELL CHARACTERISTICS.--Drilled observation well fitted with a borehole, pipe extensometer, diameter 12 in., depth 485 ft, open throughout casing.

INSTRUMENTATION.--Water-level and compaction recorders.

DATUM.--Elevation of land surface is 2,555.0 ft above sea level, from topographic map. Measuring point: Top of well 1.0 ft above land-surface datum.

REMARKS.--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

PERIOD OF RECORD.--Dec. 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 252.75 ft below land-surface datum, Jan. 24, 1980; lowest recorded, 323.3 ft below land-surface datum, Dec. 1, 2, 2005.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	322.6	322.9	323.3	---	321.8	321.6	321.3	321.4	321.4	321.6	321.7	321.5
2	322.6	322.9	---	---	321.9	321.6	321.3	321.4	321.5	321.5	321.8	321.5
3	322.6	322.9	---	---	321.8	321.5	321.4	321.4	321.5	321.5	321.7	321.6
4	322.6	322.6	---	322.2	321.8	321.5	321.4	321.4	321.5	321.6	321.7	321.6
5	322.7	322.5	---	322.0	321.9	321.4	321.3	321.4	321.4	321.6	321.7	321.6
6	322.7	322.5	---	322.0	322.0	321.4	321.3	321.4	321.4	321.6	321.7	321.6
7	322.7	322.6	---	322.1	321.9	321.4	321.3	321.4	321.4	321.5	321.8	321.5
8	322.7	322.6	---	322.0	321.7	321.4	321.4	321.4	321.4	321.6	321.7	321.6
9	322.7	322.6	---	321.9	321.8	321.5	321.5	321.4	321.4	321.7	321.7	321.6
10	322.7	322.6	---	321.9	321.8	321.5	321.4	321.5	321.5	321.7	321.7	321.6
11	322.8	322.6	---	322.1	321.8	321.6	321.2	321.5	321.5	321.7	321.7	321.6
12	322.7	322.7	---	322.1	321.9	321.5	321.2	321.4	321.3	321.7	321.8	321.6
13	322.7	322.7	---	321.9	321.9	321.6	321.3	321.4	321.3	321.6	321.7	321.6
14	322.7	322.7	---	321.9	321.9	321.5	321.3	321.4	321.4	321.6	321.6	321.6
15	322.8	322.7	---	321.8	321.9	321.5	321.2	321.5	321.5	321.6	321.6	321.5
16	322.7	322.8	---	321.8	321.9	321.5	321.2	321.5	321.5	321.6	321.6	321.5
17	322.7	322.9	---	321.9	321.9	321.5	321.2	321.6	321.6	321.6	321.6	321.6
18	322.7	322.9	---	321.9	321.8	321.5	321.2	321.5	321.5	321.7	321.6	321.6
19	322.8	322.9	---	321.9	321.8	321.5	321.3	321.4	321.5	321.7	321.6	321.5
20	322.8	322.9	---	322.0	321.7	321.4	321.2	321.4	321.5	321.6	321.6	321.5
21	322.8	323.0	---	322.0	321.7	321.3	321.2	321.5	321.5	321.6	321.6	321.6
22	322.8	323.0	---	322.0	321.7	321.3	321.2	321.4	321.5	321.6	321.6	321.7
23	322.8	322.9	---	321.9	321.7	321.4	321.3	321.4	321.6	321.7	321.6	321.7
24	322.8	323.0	---	321.9	321.7	321.4	321.3	321.3	321.6	321.7	321.6	321.8
25	322.8	323.0	---	321.9	321.7	321.4	321.3	321.3	321.7	321.7	321.6	321.7
26	322.7	323.1	---	322.0	321.7	321.2	321.3	321.3	321.6	321.8	321.6	321.6
27	322.7	323.1	---	322.0	321.6	321.2	321.3	321.4	321.6	321.7	321.6	321.6
28	322.8	323.1	---	321.8	321.5	321.3	321.3	321.4	321.6	321.6	321.6	321.5
29	322.8	323.1	---	321.9	---	321.3	321.3	321.4	321.6	321.6	321.7	321.5
30	322.8	323.2	---	321.9	---	321.3	321.3	321.4	321.6	321.6	321.6	321.5
31	322.8	---	---	321.8	---	321.2	---	321.4	---	321.7	321.5	---
MEAN	322.7	322.8	---	---	321.8	321.4	321.3	321.4	321.5	321.6	321.6	321.6
MAX	322.8	323.2	---	---	322.0	321.6	321.5	321.6	321.7	321.8	321.8	321.8
MIN	322.6	322.5	---	---	321.5	321.2	321.2	321.3	321.3	321.5	321.5	321.5

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	0.340	0.342	0.344	0.345	0.348	0.348	0.350	0.351	0.353	0.355	0.356
2	---	0.339	0.342	0.345	0.345	0.348	0.350	0.350	0.351	0.353	0.356	0.356
3	---	0.341	0.343	0.345	0.345	0.347	0.349	0.350	0.351	0.354	0.355	0.356
4	---	0.341	0.343	0.344	0.345	0.348	0.349	0.349	0.352	0.354	0.355	0.356
5	0.340	0.341	0.343	0.342	0.346	0.348	0.347	---	0.352	0.354	0.355	0.356
6	0.340	0.341	0.340	0.345	0.345	0.348	0.349	---	0.352	0.354	0.355	0.356
7	0.340	0.341	0.341	0.345	0.346	0.348	0.350	0.350	0.352	0.354	0.355	0.356
8	0.340	0.341	0.342	0.344	0.346	0.348	0.350	0.350	0.352	0.354	0.355	0.356
9	0.340	0.341	0.342	0.344	0.346	0.348	0.350	0.350	0.352	0.354	0.355	0.356
10	0.340	0.341	0.343	0.344	0.346	0.349	0.349	0.350	0.352	0.354	0.355	0.356
11	0.340	0.341	0.344	0.345	0.347	0.348	0.348	0.350	0.352	0.354	0.355	0.356
12	0.339	0.342	0.343	0.342	0.346	0.348	0.349	0.350	0.352	0.354	0.355	0.356
13	0.340	0.342	0.343	0.342	0.346	0.349	0.349	0.350	0.352	0.354	0.355	0.356
14	0.340	0.341	0.343	0.344	0.347	0.349	0.348	0.350	0.353	0.354	0.355	0.356
15	0.340	0.341	0.344	0.343	0.347	0.347	0.348	0.350	0.353	0.354	0.355	0.356
16	0.340	0.341	0.342	0.344	0.347	0.347	0.348	0.350	0.353	0.354	0.355	0.356
17	0.340	0.341	0.343	0.344	0.347	0.349	0.349	0.350	0.353	0.354	0.355	0.356
18	0.340	0.342	0.343	0.344	0.348	0.349	0.349	0.350	0.353	0.354	0.355	0.356
19	0.340	0.343	0.343	0.344	0.348	0.348	0.349	0.350	0.353	0.355	0.355	0.356
20	0.340	0.343	0.345	0.345	0.348	0.348	0.348	0.350	0.353	0.355	0.355	0.356
21	0.340	0.343	0.345	0.345	0.349	0.348	0.348	0.350	0.353	0.355	0.355	0.356
22	0.340	0.342	0.343	0.344	0.349	0.349	0.349	0.350	0.353	0.355	0.355	0.357
23	0.340	0.342	0.344	0.345	0.349	0.349	0.349	0.351	0.353	0.355	0.355	0.357
24	0.341	0.341	0.341	0.344	0.349	0.348	0.349	0.351	0.353	0.355	0.356	0.357
25	0.341	0.342	0.343	0.345	0.348	0.348	0.349	0.351	0.353	0.355	0.356	0.357
26	0.341	0.342	0.344	0.346	0.347	0.348	0.349	0.351	0.353	0.355	0.356	0.356
27	0.341	0.342	0.344	0.345	0.347	0.349	0.349	0.351	0.353	0.355	0.356	0.357
28	0.341	0.342	0.343	0.345	0.347	0.350	0.349	0.351	0.353	0.355	0.356	0.357
29	0.340	0.338	0.345	0.346	---	0.348	0.349	0.351	0.353	0.355	0.356	0.357
30	0.341	0.340	0.344	0.345	---	0.348	0.350	0.351	0.353	0.355	0.356	0.357
31	0.341	---	0.345	0.346	---	0.347	---	0.351	---	0.355	0.356	---
MEAN	---	0.341	0.343	0.344	0.347	0.348	0.349	---	0.352	0.354	0.355	0.356
MAX	---	0.343	0.345	0.346	0.349	0.350	0.350	---	0.353	0.355	0.356	0.357
MIN	---	0.338	0.340	0.342	0.345	0.347	0.347	---	0.351	0.353	0.355	0.356

## GROUND-WATER LEVELS AND COMPACTION VALUES

## PIMA COUNTY

## 321142110530301. Local Number, (D-14-14)23cba

**LOCATION**--Lat 32°11'57", long 110°53'15", Hydrologic Unit 15050301, within the Tucson ground-water basin, on 29th Street and Swan at Freedom Park. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 16 in., depth 1,030 ft, open throughout casing.

**INSTRUMENTATION**--Water-level and compaction recorders.

**DATUM**--Elevation of land surface is 2,592.0 ft above sea level, from topographic map. Measuring point: Top of casing 1.0 ft above land-surface datum.

**REMARKS**--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

**PERIOD OF RECORD**--Mar. 1980 to current year.

**EXTREMES FOR PERIOD OF RECORD**--Highest water level recorded, 270.4 ft below land-surface datum, Apr. 9, 1980; lowest recorded, 333.6 ft below land-surface datum, Sept. 19, 25, 26, 2005.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	332.9	333.0	---	332.6	332.5	332.3	332.6	332.9	332.9	333.2	333.2	333.3
2	332.8	332.8	---	332.6	332.6	332.3	332.5	332.9	332.9	333.2	333.3	333.3
3	332.8	332.8	332.7	332.6	332.5	332.4	332.6	332.9	333.0	333.2	333.3	333.4
4	332.8	332.8	332.7	332.6	332.5	332.3	332.6	333.0	333.0	333.2	333.3	333.3
5	332.8	332.9	332.7	332.8	332.4	332.4	332.6	332.9	333.0	333.2	333.3	333.3
6	332.8	332.8	332.8	332.6	332.5	332.4	332.5	332.9	333.0	333.2	333.2	333.3
7	332.8	332.8	332.8	332.6	332.5	332.4	332.5	332.9	333.0	333.2	333.2	333.3
8	332.8	332.8	332.8	332.7	332.5	332.4	332.5	332.9	333.0	333.1	333.1	333.3
9	332.7	332.9	332.8	332.7	332.5	332.4	332.5	332.9	333.0	333.2	333.1	333.3
10	332.7	332.8	332.8	332.6	332.5	332.3	332.6	332.8	333.0	333.2	333.1	333.3
11	332.9	332.8	332.7	332.5	332.4	332.3	332.7	332.9	333.0	333.2	333.1	333.3
12	332.8	332.7	332.7	332.6	332.5	332.3	332.6	332.9	333.1	333.2	333.1	333.3
13	332.8	332.8	332.8	332.7	332.5	332.3	332.6	332.9	333.0	333.2	333.1	333.4
14	332.8	332.8	332.8	332.6	332.4	332.3	332.6	332.9	333.0	333.2	333.1	333.4
15	332.8	332.8	332.7	332.6	332.4	332.4	332.7	332.8	333.0	333.2	333.2	333.4
16	332.8	332.9	332.8	332.6	332.4	332.4	332.7	332.8	333.0	333.2	333.2	333.4
17	332.8	332.8	332.8	332.5	332.4	332.3	332.7	332.8	333.0	333.2	333.1	333.4
18	332.8	332.8	332.7	332.6	332.4	332.3	332.7	332.9	333.0	333.2	333.1	333.4
19	332.8	332.7	332.7	332.6	332.4	332.4	332.7	332.9	333.0	333.2	333.2	333.5
20	332.8	---	332.6	332.5	332.4	332.4	332.8	332.9	333.0	333.2	333.2	333.4
21	332.9	---	332.6	332.5	332.4	332.4	332.8	332.9	333.0	333.2	333.2	333.4
22	332.9	---	332.7	332.6	332.4	332.4	332.8	332.9	333.1	333.2	333.2	333.4
23	332.8	---	332.7	332.6	332.4	332.3	332.8	332.9	333.1	333.3	333.3	333.4
24	332.8	---	332.8	332.6	332.4	332.4	332.8	332.9	333.1	333.2	333.3	333.4
25	332.8	---	332.7	332.5	332.4	332.4	332.9	332.9	333.0	333.1	333.3	333.5
26	332.9	---	332.6	332.5	332.4	332.5	332.9	332.9	333.1	333.1	333.3	333.5
27	332.9	---	332.7	332.6	332.4	332.5	332.9	332.9	333.1	333.2	333.2	333.5
28	332.9	---	332.7	332.6	332.4	332.4	332.9	333.0	333.1	333.2	333.2	333.4
29	332.8	---	332.6	332.4	---	332.5	332.9	332.9	333.1	333.3	333.2	333.5
30	332.8	---	332.7	332.5	---	332.6	332.9	332.9	333.1	333.3	333.3	333.4
31	332.8	---	332.6	332.5	---	332.7	---	333.0	---	333.3	333.3	---
MEAN	332.8	---	---	332.6	332.4	332.4	332.7	332.9	333.0	333.2	333.2	333.4
MAX	332.9	---	---	332.8	332.6	332.7	332.9	333.0	333.1	333.3	333.3	333.5
MIN	332.7	---	---	332.4	332.4	332.3	332.5	332.8	332.9	333.1	333.1	333.3

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	0.235	0.235	0.235	---	0.234	0.233	0.233	0.236	0.238	0.240	0.239
2	---	0.235	0.235	0.235	---	0.234	0.233	0.233	0.236	0.238	0.240	0.240
3	---	0.236	0.235	---	---	0.234	0.233	0.233	0.236	0.238	0.240	0.240
4	---	0.236	0.235	---	---	0.234	0.233	0.233	0.236	0.238	0.240	0.240
5	---	0.236	0.235	---	---	0.234	0.233	0.233	0.236	0.238	0.240	0.240
6	0.236	0.236	0.235	0.235	0.234	0.234	0.233	0.233	0.236	0.238	0.240	0.240
7	0.236	0.236	0.235	0.235	0.234	0.234	0.233	0.234	0.236	0.238	0.240	0.240
8	0.236	0.236	0.235	0.235	0.234	0.233	0.233	0.234	0.236	0.238	0.239	0.240
9	0.235	0.236	0.235	0.235	0.234	0.233	0.233	0.234	0.236	0.238	0.239	0.240
10	0.235	0.236	0.235	0.235	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.240
11	0.235	0.236	0.235	0.235	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.240
12	0.235	0.236	0.235	0.235	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.240
13	0.235	0.236	0.235	0.235	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.240
14	0.235	0.236	0.235	0.235	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.240
15	0.235	0.236	0.235	0.235	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.240
16	0.235	0.236	0.235	0.235	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.240
17	0.235	0.236	0.235	0.234	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.241
18	0.235	0.236	0.235	---	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.241
19	0.235	0.236	0.235	---	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.241
20	0.235	0.236	0.235	---	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.241
21	0.235	0.236	0.235	---	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.241
22	0.235	0.236	0.235	---	0.234	0.233	0.233	0.234	0.237	0.239	0.239	0.241
23	0.235	0.236	0.235	---	0.234	0.233	0.233	0.235	0.237	0.239	0.239	0.241
24	0.235	0.236	0.235	---	0.234	0.233	0.233	0.235	0.237	0.239	0.239	0.241
25	0.235	0.236	0.235	---	0.234	0.233	0.233	0.235	0.237	0.240	0.239	0.241
26	0.235	0.236	0.235	---	0.234	0.233	0.233	0.235	0.238	0.240	0.239	0.241
27	0.235	0.236	0.235	---	0.234	0.233	0.233	0.236	0.238	0.240	0.239	0.241
28	0.235	0.235	0.235	---	0.234	0.233	0.233	0.236	0.238	0.240	0.239	0.241
29	0.235	0.235	0.235	---	---	0.233	0.233	0.236	0.238	0.240	0.239	0.241
30	0.235	0.235	0.235	---	---	0.233	0.233	0.236	0.238	0.240	0.239	0.241
31	0.235	---	0.235	---	---	0.233	---	0.236	---	0.240	0.239	---
MEAN	---	0.236	0.235	---	---	0.233	0.233	0.234	0.237	0.239	0.239	0.240
MAX	---	0.236	0.235	---	---	0.234	0.233	0.236	0.238	0.240	0.240	0.241
MIN	---	0.235	0.235	---	---	0.233	0.233	0.233	0.236	0.238	0.239	0.239

**GROUND-WATER LEVELS AND COMPACTION VALUES**

**PIMA COUNTY**

**321058110563301. Local number, (D-14-14)29cbc**

**LOCATION.**--Lat 32°10'58", long 110°56'33", Hydrologic Unit 15050301, within the Tucson ground-water basin, on the northeast corner of Campbell and Granito Vista. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS.**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 16 in., depth 885 ft, open throughout casing.

**INSTRUMENTATION.**--Water-level and compaction recorders.

**DATUM.**--Elevation of land surface is 2,502.0 ft above sea level, from topographic map. Measuring point: Top of casing 2.6 ft above land-surface datum.

**REMARKS.**--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

**PERIOD OF RECORD.**--Apr. 1980 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 191.9 ft below land-surface datum, Apr. 10, 1981; lowest recorded, 231.6 ft below land-surface datum, July 20, 22, 23, 24, 27, 28, 2005.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	227.0	226.9	227.3	227.0	226.2	229.0	230.3	230.1	229.2
2	---	---	---	227.0	227.1	227.3	226.7	226.2	229.0	230.3	229.9	229.2
3	---	---	227.1	227.0	227.2	227.3	226.6	226.2	229.1	230.3	230.0	229.2
4	---	---	226.9	227.1	227.1	227.2	226.7	226.2	229.3	230.4	230.0	229.0
5	---	---	226.8	227.5	226.9	227.1	227.0	226.1	229.2	---	229.9	228.9
6	---	---	227.0	227.3	227.0	227.1	226.9	225.9	229.3	231.0	229.8	228.9
7	---	---	227.3	227.2	227.1	227.2	226.6	226.0	229.4	230.9	229.7	228.8
8	---	---	227.3	227.3	227.2	227.1	226.4	225.9	229.4	231.0	229.7	228.7
9	---	---	227.4	227.4	227.3	227.2	226.3	225.9	229.3	230.9	229.7	228.7
10	---	---	227.3	227.3	227.2	226.9	226.5	225.9	229.3	230.9	229.6	228.7
11	---	---	227.2	227.0	227.1	226.9	226.6	226.0	229.1	231.0	229.6	228.6
12	---	---	227.2	227.2	227.0	226.8	226.2	226.1	229.5	231.1	229.4	228.6
13	---	---	227.2	227.5	227.1	226.7	226.2	226.1	229.5	231.1	229.4	228.5
14	---	---	227.3	227.4	227.1	226.7	226.3	226.2	229.5	231.1	229.5	228.4
15	---	---	227.2	227.3	227.2	227.0	226.4	226.2	229.7	231.1	229.5	228.5
16	---	---	227.3	227.2	227.2	227.3	226.4	226.1	229.8	231.2	229.5	228.4
17	---	---	227.4	227.0	227.0	227.1	226.5	226.2	229.8	231.2	229.5	228.3
18	---	---	227.3	227.2	226.9	227.0	226.3	226.3	229.9	231.1	229.4	228.3
19	---	---	227.3	227.2	227.0	227.0	226.2	227.3	229.7	231.3	229.4	228.4
20	---	---	227.1	227.2	227.1	227.0	226.3	227.8	229.8	231.4	229.5	228.3
21	---	---	227.0	227.1	227.4	227.0	226.4	228.2	230.0	231.4	229.4	228.1
22	---	---	227.3	227.3	227.3	226.9	226.4	228.4	230.0	231.4	229.3	228.0
23	---	---	227.3	227.3	227.2	226.7	226.5	228.5	230.0	231.6	229.4	227.9
24	---	---	227.5	227.3	227.3	226.9	226.3	228.6	230.0	231.5	229.2	227.8
25	---	---	227.5	227.3	227.2	226.9	226.3	228.7	230.0	231.4	229.3	227.9
26	---	---	227.3	227.1	227.2	227.0	226.3	228.8	230.1	231.2	229.2	227.9
27	---	---	227.3	227.1	227.4	226.9	226.3	229.0	230.2	231.4	229.1	227.8
28	---	---	227.5	227.2	227.5	226.6	226.3	229.0	230.2	231.4	229.0	227.7
29	---	---	227.3	227.0	---	226.7	226.3	229.0	230.2	230.9	229.1	227.5
30	---	---	227.4	227.1	---	226.8	226.3	229.0	230.2	231.2	229.1	227.4
31	---	---	227.3	227.0	---	226.9	---	229.0	---	230.6	229.1	---
MEAN	---	---	---	227.2	227.2	227.0	226.4	227.1	229.7	---	229.5	228.4
MAX	---	---	---	227.5	227.5	227.3	227.0	229.0	230.2	---	230.1	229.2
MIN	---	---	---	227.0	226.9	226.6	226.2	225.9	229.0	---	229.0	227.4

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.397	0.399	0.401	0.404	0.407	0.410	0.412	0.414	0.415	0.418	0.422	0.424
2	0.397	0.399	0.401	0.404	0.407	0.410	0.412	0.414	0.415	0.418	0.422	0.424
3	0.397	0.399	0.401	0.404	0.407	0.410	0.412	0.414	0.415	0.418	0.422	0.424
4	0.397	0.399	0.401	0.405	0.407	0.410	0.412	0.414	0.416	0.418	0.422	0.424
5	0.397	0.399	0.401	0.405	0.407	0.410	0.412	0.414	0.416	0.418	0.422	0.424
6	0.397	0.399	0.401	0.405	0.407	0.410	0.412	0.414	0.416	0.418	0.422	0.424
7	0.397	0.399	0.401	0.405	0.407	0.410	0.412	0.414	0.416	0.418	0.422	0.424
8	0.397	0.399	0.402	0.405	0.407	0.410	0.412	0.414	0.416	0.418	0.422	0.424
9	0.397	0.399	0.403	0.405	0.407	0.410	0.412	0.414	0.416	0.418	0.422	0.424
10	0.397	0.399	0.403	0.405	0.408	0.410	0.412	0.414	0.416	0.418	0.422	0.424
11	0.397	0.400	0.403	0.405	0.407	0.410	0.412	0.414	0.416	0.418	0.422	0.424
12	0.397	0.400	0.403	0.405	0.407	0.410	0.412	0.414	0.416	0.418	0.422	0.424
13	0.397	0.400	0.403	0.406	0.408	0.410	0.412	0.414	0.416	0.418	0.422	0.424
14	0.397	0.400	0.403	0.406	0.408	0.410	0.412	0.414	0.416	0.418	0.422	0.424
15	0.398	0.400	0.403	0.406	0.408	0.410	0.412	0.414	0.416	0.418	0.423	0.424
16	0.398	0.400	0.403	0.406	0.408	0.410	0.412	0.414	0.416	0.418	0.423	0.424
17	0.398	0.400	0.403	0.406	0.408	0.410	0.412	0.414	0.416	0.419	0.423	0.424
18	0.398	0.400	0.403	0.406	0.408	0.410	0.412	0.414	0.416	0.419	0.423	0.424
19	0.398	0.400	0.403	0.406	0.408	0.410	0.412	0.414	0.417	0.419	0.423	0.424
20	0.398	0.400	0.403	0.406	0.408	0.410	0.412	0.414	0.417	0.419	0.423	0.424
21	0.398	0.400	0.403	0.406	0.408	0.410	0.412	0.414	0.417	0.419	0.423	0.424
22	0.398	0.400	0.403	0.406	0.408	0.410	0.413	0.414	0.418	0.419	0.423	0.424
23	0.398	0.400	0.403	0.406	0.408	0.410	0.413	0.414	0.418	0.419	0.423	0.424
24	0.398	0.400	0.403	0.406	0.408	0.410	0.413	0.414	0.418	0.419	0.423	0.424
25	0.398	0.401	0.403	0.406	0.408	0.410	0.413	0.414	0.418	0.419	0.423	0.424
26	0.398	0.401	0.404	0.406	0.408	0.411	0.413	0.414	0.418	0.419	0.423	0.424
27	0.398	0.401	0.404	0.406	0.410	0.412	0.413	0.415	0.418	0.421	0.423	0.424
28	0.398	0.401	0.404	0.406	0.410	0.411	0.414	0.415	0.418	0.422	0.423	0.424
29	0.398	0.401	0.404	0.406	---	0.412	0.414	0.415	0.418	0.422	0.424	0.425
30	0.399	0.401	0.404	0.406	---	0.412	0.414	0.415	0.418	0.422	0.424	0.425
31	0.399	---	0.404	0.407	---	0.412	---	0.415	---	0.422	0.424	---
MEAN	0.398	0.400	0.403	0.406	0.408	0.410	0.412	0.414	0.417	0.419	0.423	0.424
MAX	0.399	0.401	0.404	0.407	0.410	0.412	0.414	0.415	0.418	0.422	0.424	0.425
MIN	0.397	0.399	0.401	0.404	0.407	0.410	0.412	0.414	0.415	0.418	0.422	0.424

## GROUND-WATER LEVELS AND COMPACTION VALUES

## PINAL COUNTY

## 321028111100301. Local number, (D-14-11)36aac

**LOCATION**--Lat 32°10'28", long 111°10'03", Hydrologic Unit 15050304, within the Avra Valley ground-water basin, approximately 3 mi north of Ajo Highway on Bopp Road along CAP canal. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 11.9 in., depth 1,400 ft, open throughout casing.

**INSTRUMENTATION**--Water-level and compaction recorders.

**DATUM**--Elevation of land surface is 2,377 ft above sea level, from topographic map. Measuring point: Top of casing 0.6 ft above land-surface datum.

**REMARKS**--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

**PERIOD OF RECORD**--April 1989 to current year.

**EXTREMES FOR PERIOD OF RECORD**--Highest water level recorded, 400.2 ft below land-surface datum, May 1, 1989; lowest recorded, 442.2 ft below land-surface datum, Sept. 19, 20, 2005.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	439.9	440.1	440.2	440.4	440.6	440.7	441.1	441.0	441.1	441.4	441.6	441.9
2	439.9	440.1	440.3	440.4	440.6	440.7	441.0	441.0	441.1	441.4	441.6	441.9
3	439.8	439.9	440.3	440.4	440.6	440.8	441.1	441.1	441.2	441.5	441.6	442.0
4	439.8	440.0	440.2	440.4	440.6	440.9	441.1	441.1	441.2	441.5	441.6	441.9
5	439.8	440.1	440.2	440.7	440.5	440.9	441.3	441.1	441.2	441.4	441.6	441.9
6	439.8	440.0	440.4	440.5	440.6	440.9	441.1	441.2	441.2	441.5	441.6	441.9
7	439.9	440.0	440.3	440.5	440.7	440.9	441.1	441.2	441.2	441.5	441.6	441.9
8	439.9	440.0	440.3	440.6	440.8	440.9	441.1	441.2	441.2	441.5	441.6	441.9
9	439.8	440.1	440.3	440.6	440.8	440.9	441.1	441.2	441.2	441.5	441.7	441.9
10	439.7	440.1	440.3	440.5	440.7	440.8	441.2	441.2	441.2	441.5	441.7	442.0
11	439.9	440.1	440.2	440.4	440.7	440.9	441.3	441.2	441.3	441.5	441.6	442.0
12	439.9	440.0	440.3	440.6	440.8	440.9	441.2	441.3	441.4	441.5	441.6	442.0
13	439.8	440.1	440.3	440.8	440.9	440.9	441.2	441.2	441.4	441.5	441.6	442.0
14	439.8	440.2	440.4	440.6	440.7	440.9	441.2	441.2	441.3	441.4	441.7	442.0
15	439.8	440.2	440.2	440.7	440.7	441.0	441.2	441.2	441.4	441.5	441.7	442.0
16	439.8	440.3	440.3	440.6	440.8	441.1	441.2	441.1	441.4	441.5	441.7	442.0
17	439.8	440.2	440.4	440.5	440.7	441.0	441.3	441.2	441.4	441.5	441.7	442.0
18	439.8	440.2	440.3	440.7	440.7	440.9	441.2	441.3	441.4	441.5	441.7	442.0
19	439.8	440.1	440.3	440.6	440.7	441.0	441.3	441.3	441.4	441.5	441.7	442.1
20	439.8	440.1	440.2	440.6	440.8	441.0	441.2	441.2	441.4	441.6	441.7	442.1
21	439.8	440.2	440.2	440.6	440.7	441.0	441.1	441.2	441.4	441.6	441.7	442.0
22	439.9	440.2	440.4	440.7	440.7	440.9	441.1	441.2	441.4	441.6	441.7	442.0
23	439.9	440.3	440.4	440.6	440.7	440.9	441.0	441.2	441.4	441.6	441.8	442.0
24	439.8	440.3	440.5	440.7	440.7	441.0	441.0	441.3	441.4	441.6	441.7	442.1
25	439.8	440.2	440.4	440.6	440.7	441.0	441.1	441.3	441.4	441.6	441.8	442.0
26	439.9	440.2	440.3	440.6	440.8	441.1	441.1	441.2	441.4	441.6	441.8	442.1
27	439.9	440.2	440.4	440.7	440.8	441.0	441.1	441.2	441.4	441.6	441.7	442.0
28	440.0	440.2	440.4	440.7	440.8	440.9	441.1	441.2	441.4	441.6	441.8	442.0
29	440.1	440.5	440.3	440.6	---	441.0	441.1	441.2	441.4	441.6	441.8	442.0
30	439.9	440.4	440.5	440.6	---	441.1	441.1	441.2	441.4	441.7	441.9	442.0
31	439.9	---	440.4	440.6	---	441.2	---	441.2	---	441.6	441.9	---
MEAN	439.9	440.2	440.3	440.6	440.7	440.9	441.1	441.2	441.3	441.5	441.7	442.0
MAX	440.1	440.5	440.5	440.8	440.9	441.2	441.3	441.3	441.4	441.7	441.9	442.1
MIN	439.7	439.9	440.2	440.4	440.5	440.7	441.0	441.0	441.1	441.4	441.6	441.9

GROUND-WATER LEVELS AND COMPACTION VALUES

PIMA COUNTY

32094411125701. Local number, (D-14-11)34ccc

LOCATION.--Lat 32°09'44", long 111°12'57", Hydrologic Unit 15050304, within the Avra Valley ground-water basin, approximately 2.5 mi north of Ajo Way (Highway 86), on northeast corner of Sandario and Snyder Hill. Owner: U.S. Geological Survey.

WELL CHARACTERISTICS.--Drilled observation well fitted with a borehole, pipe extensometer, diameter 20 in., depth 780 ft, open throughout casing.

INSTRUMENTATION.--Water-level and compaction recorders.

DATUM.--Elevation of land surface is 2,322.0 ft above sea level, from topographic map. Measuring point: Top of casing 1.0 ft above land-surface datum.

REMARKS.--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

PERIOD OF RECORD.--Aug. 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 335.59 ft below land-surface datum, May 26, 1985; lowest recorded, 408.9 ft below land-surface datum, July 13-14, 2004.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	407.7	406.9	406.2	---	---	---	403.9	403.3	403.4	---	406.1	406.4
2	407.7	407.1	406.2	---	---	---	403.7	403.3	403.4	---	406.2	406.4
3	407.7	406.9	406.2	---	---	---	403.7	403.2	403.4	---	406.2	406.5
4	407.6	406.8	406.2	---	---	---	403.7	403.3	403.5	---	406.2	406.4
5	407.5	406.8	406.2	---	---	---	403.8	403.2	403.5	---	406.2	406.4
6	407.4	406.7	406.4	---	---	---	403.7	403.2	403.6	---	406.2	406.4
7	407.5	406.6	406.5	---	---	---	403.5	403.2	403.6	---	406.2	406.4
8	407.6	406.6	406.6	---	---	---	403.4	403.3	403.5	---	406.2	406.4
9	407.4	406.7	406.6	---	---	---	403.5	403.2	403.5	---	406.3	406.4
10	407.2	406.7	406.6	---	---	---	403.6	403.2	403.5	---	406.3	406.4
11	407.3	406.6	406.5	---	---	---	403.7	403.2	403.4	---	406.2	406.5
12	407.4	406.4	406.4	---	---	---	403.5	403.3	403.6	---	406.2	406.5
13	407.4	406.4	406.4	---	---	---	403.5	403.3	403.7	---	406.2	406.5
14	407.4	406.5	406.5	---	---	---	403.5	403.3	403.6	---	406.3	406.4
15	407.3	406.6	406.3	---	---	---	403.6	403.3	403.7	---	406.3	406.5
16	407.2	406.7	406.4	---	---	---	403.5	403.2	403.8	---	406.4	406.5
17	407.2	406.7	406.4	---	---	---	403.6	403.2	403.8	---	406.3	406.5
18	407.2	406.6	406.3	---	---	---	403.4	403.4	403.8	---	406.3	406.5
19	407.1	406.4	---	---	---	---	403.3	403.4	403.9	---	406.3	406.6
20	407.1	406.4	---	---	---	---	403.5	403.4	403.9	---	406.3	406.6
21	407.1	406.3	406.0	---	---	---	403.5	403.3	404.0	405.7	406.2	406.6
22	407.2	406.4	406.1	---	---	---	403.5	403.3	404.1	405.8	406.2	406.5
23	407.1	406.4	406.1	---	---	---	403.4	403.4	404.1	405.9	406.3	406.5
24	407.0	406.5	406.3	---	---	---	403.3	403.4	404.2	405.9	406.3	406.6
25	406.9	406.4	406.3	---	---	403.9	403.3	403.5	404.1	405.9	406.3	406.7
26	406.9	406.3	406.1	---	---	404.0	403.4	403.4	404.2	405.9	406.3	406.8
27	406.9	406.2	406.1	---	---	403.9	403.4	403.5	404.3	406.0	406.2	406.8
28	407.1	406.1	406.2	---	---	403.7	403.4	403.5	404.3	406.1	406.2	406.8
29	407.1	406.4	406.1	---	---	403.8	403.4	403.5	404.4	406.1	406.2	406.8
30	407.0	406.4	406.2	---	---	403.8	403.4	403.5	404.5	406.2	406.3	406.8
31	406.8	---	406.1	---	---	404.0	---	403.5	---	406.2	406.4	---
TOTAL	12625.0	12196.5	---	---	---	---	12105.6	12503.2	12114.3	---	12593.8	12196.1
MEAN	407.3	406.6	---	---	---	---	403.5	403.3	403.8	---	406.3	406.5
MAX	407.7	407.1	---	---	---	---	403.9	403.5	404.5	---	406.4	406.8
MIN	406.8	406.1	---	---	---	---	403.3	403.2	403.4	---	406.1	406.4
MED	407.2	406.5	---	---	---	---	403.5	403.3	403.8	---	406.2	406.5

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.119	0.117	0.118	0.119	0.121	---	0.115	0.118	0.121	---	0.120	0.109
2	0.119	0.113	0.119	0.119	0.119	---	0.118	0.118	0.122	---	0.120	0.109
3	0.119	0.116	0.120	0.121	0.120	---	0.119	0.118	---	---	0.120	0.109
4	0.119	0.118	0.122	0.120	0.121	---	0.119	0.118	---	---	0.120	0.108
5	0.119	0.118	0.122	0.114	0.123	---	0.116	0.118	---	---	0.120	0.108
6	0.120	0.119	0.118	0.118	0.122	---	0.118	0.118	---	---	0.120	0.108
7	0.119	0.119	0.114	0.119	0.121	---	0.120	0.118	---	---	0.120	0.108
8	0.119	0.120	0.115	0.117	0.120	---	0.121	0.118	---	---	0.120	0.108
9	0.119	0.118	0.114	0.116	0.120	---	0.121	0.118	---	---	0.120	0.108
10	0.121	0.118	0.115	0.118	0.121	---	0.119	0.118	---	---	0.120	0.108
11	0.120	0.119	0.118	0.121	0.122	---	0.118	0.118	---	---	0.120	0.107
12	0.119	0.121	0.118	0.118	0.121	---	0.119	0.118	0.121	---	0.121	0.107
13	0.119	0.121	0.118	0.114	0.118	---	0.120	0.118	0.120	---	0.121	0.106
14	0.119	0.120	0.116	0.115	0.120	---	0.119	0.118	0.121	---	0.121	0.106
15	0.120	0.118	0.118	0.114	0.122	---	0.119	0.119	0.121	---	0.120	0.106
16	0.120	0.116	0.118	0.115	0.122	0.116	0.119	0.119	0.120	---	0.119	0.106
17	0.120	0.115	0.116	0.119	0.123	0.118	0.119	0.120	0.120	---	0.119	0.106
18	0.120	0.117	0.117	0.118	---	0.120	0.119	0.118	0.120	---	0.119	0.106
19	0.120	0.119	0.117	0.118	---	0.119	0.119	0.118	0.120	---	0.119	0.105
20	0.120	0.120	0.120	0.120	---	0.118	0.119	0.119	0.120	---	0.118	0.105
21	0.120	0.120	0.121	0.121	---	0.118	0.118	0.119	0.120	0.120	0.118	0.105
22	0.119	0.120	0.120	0.120	---	0.119	0.118	0.119	0.120	0.119	0.118	0.106
23	0.118	0.118	0.120	0.120	---	0.120	0.118	0.119	0.120	0.120	0.117	0.106
24	0.120	0.117	0.113	0.119	---	0.119	0.118	0.119	0.120	0.120	0.115	0.106
25	0.120	0.118	0.116	0.120	---	0.118	0.118	0.119	0.120	0.119	0.113	0.105
26	0.121	0.120	0.119	0.122	---	0.116	0.118	0.119	0.120	0.120	0.112	0.104
27	0.120	0.121	0.118	0.121	---	0.118	0.118	0.119	0.120	0.120	0.112	0.104
28	0.118	0.121	0.118	0.120	---	0.120	0.118	0.119	0.120	0.120	0.112	0.105
29	0.115	0.114	0.120	0.122	---	0.120	0.118	0.120	0.120	0.120	0.111	0.104
30	0.117	0.112	0.118	0.121	---	0.117	0.118	0.120	0.120	0.120	0.111	0.105
31	0.119	---	0.120	0.122	---	0.114	---	0.120	---	0.120	0.109	---
MEAN	0.119	0.118	0.118	0.119	---	---	0.119	0.119	---	---	0.118	0.106
MAX	0.121	0.121	0.122	0.122	---	---	0.121	0.120	---	---	0.121	0.109
MIN	0.115	0.112	0.113	0.114	---	---	0.115	0.118	---	---	0.109	0.104

## GROUND-WATER LEVELS AND COMPACTION VALUES

## PIMA COUNTY

## 320845110551201. Local number, (D-15-14)09bac

**LOCATION**--Lat 32°08'45", long 110°55'12", Hydrologic Unit 15050301, within the Tucson ground-water basin, about .25 mi east of Country Club on Alvord Road. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 6 in., depth 1,030 ft, open throughout casing.

**INSTRUMENTATION**--Water-level and compaction recorders.

**DATUM**--Elevation of land surface is 2,636 ft above sea level, from topographic map. Measuring point: Top of casing 1.5 ft above land-surface datum.

**REMARKS**--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

**PERIOD OF RECORD**--Nov. 1983 to current year.

**EXTREMES FOR PERIOD OF RECORD**--Highest water level recorded, 143.29 ft below land-surface datum, Apr. 6, 1984; lowest recorded, 152.7 ft below land-surface datum, Sept. 24 - 30, 2005.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152.0	---	151.8	151.8	151.7	151.7	151.9	151.9	152.0	152.4	152.5	152.5
2	152.0	151.8	151.8	151.7	151.7	151.8	151.9	151.9	152.1	152.4	152.5	152.5
3	152.0	151.8	151.8	151.7	151.7	151.8	151.9	151.9	152.1	152.4	152.5	152.5
4	151.9	151.8	151.8	151.7	151.7	151.7	151.9	151.9	152.2	152.4	152.4	152.5
5	152.0	151.8	151.8	151.7	151.6	151.8	152.0	152.0	152.2	152.4	152.4	152.5
6	152.0	151.8	151.9	151.7	151.7	151.8	151.9	152.0	152.2	152.4	152.4	152.5
7	152.0	151.8	151.8	151.7	151.7	151.8	151.9	152.0	152.2	152.4	152.4	152.5
8	152.0	151.8	151.8	151.7	151.7	151.8	152.0	152.0	152.2	152.4	152.4	152.5
9	152.0	151.8	151.8	151.7	151.7	151.8	152.0	152.0	152.2	152.4	152.4	152.5
10	152.0	151.8	151.8	151.7	151.7	151.8	152.0	152.0	152.2	152.4	152.4	152.5
11	152.0	151.8	151.8	151.6	151.7	151.8	152.0	152.0	152.2	152.4	152.4	152.5
12	152.0	151.8	151.8	151.7	151.7	151.8	151.9	152.0	152.2	152.4	152.4	152.5
13	152.0	151.8	151.8	151.7	151.7	151.8	151.9	152.0	152.2	152.4	152.4	152.5
14	152.0	151.8	151.8	151.7	151.7	151.8	151.9	152.0	152.2	152.4	152.4	152.5
15	152.0	151.8	151.8	151.7	151.7	151.8	151.9	152.0	152.2	152.4	152.4	152.5
16	152.0	151.8	151.8	151.7	151.7	151.8	151.9	152.0	152.2	152.4	152.4	152.5
17	152.0	151.8	151.8	151.7	151.7	151.8	151.9	152.1	152.2	152.4	152.4	152.5
18	152.0	151.8	151.8	151.7	151.7	151.8	151.9	152.1	152.2	152.4	152.4	152.5
19	152.0	151.8	151.8	151.7	151.7	151.8	152.0	152.1	152.2	152.5	152.4	152.5
20	152.0	151.8	151.7	151.7	151.8	151.8	152.0	152.1	152.3	152.5	152.4	152.5
21	152.0	151.8	151.8	151.7	151.7	151.8	152.0	152.1	152.3	152.5	152.4	152.5
22	---	151.8	151.8	151.7	151.7	151.8	152.0	152.1	152.3	152.5	152.4	152.5
23	---	151.8	151.8	151.7	151.8	151.8	152.0	152.1	152.3	152.5	152.4	152.5
24	---	151.8	151.8	151.7	151.8	151.9	152.0	152.1	152.3	152.4	152.4	152.5
25	---	151.8	151.8	151.7	151.7	151.9	152.0	152.2	152.3	152.4	152.4	152.6
26	---	151.8	151.7	151.7	151.8	151.9	152.0	152.1	152.4	152.5	152.4	152.6
27	---	151.8	151.8	151.7	151.8	151.8	152.0	152.1	152.4	152.5	152.4	152.6
28	---	151.8	151.8	151.7	151.8	151.8	151.9	152.0	152.4	152.5	152.4	152.6
29	---	151.9	151.7	151.7	---	151.9	151.9	152.0	152.4	152.5	152.5	152.6
30	---	151.8	151.8	151.7	---	151.9	151.9	152.0	152.4	152.5	152.5	152.6
31	---	---	151.7	151.7	---	151.9	---	152.1	---	152.5	152.5	---
MEAN	---	---	151.8	151.7	151.7	151.8	151.9	152.0	152.2	152.4	152.4	152.5
MAX	---	---	151.9	151.8	151.8	151.9	152.0	152.2	152.4	152.5	152.5	152.6
MIN	---	---	151.7	151.6	151.6	151.7	151.9	151.9	152.0	152.4	152.4	152.5

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	0.062	0.062	0.062	0.062	0.062	0.063	0.063	0.062	0.063	0.065	0.065
2	0.062	0.062	0.062	0.062	0.062	0.062	0.063	0.063	0.062	0.063	0.065	0.065
3	0.062	0.062	0.062	0.062	0.062	0.062	0.063	0.063	0.062	0.063	0.065	0.065
4	0.062	0.062	0.062	0.062	0.062	0.062	0.063	0.063	0.062	0.063	0.065	0.065
5	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.063	0.062	0.064	0.065	0.065
6	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.063	0.062	0.064	0.065	0.065
7	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
8	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
9	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
10	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
11	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
12	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
13	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
14	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
15	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
16	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
17	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
18	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
19	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
20	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
21	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.065	0.065	0.065
22	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.065	0.065	0.065
23	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.065	0.065	0.065
24	0.062	0.062	0.062	0.062	0.062	0.062	0.063	0.062	0.062	0.065	0.065	0.065
25	0.062	0.062	0.062	0.062	0.062	0.062	0.063	0.062	0.062	0.065	0.065	0.065
26	0.062	0.062	0.062	0.062	0.062	0.062	0.063	0.062	0.063	0.065	0.065	0.065
27	0.062	0.062	0.062	0.062	0.062	0.063	0.063	0.062	0.063	0.065	0.065	0.065
28	0.062	0.062	0.062	0.062	0.062	0.063	0.063	0.062	0.063	0.065	0.065	0.065
29	0.062	0.062	0.062	0.062	---	0.063	0.063	0.062	0.063	0.065	0.065	0.065
30	0.062	0.062	0.062	0.062	---	0.063	0.063	0.062	0.063	0.065	0.065	0.065
31	0.062	---	0.062	0.062	---	0.063	---	0.062	---	0.065	0.065	---
MEAN	---	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.064	0.065	0.065
MAX	---	0.062	0.062	0.062	0.062	0.063	0.063	0.063	0.063	0.065	0.065	0.065
MIN	---	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.063	0.065	0.065

## GROUND-WATER LEVELS AND COMPACTION VALUES

311

## PIMA COUNTY

## 320540110573401. LOCAL NUMBER, (D-15-14)30cbc

**LOCATION**--Lat 32°05'37", long 110°57'36", Hydrologic Unit 15050301, within the Tucson ground-water basin off Old Nogales Highway. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 16 in., depth 805 ft, open throughout casing.

**INSTRUMENTATION**--Water-level and compaction recorders.

**DATUM**--Elevation of land surface is 2,587.0 ft above sea level, from topographic map. Measuring point: Top of casing 1.0 ft above land-surface datum.

**REMARKS**--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

**PERIOD OF RECORD**--Nov. 1979 to current year.

**EXTREMES FOR PERIOD OF RECORD**--Highest water level recorded, 94.3 ft below land-surface datum, Dec. 23--24, 2005; lowest recorded, 120.82 ft below land-surface datum, Aug. 25, 1982.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101.8	101.9	101.3	98.8	96.4	98.1	99.6	98.9	99.7	99.8	99.5	98.6
2	101.9	102.0	101.3	98.1	96.1	98.3	99.5	99.3	99.7	99.9	99.5	98.6
3	101.8	101.8	101.2	97.7	95.9	98.4	99.5	99.5	99.8	99.9	99.5	98.7
4	101.8	101.8	101.0	98.2	95.6	98.5	99.5	99.7	99.8	100	99.2	98.7
5	101.8	101.8	101.0	98.0	95.4	98.6	99.7	99.7	99.9	99.9	98.9	98.6
6	101.8	101.7	101.1	97.9	95.4	98.7	99.7	99.8	100	100	99.1	98.6
7	101.8	101.7	101.3	98.0	96.7	98.7	99.5	99.8	100	100.0	98.9	98.7
8	101.9	101.7	101.3	98.5	97.5	98.8	99.5	99.9	99.9	100.0	98.5	98.6
9	101.8	101.8	101.4	98.6	97.9	98.6	99.5	99.8	99.9	100.0	98.9	98.4
10	101.7	101.7	101.4	98.3	98.0	98.1	99.7	99.7	99.9	100	99.0	98.4
11	101.7	101.7	101.3	98.4	96.5	98.5	99.8	99.7	99.9	99.9	99.1	98.5
12	101.8	101.5	101.3	98.6	95.3	98.7	99.8	99.8	99.5	99.8	99.0	98.5
13	101.8	101.5	100.5	98.7	96.6	98.7	99.7	100.0	99.2	99.8	99.0	98.5
14	101.9	101.0	98.7	97.3	96.9	98.8	99.8	99.9	99.3	99.6	99.1	98.5
15	101.9	101.4	97.8	97.9	97.1	98.9	99.8	99.9	99.0	99.6	99.1	98.6
16	101.9	101.6	97.2	96.7	97.6	99.0	99.8	99.8	99.2	99.5	99.1	98.5
17	101.9	101.6	96.7	96.8	97.9	99.0	99.9	99.8	99.3	99.3	98.9	98.5
18	101.9	101.6	96.2	97.7	98.1	99.0	99.8	100	99.4	98.6	98.9	98.5
19	101.9	101.4	95.9	97.9	97.6	99.2	99.8	100.0	99.5	99.1	99.0	98.6
20	101.9	101.4	95.4	97.9	96.6	99.2	99.9	100.1	99.4	99.3	99.0	98.5
21	101.8	101.4	94.9	97.9	96.9	99.3	100	100.1	99.4	99.3	99.0	98.3
22	101.9	101.4	94.7	97.1	97.8	99.3	100.0	100.1	99.5	99.4	99.0	98.3
23	101.9	101.5	94.4	97.9	97.7	98.6	99.9	100.1	99.5	99.5	98.8	98.1
24	101.8	101.6	95.2	98.2	97.1	98.3	99.9	100.2	99.5	99.5	98.3	98.0
25	101.8	101.5	96.7	98.2	96.6	99.0	99.9	100.2	99.5	99.5	98.5	97.9
26	101.8	101.5	97.3	97.2	97.1	98.7	100	100.2	99.6	99.6	98.6	97.9
27	101.8	101.4	97.7	96.5	97.4	98.2	100.0	100.2	99.7	99.4	98.6	97.9
28	101.9	101.3	98.1	96.2	97.9	98.8	99.7	100.1	99.7	99.0	98.5	97.8
29	101.9	101.6	98.2	96.0	---	99.1	98.4	99.9	99.7	99.4	98.5	97.8
30	101.8	101.6	98.6	96.5	---	99.3	97.9	99.7	99.8	99.5	98.6	97.7
31	101.8	---	98.6	97.3	---	99.6	---	99.7	---	99.6	98.6	---
MEAN	101.8	101.6	98.6	97.7	96.9	98.8	99.7	99.9	99.6	99.6	98.9	98.4
MAX	101.9	102.0	101.4	98.8	98.1	99.6	100.0	100.2	100.0	100.0	99.5	98.7
MIN	101.7	101.0	94.4	96.0	95.3	98.1	97.9	98.9	99.0	98.6	98.3	97.7

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.191	0.192	0.192	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
2	0.191	0.192	0.192	0.191	0.192	0.193	0.194	0.194	0.196	0.197	0.198	0.197
3	0.191	0.192	0.192	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
4	0.191	0.192	0.192	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
5	0.191	0.192	0.192	0.191	0.191	0.193	0.194	0.195	0.196	0.197	0.198	0.197
6	0.191	0.192	0.192	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
7	0.191	0.192	0.192	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
8	0.191	0.192	0.192	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.197	0.197
9	0.191	0.192	0.192	0.192	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
10	0.191	0.192	0.192	0.192	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
11	0.191	0.192	0.192	0.191	0.192	---	0.194	0.195	0.196	0.197	0.198	0.197
12	0.191	0.192	0.192	0.192	0.192	---	0.194	0.195	0.196	0.197	0.198	0.197
13	0.191	0.192	0.192	0.192	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
14	0.191	0.192	0.192	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
15	0.191	0.192	0.192	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
16	0.191	0.192	0.191	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
17	0.191	0.192	0.191	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
18	0.191	0.192	0.191	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.198	0.197
19	0.191	0.192	0.191	0.191	0.192	0.193	0.194	0.196	0.196	0.197	0.198	0.197
20	0.191	0.192	0.191	0.191	0.192	0.193	0.194	0.196	0.196	0.197	0.198	0.197
21	0.192	0.192	0.190	0.191	0.192	0.194	0.194	0.196	0.196	0.197	0.198	0.197
22	0.192	0.192	0.190	0.191	0.192	0.193	0.194	0.196	0.196	0.197	0.198	0.197
23	0.192	0.192	0.190	0.191	0.192	0.193	0.194	0.196	0.197	0.197	0.198	0.197
24	0.192	0.192	0.190	0.191	0.192	0.193	0.194	0.196	0.196	0.197	0.197	0.197
25	0.192	0.192	0.190	0.191	0.192	0.194	0.195	0.196	0.197	0.197	0.198	0.197
26	0.192	0.192	0.191	0.192	0.192	0.194	0.195	0.196	0.197	0.197	0.198	0.197
27	0.192	0.192	0.191	0.191	0.192	0.194	0.195	0.196	0.197	0.197	0.198	0.197
28	0.192	0.192	0.191	0.192	0.193	0.194	0.195	0.196	0.197	0.197	0.197	0.197
29	0.192	0.192	0.191	0.192	---	0.194	0.194	0.196	0.197	0.197	0.197	0.197
30	0.192	0.192	0.191	0.192	---	0.194	0.194	0.196	0.197	0.197	0.198	0.197
31	0.192	---	0.191	0.192	---	0.194	---	0.196	---	0.198	0.197	---
MEAN	0.191	0.192	0.191	0.191	0.192	---	0.194	0.195	0.196	0.197	0.198	0.197
MAX	0.192	0.192	0.192	0.192	0.193	---	0.195	0.196	0.197	0.198	0.198	0.197
MIN	0.191	0.192	0.190	0.191	0.191	---	0.194	0.194	0.196	0.197	0.197	0.197



## GROUND-WATER LEVELS AND COMPACTION VALUES

## PIMA COUNTY

## 315909110540601. Local number, (D-17-14)03baa

**LOCATION**--Lat 31°59'09", long 110°54'06", Hydrologic Unit 15050301, in Sahuarita, about 10 mi south of Tucson, 6 mi east of Old Nogales Highway. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 16 in., depth 965 ft, open throughout casing.

**INSTRUMENTATION**--Water-level and compaction recorders.

**DATUM**--Elevation of land surface is 2,735.0 ft above sea level, from topographic map. Measuring point: Top of casing 0.0 ft above land-surface datum.

**REMARKS**--Water level affected by pumping from nearby wells. For previous record, contact the Arizona Water Science Center in Tucson.

**PERIOD OF RECORD**--June 1980 to current year.

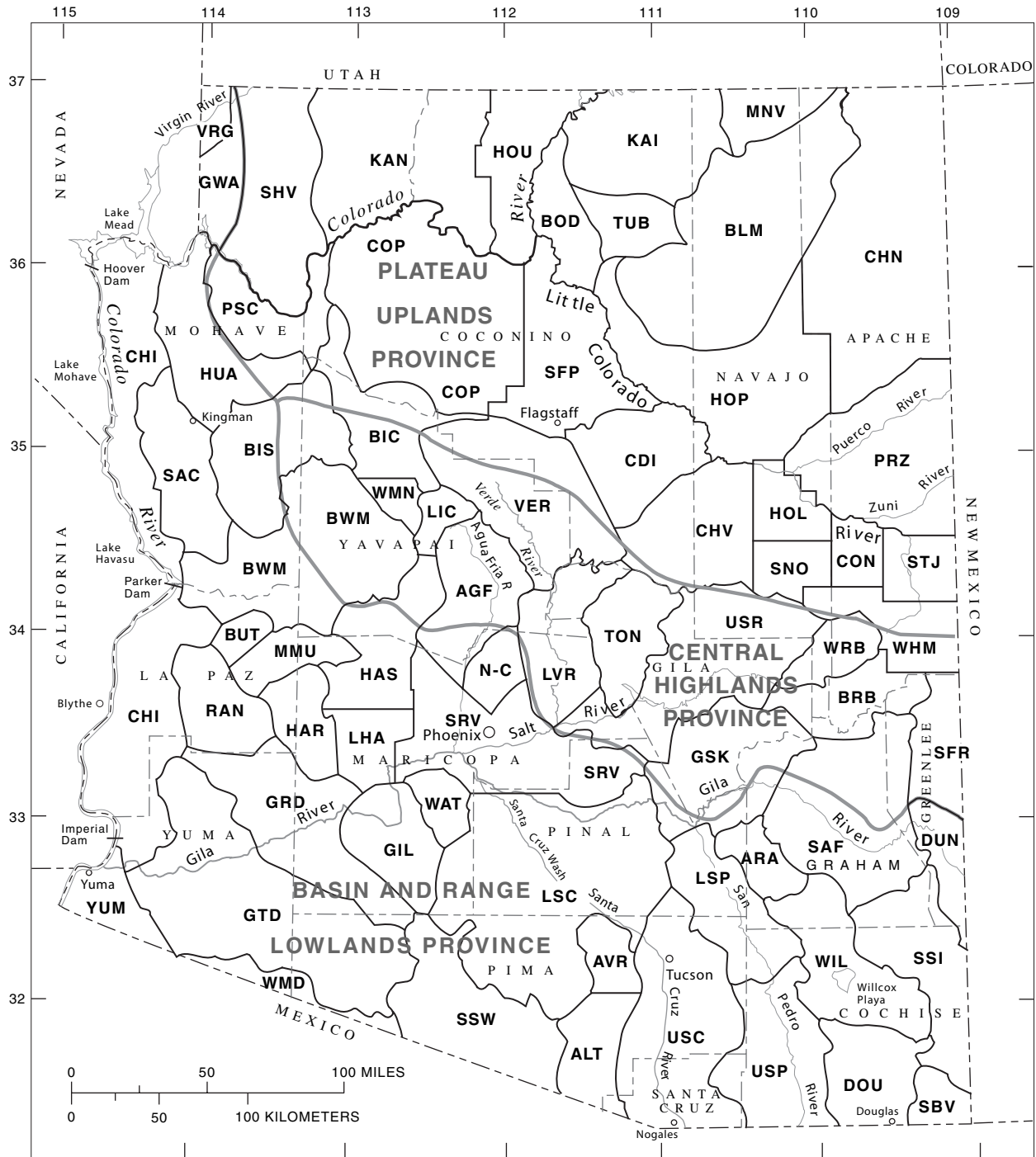
**EXTREMES FOR PERIOD OF RECORD**--Highest water level recorded, 182.4 ft below land-surface datum, Jan. 24, 1989; lowest recorded, 226.3 ft below land-surface datum, Sept. 8, 2000, Oct. 10, 11, 2001.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221.2	221.8	219.5	211.0	212.0	208.2	206.2	207.8	214.1	217.6	219.3	219.3
2	221.3	221.8	219.6	211.3	212.1	208.2	206.2	207.8	214.2	217.8	219.4	219.4
3	221.3	221.7	219.6	211.4	212.1	208.3	206.3	207.6	214.4	217.9	219.6	219.5
4	221.4	221.7	219.5	211.5	212.1	208.3	206.4	207.7	214.5	218.0	219.6	219.5
5	221.4	221.8	219.5	211.5	212.0	208.2	206.5	208.0	214.7	218.1	219.7	219.6
6	221.5	221.8	219.5	211.1	212.0	208.1	206.5	208.3	214.8	218.3	219.5	219.6
7	221.5	221.8	219.5	210.8	212.0	208.0	206.5	208.6	215.0	218.4	219.6	219.7
8	221.6	221.8	219.5	210.6	211.9	207.8	206.4	209.0	215.1	218.5	219.6	219.7
9	221.6	221.8	219.5	210.7	211.9	207.7	206.2	209.3	215.3	218.6	219.2	219.8
10	221.6	221.8	219.4	210.7	211.8	207.5	206.3	209.6	215.4	218.6	218.9	219.8
11	221.7	221.8	219.4	210.3	211.6	207.3	206.4	209.9	215.5	218.3	218.8	219.8
12	221.7	221.7	219.4	210.0	211.3	207.1	206.5	210.1	215.7	218.0	218.7	219.9
13	221.8	221.7	219.3	209.9	211.1	206.9	206.6	210.3	215.8	218.1	218.7	219.9
14	221.8	221.7	218.8	210.1	210.9	206.7	206.7	210.6	215.9	218.3	218.8	220.0
15	221.8	221.7	217.9	210.4	210.7	206.6	206.8	210.9	216.0	218.5	218.8	220.1
16	221.8	221.5	216.9	210.6	210.6	206.5	206.7	211.1	216.2	218.7	218.8	220.1
17	221.8	221.1	215.9	210.8	210.4	206.4	206.4	211.4	216.3	218.9	218.9	220.2
18	221.9	220.6	215.0	211.0	210.2	206.3	206.0	211.6	216.4	218.8	219.0	220.2
19	221.9	220.1	214.1	211.2	210.0	206.2	205.7	211.8	216.6	218.4	219.1	220.3
20	221.9	219.7	213.2	211.3	209.9	206.1	205.4	212.0	216.7	218.3	219.2	220.3
21	221.9	219.4	212.4	211.4	209.8	206.0	205.2	212.2	216.8	218.4	219.3	220.3
22	222.0	219.1	211.6	211.5	209.7	205.9	205.2	212.4	216.9	218.5	219.4	220.2
23	222.0	218.8	210.9	211.6	209.6	205.9	205.5	212.6	217.1	218.7	219.4	220.2
24	222.0	218.6	210.2	211.7	209.5	205.9	205.8	212.8	217.2	218.8	219.2	220.3
25	222.0	218.5	209.8	211.8	209.4	205.9	206.1	213.0	217.3	218.9	219.0	220.4
26	222.0	218.7	209.8	211.8	209.1	206.0	206.4	213.2	217.4	219.0	218.9	220.5
27	222.0	218.9	209.9	211.9	208.6	206.1	206.6	213.3	217.4	219.1	218.9	220.6
28	222.1	219.1	210.1	212.0	208.2	206.0	206.8	213.5	217.4	219.1	219.0	220.6
29	222.1	219.3	210.3	212.0	---	206.0	207.2	213.7	217.4	219.1	219.1	220.7
30	222.0	219.5	210.6	212.0	---	206.1	207.6	213.8	217.5	219.2	219.2	220.8
31	221.9	---	210.8	212.0	---	206.1	---	214.0	---	219.2	219.3	---
MEAN	221.8	220.6	215.5	211.2	210.7	206.8	206.3	210.9	216.0	218.5	219.2	220.0
MAX	222.1	221.8	219.6	212.0	212.1	208.3	207.6	214.0	217.5	219.2	219.7	220.8
MIN	221.2	218.5	209.8	209.9	208.2	205.9	205.2	207.6	214.1	217.6	218.7	219.3

COMPACTION, SEDIMENT, FEET, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	0.201	0.200	0.196	0.191	0.187	---	0.185	0.190	0.198	0.201	0.198
2	0.199	0.201	0.199	0.196	0.191	0.187	---	0.185	0.190	0.199	0.201	0.198
3	0.199	0.201	0.199	0.196	0.191	0.187	0.184	0.185	0.190	0.199	0.201	0.198
4	0.199	0.201	0.199	0.196	0.191	0.187	0.184	0.185	0.190	0.199	0.200	0.199
5	0.199	0.201	0.199	0.196	0.190	0.187	0.184	0.185	0.191	0.199	0.200	0.199
6	0.200	0.201	0.199	0.195	0.190	0.187	0.184	0.185	0.191	0.199	0.200	0.199
7	0.200	0.201	0.199	0.195	0.190	0.186	0.184	0.185	0.191	0.200	0.200	0.199
8	0.200	0.201	0.199	0.195	0.190	0.186	0.184	0.186	0.191	0.201	0.200	0.199
9	0.200	0.201	0.199	0.195	0.190	0.186	0.184	---	0.191	0.201	0.199	0.200
10	0.200	0.201	0.199	0.195	0.190	0.186	0.184	---	0.192	0.201	0.199	0.200
11	0.200	0.201	0.199	0.194	0.190	---	0.184	0.186	0.193	0.201	0.199	0.201
12	0.200	0.201	0.199	0.194	0.190	---	0.184	0.186	0.193	0.201	0.198	0.201
13	0.200	0.201	0.199	0.194	0.190	---	0.184	0.187	0.193	0.201	0.198	0.201
14	0.200	0.201	0.199	0.194	0.190	0.185	0.184	0.187	0.193	0.201	0.198	0.201
15	0.200	0.201	---	0.194	0.189	0.185	0.184	---	0.193	0.201	0.198	0.201
16	0.200	0.201	---	0.193	0.189	0.185	0.184	---	0.193	0.201	0.198	0.202
17	0.200	0.201	---	0.193	0.189	0.185	0.184	0.187	0.195	0.202	0.198	0.202
18	0.201	0.201	0.198	0.193	0.189	0.185	0.184	0.188	0.196	0.202	0.198	0.202
19	0.201	0.201	0.198	0.193	0.189	0.185	0.184	0.189	0.196	0.202	0.198	0.202
20	0.201	0.201	0.197	0.193	0.189	0.185	0.184	0.188	0.196	0.202	0.198	0.202
21	0.201	0.201	0.197	0.192	0.189	0.185	0.183	0.187	0.196	0.203	0.198	0.203
22	0.201	0.201	0.197	0.192	0.188	0.184	0.183	0.187	0.196	0.203	0.198	0.203
23	0.201	0.201	0.197	0.192	0.188	0.184	0.183	0.187	0.197	0.203	0.198	0.203
24	0.201	0.201	0.197	0.192	0.188	0.184	0.184	0.187	0.198	0.203	0.198	0.203
25	0.201	0.200	0.197	0.192	0.188	0.184	0.184	0.188	0.198	0.202	0.198	0.203
26	0.201	0.200	0.196	0.192	0.188	0.184	0.184	0.188	0.198	0.202	0.197	0.203
27	0.201	0.200	0.196	0.192	0.188	0.184	0.184	0.189	0.198	0.201	0.197	0.204
28	0.201	0.200	0.196	0.192	0.188	0.184	0.184	0.189	0.198	0.201	0.197	0.204
29	0.201	0.200	0.196	0.191	---	0.184	0.184	0.190	0.198	0.201	0.197	0.204
30	0.201	0.200	0.196	0.191	---	0.184	0.185	0.190	0.198	0.201	0.197	0.204
31	0.201	---	0.196	0.191	---	0.184	---	0.190	---	0.201	0.198	---
MEAN	---	0.201	---	0.194	0.189	---	---	---	0.194	0.201	0.199	0.201
MAX	---	0.201	---	0.196	0.191	---	---	---	0.198	0.203	0.201	0.204
MIN	---	0.200	---	0.191	0.188	---	---	---	0.190	0.198	0.197	0.198



Base from U.S. Geological Survey State base maps, 1:500,000, Arizona, 1974; Nevada, 1965; New Mexico, 1965; and Utah, 1959

**EXPLANATION**

—— BOUNDARY OF GROUND-WATER AREA

**Figure 8.** Index map of U.S. Geological Survey ground-water areas in Arizona.

## GROUND-WATER AREAS AND ABBREVIATIONS

<b>AGF</b> — Agua Fria basin	<b>LHA</b> — Lower Hassayampa
<b>ALT</b> — Altar Valley	<b>LSP</b> — Lower San Pedro basin
<b>ARA</b> — Aravaipa Valley	<b>LSC</b> — Lower Santa Cruz basin
<b>AVR</b> — Avra Valley	<b>LVR</b> — Lower Verde River
<b>BIC</b> — Big Chino Valley	<b>MMU</b> — McMullen Valley
<b>BIS</b> — Big Sandy Valley	<b>MNV</b> — Monument Valley
<b>BWM</b> — Bill Williams	<b>N-C</b> — New River-Cave Creek
<b>BLM</b> — Black Mesa	<b>PSC</b> — Peach Springs Canyon
<b>BRB</b> — Black River basin	<b>PRZ</b> — Puerco-Zuni
<b>BOD</b> — Bodaway Mesa	<b>RAN</b> — Ranegras Plain
<b>BUT</b> — Butler Valley	<b>SAC</b> — Sacramento Valley
<b>CDI</b> — Canyon Diablo	<b>SAF</b> — Safford basin
<b>CHV</b> — Chevelon	<b>SRV</b> — Salt River Valley
<b>CHN</b> — Chinle	<b>SBV</b> — San Bernardino Valley
<b>COP</b> — Coconino Plateau	<b>SFP</b> — San Francisco Peaks
<b>CHI</b> — Colorado River, Hoover Dam to Imperial Dam	<b>SFR</b> — San Francisco River basin
<b>CON</b> — Concho	<b>SSI</b> — San Simon basin
<b>DOU</b> — Douglas basin	<b>SSW</b> — San Simon Wash
<b>DUN</b> — Duncan basin	<b>SHV</b> — Shivwits
<b>GIL</b> — Gila Bend basin	<b>SNO</b> — Snowflake
<b>GRD</b> — Gila River from Painted Rock Dam to Texas Hill	<b>STJ</b> — St. Johns
<b>GSK</b> — Gila River from head of San Carlos Reservoir to Kelvin	<b>TON</b> — Tonto basin
<b>GTD</b> — Gila River from Texas Hill to Dome	<b>TUB</b> — Tuba City
<b>GWA</b> — Grand Wash	<b>USR</b> — Upper Salt River basin
<b>HAR</b> — Harquahala Plains	<b>USP</b> — Upper San Pedro basin
<b>HAS</b> — Hassayampa basin	<b>USC</b> — Upper Santa Cruz basin
<b>HOL</b> — Holbrook	<b>VER</b> — Upper Verde River
<b>HOP</b> — Hopi	<b>VRG</b> — Virgin River
<b>HOU</b> — House Rock	<b>WAT</b> — Waterman Wash
<b>HUA</b> — Hualapai Valley	<b>WMD</b> — Western Mexican drainage
<b>KAI</b> — Kaibito	<b>WHM</b> — White Mountains
<b>KAN</b> — Kanab	<b>WRB</b> — White River basin
<b>LIC</b> — Little Chino Valley	<b>WIL</b> — Willcox basin
	<b>WMN</b> — Williamson Valley
	<b>YUM</b> — Yuma

**WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA**  
**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM**

**KANAB CREEK BASIN**

**SITE: 365403112452801**  
**LOCAL NUMBER: B-40-04 06AAC**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10, 2004	86.6	FEB 17, 2005	86.3	APR 13, 2005	86.0	JUL 26, 2005	85.8
SEP 30, 2005	86.0						
	HIGHEST	85.8	JUL 26, 2005				
	LOWEST	86.6	DEC 10, 2004				

**LITTLE COLORADO RIVER BASIN**

**SITE: 344928109515301**  
**LOCAL NUMBER: A-17-23 35DDB**

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 03, 2005	311.0	JUL 25, 2005	312.2

**SITE: 345023110111401**  
**LOCAL NUMBER: A-17-20 26DBC**

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 03, 2005	303.9	JUL 25, 2005	304.5

**SITE: 345333109474501**  
**LOCAL NUMBER: A-17-24 09ABD**

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 03, 2005	268.2	JUL 25, 2005	268.0

**SITE: 345603110450301**  
**LOCAL NUMBER: A-18-15 28AAD**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 13, 2004	267.3	MAR 03, 2005	267.2	APR 12, 2005	267.1	JUL 25, 2005	267.1
	HIGHEST	267.1	APR 12, 2005	JUL 25, 2005			
	LOWEST	267.3	DEC 13, 2004				

**SITE: 350002110355501**  
**LOCAL NUMBER: A-19-16 36DDB**

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 05, 2005	35.3	JUL 25, 2005	36.9

**SITE: 350706111014701**  
**LOCAL NUMBER: A-20-12H 13CBB**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 26, 2005	562.0	FEB 27, 2005	562.2	FEB 28, 2005	561.8	MAR 01, 2005	561.9
MAR 02, 2005	561.8	MAR 04, 2005	561.8	MAR 05, 2005	561.8	MAR 06, 2005	561.8
MAR 07, 2005	561.8	MAR 08, 2005	561.9	MAR 09, 2005	562.0	MAR 10, 2005	561.8
MAR 11, 2005	562.2	MAR 12, 2005	562.0	MAR 13, 2005	562.0	MAR 29, 2005	562.0
APR 01, 2005	563.3 P	APR 06, 2005	562.3	APR 26, 2005	562.2	APR 27, 2005	562.1
APR 28, 2005	562.2	APR 29, 2005	562.3	APR 30, 2005	562.5	MAY 01, 2005	562.4
MAY 02, 2005	562.4	MAY 03, 2005	562.4	MAY 04, 2005	562.5	MAY 05, 2005	562.4
MAY 06, 2005	562.4	MAY 07, 2005	562.4	MAY 08, 2005	562.5	MAY 09, 2005	562.4
MAY 10, 2005	562.4	MAY 12, 2005	562.6	MAY 16, 2005	562.4	MAY 19, 2005	562.6
MAY 23, 2005	562.5	JUN 03, 2005	562.4	AUG 04, 2005	562.6		
	HIGHEST	261.8	Feb 28, 2005, MAR 02, 04-07, 10, 2005				
	LOWEST	263.3	APR 01, 2005				

## WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA—CONTINUED

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

SITE: 350848111381701  
LOCAL NUMBER: A-20-07 03ACA

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 20, 2004	929.7	FEB 02, 2005	925.6	JUN 29, 2005	925.1
	HIGHEST	925.1	JUN 29, 2005		
	LOWEST	929.7	DEC 20, 2004		

SITE: 350957110562601  
LOCAL NUMBER: 05 144-10.76X05.75

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 10, 2005	225.5	FEB 11, 2005	224.01	FEB 12, 2005	224.21	FEB 13, 2005	224.59
FEB 14, 2005	224.52	FEB 17, 2005	224.51	FEB 18, 2005	224.56	FEB 20, 2005	224.61
FEB 21, 2005	224.62	FEB 23, 2005	224.74	FEB 24, 2005	224.54	FEB 26, 2005	224.36
MAR 09, 2005	224.78	APR 26, 2005	224.41	APR 27, 2005	224.42	APR 28, 2005	224.35
APR 29, 2005	224.40	APR 30, 2005	224.49	MAY 01, 2005	224.46	MAY 02, 2005	224.46
MAY 03, 2005	224.45	MAY 04, 2005	224.44	MAY 05, 2005	224.35	MAY 06, 2005	224.33
MAY 07, 2005	224.43	MAY 08, 2005	224.42	MAY 09, 2005	224.36	MAY 10, 2005	224.25
MAY 13, 2005	224.43	MAY 16, 2005	224.19	MAY 19, 2005	224.35	MAY 23, 2005	224.26
JUN 03, 2005	224.04	AUG 04, 2005	224.40				
	HIGHEST	224.01	Feb 11, 2005				
	LOWEST	225.5	FEB 10, 2005				

SITE: 350958110562201  
LOCAL NUMBER: 05 144-10.67X05.72(1)

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 10, 2005	226.36						

SITE: 350958110562202  
LOCAL NUMBER: 05 144-10.67X05.72(2)

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 17, 2005	226.38	FEB 18, 2005	226.33	FEB 20, 2005	226.43	FEB 21, 2005	226.38
FEB 22, 2005	226.35	FEB 23, 2005	226.06	FEB 24, 2005	226.24	FEB 26, 2005	226.27
MAR 09, 2005	226.84	APR 26, 2005	226.46	APR 27, 2005	226.45	APR 28, 2005	226.40
APR 29, 2005	226.47	APR 30, 2005	226.50	MAY 01, 2005	226.47	MAY 02, 2005	226.50
MAY 03, 2005	226.49	MAY 04, 2005	226.47	MAY 05, 2005	226.36	MAY 06, 2005	226.34
MAY 07, 2005	226.43	MAY 08, 2005	226.42	MAY 09, 2005	226.33	MAY 10, 2005	226.29
MAY 13, 2005	226.44	MAY 16, 2005	226.15	MAY 19, 2005	226.38	MAY 23, 2005	226.21
JUN 03, 2005	226.06	AUG 04, 2005	225.70				
	HIGHEST	225.70	AUG 04, 2005				
	LOWEST	226.84	MAR 09, 2005				

SITE: 350958110562203  
LOCAL NUMBER: 05 144-10.67X05.72(3)

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 17, 2005	226.45	FEB 18, 2005	226.41	FEB 20, 2005	226.51	FEB 21, 2005	226.46
FEB 22, 2005	226.43	FEB 23, 2005	225.99	FEB 24, 2005	226.22	FEB 26, 2005	225.94
MAR 09, 2005	226.61	APR 26, 2005	226.40	APR 27, 2005	226.40	APR 28, 2005	226.34
APR 29, 2005	226.41	APR 30, 2005	226.44	MAY 01, 2005	226.44	MAY 02, 2005	226.45
MAY 03, 2005	226.44	MAY 04, 2005	226.44	MAY 05, 2005	226.31	MAY 06, 2005	226.34
MAY 07, 2005	226.41	MAY 08, 2005	226.38	MAY 09, 2005	226.30	MAY 10, 2005	226.24
MAY 13, 2005	226.40	MAY 16, 2005	226.17	MAY 19, 2005	226.32	MAY 19, 2005	226.32
MAY 23, 2005	226.23	JUN 03, 2005	226.65	AUG 04, 2005	225.70		
	HIGHEST	225.70	AUG 04, 2005				
	LOWEST	226.65	JUN 03, 2005				

**WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA—CONTINUED**

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**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM**

**SITE: 350958110562204**  
**LOCAL NUMBER: 05 144-10.67X05.72 (4)**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 17, 2005	226.64	FEB 18, 2005	226.61	FEB 20, 2005	226.66	FEB 21, 2005	226.66
FEB 22, 2005	226.63	FEB 23, 2005	226.11	FEB 24, 2005	226.29	FEB 26, 2005	226.03
MAR 09, 2005	226.65	APR 26, 2005	226.48	APR 27, 2005	226.46	APR 28, 2005	226.42
APR 29, 2005	226.40	APR 30, 2005	226.57	MAY 01, 2005	226.52	MAY 02, 2005	226.53
MAY 03, 2005	226.51	MAY 04, 2005	226.51	MAY 05, 2005	226.43	MAY 06, 2005	226.44
MAY 07, 2005	226.52	MAY 08, 2005	226.54	MAY 09, 2005	226.48	MAY 10, 2005	226.34
MAY 13, 2005	226.57	MAY 16, 2005	226.32	MAY 19, 2005	226.47	MAY 23, 2005	226.40
JUN 03, 2005	226.14	AUG 04, 2005	226.00				
	HIGHEST	226.00	AUG 04, 2005				
	LOWEST	226.66	FEB 20, 2005				

**SITE: 350959110562302**  
**LOCAL NUMBER: 05 144-10.70X05.71 (2)**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 29, 2005	225.68	FEB 02, 2005	225.90	FEB 02, 2005	225.91	FEB 02, 2005	225.89
FEB 02, 2005	225.66	FEB 07, 2005	225.66	FEB 09, 2005	225.56	FEB 10, 2005	225.52
FEB 12, 2005	224.39	FEB 13, 2005	224.58	FEB 14, 2005	225.37	FEB 17, 2005	225.68
FEB 18, 2005	225.65	FEB 20, 2005	225.74	FEB 21, 2005	225.69	FEB 22, 2005	225.67
FEB 23, 2005	225.10	FEB 24, 2005	225.11	FEB 26, 2005	225.16	MAR 09, 2005	225.96
APR 26, 2005	225.91	APR 27, 2005	225.88	APR 28, 2005	225.83	APR 29, 2005	225.90
APR 30, 2005	225.96	MAY 01, 2005	225.92	MAY 02, 2005	225.93	MAY 03, 2005	225.93
MAY 04, 2005	225.91	MAY 05, 2005	225.80	MAY 06, 2005	225.80	MAY 07, 2005	225.87
MAY 08, 2005	225.84	MAY 09, 2005	225.77	MAY 10, 2005	225.71	MAY 13, 2005	225.85
MAY 16, 2005	225.62	MAY 19, 2005	225.78	MAY 23, 2005	225.52	JUN 03, 2005	225.46
AUG 04, 2005	225.1						
	HIGHEST	224.39	FEB 12, 2005				
	LOWEST	225.96	MAR 09, APR 30, 2005				

**SITE: 350959110562303**  
**LOCAL NUMBER: 05 144-10.70X05.71 (3)**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 29, 2005	225.98	FEB 02, 2005	226.49	FEB 02, 2005	226.44	FEB 02, 2005	226.29
FEB 02, 2005	225.96	FEB 07, 2005	225.92	FEB 09, 2005	225.84	FEB 10, 2005	225.80
FEB 12, 2005	225.56	FEB 13, 2005	225.84	FEB 14, 2005	225.65	FEB 17, 2005	225.66
FEB 18, 2005	225.58	FEB 20, 2005	225.66	FEB 21, 2005	225.65	FEB 22, 2005	225.62
FEB 23, 2005	225.16	FEB 24, 2005	225.17	FEB 26, 2005	225.17	MAR 09, 2005	225.83
APR 26, 2005	225.64	APR 27, 2005	225.65	APR 28, 2005	225.61	APR 29, 2005	225.67
APR 30, 2005	225.76	MAY 01, 2005	225.70	MAY 02, 2005	225.71	MAY 03, 2005	225.69
MAY 04, 2005	225.69	MAY 05, 2005	225.58	MAY 06, 2005	225.58	MAY 07, 2005	225.67
MAY 08, 2005	225.66	MAY 09, 2005	225.59	MAY 10, 2005	225.49	MAY 13, 2005	225.69
MAY 16, 2005	225.46	MAY 19, 2005	225.63	MAY 23, 2005	225.52	JUN 03, 2005	225.31
AUG 04, 2005	224.70						
	HIGHEST	224.70	AUG 04, 2005				
	LOWEST	226.49	FEB 02, 2005				

**SITE: 351001110562601**  
**LOCAL NUMBER: 05 144-10.79X05.73**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 29, 2005	220.91	FEB 02, 2005	223.10	FEB 02, 2005	222.91	FEB 07, 2005	222.90
FEB 09, 2005	222.81	FEB 10, 2005	222.67	FEB 11, 2005	222.63	FEB 12, 2005	222.66
FEB 13, 2005	222.82	FEB 14, 2005	222.64	FEB 17, 2005	222.65	FEB 18, 2005	222.60
FEB 20, 2005	222.63	FEB 21, 2005	222.68	FEB 22, 2005	222.64	FEB 23, 2005	222.23
FEB 24, 2005	227.21	FEB 26, 2005	222.36	MAR 05, 2005	225.05	MAR 09, 2005	223.19
MAR 19, 2005	225.67						
	HIGHEST	220.91	JAN 29, 2005				
	LOWEST	227.21	FEB 24, 2005				

## WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA—CONTINUED

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

SITE: 351022111062801

LOCAL NUMBER: 05 145-06.02X05.54

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 17, 2005	615.2	FEB 18, 2005	615.0	FEB 19, 2005	614.97	FEB 20, 2005	614.09
FEB 21, 2005	615.09	FEB 22, 2005	615.48	FEB 25, 2005	615.16	FEB 26, 2005	615.8
FEB 27, 2005	615.64	FEB 27, 2005	616.32	FEB 28, 2005	616.22	MAR 04, 2005	616.68
MAR 04, 2005	616.72	MAR 20, 2005	614.59	MAR 21, 2005	614.58	MAR 22, 2005	614.5
MAR 22, 2005	614.32	MAR 22, 2005	614.32	MAR 23, 2005	614.21	MAR 23, 2005	614.06
MAR 23, 2005	614.24	MAR 24, 2005	614.22	MAR 25, 2005	614.16	APR 06, 2005	618.2
APR 26, 2005	618.22	APR 27, 2005	618.16	APR 28, 2005	618.12	APR 29, 2005	618.26
APR 30, 2005	618.28	MAY 01, 2005	618.68	MAY 02, 2005	618.44	MAY 03, 2005	618.42
MAY 04, 2005	618.48	MAY 05, 2005	618.35	MAY 06, 2005	618.31	MAY 07, 2005	618.44
MAY 08, 2005	618.47	MAY 10, 2005	618.24	MAY 12, 2005	618.6		
	HIGHEST 614.06	MAR 23, 2005					
	LOWEST 618.68	MAY 01, 2005					

SITE: 351022111061801

LOCAL NUMBER: 05 145-05.92X05.31

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 10, 2005	614.82	FEB 11, 2005	613.73	FEB 12, 2005	613.61	FEB 13, 2005	613.92
FEB 13, 2005	614.2	FEB 13, 2005	614.38	FEB 13, 2005	614.45	FEB 13, 2005	614.52
FEB 13, 2005	614.58	FEB 13, 2005	614.6	FEB 13, 2005	614.66	FEB 13, 2005	614.68
FEB 13, 2005	614.75	FEB 14, 2005	613.8	FEB 17, 2005	609.6	FEB 18, 2005	609.32
FEB 20, 2005	610.65	FEB 22, 2005	614.01	FEB 25, 2005	611.99	FEB 28, 2005	611.64
MAR 01, 2005	614.74	MAR 04, 2005	611.81	MAR 04, 2005	611.81	MAR 11, 2005	616.57
MAR 19, 2005	614.27	MAR 20, 2005	612.58	MAR 21, 2005	612.38	MAR 22, 2005	611.04
MAR 22, 2005	611.22	MAR 22, 2005	611.33	MAR 23, 2005	612.07	MAR 23, 2005	611.0
MAR 23, 2005	610.04	MAR 24, 2005	612.27	MAR 24, 2005	612.19	APR 06, 2005	614.24
APR 26, 2005	614.1	APR 27, 2005	614.05	APR 28, 2005	614.01	APR 29, 2005	614.15
APR 29, 2005	614.17	MAY 01, 2005	614.2	MAY 02, 2005	614.34	MAY 03, 2005	614.29
MAY 04, 2005	614.34	MAY 05, 2005	614.19	MAY 06, 2005	614.19	MAY 07, 2005	614.33
MAY 08, 2005	614.35	MAY 09, 2005	613.64	MAY 10, 2005	614.12	MAY 12, 2005	614.47
MAY 16, 2005	614.16	MAY 19, 2005	614.46	MAY 23, 2005	614.31	JUN 03, 2005	614.09
AUG 04, 2005	613.7						
	HIGHEST 609.32	FEB 18, 2005					
	LOWEST 616.57	MAR 11, 2005					

SITE: 351023111062002

LOCAL NUMBER: 05 145-05.96X05.28(2)

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 17, 2005	611.42	FEB 19, 2005	611.93	FEB 20, 2005	611.42	FEB 21, 2005	611.42
FEB 22, 2005	611.12	FEB 25, 2005	611.22	FEB 27, 2005	613.32	APR 06, 2005	613.67
APR 26, 2005	613.47	APR 27, 2005	613.43	APR 28, 2005	613.38	APR 29, 2005	613.49
APR 29, 2005	613.51	MAY 01, 2005	613.6	MAY 02, 2005	613.71	MAY 03, 2005	613.63
MAY 04, 2005	613.71	MAY 05, 2005	613.32	MAY 06, 2005	613.6	MAY 07, 2005	613.69
MAY 08, 2005	613.74	MAY 09, 2005	614.31	MAY 10, 2005	613.51	MAY 12, 2005	613.8
MAY 19, 2005	613.74	MAY 23, 2005	613.66	JUN 03, 2005	613.54	AUG 04, 2005	613.6
	HIGHEST 611.12	FEB 22, 2005					
	LOWEST 614.31	MAY 09, 2005					

SITE: 351025111303701

LOCAL NUMBER: A-21-08 26DAB

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 22, 2004	1473.5	APR 18, 2005	1474.6	AUG 18, 2005	1479.2		
	HIGHEST 1473.5	DEC 22, 2004					
	LOWEST 1479.2	AUG 18, 2005					

**WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA—CONTINUED**

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**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM**

**SITE: 351127111360001**  
**LOCAL NUMBER: A-21-07 24AAD**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 20, 2004	1332.0 R	MAR 28, 2005	1313.0 R	AUG 03, 2005	1330.0 R		
	HIGHEST	1313.0	MAR 28, 2005				
	LOWEST	1332.0	DEC 20, 2004				

**SITE: 351213111022101**  
**LOCAL NUMBER: 05 145-02.22X03.21**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 20, 2005	330.95	APR 22, 2005	331.90	APR 26, 2005	331.04	MAY 13, 2005	331.39
MAY 16, 2005	331.13	MAY 19, 2005	331.24	MAY 23, 2005	331.12	JUN 03, 2005	328.38
AUG 04, 2005	329.70						
	HIGHEST	328.38	JUN 03, 2005				
	LOWEST	331.90	APR 22, 2005				

**SITE: 351214111022101**  
**LOCAL NUMBER: 05 145-02.25X03.18**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 18, 2005	328.33	APR 20, 2005	327.39	APR 22, 2005	327.65	APR 26, 2005	327.51
JUN 06, 2005	329.49	AUG 04, 2005	328.40				
	HIGHEST	327.39	APR 20, 2005				
	LOWEST	329.49	JUN 06, 2005				

**SITE: 351215111021701**  
**LOCAL NUMBER: 05 145-02.17X03.15**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 29, 2005	327.82	FEB 02, 2005	327.94	FEB 02, 2005	327.85	FEB 07, 2005	327.90
FEB 10, 2005	327.53	FEB 11, 2005	327.51	FEB 12, 2005	327.53	FEB 13, 2005	327.64
FEB 14, 2005	327.53	APR 20, 2005	326.72	APR 22, 2005	326.53	APR 26, 2005	325.96
APR 27, 2005	327.82	APR 28, 2005	327.90	APR 29, 2005	327.99	APR 30, 2005	328.02
MAY 01, 2005	328.19	MAY 02, 2005	328.26	MAY 03, 2005	328.26	MAY 04, 2005	328.32
MAY 05, 2005	328.28	MAY 06, 2005	328.30	MAY 07, 2005	328.37	MAY 08, 2005	328.36
MAY 10, 2005	328.34	MAY 13, 2005	327.91	MAY 16, 2005	327.73	MAY 19, 2005	327.79
MAY 23, 2005	327.74						
	HIGHEST	325.96	APR 26, 2005				
	LOWEST	328.37	MAY 07, 2005				

**SITE: 351216111021902**  
**LOCAL NUMBER: 05 145-02.14X03.14 (02)**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 11, 2005	323.25	FEB 12, 2005	321.77	FEB 13, 2005	323.32	FEB 14, 2005	323.22
FEB 17, 2005	323.26	FEB 18, 2005	323.21	FEB 20, 2005	323.30	FEB 21, 2005	323.31
FEB 22, 2005	323.24	FEB 26, 2005	323.29	FEB 27, 2005	323.33	FEB 28, 2005	323.31
MAR 01, 2005	323.37	MAR 02, 2005	323.27	MAR 04, 2005	323.26	MAR 05, 2005	323.33
MAR 06, 2005	323.29	MAR 07, 2005	323.30	MAR 08, 2005	323.30	MAR 09, 2005	323.32
MAR 10, 2005	323.24	MAR 11, 2005	323.32	MAR 12, 2005	323.23	MAR 13, 2005	323.23
MAR 19, 2005	323.31	MAR 20, 2005	323.30	MAR 21, 2005	323.30	MAR 22, 2005	323.24
MAR 23, 2005	323.25	MAR 24, 2005	323.30	MAR 25, 2005	323.28	MAR 29, 2005	323.25
APR 01, 2005	323.34	APR 06, 2005	323.32	APR 12, 2005	323.34	APR 12, 2005	323.53
APR 12, 2005	323.54	APR 12, 2005	323.67	APR 12, 2005	323.69	APR 18, 2005	323.22
APR 20, 2005	322.25	APR 22, 2005	323.16	APR 26, 2005	323.84	JUN 03, 2005	326.44
AUG 04, 2005	323.60						
	HIGHEST	321.77	FEB 12, 2005				
	LOWEST	326.44	JUN 03, 2005				



## WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA—CONTINUED

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

SITE: 351216111021903  
LOCAL NUMBER: 05 145-02.14X03.14 (03)

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 11, 2005	323.24	FEB 12, 2005	323.22	FEB 13, 2005	323.32	FEB 14, 2005	323.15
FEB 17, 2005	323.24	FEB 18, 2005	323.23	FEB 20, 2005	323.27	FEB 21, 2005	323.51
FEB 22, 2005	323.23	FEB 26, 2005	323.28	FEB 27, 2005	323.31	FEB 28, 2005	323.28
MAR 01, 2005	323.32	MAR 02, 2005	323.28	MAR 04, 2005	323.25	MAR 05, 2005	323.31
MAR 06, 2005	323.27	MAR 07, 2005	323.27	MAR 08, 2005	323.30	MAR 09, 2005	323.30
MAR 10, 2005	323.25	MAR 11, 2005	323.32	MAR 12, 2005	323.19	MAR 13, 2005	323.24
MAR 19, 2005	323.29	MAR 20, 2005	323.28	MAR 21, 2005	323.31	MAR 22, 2005	323.23
MAR 23, 2005	323.24	MAR 24, 2005	323.28	MAR 25, 2005	323.27	MAR 29, 2005	323.24
APR 01, 2005	323.36	APR 06, 2005	323.32	APR 12, 2005	323.35	APR 12, 2005	323.56
APR 12, 2005	323.53	APR 12, 2005	323.70	APR 12, 2005	323.72	APR 18, 2005	323.22
APR 20, 2005	322.42	APR 22, 2005	323.68	APR 26, 2005	323.86	JUN 03, 2005	323.54
AUG 04, 2005	323.70						
	HIGHEST	322.42	APR 20, 2005				
	LOWEST	323.86	APR 26, 2005				

SITE: 351216111021904  
LOCAL NUMBER: 05 145 02.14X03.14 (4)

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 11, 2005	323.16	FEB 12, 2005	324.56	FEB 13, 2005	323.24	FEB 14, 2005	323.14
FEB 17, 2005	323.22	FEB 18, 2005	323.10	FEB 20, 2005	323.24	FEB 21, 2005	323.25
FEB 22, 2005	323.16	FEB 26, 2005	323.24	FEB 27, 2005	323.24	FEB 28, 2005	323.20
MAR 01, 2005	323.25	MAR 02, 2005	323.18	MAR 04, 2005	323.16	MAR 05, 2005	323.24
MAR 06, 2005	323.20	MAR 07, 2005	323.25	MAR 08, 2005	323.25	MAR 09, 2005	323.23
MAR 10, 2005	323.19	MAR 11, 2005	323.25	MAR 12, 2005	323.18	MAR 13, 2005	323.19
MAR 19, 2005	323.23	MAR 20, 2005	323.22	MAR 21, 2005	323.24	MAR 22, 2005	323.20
MAR 23, 2005	323.15	MAR 24, 2005	323.23	MAR 25, 2005	323.24	MAR 29, 2005	323.23
APR 01, 2005	323.31	APR 06, 2005	323.28	APR 12, 2005	323.33	APR 12, 2005	323.70
APR 12, 2005	323.48	APR 12, 2005	323.64	APR 12, 2005	323.64	APR 18, 2005	323.17
APR 20, 2005	322.99	APR 22, 2005	324.54	APR 26, 2005	324.33	JUN 03, 2005	323.49
AUG 04, 2005	323.50						
	HIGHEST	322.99	APR 20, 2005				
	LOWEST	324.56	FEB 12, 2005				

SITE: 351218111021701  
LOCAL NUMBER: 05 145-02.12X03.09

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 08, 2005	321.55	MAR 24, 2005	320.66	MAR 25, 2005	320.64	MAR 29, 2005	320.62
APR 01, 2005	320.72	APR 06, 2005	320.70	APR 12, 2005	320.68	APR 18, 2005	320.57
APR 22, 2005	320.45	APR 26, 2005	320.67	APR 27, 2005	320.92	APR 28, 2005	321.00
APR 29, 2005	321.10	APR 30, 2005	321.13	MAY 01, 2005	321.28	MAY 02, 2005	321.36
MAY 03, 2005	321.38	MAY 04, 2005	321.41	MAY 05, 2005	321.40	MAY 06, 2005	321.40
MAY 07, 2005	321.45	MAY 08, 2005	321.48	MAY 10, 2005	321.47	MAY 13, 2005	321.16
MAY 16, 2005	320.96	MAY 19, 2005	321.01	MAY 23, 2005	320.95	JUN 03, 2005	320.90
AUG 04, 2005	320.9						
	HIGHEST	320.45	APR 22, 2005				
	LOWEST	321.55	MAR 08, 2005				

SITE: 351223111342802  
LOCAL NUMBER: A-21-08 17BCA2

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 20, 2004	1324.0 R	MAR 28, 2005	1309.0 R	AUG 03, 2005	1309.0 R		
	HIGHEST	1309.0	MAR 28, 2005	Aug 03, 2005			
	LOWEST	1324.0	DEC 20, 2004				

SITE: 352214111324601  
LOCAL NUMBER: A-23-08 21AAD

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 17, 2004	1963.0	MAR 24, 2005	1960.4	JUN 29, 2005	1961.0		
	HIGHEST	1960.4	MAR 24, 2005				
	LOWEST	1963.0	DEC 17, 2004				

**WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA—CONTINUED**

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM**

**SITE: 353410111284001**  
**LOCAL NUMBER: A-25-09 06CCD**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 17, 2004	1589.1	MAR 24, 2005	1587.1	JUN 29, 2005	1587.6	AUG 19, 2005	1587.8
	HIGHEST	1587.1	MAR 24, 2005				
	LOWEST	1589.1	DEC 17, 2004				

**SITE: 354646111294801**  
**LOCAL NUMBER: 03 098-13.94X15.20**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 22, 2004	1138.6 P	FEB 22, 2005	1159.2 R	FEB 23, 2005	1063.4	AUG 19, 2005	1066.9
	HIGHEST	1063.4	FEB 23, 2005				
	LOWEST	1159.2	FEB 22, 2005				

## Conversion Factors

Multiply	By	To obtain
Length		
inch (in.)	$2.54 \times 10^1$	millimeter (mm)
	$2.54 \times 10^{-2}$	meter (m)
foot (ft)	$3.048 \times 10^{-1}$	meter (m)
mile (mi)	$1.609 \times 10^0$	kilometer (km)
Area		
acre	$4.047 \times 10^3$	square meter (m <sup>2</sup> )
	$4.047 \times 10^{-1}$	square hectometer (hm <sup>2</sup> )
	$4.047 \times 10^{-3}$	square kilometer (km <sup>2</sup> )
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer (km <sup>2</sup> )
Volume		
gallon (gal)	$3.785 \times 10^0$	liter (L)
	$3.785 \times 10^{-3}$	cubic meter (m <sup>3</sup> )
	$3.785 \times 10^0$	cubic decimeter (dm <sup>3</sup> )
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter (m <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^{-2}$	cubic meter (m <sup>3</sup> )
	$2.832 \times 10^1$	cubic decimeter (dm <sup>3</sup> )
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter (m <sup>3</sup> )
	$2.447 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter (m <sup>3</sup> )
	$1.233 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
	$1.233 \times 10^{-6}$	cubic kilometer (km <sup>3</sup> )
Flow		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second (L/s)
	$2.832 \times 10^{-2}$	cubic meter per second (m <sup>3</sup> /s)
	$2.832 \times 10^1$	cubic decimeter per second (dm <sup>3</sup> /s)
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second (L/s)
	$6.309 \times 10^{-5}$	cubic meter per second (m <sup>3</sup> /s)
	$6.309 \times 10^{-2}$	cubic decimeter per second (dm <sup>3</sup> /s)
million gallons per day (Mgal/d)	$4.381 \times 10^{-2}$	cubic meter per second (m <sup>3</sup> /s)
	$4.381 \times 10^1$	cubic decimeter per second (dm <sup>3</sup> /s)
Mass		
ton (short)	$9.072 \times 10^{-1}$	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$