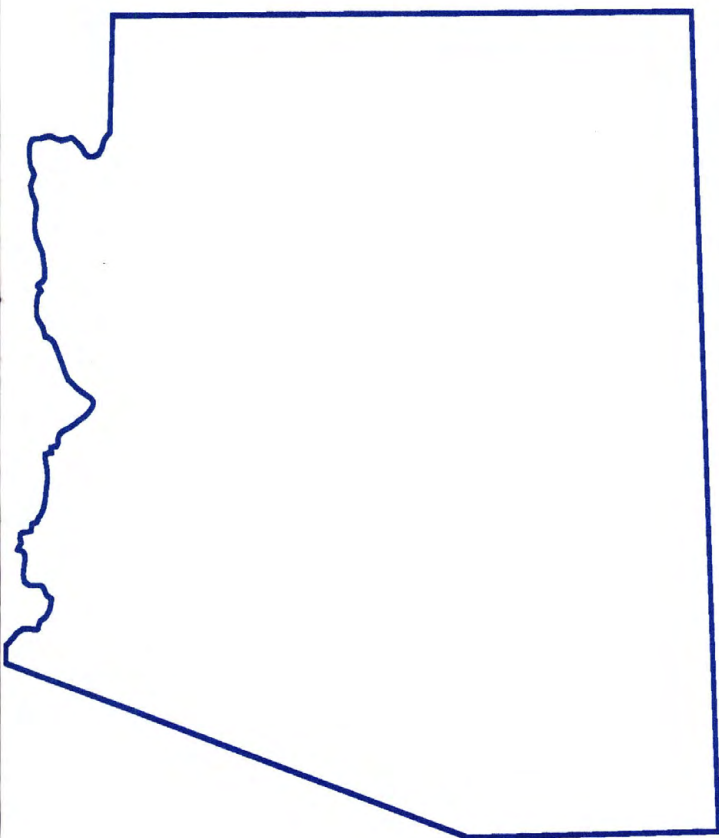
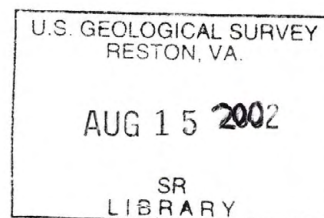


# Water Resources Data Arizona Water Year 2001

Water-Data Report AZ-01-1



# CALENDAR FOR WATER YEAR 2001

2000

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30
														31						

2001

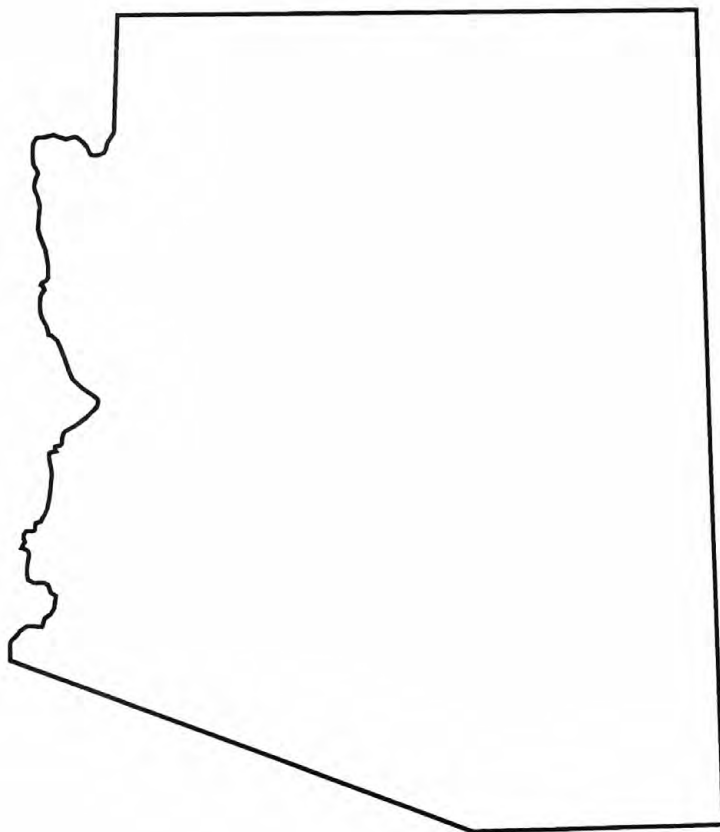
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S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3					1	2	3
7	8	9	10	11	12	13	4	5	6	7	8	9	10	4	5	6	7	8	9	10
14	15	16	17	18	19	20	11	12	13	14	15	16	17	11	12	13	14	15	16	17
21	22	23	24	25	26	27	18	19	20	21	22	23	24	18	19	20	21	22	23	24
28	29	30	31				25	26	27	28				25	26	27	28	29	30	31
APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7			1	2	3	4	5						1	2
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22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23
29	30						27	28	29	30	31			24	25	26	27	28	29	30
JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4							1
8	9	10	11	12	13	14	5	6	7	8	9	10	11	2	3	4	5	6	7	8
15	16	17	18	19	20	21	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	21	22	23	24	25	16	17	18	19	20	21	22
29	30	31					26	27	28	29	30	31		23	24	25	26	27	28	29
														30						



# Water Resources Data Arizona Water Year 2001

By H.F. McCormack, G.G. Fisk, N.R. Duet, D.W. Evans, and N.K. Castillo

Water-Data Report AZ-01-1



UNITED STATES DEPARTMENT OF THE INTERIOR

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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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This report was prepared in cooperation with the State of Arizona and with other agencies, under the general supervision of Christopher F. Smith, Data Chief, Arizona.



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# SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

[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 number	Drainage area, in square miles	Period of record (water years)
Lee Valley Creek above Lee Valley Reservoir near Greer, AZ.....	09383200	a1.3	1966–72
Lee Valley tributary near Greer, AZ.....	09383220	a.5	1966–72
Lee Valley Creek below Lee Valley Reservoir, near Greer, AZ.....	09383250	a1.9	1966–72
Filler ditch at Greer, AZ.....	09383300	---	1960–77
Little Colorado River at Greer, AZ.....	09383400	29.1	1960–82
Nutrios Creek above Nelson Reservoir, near Springerville, AZ.....	09383500	83.3	1967–82
Nutrios Creek below Nelson Reservoir, near Springerville, AZ.....	09383550	86.7	1967–82
Lyman Reservoir near St. Johns, AZ.....	09384500	b811	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	b811	1941–80
Little Colorado River at St. Johns, AZ.....	09386000	b964	1906–7, 1909, 1929–33 1935–40
Little Colorado River above Zuni River, near Hunt, AZ.....	09386500	b3,741	1940–72
Little Colorado River near Hunt, AZ.....	09388000	b6,383	1929–33, 1940–72
Silver Creek near Shumway, AZ.....	09390000	b172	1942–55
Show Low Creek at Show Low, AZ.....	09392500	90.2	1944–55
Silver Creek at Snowflake, AZ.....	09393000	b488	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	b966	1929–33, 1935–52
Puerco River near Church Rock, NM.....	09395350	205	1977–82, 1989–91
Puerco River near Lupton, AZ.....	09395650	a1,050	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	b2,654	1940–49
Little Colorado River at Holbrook, AZ.....	09397000	b11,462	1905–7, 1949–73
Chevelon Creek near Winslow, AZ.....	09398000	b785	1905–6, 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

a Approximately.

b Includes area that is probably noncontributing.

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

Station name	Station number	Drainage area, in square miles	Period of record (water years)
Jacks Canyon Creek near Winslow, AZ.....	09399400	295	1969–72
Salt Creek near Winslow, AZ.....	09399500	287	1939–41
Little Colorado River near Winslow, AZ.....	09400000	a16,100	1954–56
Rio de Flag at Flagstaff, AZ.....	09400600	51.0	1955–60
Little Colorado River at Grand Falls, AZ.....	09401000	b21,068	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	a1,650	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
Little Colorado above mouth near Desert View, AZ.....	09402300	---	1990–93
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
Garden Creek below Indian Garden near Grand Canyon, AZ.....	09403015	---	1994–96
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
Havas Creek above Havasu Falls near Supai, AZ.....	09404112	2,898	1995–2000
Havas Creek above mouth near Supai, AZ.....	09404115	---	1990–97
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	ab176,300	1917–82
Cottonwood Wash No. 1 near Kingman, AZ.....	09424200	143	1964–78
Francis Creek near Bagdad, AZ.....	09424432	134	1985–93
Burro Creek at old U.S. 93 bridge near Bagdad, AZ.....	09424447	b611	1980–93
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	ab186,200	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	ab187,800	1956–88

a Approximately.

b Includes area that is probably noncontributing.

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

Station name	Station number	Drainage area, in square miles	Period of record (water years)
Gila River at New Mexico–Arizona State Line, near Virden, NM .....	09438000	3,349	1939–49
Blue River near Clifton, AZ.....	09444200	506	1967–91
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
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	a39	1919–25
Cave Creek Canal near Paradise, AZ.....	09455000	---	1919–25
East Turkey Creek at Paradise, AZ .....	09455500	a8.2	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
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

a Approximately.

b Includes area that is probably noncontributing.

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

Station name	Station number	Drainage area, in square miles	Period of record (water years)
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	a18,300	1898–99
Gila River near Sacaton, AZ.....	09478350	---	1995–98
Queen Creek at Whitlow Dam site (Whitlow's Ranch), near Superior, AZ.....	09478500	144	1948–59
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	a37	1932–34
Sonoita Creek near Patagonia, AZ.....	09481500	209	1930–33, 1935–72
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
Canada del Oro near Oracle Junction, AZ.....	09486100	42.3	1985–91
Canada del Oro near Tucson, AZ.....	09486300	250	1965–78
Santa Cruz River at Ina Road, near Tucson, AZ.....	09486490	3,489	1991–93
Santa Cruz River near Rillito.....	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	1991–1999
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	a39	1965–78
North Fork White River near McNary, AZ.....	09491000	a66	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

a Approximately.

b Includes area that is probably noncontributing.



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

Station name	Station number	Drainage area, in square miles	Period of record (water years)
East Fork White River at Fort Apache, AZ.....	09493000	135	1912–20
White River at Fort Apache, AZ.....	09493500	499	1912–19, 1921–22
White River near Fort Apache, AZ.....	09494000	632	1917–98
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
Corduroy Creek near Mouth, near Show Low, AZ.....	09496000	203	1951–75
Cibecue No. 1 tributary to Carrizo Creek, near Show Low, AZ.....	09496600	.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
Tonto Creek near Roosevelt, AZ.....	09499500	838	1913–40
Salt River at Roosevelt (at reservoir site) (nr Livingstone), AZ.....	09500500	5,824	1904–7
Salt River at McDowell, AZ.....	09502500	6,268	1904–9
Williamson Valley Wash near Paulden, AZ.....	09502800	255	1965–85
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	b130	1965–72
Oak Creek at Sedona, AZ.....	09504430	233	1981–95
Verde River at Camp Verde, AZ.....	09505000	b4,215	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	b4,653	1971–78
Verde River at Childs, near Camp Verde, AZ.....	09506500	b5,098	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	b5,606	1934–41
Verde River above Bartlett Reservoir, near Cave Creek, AZ.....	09509000	b6,036	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

a Approximately.

b Includes area that is probably noncontributing.



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

Station name	Station number	Drainage area, in square miles	Period of record (water years)
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	a.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	1983–1994
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	1628	1962–1998
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	ab246,500	1902–64
Colorado River and Pilot Knob wasteway (Colorado River) at Rockwood Gate, CA .....	09521500	ab246,600	1945–50
Colorado River at southerly international boundary, near San Luis, AZ	09522200	ab246,700	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

a Approximately.

b Includes area that is probably noncontributing.

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

Station name	Station number	Drainage area, in square miles	Period of record (water years)
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	a19	1919–25
Whitewater Draw near Rucker, AZ.....	09537000	38.7	1919–25
Whitewater Draw (White, White Water River) near Douglas, AZ .....	09537500	1,023	1912–13, 1918–19, 1930–33, 1935–82

a Approximately.

b 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 number	Drainage area, in square miles	Type of record	Period of record
Paria River at Lees Ferry, AZ.....	09382000	1,410		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 abv Lyman Lake, near St. Johns, AZ.....	09384000	a706	C,S,T	1976-83
Little Colorado River abv Zion Reservoir, near St. Johns, AZ.....	09386030	1,007	C,T	1975-94
Zuni River above Black Rock Reservoir, NM .....	09386950	848		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	a8,072	C,S,T	1905-06, 1950-57
Puerco River near Church Rock, NM .....	09395350	205		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	a21,068	C,S,T	1991-94
Little Colorado River at Cameron, AZ .....	09401200	a23,119		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		1970-72; 1990-91
Colorado River near Grand Canyon, AZ .....	09402500	ab141,600	C,S,T	1925-88
Bright Angel Creek near Grand Canyon, AZ .....	09403000	101		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	a2,125	C,T	1957-92
Las Vegas Wash above Three Kids Wash below Henderson, NV .....	09419753	b2,180	C,T	1988-92
Lake Mead at Hoover Dam, AZ.....	09421000	ab171,700		1941-62, 1964-85
Colorado River below Davis Dam, AZ.....	09423000	ab173,300	C,T	1969-87
Topock Marsh Outlet near Needles, CA .....	09423640	---		1980-81, 1983

\*Unpublished data.

a Includes area that is probably noncontributing.

b Approximately.

## DISCONTINUED SURFACE-WATER QUALITY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Type of record	Period of record
Topock Marsh Outlet near Topock, AZ .....	09423650	---	C,T	1975-77
Colorado River near Topock, AZ.....	09424000	ab176,300		1925-27, 1952-62, 1969-82
			C,T	
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	---		1969-83
			C,T	
Palo Verde Canal near Blythe, CA.....	09429000	---	C,T	1970-85
Palo Verde Drain near Parker, AZ.....	09429030	---		*1962-68,
			C,T	1969-83
Colorado River Indian Reservation Lower Main Drain near Parker, AZ.....	09429060	---		*1962-68,
			C,T	1969-83
Colorado River below Palo Verde Dam, AZ.....	09429100	ab186,200	T	1956-66
Palo Verde Irrigation District Olive Lake Drain near Blythe, CA .....	09429130	---		*1963-65,
			C,T	1969-81
Colorado River at Taylor Ferry, near Blythe, CA .....	09429188	ab187,700	C,T	1970-83
Palo Verde Irrigation District Outfall Drain near Palo Verde, CA.....	09429220	---		*1962-65,
				*1967-68,
			C,T	1969-83
Palo Verde Irrigation District Anderson Drain near Palo Verde, CA .....	09429225	---		1969-81
			C,T	
Colorado River below Cibola Valley, AZ .....	09429300	ab187,800		1956-66,
			C,T	1969-83
Colorado River below Laguna Dam, AZ .....	09429600	ab188,600	C,T	1972-83
Colorado River above Gila River, near Yuma, AZ.....	09429690	ab188,700		*1961-68,
			C,T	1969-79
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	a2,766		1943-44,
			C,S,T	1964-67
San Francisco River near Clifton, AZ.....	09444600	a2,770		1976-79, 1981-84, 1987-88,
				1990-93
			C	
Gila River at Safford, AZ.....	09458500	10,459	C,T	1941-44
Gila River at Fort Thomas, AZ .....	---	---		1940-41,
			C,T	1943-44
Gila River at Calva, AZ .....	09466500	11,470		1943-44;
			C,T	1974-94
San Carlos River near Peridot, AZ.....	09468500	1,026	C	1990-91
Gila River at Winkleman, AZ .....	09470000	a13,268	C,S,T	1976-84

\*Unpublished data.

a Includes area that is probably noncontributing.

b Approximately.

## DISCONTINUED SURFACE-WATER QUALITY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Type of record	Period of record
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 Winkleman, AZ.....	09473400	4,449	C,S,T	1962–66
San Pedro River at Winkleman, AZ.....	09473500	4,471	C,S,T	1966–80
Mineral Wash at Kelvin, AZ.....	09473900	97.9		1956–58,
			C,T	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		1976,
			C,S,T	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
Tonto Creek above Gun Creek, near Roosevelt, AZ.....	09499000	675		1976–79,
			C,S,T	1983
Salt River below Stewart Mountain Dam, AZ.....	09502000	6,232	C,S,T	1950–92
Oak Creek at Red Rock Crossing near Sedona, AZ.....	09504440	252		1978–83;
			C,T	1986–94
Oak Creek near Cornville, AZ.....	09504500	357		1954–64,
			C,T	1976–78
Verde River near Camp Verde, AZ.....	09506000	a5,009		1977,
			C,S,T	1979–84
Verde River below Bartlett Dam, AZ.....	09510000	a6,161	C,S,T	1950–92
Turkey Creek near Cleator	09512600	89.4	C,T	1980–82
Agua Fria River below Waddell Dam, AZ.....	09513600	1,459		1950–58;
				1975;
				1982–89;
			C,T	1991–94
Gila River near Dome.....	09520500	b57,850		1973, 1979,
			C,S,T	1984–92
Gila River near mouth, near Yuma.....	09520700	b57,950		*1961–68,
			C,S,T	1969–84
Colorado River at Yuma.....	09521000	ab246,500		1905,
				1926–28,
				1943–44,
			C,S,T	1947–63
Colorado River below Yuma Main Canal Wasteway, at Yuma, AZ.....	09521100	ab246,500		1976,
			C,T	1987–88
Colorado River at southerly international boundary, near San Luis, AZ.....	09522200	ab246,700		*1962–66,
			C,T	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	---		*1926–28,
			C,T	1943–70
Mittrey Lake Outlet Channel near Yuma, AZ.....	09527900	---	C,T	1974–83
North Gila Drain No. 1, near Yuma, AZ.....	09529000	---		*1966–68,
			C,T	1969–81

\*Unpublished data.

a Includes area that is probably noncontributing.

b Approximately.



## DISCONTINUED SURFACE-WATER QUALITY STATIONS—Continued

Station name	Station number	Drainage area, in square miles	Type of record	Period of record
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
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.

a Includes area that is probably noncontributing.

b Approximately.



# **WATER RESOURCES DATA FOR ARIZONA, WATER YEAR 2001**

## **INTRODUCTION**

The Water Resources Division 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 197 streamflow-gaging stations, for 29 crest-stage, partial-record streamflow stations, and 53 miscellaneous sites; (2) contents only records for 8 lakes and reservoirs; stage and (or) content records for 1 lake; (3) water-quality records for 16 continuous-record stations, 2 miscellaneous sites, and 155 wells; (4) ground-water levels and compaction values for 18 stations; and (5) water levels for 19 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, Colorado 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-01-1." 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 District Chief 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 cooperative agreement with the Survey are:

Arizona Department of Environmental Quality  
Arizona Department of Water Resources  
Bureau of Indian Affairs  
Bureau of Land Management  
Bureau of Reclamation  
Central Arizona Water Conservation District  
City of Flagstaff  
City of Nogales  
City of Safford  
City of Tucson  
Cochise County  
Flood Control District of Maricopa County  
Gila Water Commissioner  
Gila Valley Irrigation District  
The Havasupai Indian Tribe  
The Hopi Indian Tribe  
The Hualapai Indian Tribe  
Metropolitan Water District of Southern California  
National Park Service  
National Weather Service  
The Navajo Nation  
Phelps Dodge Corporation

Assistance in the form of funds or services was given by the Bureau of Land Management, Bureau of Reclamation, U.S. Fish and Wildlife Service, and National Park Service, U.S. Department of the Interior; U.S. Army Corps of Engineers; Forest Service, U.S. Department of Agriculture; International Boundary and Water Commission, U.S. Department of State; and by the Federal Power Commission. Assistance in collecting records was furnished by the Arizona Public Service Co. Organizations that supplied data are acknowledged in station descriptions.

## HYDROLOGIC CONDITIONS

As is common in Arizona, streamflow varied greatly in the 2001 water year—from month to month throughout the year and from place to place in the State. The variations are related to differences in precipitation, temperature, topography, and geology. The yearly discharge at five key streamflow-gaging stations ranged from 63 to 255 percent of the median of yearly discharges. The median of the yearly discharges is defined as the middle value of discharge when arranged in order of size. For these index stations, the median is computed from the yearly discharges for the 1950–2001 period of record.

The yearly discharge for the 2001 water year was within the normal range at five stations, and was excessive at one station. Excessive discharge is defined as a discharge greater than the 75-percent quartile, that is, greater than 75-percent of the values arranged in order of magnitude; deficient discharge is less than the 25-percent quartile. The yearly discharge for the 2001 water year and the relation to the median of yearly discharges for the period 1950–2001 for the five index gaging stations are given below.

Station	Discharge (acre-feet)	Percent of median
Little Colorado River near Cameron.....	83,130	63
Gila River at head of Safford Valley, near Solomon .....	431,970	183
San Pedro River at Charleston .....	64,980	255
Salt River near Roosevelt.....	449,900	102
Verde River below Tangle Creek, above Horseshoe Dam .....	262,300	80

Figure 1 shows the mean monthly discharge for the 2001 water year compared with the median of mean monthly discharge for the period 1950–2001 at five representative gaging stations for which long-term records are available.

### Water Use

Arizona is an arid state in which economic development is influenced largely by the location of adequate water supplies. Water demand is met by pumping ground water from aquifers or by conveying surface water through a system of reservoirs and canals. Data on the nature and extent of the aquifers, quantity and quality of available ground water, and the effect of aquifer development are necessary for proper management of this valuable resource.

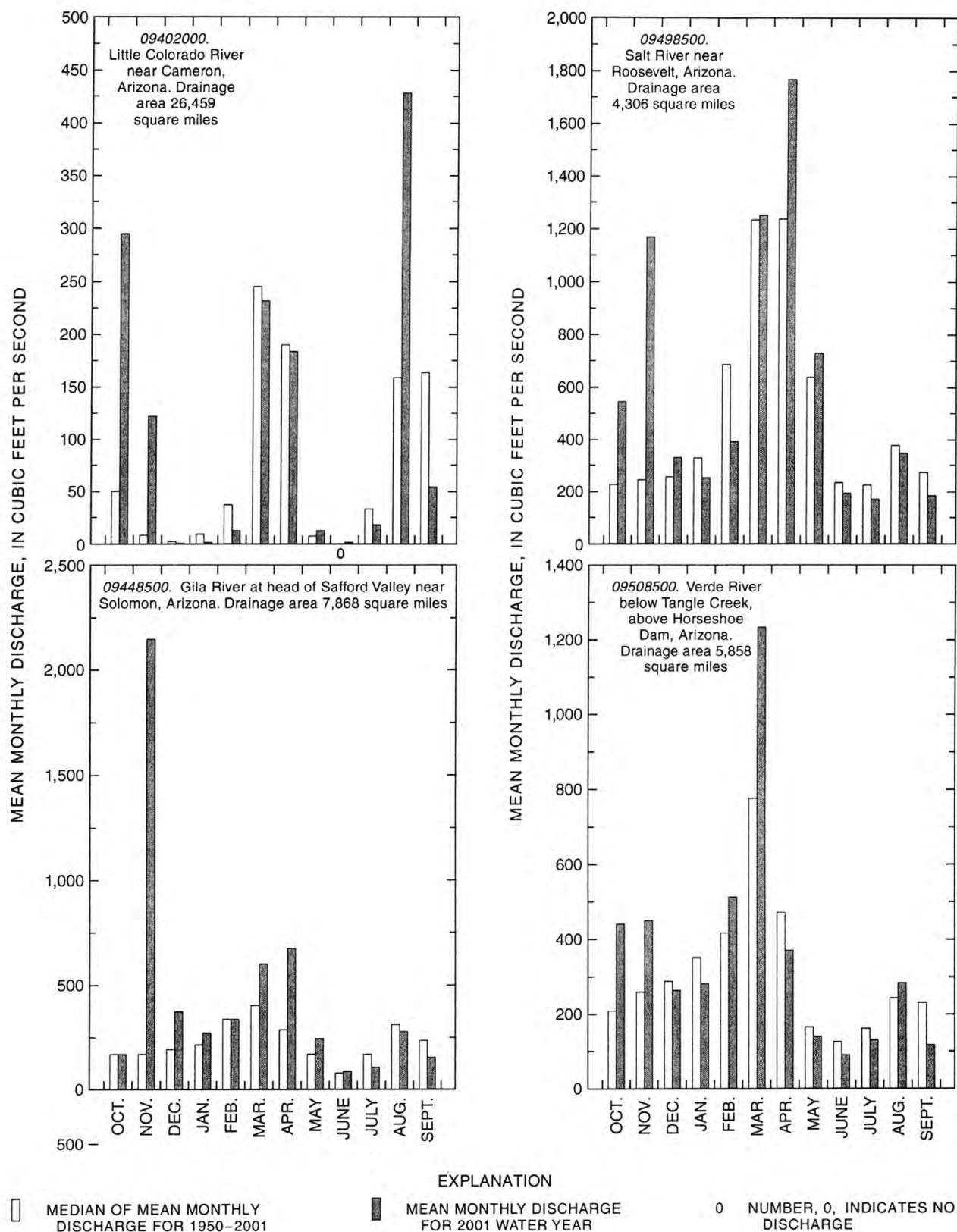
## GROUND-WATER LEVELS AND COMPACTION VALUES

Since the 1940s, declines of several feet per year in ground-water levels have resulted in aquifer compaction in the 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 18 sites in the 2001 water year are summarized in this report. The 18 sites are shown in figure 9, and the water-level and compaction data are listed on 351–368. Historic data are available from the District Office 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 (lstd). 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.





**Figure 1.** Mean monthly discharge for the 2001 water year compared with median of mean monthly discharge for period 1950–2001 at five representative gaging stations for which long-term records are available.

## SPECIAL NETWORKS AND PROGRAMS

Special networks and sampling programs have been established on the state and national level to monitor certain hydrologic conditions and trends. The following sections describe each program and are summarized at the end with a table listing stations which comprise each network.

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the affects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Network can be found at <http://water.usgs.gov/hbn/>

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within the Nation's largest river basins. From 1995 through 2000, a network of approximately 40 stations were operated in the Mississippi, Columbia, Colorado, and Rio Grande River Basins. For 2001 through 2005, sampling will be reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations can 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 can be found at <http://water.usgs.gov/nasqan/>

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) 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 a network of 225 precipitation chemistry monitoring 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. Data from the network, as well as information about individual sites, are available through the World Wide Web at: <http://nadp.sws.uiuc.edu/>

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey 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-water and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 59 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 will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic stud-

ies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers 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, Native American governments, 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 to collaborate efforts among the agencies. Additional information about the NAWQA Program can be found at [http://water.usgs.gov/nawqa/nawqa\\_home.html/](http://water.usgs.gov/nawqa/nawqa_home.html/)

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 number	NASQAN	Arizona Fixed Station Network
Colorado River at Lees Ferry .....	09380000	X	X
Colorado River above Diamond Creek .....	09404200	X	
Colorado River below Parker Dam .....	09427520		X
Gila River near Virden .....	09432000		X
Gila River at the head of Safford Valley near Solomon .....	09448500		X
Gila River at Calva .....	09466500		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 THE RECORDS**

The surface-water and ground-water records published in this report are for the 2001 water year that began October 1, 2000, and ended September 30, 2001. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface water and ground water, aquifer compaction data, and ground-water-level data. The locations of the stations where the data were collected are shown in figures 4 through 7. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

### **Station Identification Numbers**

Each data station, whether stream site or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the USGS to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Arizona, for surface-water stations where only miscellaneous measurements are made.

#### **Downstream Order System**

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

The station identification number is assigned according to downstream order. In assigning station numbers, 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 made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 09402500, which appears just to the left of the station name, includes the two-digit part number "09" plus the six-digit downstream-order number "402500." The part number "09" designates the major river basin (Colorado River Basin).

#### **Latitude-Longitude System**

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude; the next seven digits denote degrees, minutes, and seconds of longitude; and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site identification number, once assigned, is a pure number, and has no locational significance. In



the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number, however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description (fig. 2).

### **Local Well Numbers**

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.

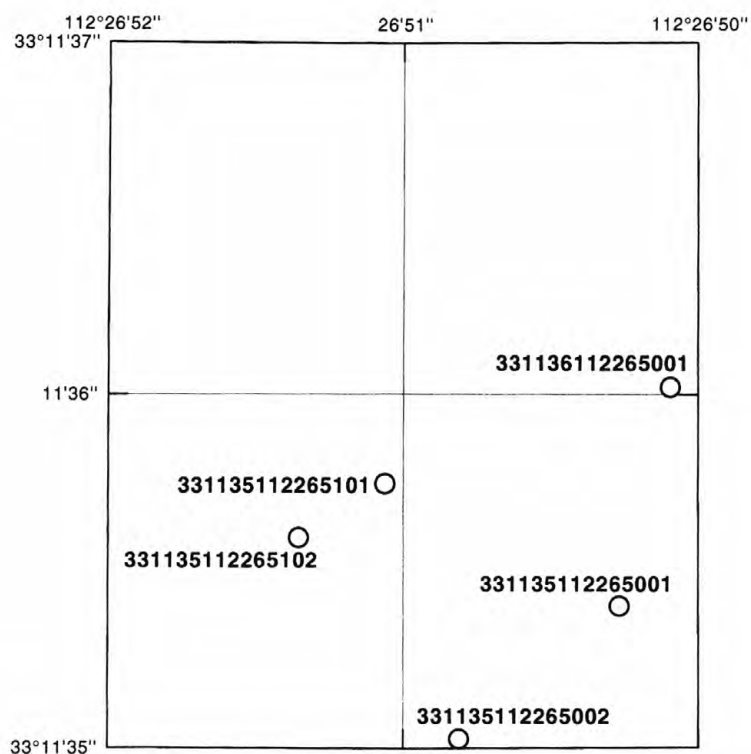
The well numbers used by the USGS in Arizona are in accordance with the Bureau of Land Management's system of land subdivision. The land survey in Arizona is based on the Gila and Salt River meridian and base line, which divide the State into four quadrants. These quadrants are designated counterclockwise 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.

### **Records of Stage and Water Discharge**

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time or any period of time during the period of record. Complete records of lake and reservoir contents are those for which stage or contents may be computed or estimated with reasonable accuracy for any time or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

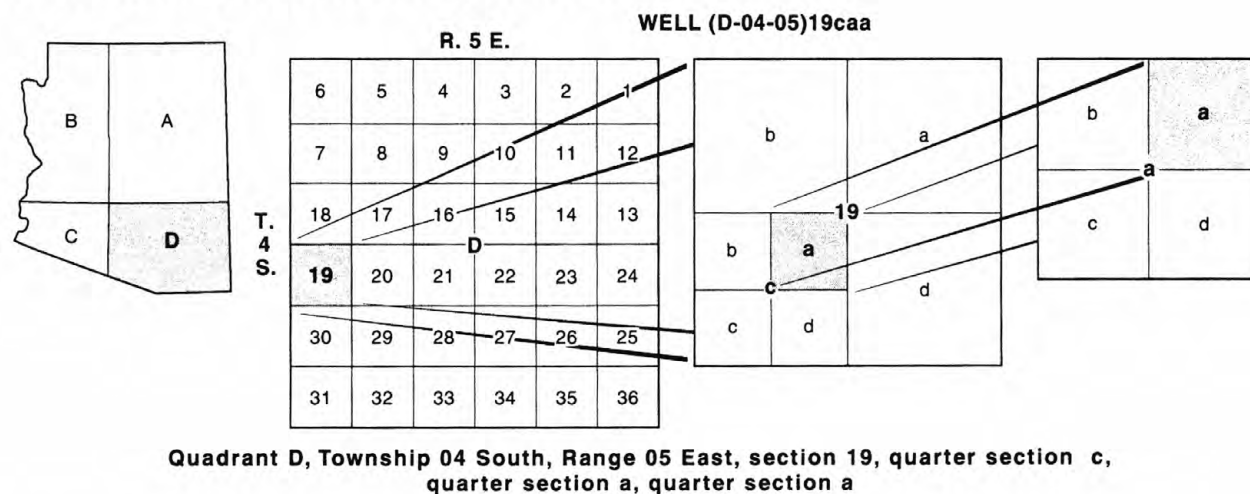
By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and crest-stage partial-record stations for which data are given in this report are shown in figures 4 through 7.





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

## WELL-NUMBERING AND NAMING SYSTEM



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

### Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relation between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relation between stage and lake contents. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the USGS as a result of experience accumulated since 1880. These methods are described in standard textbooks, Water-Supply Paper 2175, and the U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI's), book 3, chap. A1 through A19 and book 8, chaps. A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves then are constructed. From these curves, rating tables indicating the approximate discharge are prepared for any stage within the range of the measurements. If it is necessary to define extremes of discharge outside the range of current-meter measurements, the curves are extended using (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dam or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method in which correction factors based on individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relation that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes or observations, and records for other stations in the same or nearby basins for comparable periods.

At some streamflow-gaging stations, the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This 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 set at some distance from the base gage. 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.

In computing records of lake or reservoir contents, it is necessary to have available surveys, curves, or tables to define the relation between stage and contents. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relation changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relation. When this is done, the contents computed may become increasingly in error as time increases since the last survey. Discharges over lake or reservoir spillways are computed from stage-discharge relations in the same manner as other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This conditions occurs when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basin. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily values of discharges are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

### **Data Presentation**

Streamflow data in this report are presented in a format that is considerably different from the format in data reports prior to the 1992 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts, the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and 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.

### **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 to follow clarify information presented under the various headings of the station description.

**LOCATION.**—Information on locations is obtained from the most accurate maps available or from Global Positioning System data. The location of the gage 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.

**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.**—The period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time when the present station was not in operation and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

**REVISED RECORDS.**—Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

**GAGE.**—The type of gage in current use, the datum of the current gage referred to sea level (see Definition of Terms), 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 record will either be identified by date in this paragraph for discharge stations or flagged in the daily discharge table. (See next section, “Identifying Estimated Daily Discharge.”) If a REMARKS statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph also is used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station, and possibly to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and 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.

**AVERAGE DISCHARGE.**—The discharge value given is the arithmetic mean of the water-year mean discharges. Average discharge is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

**EXTREMES FOR PERIOD OF RECORD.**—Extremes may include maximum and minimum discharges or contents. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and is determined and reported in the same manner as the maximum.

**EXTREMES OUTSIDE PERIOD OF RECORD.**—Information is included on 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.

**EXTREMES FOR CURRENT YEAR.**—Extremes given are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

**REVISIONS.**—If errors in published water-quality records are discovered after publication, appropriate updates are made in the U.S. Geological Survey’s distributed data system, NWIS, and subsequently to its web-based National data system, NWISWeb [<http://water.usgs.gov/nwis/nwis>]. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure the most recent updates. Updates to NWISWeb are currently made on an annual basis.

#### Data Table of Daily Mean Values

The daily table for streamflow-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed “TOTAL” gives the sum of the daily figures. The line headed “MEAN” gives the average flow in cubic feet per second during the month. The lines headed “MAX” and “MIN” give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed “CFSM”), or in inches (line headed “IN.”), or in acre-feet (line headed “AC-FT”).



Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

#### Statistics of Monthly Mean Data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "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 figures. 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 summary will consist of all the station records within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be 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, and the first column contains 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 the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive unless a break in the station record is indicated in the manuscript. All 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. Reported occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. 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, therefore, may not be within the selected water years listed in the heading. When this occurs, 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 there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, 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. At some stations, the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.



**ANNUAL MEAN.**—The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes. At least 5 complete years of record must be available before this statistic is published 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. 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 first day of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

**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 equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

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

Inches (INCHES) indicates the depth to which the drainage area would be covered if all 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 a table of annual maximum stage and discharge at crest-stage stations. The table of crest-stage stations is followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements generally are 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.

### Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified by flagging individual daily values with the letter symbol “e” and printing the table footnote, “e, Estimated.”

### Accuracy of the Records

The accuracy of streamflow records 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 measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under “REMARKS.” “Excellent” means that about 95 percent of the daily discharges are within 5 percent of the true; “good,” within 10 percent; and “fair,” within 15 percent. Records that do not meet the criteria mentioned are rated “poor.” Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second ( $\text{ft}^3/\text{s}$ ) for values less than  $1 \text{ ft}^3/\text{s}$ , to the nearest tenth between  $1.0$  and  $10 \text{ ft}^3/\text{s}$ , to whole numbers between  $10$  and  $1,000 \text{ ft}^3/\text{s}$ , and to three significant figures for more than  $1,000 \text{ ft}^3/\text{s}$ . The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff owing 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, figures 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 Records Available

The National Water Data Exchange (NAWDEx), USGS, Reston, VA 20192, maintains an index of sites as well as an index of records of discharge collected by other agencies but not published by the USGS. Information on records at specific sites can be obtained from that office upon request.

Several components of the National Water Information System (NWIS) are on the Arizona District computer. Many of the data published in this report and much additional information can be retrieved from the databases. The Ground Water Site Inventory (GWSI) database contains station numbers, well and miscellaneous site numbers, local well numbers, locations, and other descriptive data for all USGS data-collection sites. GWSI contains most of the data collected for wells except for chemical analyses. The Automated Data Processing System (ADAPS) contains most surface-water data except for site descriptions and chemical analyses. The Water Quality Data Processing System (QW) contains chemical analyses of water from ground-water and surface-water sites.

Data retrievals from the three databases are available at cost on paper, disk, or nine-track computer tape. Some of the retrievals produce data in a format suitable for machine reading that does not contain blank lines or page headers.

### Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near streamflow-gaging stations because interpretation of records of surface-water quality almost always requires corresponding discharge data. Records of surface-water quality in this report may 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 continuing or partial-record station, where random 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 “continuing records” as used in this report and “continuous recordings,” which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. 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 5 and 6.

### **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. 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.

### **Onsite Measurements and Sample Collection**

In obtaining water-quality data, a major concern is the assurance that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, are made onsite when samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures are 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 publications on “Techniques of Water-Resources Investigations,” Book 1, Chap. D2; Book 3, Chap. A1, A3, and A4; Book 9, Chap. A1–A9. These references are listed in the section entitled “Techniques of Water-Resources Investigations of the U.S. Geological Survey.” These methods are consistent with ASTM standards and generally follow ISO standards.

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the cross section is homogeneous. The concentration of solutes at different locations in the cross section, however, may vary widely with different rates of water discharge depending on the source of material and turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream-Quality Accounting Network (see “Special Networks and Programs”) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors that must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative value available for the stations listed. The values represent water-quality conditions at the time of sampling as much as possible and are 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 for each constituent measured and are based on hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the District office whose address is given on the back of the title page of this report.

### **Water Temperature**

Water temperatures are measured at the water-quality stations. In addition, water temperatures are taken at the time discharge measurements are made 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 closely follow 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 in the District office.

### **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 the coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). 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. Methods used in the computation of sediment records are described in the TWRI, book 3, chap. C1 and C3. These methods are consistent with ASTM standards and generally follow ISO standards.

At other stations, suspended-sediment samples were 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.

### **Cross-Sectional Data**

Cross-sectional surveys of water temperature, pH, specific conductance, dissolved oxygen, and suspended sediment are conducted at all NASQAN and Hydrologic Benchmark Network stations during various seasons and surface-water discharges. Documentation of cross-section variation of water quality is essential in order to determine how many samples in a cross section are necessary to ensure a representative composite sample.

### Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed at the USGS National Water-Quality Laboratory in Denver, Colorado. Methods used to analyze sediment samples and to compute sediment records are described in the TWRI Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRI, book 1, chap. D2; book 3, chap. C2; and book 5, chaps. A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

MBAS determinations made from January 1, 1970, through August 29, 1993, at the National Water-Quality Laboratory in Denver (Analyzing Agency Code 80020) are positively biased. These data can be corrected on the basis of the following equation, if concentrations of dissolved nitrate plus nitrite, as nitrogen, and dissolved chloride, determined concurrently with the MBAS data, are applied:

$$\text{MBASCOR} = M - 0.0088N - 0.00019C$$

where

MBASCOR = corrected MBAS concentrations, in milligrams per liter;

M = reported MBAS concentration, in milligrams per liter;

N = dissolved nitrate plus nitrite, as nitrogen, concentration, in milligrams per liter; and

C = dissolved chloride concentration, in milligrams per liter.

The detection limit of the new method is 0.02 mg/L, whereas the detection limit for the old method was 0.01 mg/L. A detection limit of 0.02 mg/L should be used with corrected MBAS data from January 1, 1970, through August 29, 1993. In March 1989, the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989.

Samples where the dissolved concentration of a constituent (which is theoretically less than or equal to the total concentration) exceeds the respective total, may be due to unavoidable errors associated with subsampling and sample processing, or limitations on precision and accuracy of the analytical procedure.

### Identifying Estimated Concentrations

Estimated concentrations published in this report are identified by flagging individual values with the symbol "E" and printing a table footnote "E, Estimated value." A wide variety of conditions can justify evoking the "E" remark code. All reported concentrations that are less than the lower reporting level (LRL) for an analytical method or the lowest calibration standard used, whichever is higher, are qualified using an "E" remark code. Reported concentrations that are greater than the highest calibration standard are also qualified with an "E" remark code. The "E" code is also assigned by the laboratory under the following conditions:

- Data quantification was not performed according to method-specific criteria.
- Performance of the analyte does not meet acceptable method-specific criteria. (Certain analytes that rarely meet criteria are permanently "E" coded.)
- Deviation from the standard operating procedure was required.
- Some moderate losses occurred in sample preparation but were not quantifiable.
- Moderate matrix interference conditions occurred. (Severe matrix interference results in raised reporting levels or deletion of the result.)

For microbiological values, an "E" is assigned when the reported value is not representative of an ideal colony count.



### 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 other data 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 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, as appropriate, 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" under "Records of Stage and Water Discharge"; same comments apply.

**DRAINAGE AREA.**—See "Data Presentation" under "Records of Stage and Water Discharge"; same comments apply.

**PERIOD OF RECORD.**—This indicates the periods for which there are published water-quality records for the station. 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 individual parameters.

**INSTRUMENTATION.**—Information on instrumentation is given only if a water temperature sensor 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. None are given for parameters measured weekly or less frequently because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for the period of record and for the current water year.

**REVISIONS.**—If errors in water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the USGS's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's (USEPA) STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of USGS water-quality data are encouraged to obtain all required data from the appropriate computer file to ensure the most recent updates.

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.

**Codes**

<b>Printed output</b>		<b>Remarks</b>
<b>Sample Type</b>		
1	Spike	
2	Blank (field)	
7	Replicate (concurrent)	
9	Environmental	
<b>Sample Purpose</b>		
20.0	National Stream-Quality Accounting Network (NASQAN)	
40.0	Arizona Department of Environmental Quality	
<b>Remark Code</b>		
e or E	Estimated value.	
>	Actual value is known to be greater than value shown.	
<	Actual value is known to be less than value shown.	
M	Presence of material verified, but not quantified.	
V	Analyte was detected in both the environmental sample and the associated blanks.	
<b>Value qualifier code</b>		
k	Results based upon colony counts outside the acceptable range.	
v	Analyte detected in laboratory blank.	

**Dissolved Trace-Element Concentrations**

Note: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ( $\mu\text{g/L}$ ) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10s to 100s of nanograms per liter ( $\text{ng/L}$ ). Data above the  $\mu\text{g/L}$  level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the USGS began using new trace-element protocols at some stations in water year 1994.

**Change in National Trends Network Procedures**

Note: Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study is available from the NADP Program Office, Illinois State Water Survey, 2204 Griffith Drive, Champaign, IL 61820-7495 (217-333-7873).

**Quality-Control Data**

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 this District 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.

**BLANK SAMPLES**—Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by 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 samples 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. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this District are:

- **Source solution blank** – a blank solution that is transferred to a sample bottle in an area of the office laboratory with an atmosphere that is relatively clean and protected with respect to target analytes.
- **Ambient blank** – a blank solution that is put in the same type of bottle used for an environmental sample, kept with the set of sample bottles before sample collection, and opened at the site and exposed to the ambient conditions.
- **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.

**Pump blank** – a blank solution that is processed through the same pump-and-tubing system used for collecting an environmental sample.

**Standpipe blank** – a blank solution that is poured from the containment vessel (stand-pipe) before the pump is inserted to obtain the pump blank.

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

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

**Canister blank** – a blank solution that is taken directly from a stainless steel canister just before the VOC sampler is submerged to obtain a field blank sample.

**REFERENCE SAMPLES**—Reference material is a solution or material prepared by a laboratory whose 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. There are many types of replicate samples 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 district are:

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

- **Concurrent sample** – a type of spike sample that is collected at the same time with the same sampling and compositing devices then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.
- **Split sample** – a type of spike sample in which a sample is split into subsamples contemporaneous in time and space then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

### Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.



### **Data Collection and Computation**

The majority of the records of ground-water quality in this report were collected by Arizona Department of Water Resources personnel. Ground-water samples are collected annually from a network of about 150 wells and springs throughout the State. The samples are analyzed for major ions, nutrients, and some cases, for metals if they are known to be present. The remaining records were obtained as a part of special studies in specific areas. A number of chemical analyses are presented for some ground-water areas but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other ground-water areas in earlier years.

Most methods for collecting and analyzing water samples are described in the USGS TWRI publications referred to in the "On-site Measurements and Sample Collection" and the "Laboratory Measurements" sections in this data report. In addition, the TWRI, book 1, chap. D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not been exposed to the atmosphere and to the well-casing material.

### **Data Presentation**

The records of ground-water quality are published in a section titled "Quality of Water in Selected Wells in Ground-Water Areas in Arizona" immediately following the water-level records. Data for quality of ground water are listed alphabetically by ground-water area, and are identified by local well number. Each record consists of two parts—the site information table and the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records also are applicable to ground-water-quality records.

## **ACCESS TO WATSTORE DATA**

The USGS is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the USGS's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the USGS and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as log-Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the USGS at its National Center in Reston, Virginia, and consists of related files and databases.

- Station Header File—Contains descriptive information on more than 440,000 sites throughout the United States and its territories where the USGS collects or has collected data.
- Daily Value File—Contains more than 220 million daily values of streamflows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.



- **Peak Flow File**—Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.
- **Water Quality File**—Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radiochemical characteristics of surface water and ground water.
- **Ground-Water Site Inventory Database**—Contains inventory data for more than 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements, such as water temperature.

In 1976, the USGS opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requester will be expected to pay all computer costs that are incurred. Direct access may be obtained by contacting:

U.S. Geological Survey  
National Water Data Exchange  
421 USGS National Center  
Reston, VA 20192

## DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, 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 on the inside of the back cover.

**Acid neutralizing capacity** (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an “unfiltered” sample (formerly reported as alkalinity).

**Acre-foot** (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also “Annual runoff”)

**Adenosine triphosphate** (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

**Algal growth potential** (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

**Alkalinity** is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a “filtered” sample.

**Annual runoff** is the total quantity of water that is discharged (“runs off”) from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

**Annual 7-day minimum** is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 to September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. 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.)

**Aroclor** is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type and the last two digits represent the weight percent of the hydrogen substituted chlorine.

**Artificial substrate** is a device that is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also "Substrate")

**Ash mass** is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter ( $\text{g}/\text{m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g}/\text{m}^2$ ). (See also "Biomass")

**Bacteria** are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

**Base discharge (for peak discharge)** is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peaks per year will be published.

**Base flow** is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

**Bedload** is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 ft) that are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler may also contain a component of the suspended load.

**Bedload discharge** (tons per day) is rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload" and "Sediment")

**Bed material** is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

**Benthic organisms** are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

**Biochemical oxygen demand (BOD)** is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

**Biomass** is the amount of living matter present at any given time, expressed as mass per unit area or volume of habitat.

**Biomass pigment ratio** is an indicator of the total proportion of periphyton which are autotrophic (plants). This is also called the Autotrophic Index.

**Blue-green algae** (*Cyanophyta*) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water. Concentrations are expressed as a number of cells per milliliter ( $\text{cells}/\text{mL}$ ) of sample. (See also "Phytoplankton")

**Bottom material** (See "Bed material")

**Cells/volume** refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and are generally reported as cells or units per milliliter (mL) or liter (L).

**Cells volume** (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume ( $\mu\text{m}^3$ ) is determined by obtaining critical cell measurements on cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } 4/3 \pi r^3 \quad \text{cone } 1/3 \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi is the ratio of the circumference to the diameter of a circle; pi = 3.14159...

From cell volume, total algal biomass expressed as biovolume ( $\mu\text{m}^3/\text{mL}$ ) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes over all species.

**Cfs-day** (See "Cubic foot per second-day")

**Chemical oxygen demand** (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also "Biochemical oxygen demand (BOD)"]

***Clostridium perfringens*** (*C. perfringens*) is a spore-forming bacterium that is common in the feces of human and other warm-blooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

**Coliphages** are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of waters and of the survival and transport of viruses in the environment.

**Color unit** is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

**Confined aquifer** is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

**Contents** is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

**Continuous-record station** is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

**Control** designates a feature in the channel downstream from a gaging station that physically influences the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

**Control structure** as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

**Cubic foot per second** (CFS,  $\text{ft}^3/\text{s}$ ) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-feet" sometimes is used synonymously with "cubic feet per second" but is now obsolete.



**Cubic foot per second-day (CFS-DAY, Cfs-day, [(ft<sup>3</sup>/s)/d])** is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily-mean discharges reported in the daily-value data tables are numerically equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

**Cubic foot per second per square mile [CFSM, (ft<sup>3</sup>/s)/mi<sup>2</sup>]** 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. (See also "Annual runoff")

**Daily mean suspended-sediment concentration** is the time-weighted concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Mean concentration of suspended sediment," "Sediment," and "Suspended-sediment concentration")

**Daily-record station** is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or data collection on a daily or near-daily basis.

**Data Collection Platform (DCP)** is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

**Data logger** is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data are usually downloaded from onsite data loggers for entry into office data systems.

**Datum** is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or UTM coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")

**Diatoms** are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

**Diel** is of or pertaining to a 24-hour period of time; a regular daily cycle.

**Discharge**, or flow, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediments or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, etc., within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents such as suspended sediment, bedload, and dissolved or suspended chemical constituents, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

**Dissolved** refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.

**Dissolved oxygen (DO)** is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

**Dissolved-solids concentration** in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO<sub>3</sub>) can be converted to carbonate concentration by multiplying by 0.60.

**Diversity index (H) (Shannon Index)** is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

where  $n_i$  is the number of individuals per taxon,  $n$  is the total number of individuals, and  $s$  is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

**Drainage area** of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

**Drainage basin** is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

**Dry mass** refers to the mass of residue present after drying in an oven at 105° C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also "Ash mass," "Biomass," and "Wet mass")

**Dry weight** refers to the weight of animal tissue after it has been dried in an oven at 65° C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

**Enterococcus bacteria** are commonly found in the feces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41° C on mE agar and subsequent transfer to EIA medium. Enterococci include *Streptococcus fecalis*, *Streptococcus fecium*, *Streptococcus avium*, and their variants. (See also "Bacteria")

**EPT Index** is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that are generally considered pollution sensitive, the index usually decreases with pollution.

**Escherichia coli (E. coli)** are bacteria present in the intestine and feces of warm-blooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5° C on mTEC medium. Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Estimated (E) value** of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

**Euglenoids (Euglenophyta)** are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

**Extractable organic halides (EOX)** are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried streambed sediments. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediments.

**Fecal coliform bacteria** are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5° C plus or minus 0.2° C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")



**Fecal streptococcal bacteria** are present in the intestine of warm-blooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35° C plus or minus 1.0° C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Fire algae** (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

**Flow-duration percentiles** are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

**Gage datum** is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly larger than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any National geodetic datum. However, if the elevation of the gage datum relative to the National datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the National datum by adding the elevation of the gage datum to the gage reading.

**Gage height** (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

**Gage values** are values that are recorded, transmitted and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

**Gaging station** is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

**Gas chromatography/flame ionization detector** (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

**Green algae** have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

**Habitat quality index** is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

**Hardness** of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ( $\text{CaCO}_3$ ).

**High tide** is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA web site:  
<http://www.co-ops.nos.noaa.gov/tideglos.html>

**Hilsenhoff's Biotic Index** (HBI) is an indicator of organic pollution which uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \frac{\sum (n)(a)}{N}$$

where  $n$  is the number of individuals of each taxon,  $a$  is the tolerance value of each taxon, and  $N$  is the total number of organisms in the sample.

**Horizontal datum** (See "Datum")

**Hydrologic benchmark station** is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a benchmark station may be used to separate effects of natural from human-induced changes in other basins that have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped benchmark basin.

**Hydrologic index stations** referred to in this report are five continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

**Hydrologic unit** is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.

**Inch** (IN., in.), as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it. (See also "Annual runoff")

**Instantaneous discharge** is the discharge at a particular instant of time. (See also "Discharge")

**Laboratory Reporting Level (LRL)** is generally equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a non-detection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory collects quality-control data from selected analytical methods on a continuing basis to determine

LT-MDLs and to establish LRLs. These values are reevaluated annually based on the most current quality-control data and may, therefore, change. [Note: In several previous NWQL documents (Connor and others, 1998; NWQL Technical Memorandum 98.07, 1998), the LRL was called the non-detection value or NDV—a term that is no longer used.)

**Land-surface datum** (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

**Light-attenuation coefficient**, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation

$$I = I_0 e^{-\lambda L},$$

where  $I_0$  is the source light intensity,  $I$  is the light intensity at length  $L$  (in meters) from the source,  $\lambda$  is the light-attenuation coefficient, and  $e$  is the base of the natural logarithm. The light attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0}.$$

**Lipid** is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

**Long-Term Method Detection Level (LT-MDL)** is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

**Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. See NOAA web site: <http://www.co-ops.nos.noaa.gov/tideglos.html>

**Macrophytes** are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that are usually arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

**Mean concentration of suspended sediment** (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

**Mean discharge (MEAN)** is the arithmetic mean of individual daily mean discharges during a specific period. (See also "Discharge")

**Mean high or low tide** is the average of all high or low tides, respectively, over a specific period.

**Mean sea level** is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

**Measuring point (MP)** is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

**Membrane filter** is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

**Metamorphic stage** refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

**Method Detection Limit (MDL)** is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

**Methylene blue active substances (MBAS)** are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

**Micrograms per gram (UG/G,  $\mu\text{g/g}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

**Micrograms per kilogram (UG/KG,  $\mu\text{g/kg}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

**Micrograms per liter (UG/L,  $\mu\text{g/L}$ )** is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

**Microsiemens per centimeter (US/CM,  $\mu\text{S/cm}$ )** is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

**Milligrams per liter (MG/L,  $\text{mg/L}$ )** is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in  $\text{mg/L}$  and is based on the mass of dry sediment per liter of water-sediment mixture.

**Minimum Reporting Level (MRL)** is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method (Timme, 1995).

**Miscellaneous site**, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

**Most probable number (MPN)** is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

**Multiple-plate samplers** are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.



**Nanograms per liter** (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

**National Geodetic Vertical Datum of 1929** (NGVD of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. *See NOAA web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88>* (See "North American Vertical Datum of 1988")

**Natural substrate** refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

**Nekton** are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

**Nephelometric turbidity unit** (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of Formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

**North American Vertical Datum of 1988 (NAVD 1988)** is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the U.S. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and U.S. first-order terrestrial leveling networks.

**Open or screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

**Organic carbon** (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediments. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

**Organic mass** or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

**Organism count/area** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m<sup>2</sup>), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

**Organism count/volume** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

**Organochlorine compounds** are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

**Parameter Code** is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

**Partial-record station** is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

**Particle size** is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, Sedigraph) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).



**Particle-size classification**, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024–0.004	Sedimentation
Silt	0.004–0.062	Sedimentation
Sand	0.062–2.0	Sedimentation/sieve
Gravel	2.0–64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

**Peak flow (peak stage)** is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation to the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

**Percent composition or percent of total** is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, mass, or volume.

**Percent shading** is determined by using a clinometer to estimate left and right bank shading. The values are added together and divided by 180 to determine percent shading relative to a horizontal surface.

**Periodic-record station** is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year, but at a frequency insufficient to develop a daily record.

**Periphyton** is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

**Pesticides** are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

**pH** of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

**Phytoplankton** is the plant part of the plankton. They are usually microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae. (See also "Plankton")

**Picocurie (PC, pCi)** is one trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

**Plankton** is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL of sample).

**Polychlorinated biphenyls (PCBs)** are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

**Polychlorinated naphthalenes (PCNs)** are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

**Primary productivity** is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

**Primary productivity (carbon method)** is expressed as milligrams of carbon per area per unit time [ $\text{mg C}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg C}/(\text{m}^3/\text{time})$ ] for phytoplankton. Carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

**Primary productivity (oxygen method)** is expressed as milligrams of oxygen per area per unit time [ $\text{mg O}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg O}/(\text{m}^3/\text{time})$ ] for phytoplankton. Oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

**Radioisotopes** are isotopic forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

**Recoverable from bed (bottom) material** is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. (See also "Bed material")

**Recurrence interval**, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or non-exceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day 10-year low flow ( $7Q_{10}$ ) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the non-exceedances of the  $7Q_{10}$  occur less than 10 years after the previous non-exceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous non-exceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the  $7Q_{10}$ .

**Replicate samples** are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

**Return period** (See “Recurrence interval”)

**River mileage** is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council, and typically used to denote location along a river.

**Runoff** is the quantity of water that is discharged (“runs off”) from a drainage basin in a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

**Sea level**, as used in this report, refers to one of the two commonly used national vertical datums, (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums. See conversion of units page (inside back cover) for identification of the datum used in this report.

**Sediment** is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

**Seven-day 10-year low flow (7Q10)** is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-run average. The recurrence interval of the 7Q10 is 10 years; the chance that the annual 7-day minimum flow will be less than the 7Q10 is 10 percent in any given year. (See also “Recurrence interval” and “Annual 7-day minimum”)

**Sodium adsorption ratio (SAR)** is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

**Specific electrical conductance (conductivity)** is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25° C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

**Stable isotope ratio** (per MIL/MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific waters, to evaluate mixing of different waters, as an aid in determining reaction rates, and other chemical or hydrologic processes.

**Stage** (See “Gage height”)

**Stage-discharge relation** is the relation between the water-surface elevation, termed stage (gage height), and the volume of water flowing in a channel per unit time.

**Streamflow** is the discharge that occurs in a natural channel. Although the term “discharge” can be applied to the flow of a canal, the word “streamflow” uniquely describes the discharge in a surface stream course. The term “streamflow” is more general than “runoff” as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

**Substrate** is the physical surface upon which an organism lives.

**Substrate Embeddedness Class** is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2mm, sand or finer). Below are the class categories expressed as percent covered by fine sediment:

0	< no gravel or larger substrate	3	26–50%
1	> 75%	4	5–25%
2	51–75%	5	< 5%



**Surface area of a lake** is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

**Surficial bed material** is the upper surface (0.1 to 0.2 ft) of the bed material such as that material which is sampled using U.S. Series Bed-Material Samplers.

**Suspended** (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is operationally defined as the material retained on a 0.45-micrometer filter.

**Suspended, recoverable** is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of "suspended, recoverable" constituents are made either by directly analyzing the suspended material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also "Suspended")

**Suspended sediment** is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also "Sediment")

**Suspended-sediment concentration** is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

**Suspended-sediment discharge** (tons/day) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge ( $\text{ft}^3/\text{s}$ ) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

**Suspended-sediment load** is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

**Suspended, total** is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

**Suspended solids, total residue at 105 °C concentration** is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

**Synoptic studies** are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

**Taxa richness** is the total number of distinct species or groups and usually decreases with pollution. (See also "Percent Shading")



**Taxonomy** is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>
Species:	<i>Hexagenia limbata</i>

#### Temperature preferences:

**Cold** – preferred water temperature for the species is less than 20° C or spawning temperature preference less than 16° C and native distribution is considered to be predominantly north of 45° N. latitude.

**Warm** – preferred water temperatures for the species is greater than 20° C or spawning temperature preference greater than 16° C and native distribution is considered to be predominantly south of 45° N. latitude.

**Cool** – intermediate between cold and warm water temperature preferences.

**Thermograph** is an instrument that continuously records variations of temperature on a chart. The more general term “temperature recorder” is used in the table descriptions and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

**Time-weighted average** is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

**Tons per acre-foot (T/acre-ft)** is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

**Tons per day (T/DAY, tons/d)** is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

**Total** is the amount of a given constituent in a representative whole-water (unfiltered) sample, regardless of the constituent’s physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as “total.” (Note that the word “total” does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined at least 95 percent of the constituent in the sample.)

**Total coliform bacteria** are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35° C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35° C plus or minus 1.0° C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

**Total discharge** is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as “total sediment discharge,” “total chloride discharge,” and so on.

**Total in bottom material** is the amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

**Total length** (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

**Total load** refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

**Total organism count** is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume.")

**Total recoverable** is the amount of a given constituent in a whole-water sample after a sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

**Total sediment discharge** is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also "Sediment," "Suspended sediment," "Suspended-Sediment Concentration," "Bedload," and "Bedload discharge")

**Total sediment load** or total load is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-Sediment Load," and "Total load")

#### **Trophic group:**

**Filter feeder** – diet composed of suspended plant and/or animal material.

**Herbivore** – diet composed predominantly of plant material.

**Invertivore** – diet composed predominantly of invertebrates.

**Omnivore** – diet composed of at least 25-percent plant and 25-percent animal material.

**Piscivore** – diet composed predominantly of fish.

**Turbidity** is the reduction in the transparency of a solution due to the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to EPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values. Consequently, the method of measurement and type of instrument used to derive turbidity records should be included in the "REMARKS" column of the Annual Data Report.

**Ultraviolet (UV) absorbance (absorption)** at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of pathlength of UV light through a sample.

**Vertical datum** (See "Datum")

**Volatile organic compounds** (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

**Water table** is the level in the saturated zone at which the pressure is equal to the atmospheric pressure.

**Water-table aquifer** is an unconfined aquifer within which is found the water table.

**Water year** in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2001, is called the "2001 water year."

**WDR** is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976.)

**Weighted average** is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

**Wet mass** is the mass of living matter plus contained water. (See also "Biomass" and "Dry mass")

**Wet weight** refers to the weight of animal tissue or other substance including its contained water. (See also "Dry weight")

**WSP** is used as an acronym for "Water-Supply Paper" in reference to previously published reports.

**Zooplankton** is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers. (See also "Plankton")

## TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The USGS publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, section A of book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be made in the form of a check or money order payable to the "U.S. Geological Survey." Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations."

### Book 1. Collection of Water Data by Direct Measurement

#### Section D. Water Quality

- 1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS–TWRI book 1, chap. D1. 1975. 65 p.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

### Book 2. Collection of Environmental Data

#### Section D. Surface Geophysical Methods

- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS–TWRI book 2, chap. D1. 1974. 116 p.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 p.

#### Section E. Subsurface Geophysical Methods

- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS–TWRI book 2, chap. E1. 1971. 126 p.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 p.

#### Section F. Drilling and Sampling Methods

- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI book 2, chap. F1. 1989. 97 p.

### Book 3. Applications of Hydraulics

#### Section A. Surface-Water Techniques

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 p.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS–TWRI book 3, chap. A4. 1967. 44 p.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS–TWRI book 3, chap. A5. 1967. 29 p.



- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS-TWRI book 3, chap. A6. 1968. 13 p.
- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A7. 1968. 28 p.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A8. 1969. 65 p.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS-TWRI book 3, chap. A9. 1989. 27 p.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A10. 1984. 59 p.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 3, chap. A11. 1969. 22 p.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS-TWRI book 3, chap. A12. 1986. 34 p.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS-TWRI book 3, chap. A13. 1983. 53 p.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS-TWRI book 3, chap. A14. 1983. 46 p.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI book 3, chap. A15. 1984. 48 p.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS-TWRI book 3, chap. A16. 1985. 52 p.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS-TWRI book 3, chap. A17. 1985. 38 p.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS-TWRI book 3, chap. A18. 1989. 52 p.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A19. 1990. 31 p.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS-TWRI book 3, chap. A20. 1993. 38 p.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS-TWRI book 3, chap. A21. 1995. 56 p.

#### Section B. Ground-Water Techniques

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS-TWRI book 3, chap. B1. 1971. 26 p.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS-TWRI book 3, chap. B2. 1976. 172 p.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS-TWRI book 3, chap. B3. 1980. 106 p.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS-TWRI book 3, chap. B4. 1990. 232 p.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS-TWRI book 3, chap. B4. 1993. 8 p.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS-TWRI book 3, chap. B5. 1987. 15 p.

- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS-TWRI book 3, chap. B6. 1987. 28 p.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS-TWRI book 3, chap. B7. 1992. 190 p.
- 3-B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS-TWRI book 3, chap. B8. 2001. 29 p.

#### Section C. Sedimentation and Erosion Techniques

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS-TWRI book 3, chap. C1. 1970. 55 p.
- 3-C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS-TWRI book 3, chap. C2. 1999. 89 p.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS-TWRI book 3, chap. C3. 1972. 66 p.

#### Book 4. Hydrologic Analysis and Interpretation

##### Section A. Statistical Analysis

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS-TWRI book 4, chap. A1. 1968. 39 p.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS-TWRI book 4, chap. A2. 1968. 15 p.

##### Section B. Surface Water

- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI book 4, chap. B1. 1972. 18 p.
- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS-TWRI book 4, chap. B2. 1973. 20 p.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS-TWRI book 4, chap. B3. 1973. 15 p.

##### Section D. Interrelated Phases of the Hydrologic Cycle

- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS-TWRI book 4, chap. D1. 1970. 17 p.

#### Book 5. Laboratory Analysis

##### Section A. Water Analysis

- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS-TWRI book 5, chap. A1. 1989. 545 p.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS-TWRI book 5, chap. A2. 1971. 31 p.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS-TWRI book 5, chap. A3. 1987. 80 p.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS-TWRI book 5, chap. A4. 1989. 363 p.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS-TWRI book 5, chap. A5. 1977. 95 p.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS-TWRI book 5, chap. A6. 1982. 181 p.

##### Section C. Sediment Analysis

- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS-TWRI book 5, chap. C1. 1969. 58 p.

**Book 6. Modeling Techniques****Section A. Ground Water**

- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS-TWRI book 6, chap. A1. 1988. 586 p.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS-TWRI book 6, chap. A2. 1991. 68 p.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS-TWRI book 6, chap. A3. 1993. 136 p.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS-TWRI book 6, chap. A4. 1992. 108 p.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS-TWRI book 6, chap. A5, 1993. 243 p.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS-TWRI book 6, chap. A5, 1996. 125 p.

**Book 7. Automated Data Processing and Computations****Section C. Computer Programs**

- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS-TWRI book 7, chap. C1. 1976. 116 p.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS-TWRI book 7, chap. C2. 1978. 90 p.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS-TWRI book 7, chap. C3. 1981. 110 p.

**Book 8. Instrumentation****Section A. Instruments for Measurement of Water Level**

- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS-TWRI book 8, chap. A1. 1968. 23 p.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS-TWRI book 8, chap. A2. 1983. 57 p.

**Section B. Instruments for Measurement of Discharge**

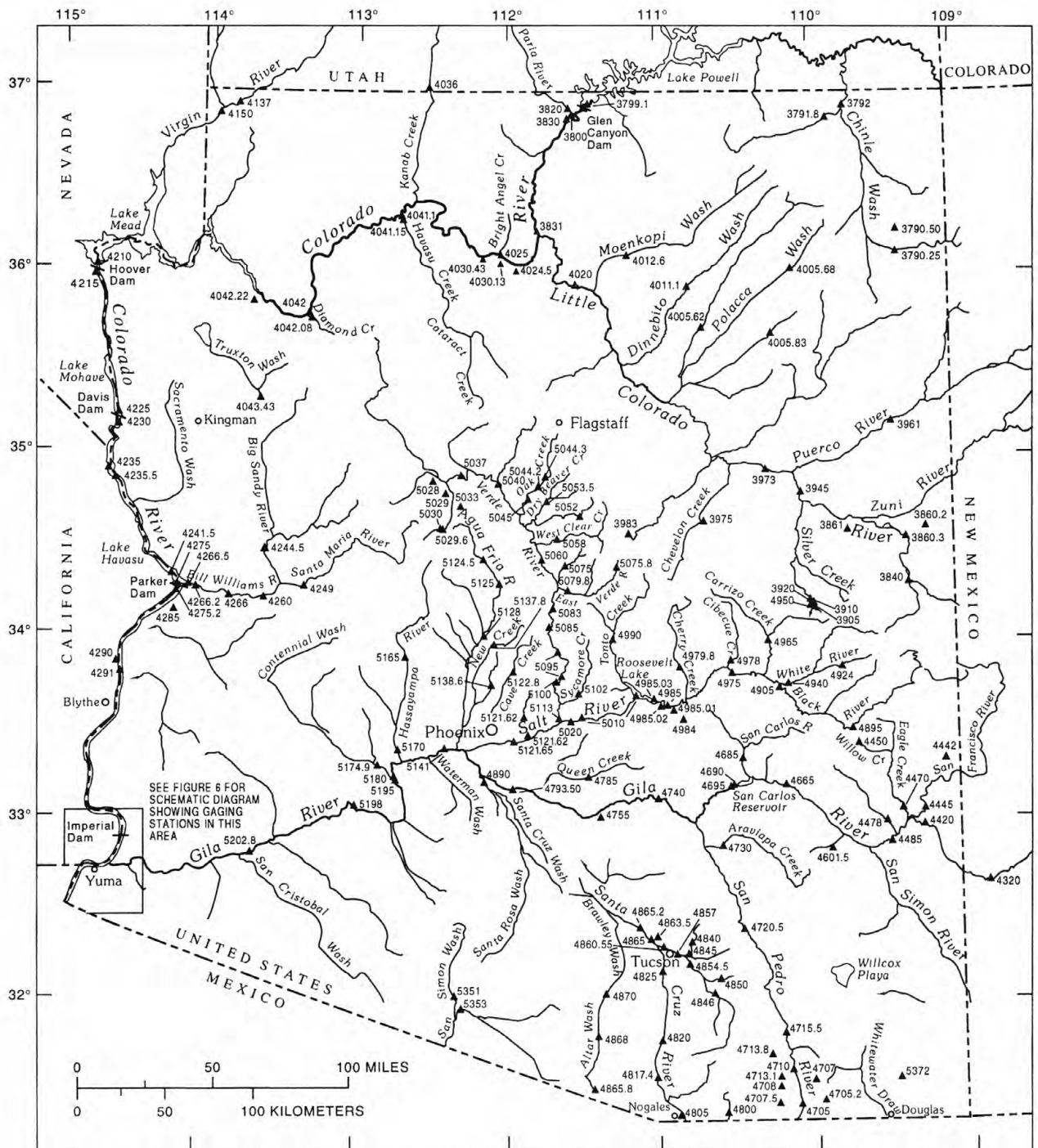
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 8, chap. B2. 1968. 15 p.

**Book 9. Handbooks for Water-Resources Investigations****Section A. National Field Manual for the Collection of Water-Quality Data**

- 9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A1. 1998. 47 p.
- 9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A2. 1998. 94 p.
- 9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A3. 1998. 75 p.

- 9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.
- 9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.
- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.



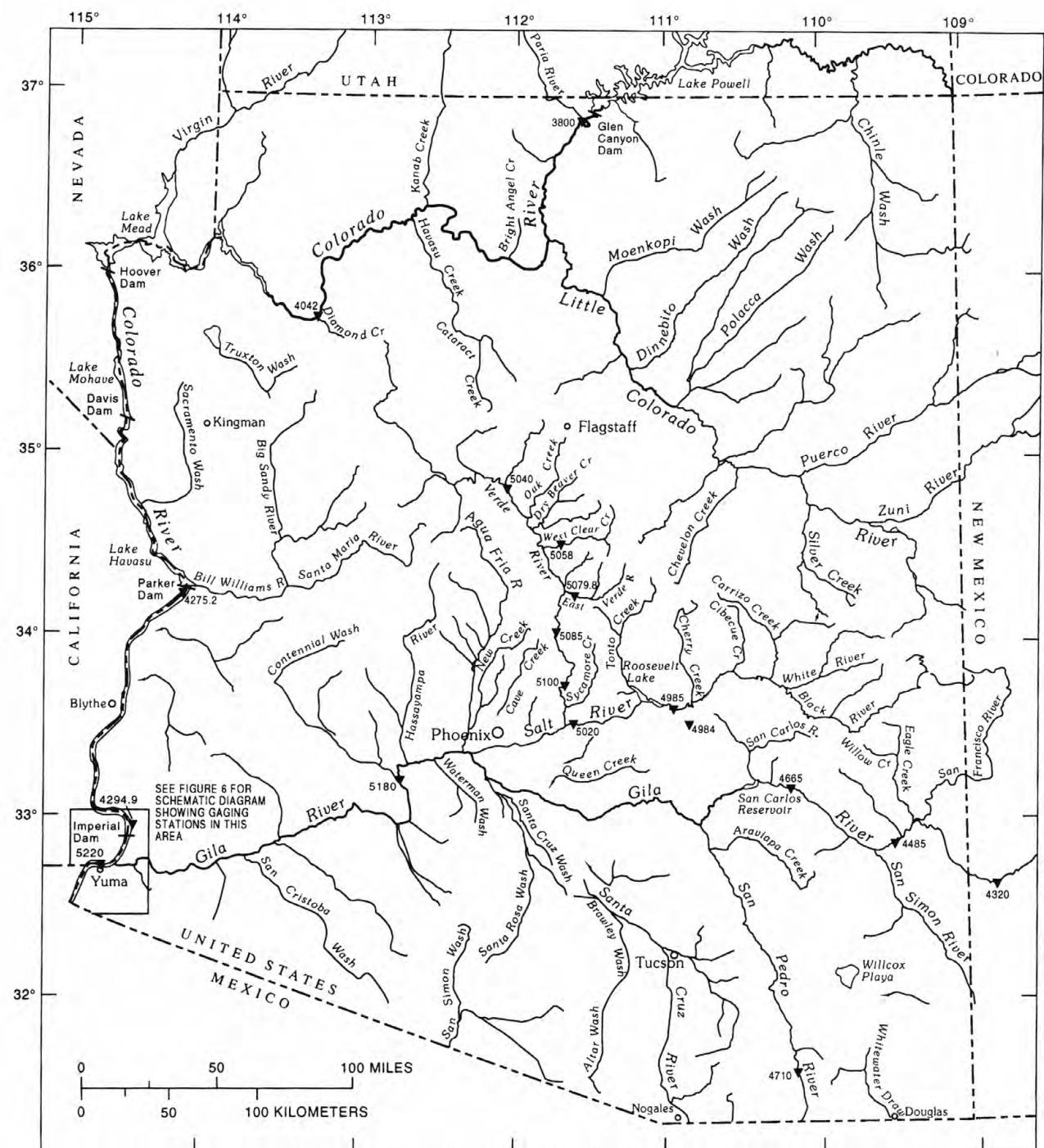


Base from U.S. Geological Survey  
State base maps, 1:500,000,  
Arizona, 1974; Nevada, 1965;  
New Mexico, 1965; and Utah, 1959

#### EXPLANATION

▲ 4665 STREAMFLOW-GAGING STATION AND  
ABBREVIATED NUMBER—Complete  
station number is 09466500

Figure 4. Location of streamflow-gaging stations, water year 2001.



Base from U.S. Geological Survey  
State base maps, 1:500,000,  
Arizona, 1974; Nevada, 1965;  
New Mexico, 1965; and Utah, 1959

#### EXPLANATION

4710 ▼ WATER-QUALITY STATION AND ABBREVIATED NUMBER—Complete station number is 09471000

**Figure 5.** Location of surface-water-quality stations, water year 2001.

## HYDROLOGIC-DATA STATION RECORDS

47

## 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, 0.50 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 Tsaile Lakes. Some diversions upstream for irrigation, livestock tanks, and domestic use.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 1,000 ft<sup>3</sup>/s Aug. 13, 2001, gage height, 4.01 ft; minimum daily, no flow for many days.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 1,000 ft<sup>3</sup>/s Aug. 13, gage height, 4.01 ft; minimum daily, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	e2.0	3.6	17	55	30	.00	.00	.00	.00
2	.00	.00	.00	e2.0	2.9	14	76	21	.00	.00	.00	.00
3	.00	.00	.00	e2.0	3.1	16	101	28	.00	.00	.00	.00
4	.00	.00	.00	e2.0	4.6	13	74	30	.00	.00	.00	.00
5	.00	.00	.00	e2.0	7.6	14	37	36	.00	.00	15	.00
6	.00	.00	.00	e2.0	7.2	18	32	30	.00	.00	3.3	.00
7	.00	.00	.00	e2.0	7.8	28	28	26	.00	.00	10	.00
8	.28	.00	.00	e2.0	10	34	26	25	.00	.00	5.9	.00
9	10	.00	e.15	e2.0	5.5	35	22	24	.00	13	4.9	.00
10	.16	.00	e.62	17	6.4	29	29	20	.00	19	53	.00
11	.00	.00	e.03	6.2	6.5	31	24	14	.00	17	16	.00
12	.00	.00	.00	6.8	8.1	25	26	15	.00	.00	30	.00
13	.00	.00	e.70	4.6	11	21	30	19	.00	8.8	100	.00
14	.00	.00	.72	e2.2	10	24	34	36	.00	1.7	16	.00
15	.00	.00	.30	2.2	8.5	28	31	31	.00	.00	.00	.00
16	.00	.00	.15	e2.2	5.1	30	44	18	.00	.00	.00	.00
17	.00	.00	.00	e2.2	5.4	32	58	14	.00	.00	.00	.00
18	.00	.00	.00	e2.2	7.4	23	55	12	.00	.00	.00	.00
19	.00	.00	.00	e2.2	18	24	34	21	.00	.00	.00	.00
20	.00	.00	.00	e2.2	57	39	27	20	.00	.00	.00	.00
21	.00	.00	.00	2.2	50	46	26	17	.00	.00	.00	.00
22	.00	.00	.00	2.4	78	47	30	16	.00	.00	.00	.00
23	.46	.00	.00	4.5	67	41	33	14	.00	.00	.00	.00
24	.48	.00	.00	4.8	9.3	42	33	9.8	.00	.00	.00	.00
25	2.1	.00	.00	7.3	9.9	35	46	10	.00	.00	.00	.00
26	e.90	.00	.00	5.6	11	34	49	7.7	.00	.00	.00	.00
27	e.10	.00	.27	4.2	14	37	40	1.5	.00	.00	.00	.00
28	e.10	.00	e.50	3.6	17	39	53	.00	.00	.00	.00	.00
29	.00	.00	e1.0	4.9	---	51	43	.00	.00	.00	.00	.00
30	.00	.00	e1.5	4.6	---	46	32	.00	.00	.00	.00	.00
31	.01	---	e2.0	4.2	---	48	---	.00	---	.00	.00	---
TOTAL	14.59	0.00	7.94	116.3	451.9	961	1228	546.00	0.00	59.50	254.10	0.00
MEAN	.47	.000	.26	3.75	16.1	31.0	40.9	17.6	.000	1.92	8.20	.000
MAX	10	.00	2.0	17	78	51	101	36	.00	19	100	.00
MIN	.00	.00	.00	2.0	2.9	13	22	.00	.00	.00	.00	.00
MED	.00	.00	.00	2.2	8.3	31	34	18	.00	.00	.00	.00

CAL YR 2000 TOTAL 2896.31 MEAN 7.91 MAX 60 MIN .00 MED .00  
WTR YR 2001 TOTAL 3639.33 MEAN 9.97 MAX 101 MIN .00 MED .03

e Estimated

## 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 Sept. 2001.

**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, 3,600 ft<sup>3</sup>/s Aug. 7, 2001, gage height, 7.88 ft, from an extension of the rating curve; minimum daily, no flow for many days.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 3,600 ft<sup>3</sup>/s Aug. 7, gage height, 7.88 ft, from an extension of the rating curve; minimum daily, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	2.6	1.7	e.70	e.50	e1.3	9.1	9.2	.11	.07	.95	.02
2	.03	2.3	1.7	e.70	e.50	e.80	14	8.1	.09	.02	.03	.02
3	.05	2.1	e1.5	e.70	e.60	e1.2	22	9.4	.07	.00	.00	.02
4	.09	2.3	e1.6	e.70	e.90	1.4	21	8.5	.07	.00	3.2	.03
5	.79	2.7	e1.8	e.70	e1.2	e1.2	14	8.8	.05	.00	.43	.02
6	.39	e1.5	e1.5	e.70	e2.0	e1.1	11	8.5	.05	.00	8.7	.01
7	.32	e1.2	e1.9	e.70	e2.2	e1.7	7.9	7.4	.04	.00	142	.01
8	2.7	1.3	1.8	e.70	e2.6	e2.3	9.7	5.8	.03	.01	7.9	.02
9	3.6	e1.7	2.2	e.70	e1.8	e2.0	9.5	5.1	.03	5.2	2.4	.01
10	.85	e1.0	1.7	e.70	e1.8	d2.3	11	4.3	.04	31	11	.00
11	.83	e1.4	1.4	e1.2	e1.8	e2.6	8.1	2.9	.03	3.8	.54	.02
12	.57	e1.1	1.3	e1.5	e1.8	e4.0	8.4	2.1	.02	.62	1.4	.02
13	.51	e1.3	1.5	e1.0	e1.6	e3.0	7.0	.87	.03	35	4.7	.02
14	.59	e1.3	e1.0	e.50	e1.6	e2.5	7.8	3.2	.03	1.0	1.2	.02
15	.60	e1.9	e6.0	e.50	e1.5	2.2	12	1.9	.07	.18	.31	.03
16	.62	e1.3	e.70	e.60	e1.5	2.4	16	.54	.05	.01	.14	.04
17	.55	e1.2	e.50	e.80	e1.5	5.7	17	.34	.04	.00	.11	.08
18	.57	e1.5	e.50	e.90	e1.5	3.3	16	.33	.04	.00	.11	.00
19	.61	1.8	e.50	e.90	e1.5	2.9	15	1.0	.04	.00	.11	.00
20	.58	3.1	e.60	e.70	e1.5	3.2	14	1.8	.03	.00	.13	.00
21	.60	3.6	e.60	e.60	e1.5	3.6	12	.65	.04	.00	32	.01
22	1.8	3.0	e.70	e.80	e1.5	3.7	15	.53	.05	.00	.44	.01
23	12	2.7	e1.0	e1.0	e1.5	3.8	12	.30	.05	.00	.20	.01
24	5.4	2.2	e1.0	e1.0	e1.2	4.1	17	.26	.08	.00	.04	.02
25	6.7	2.1	e.90	e1.5	e1.0	4.7	14	.26	.06	.00	.02	.02
26	1.9	2.8	e.70	e1.0	e1.5	5.4	13	.23	.06	.03	.02	.02
27	1.5	2.6	e.70	e.70	e1.5	5.9	13	.21	.04	.08	.02	.02
28	2.6	1.9	e1.0	e.70	e1.5	6.0	13	.17	.03	.09	.02	.02
29	3.2	1.8	e1.0	e.60	---	6.2	11	.15	.02	.09	.02	.02
30	2.0	1.9	e.80	e.50	---	5.8	10	.12	.02	.11	.03	.02
31	3.6	---	e.80	e.50	---	7.0	---	.12	---	.13	.03	---
TOTAL	56.19	59.2	40.60	24.50	41.10	103.30	380.5	93.08	1.41	77.44	218.20	0.56
MEAN	1.81	1.97	1.31	.79	1.47	3.33	12.7	3.00	.047	2.50	7.04	.019
MAX	12	3.6	6.0	1.5	2.6	7.0	22	9.4	.11	35	142	.08
MIN	.03	1.0	.50	.50	.50	.80	7.0	.12	.02	.00	.00	.00
MED	.62	1.9	1.0	.70	1.5	3.0	12	1.0	.04	.01	.20	.02
AC-FT	111	117	81	49	82	205	755	185	2.8	154	433	1.1

CAL YR 2000 TOTAL 982.71 MEAN 2.68 MAX 104 MIN .00 MED 1.0 AC-FT 1950  
WTR YR 2001 TOTAL 1096.08 MEAN 3.00 MAX 142 MIN .00 MED 1.0 AC-FT 2170

e Estimated



## LITTLE COLORADO RIVER BASIN

49

## 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 current year.

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 on many days.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. 23 .....	0300	1,120	9.20
July 10 .....	0515	*1,430	*10.43
Aug. 17 .....	0600	1,260	9.76

No flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.04	e16	e2.8	e4.7	e2.3	7.2	.60	e.13	.00	.00	.00	.00
2	e.00	e16	e6.0	3.9	e2.1	5.6	.57	e.00	.00	.00	.00	.00
3	e.00	11	e4.0	e5.2	e2.0	4.4	.41	.00	.00	.00	.00	.00
4	.00	6.7	1.3	e2.5	e5.0	4.1	.07	.00	.00	.00	.00	.00
5	.00	6.1	1.4	e2.0	e7.5	2.5	.00	.00	.00	.00	e.00	.00
6	.00	5.2	2.6	e1.2	e7.0	1.5	.00	.00	.00	.00	e9.7	.00
7	.00	4.6	2.2	e1.4	e10	1.2	5.3	e.02	.00	.00	2.6	.00
8	.00	3.4	2.9	e1.4	13	46	20	e.00	.00	.00	9.7	.00
9	.00	1.9	e2.0	e1.0	8.3	25	8.4	.00	.00	.00	46	.00
10	22	2.9	e1.6	e1.6	e3.8	8.9	6.7	.21	.00	454	57	.00
11	7.8	e2.8	e1.3	e2.5	e3.2	2.6	2.1	.00	.00	138	e8.5	.00
12	1.6	e3.0	1.4	e3.0	1.6	3.4	1.6	.00	.00	14	11	.00
13	.60	1.3	1.4	e5.0	2.6	e3.1	4.0	.00	.00	5.3	4.6	.00
14	.24	e2.0	1.3	e1.5	1.9	4.8	3.7	26	.00	1.3	6.0	.00
15	.29	e4.5	3.3	e.50	.66	2.6	3.1	4.2	.00	35	2.4	.00
16	.36	2.2	e1.6	e1.1	.89	1.5	1.6	.05	.00	9.3	.43	.00
17	.51	e2.7	e.60	e1.4	e2.8	e.70	.66	.00	.00	2.1	189	.00
18	.65	e2.0	e.70	e1.9	e5.0	.87	.49	.00	.00	.16	19	.00
19	.61	1.4	e.70	e.70	2.3	.69	.07	.00	.00	.01	4.7	.00
20	.62	e1.5	e.70	e.50	e1.5	.56	.00	110	.00	.00	.46	.00
21	.65	e1.5	e1.3	1.7	2.3	.36	.00	10	.00	.00	4.0	.00
22	4.0	e2.6	e.70	e1.5	1.1	.36	.00	1.7	.00	.00	19	.00
23	651	e6.0	e.70	e4.5	1.5	.53	.00	.54	.00	.00	1.8	.00
24	114	e7.0	e.70	e5.0	1.5	2.4	.00	.04	.00	.00	1.2	.00
25	19	e7.0	e2.5	e6.5	1.2	2.2	e.10	.00	.00	.00	1.1	.00
26	8.8	e3.0	e1.5	e5.0	1.1	1.7	e.40	.00	.00	.00	.19	.00
27	6.1	e3.5	1.8	e9.0	2.1	1.4	e8.3	.00	.00	.00	.00	.00
28	5.2	e4.7	1.6	9.0	e5.5	1.2	.00	.00	.00	.00	.00	.00
29	6.4	e7.3	1.1	e5.5	---	1.0	.00	.00	.00	.00	.00	.00
30	e8.4	e4.0	1.6	e5.0	---	.80	e.17	.00	.00	.00	.00	.00
31	9.9	---	e2.5	e5.0	---	.69	---	.00	---	.00	.00	---
TOTAL	868.77	143.8	55.80	100.70	99.75	139.86	68.34	152.89	0.00	659.17	398.38	0.00
MEAN	28.0	4.79	1.80	3.25	3.56	4.51	2.28	4.93	.000	21.3	12.9	.000
MAX	651	16	6.0	9.0	13	46	20	110	.00	454	189	.00
MIN	.00	1.3	.60	.50	.66	.36	.00	.00	.00	.00	.00	.00
AC-FT	1720	285	111	200	198	277	136	303	.00	1310	790	.00
CFSM	.07	.01	.00	.01	.01	.01	.01	.01	.00	.05	.03	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2001, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001
MEAN	12.9	4.39	1.83	3.31	3.66	1.98
MAX	28.0	7.35	3.40	4.29	6.14	4.51
(WY)	2001	1999	1999	2000	1998	2001
MIN	.83	1.60	1.05	2.31	2.60	.85
(WY)	2000	2000	2000	1997	1997	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1996 - 2001
ANNUAL TOTAL	1410.20	2687.46	
ANNUAL MEAN	3.85	7.36	6.82
HIGHEST ANNUAL MEAN			11.4
LOWEST ANNUAL MEAN			1.22
HIGHEST DAILY MEAN	651	Oct 23	651
LOWEST DAILY MEAN	.00	Apr 14	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 14	.00
ANNUAL RUNOFF (AC-FT)	2800	5330	4940
ANNUAL RUNOFF (CFSM)	.009	.018	.016
10 PERCENT EXCEEDS	5.6	8.3	7.9
50 PERCENT EXCEEDS	.24	1.1	.98
90 PERCENT EXCEEDS	.00	.00	.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 in each year.

**EXTREMES FOR CURRENT PERIOD.**--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. 9.....	1315	618	4.81	Aug. 8 .....	1500	1230	6.01
Oct. 23.....	0915	2030	---	Aug. 15 .....	0400	1010	5.66
July 10.....	1215	2260	---	Aug. 17.....	1315	*3280	*8.07

No flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	10	6.5	4.8	2.3	9.4	7.1	.15	.00	.00	.00	.00
2	e.12	15	6.1	e4.0	2.3	6.4	7.2	.48	.00	.00	.00	.00
3	e.15	9.6	4.4	e5.3	2.6	6.4	7.8	.83	.00	.00	.00	.00
4	e.18	6.5	3.0	s2.7	5.7	6.4	8.1	.42	.00	.00	e27	.00
5	.16	5.2	2.7	2.2	7.6	5.4	29	.16	.00	.00	e.00	.00
6	.18	4.4	2.7	1.4	8.9	5.1	39	.17	.00	.00	e3.8	.00
7	.18	4.0	4.1	1.6	18	5.4	32	.21	.00	.00	7.8	.00
8	.17	3.7	5.2	1.6	14	21	27	e1.0	.00	.00	178	.00
9	87	3.8	6.1	1.2	7.9	e65	30	e2.9	.00	.00	7.8	.00
10	e17	3.2	7.5	1.9	7.2	e14	23	e4.7	.00	e310	44	.00
11	e12	3.8	7.3	2.9	e6.3	7.6	24	e4.7	.00	223	12	.00
12	e3.8	5.1	7.3	3.3	e5.2	e3.8	18	e4.4	.00	94	e4.2	.00
13	e3.0	3.7	7.3	5.4	e2.8	6.0	17	e3.5	.00	9.0	2.8	5.0
14	1.6	2.3	7.2	2.0	4.5	8.5	26	e9.3	.00	e15	233	.22
15	1.0	4.9	6.9	4.0	e3.3	2.6	27	e40	.00	e29	381	.00
16	.91	5.1	7.6	4.2	3.4	2.0	27	e7.3	.00	e80	17	.00
17	.92	2.8	5.6	3.3	2.6	.79	24	e13	.00	e10	252	e17
18	1.2	2.5	3.7	2.6	4.9	1.1	23	e2.9	.00	.98	22	e.30
19	1.3	e2.6	2.0	2.4	3.9	e1.1	23	e2.6	.00	.00	.29	.08
20	1.5	1.7	1.7	3.4	1.8	e.99	22	e93	.00	.00	.06	.04
21	2.6	1.7	2.9	2.4	3.0	e4.7	25	e36	.00	.00	.00	.03
22	4.2	3.7	2.9	1.8	1.6	e1.8	21	e7.3	.00	.00	57	.01
23	e571	5.7	2.2	4.7	1.2	e1.9	14	e1.8	.00	.00	25	.00
24	e260	7.2	2.4	5.1	2.1	e1.9	11	e1.0	.00	.00	15	.00
25	e230	6.8	4.1	6.7	2.8	e2.8	7.8	.74	.00	.00	e5.0	.00
26	e125	6.5	3.2	5.6	3.7	e2.7	5.6	1.1	.00	.00	e2.4	.00
27	e24	3.9	e2.5	9.1	2.2	e2.1	3.4	4.0	.00	.00	.82	.00
28	11	5.4	e3.2	14	4.0	2.5	1.7	7.3	.00	.00	e.04	.00
29	6.8	5.1	e3.0	6.9	---	4.3	.67	5.0	.00	.00	e.00	.00
30	8.6	7.1	e3.2	6.4	---	5.2	.17	1.5	.00	.00	e.07	.00
31	19	---	e3.3	5.6	---	6.3	---	.17	.00	.00	e.00	---
TOTAL	1394.69	153.0	137.8	128.5	135.8	215.18	531.54	257.63	0.00	770.98	1298.08	22.68
MEAN	45.0	5.10	4.45	4.15	4.85	6.94	17.7	8.31	.000	24.9	41.9	.76
MAX	571	15	7.6	14	18	65	39	93	.00	310	381	17
MIN	.12	1.7	1.7	1.2	1.2	.79	.17	.15	.00	.00	.00	.00
AC-FT	2770	303	273	255	269	427	1050	511	.00	1530	2570	45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2001, BY WATER YEAR (WY)

	MEAN	23.2	14.8	8.66	17.6	27.5	24.4	59.7	51.3	5.40	25.4	56.6	37.6
MAX	142	144	41.2	151	169	215	402	294	72.5	129	501	342	
(WY)	1973	1988	1966	1993	1988	1983	1985	1980	1973	1975	1982	1982	
MIN	.90	.41	1.09	1.60	2.25	.67	.53	.26	.000	.000	.000	.000	
(WY)	1978	1991	1978	1996	1996	1967	1996	1989	1975	1979	1974	1979	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1965 - 2001
ANNUAL TOTAL	3366.04	5045.88	
ANNUAL MEAN	9.20	13.8	29.4
HIGHEST ANNUAL MEAN			94.2
LOWEST ANNUAL MEAN			4.47
HIGHEST DAILY MEAN	571	571	6000
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	6680	10010	21280
10 PERCENT EXCEEDS	9.9	23	60
50 PERCENT EXCEEDS	1.6	2.9	3.1
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

**COLORADO RIVER MAIN STEM**

51

**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 U.S. 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 U.S. 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, 20,933,000 acre-ft Oct. 1, elevation, 3,677.74 ft; minimum, 18,808,000 acre-ft. Apr.21,24,26, elevation, 3,662.39 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 THOUSANDS OF ACRE FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20931	20746	20290	19812	19318	19019	18866	18831	19838	20259	19743	19313
2	20921	20734	20276	19798	19303	19015	18869	18835	19870	20243	19723	19306
3	20915	20721	20261	19779	19289	19013	18859	18847	19912	20234	19695	19302
4	20901	20707	20244	19763	19283	19009	18858	18858	19940	20223	19681	19297
5	20903	20697	20229	19746	19270	19001	18853	18875	19974	20209	19674	19283
6	20895	20683	20213	19734	19259	18993	18850	18906	20009	20188	19655	19283
7	20886	20664	20199	19720	19240	18987	18847	18921	20037	20163	19648	19272
8	20878	20644	20184	19710	19226	18979	18846	18934	20061	20178	19617	19255
9	20865	20630	20170	19683	19218	18970	18837	18949	20084	20136	19622	19249
10	20853	20620	20151	19661	19209	18970	18838	18961	20107	20126	19607	19243
11	20832	20604	20144	19643	19198	18965	18839	18975	20129	20114	19585	19236
12	20832	20586	20122	19629	19187	18962	18834	18986	20165	20097	19587	19232
13	20819	20572	20105	19615	19172	18958	18831	19006	20158	20082	19577	19217
14	20810	20552	20086	19606	19162	18950	18830	19015	20174	20070	19573	19216
15	20806	20538	20082	19589	19148	18942	18835	19037	20191	20052	19566	19212
16	20796	20522	20062	19574	19137	18931	18834	19078	20203	20038	19557	19202
17	20786	20509	20043	19555	19131	18931	18830	19115	20220	20023	19535	19210
18	20780	20489	20030	19539	19116	18931	18822	19166	20227	20008	19517	19203
19	20773	20478	20016	19520	19105	18917	18819	19212	20237	19991	19518	19191
20	20764	20461	20005	19502	19089	18905	18809	19266	20241	19972	19494	19186
21	20770	20446	19981	19492	19082	18897	18808	19324	20247	19955	19488	19182
22	20774	20427	19965	19472	19070	18890	18812	19378	20241	19942	19465	19181
23	20767	20412	19951	19454	19061	18886	18809	19430	20254	19922	19449	19176
24	20777	20393	19944	19439	19050	18879	18808	19481	20252	19906	19435	19168
25	20779	20376	19920	19419	19049	18873	18809	19529	20250	19886	19420	19164
26	20774	20361	19899	19407	19039	18874	18808	19572	20258	19863	19413	19160
27	20779	20349	19883	19392	19031	18867	18813	19620	20257	19841	19398	19154
28	20757	20333	19870	19378	19023	18869	18812	19659	20254	19815	19385	19147
29	20759	20323	19854	19363	---	18867	18817	19713	20254	19803	19381	19144
30	20760	20302	19840	19345	---	18866	18821	19757	20259	19783	19340	19135
31	20753	---	19823	19328	---	18865	---	19797	---	19764	19321	---
TOTAL	645395	615879	621842	606667	536465	586981	564923	595033	604303	620886	605669	576519
MEAN	20819	20529	20059	19570	19159	18935	18831	19195	20143	20029	19538	19217
MAX	20931	20746	20290	19812	19318	19019	18869	19797	20259	20259	19743	19313
MIN	20753	20302	19823	19328	19023	18865	18808	18831	19838	19764	19321	19135
(*)	3676.50	3673.32	3669.89	3666.27	3664.01	3662.82	3662.49	3669.70	3673.02	3669.46	3666.22	3664.84
(**)	-1866000	-451000	-479000	-495000	-305000	-158000	-44000	+976000	+462000	-495000	-443000	-186000

CAL YR 2000 TOTAL 7681707 MEAN 20988 MAX 21758 MIN 19823 (\*\*) -1621000  
WTR YR 2001 TOTAL 7180562 MEAN 19673 MAX 20931 MIN 18808 (\*\*) -1804000

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

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

**LOCATION.**--Lat 36°55'18", long 111°28'58" in NW1/4SE1/4 sec. 25, T.41 N., R.8 E., Coconino County, Hydrologic Unit 14070006, on left bank 4,500 ft downstream from Glen Canyon Dam, 2 mi west of Page, 13 mi downstream from Utah-Arizona State line, and 14.5 mi upstream from Lees Ferry.

**PERIOD OF RECORD.**--Oct. 1989 to Mar. 1993, Mar. 2000 to current year.

**REMARKS.**--No estimated daily discharge. Records good. Flow completely regulated since Mar. 13, 1963, by Lake Powell 4,500 ft upstream. Many diversions above Lake Powell for irrigation, municipal, and industrial use. No diversion or inflow between Lake Powell and the gage.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 21,000 ft<sup>3</sup>/s, May. 7, gage height, 36.08 ft; minimum daily, 6,770 ft<sup>3</sup>/s Sept. 3.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9350	13600	14200	12700	11800	10800	7520	10500	10700	8150	14000	8940
2	9860	13700	12800	13900	12100	10700	10600	10400	10400	13200	13900	6780
3	9820	13700	12800	13900	11100	9950	10700	10300	7450	14200	13900	6770
4	9860	12800	14100	13900	10600	9530	10600	10400	10500	9190	13800	7800
5	9740	12700	14200	14000	11700	11100	10700	10400	10400	14000	9020	7810
6	9770	13700	14000	12400	11700	10700	10700	7580	10500	13900	13800	7810
7	9250	13600	13700	13000	11800	10800	10700	13000	10500	14000	13900	7800
8	9280	13700	13800	14100	11800	10700	7580	13000	10500	9170	13900	7780
9	9740	13600	12700	14100	11800	10600	10600	10400	9630	14000	13900	6780
10	9840	13700	12700	14400	11100	9880	10700	10300	7410	13900	13800	7840
11	9800	13000	13900	14100	10700	9690	10700	10200	10500	14000	13900	7850
12	9860	12900	13800	14100	11700	10600	10700	10200	10600	13900	8970	7860
13	9780	13700	13800	12600	11700	10700	10700	7580	10600	14000	13900	7890
14	9200	13700	13700	13000	11800	10800	10700	8610	10600	13900	13900	7910
15	8990	13600	13700	14300	14200	10700	7700	8760	10600	9170	13800	7880
16	10100	13800	12700	14200	11800	10600	10600	8580	9650	13900	13900	6920
17	9820	13800	12600	14000	11200	9970	10700	8620	7620	14000	13900	7900
18	9890	13200	13700	14100	10700	9670	10800	10200	10500	13900	13800	7930
19	9940	12500	13700	14600	11700	14200	10800	10100	10600	13900	8970	7960
20	9890	14100	13800	12400	11700	13800	11000	7610	10500	14000	13900	7940
21	9360	13800	13800	12100	11600	11200	10900	9900	10600	13900	13900	7950
22	9120	13900	13700	14500	11500	10500	7780	10100	10600	9320	13900	7840
23	9930	12400	12600	14100	11500	10500	10700	10100	10600	13900	13900	6850
24	9860	13800	12700	13800	11000	9830	10700	10200	7720	14000	13900	7940
25	9900	13200	12600	13900	9890	9280	10700	10200	10600	13900	13900	7870
26	9830	12600	13500	14300	11500	9140	10800	10200	10700	14200	9030	7920
27	9850	13900	13500	12500	11600	9270	10700	7510	10600	14100	13900	7900
28	9980	13900	13500	11900	11600	9230	10800	10200	7760	14100	14000	7950
29	9460	13800	13500	14700	---	9250	7770	10700	8090	9360	14000	7870
30	10200	13800	13200	14300	---	10200	10800	10600	8090	14000	14000	7010
31	10000	---	12400	14700	---	9380	---	11400	---	14000	14000	---
TOTAL	301270	404200	415400	424600	322890	323270	306450	307850				

WTR YR 2001    TOTAL 4146750    MEAN 11360    MAX 14700    MIN 6770    AC-FT 8225000



## 53

**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.

### WATER-DISCHARGE RECORDS

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, 20,300 ft<sup>3</sup>/s May 7, gage height, 10.61 ft; minimum daily, 6,800 ft<sup>3</sup>/s Sept. 3.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9350	13200	14300	12900	12300	11100	8070	10700	10800	8070	14200	9810
2	10200	13800	13100	14000	12300	10900	10200	10500	10500	12600	14100	7050
3	10100	13800	13000	14100	11300	10200	10800	10400	7950	14200	14100	6800
4	10200	13000	14300	14100	10900	9780	10800	10400	9980	9720	14000	7630
5	10100	12900	14400	14200	11800	11200	10900	10400	10500	13700	9620	7840
6	10100	13900	14500	12600	11900	10900	10800	8110	10500	14000	13500	7810
7	9590	13800	13900	13300	11900	11100	10800	11700	10500	14100	14100	7800
8	9520	13900	13700	14300	12000	10900	8360	13500	10600	9700	14100	7800
9	10100	13800	13300	14400	12000	10800	10200	11000	9820	13700	14100	6960
10	10100	13800	12900	14600	11300	10100	10900	10400	7850	14100	14000	7630
11	10200	13200	14100	14300	11000	9870	10800	10300	9910	14100	14100	7820
12	10200	13000	14100	14400	11900	10800	10900	10300	10600	14100	9580	7850
13	10200	13900	14000	12800	11900	10900	10900	8080	10600	14200	13500	7860
14	9490	14000	13900	13200	12100	11000	10800	8400	10600	14100	14000	7900
15	9330	13900	13900	14500	14100	10900	8400	8850	10600	9720	14000	7850
16	10500	14000	13000	14400	12300	10800	10200	8590	9810	13600	14000	7070
17	10200	14000	12800	14300	11400	10200	10800	8600	7980	14200	14100	7680
18	10300	13400	13900	14300	11100	9870	10900	9940	10000	14100	14000	7880
19	10300	12700	13900	14800	11900	13600	11000	10100	10600	14100	9590	7940
20	10300	14400	14000	12600	11800	14200	11100	7960	10600	14200	13500	7900
21	9740	14100	14000	12400	11800	12300	10900	9600	10700	14100	14000	7920
22	9640	14000	13900	14700	11700	10700	8500	10100	10700	9890	14100	7830
23	10300	12800	12900	14300	11700	10700	10300	10100	10600	13700	14100	7010
24	10300	13900	12900	14100	11300	10100	10900	10200	8230	14200	14000	7700
25	10200	13400	12800	14100	10200	9490	10800	10200	10100	14200	14000	7850
26	10200	13100	13700	14500	11600	9640	10900	10100	10800	14300	9640	7900
27	10300	14100	13700	12700	11800	9410	10900	7980	10600	14300	13500	7840
28	10200	14100	13700	12200	11900	9470	10900	9720	8140	14300	14100	7910
29	9620	14100	13700	14800	---	9500	8420	10600	8040	9960	14100	7880
30	10200	14000	13400	14500	---	10200	10400	10700	8040	13800	14100	7050
31	10100	---	12800	14900	---	9760	---	11400	---	14200	14100	---
TOTAL	311180	410000	422500	431300	329200	330390	3					

## 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 current year.

pH: Aug. 1990 to Apr. 1993.

WATER TEMPERATURE: July 1949 to Sept. 1981, Feb. 1982 to Dec. 1987, Oct. 1989 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, except for Apr. 10 to June 5 and Sept. 2-30, which are fair. 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 2000 TO SEPTEMBER 2001

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS (MG/L) (00904)	HARD-NESS TOTAL CACO3 AS (MG/L) (00900)
NOV 28...	0840	9	11600	.6	685	8.7	86	8.1	730	9.5	10.0	110	240
MAR 08...	0930	9	10400	.4	685	9.8	96	8.1	752	10.5	9.5	110	250
MAY 22...	0915	9	8280	.5	--	--	--	7.8	799	18.5	9.5	130	270
JUN 19...	1030	9	9470	.4	680	9.6	97	8.0	795	24.0	10.5	120	250
19...	1040	7	9470	.5	680	9.6	97	8.0	795	24.0	10.5	120	250
DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 28...	62.0	60.0	21.0	21.0	3.00	2	58.0	130	159	.0	34.0	.3	180
MAR 08...	63.0	63.0	22.0	22.0	2.90	2	59.0	134	163	.0	38.0	.2	190
MAY 22...	70.0	69.0	23.0	23.0	3.30	2	67.0	137	167	.0	46.0	.3	200
JUN 19...	65.0	64.0	22.0	22.0	3.40	2	67.0	135	165	.0	44.0	.3	190
19...	64.0	64.0	22.0	22.0	3.40	2	67.0	134	164	.0	44.0	.3	200
DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, TOTAL (MG/L AS NO3) (71887)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	E COLI, MTEC MF (COL/100 ML) (31633)
NOV 28...	<1	.63	464	437	<.20	<.01	--	.3	--	--	<.020	8	E4k
MAR 08...	5	.66	487	455	<.20	.02	.03	.2	--	--	<.020	8	E1k
MAY 22...	<1	.72	533	492	.25	<.01	--	.3	.57	2.5	<.020	6	<2
JUN 19...	2	.69	506	473	<.20	<.01	--	.3	--	--	<.020	10	<2
19...	2	.69	508	461	<.20	<.01	--	.3	--	--	<.020	7	--

COLORADO RIVER MAIN STEM

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09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BORON, DIS-SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)
NOV 28...	E2k	<1.00	<1.0	1.6	1	80.0	78.0	<1.00	<1.00	71	71	<.50	<.50
MAR 08...	E2k	<1.00	<1.0	<1.0	1	76.0	77.0	<1.00	<1.00	70	70	<.50	<.50
MAY 22...	<1	<1.00	<1.0	1.6	1	79.0	79.0	<1.00	<1.00	78	77	<.50	<.50
JUN 19...	<1	<1.00	<1.0	1.2	1	82.0	82.0	<1.00	<1.00	76	75	<.50	<.50
JUN 19...	--	<1.00	<1.0	1.2	1	80.0	80.0	<1.00	<1.00	75	74	<.50	<.50

DATE	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	CHROMIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MANGANESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)
NOV 28...	<1.0	<1	<2.0	<2.0	<2	M	<2.00	<2	<1.0	<1	<.10	<.10	<1.00
MAR 08...	<1.0	<1	<2.0	<2.0	<2	M	<2.00	<2	<1.0	<1	<.10	<.10	1.10
MAY 22...	<1.0	<1	<2.0	<2.0	<2	M	<2.00	<2	<1.0	1	<.10	<.10	<1.00
JUN 19...	<1.0	<1	<2.0	<2.0	<2	M	<2.00	<2	<1.0	1	<.10	<.10	<1.00
JUN 19...	<1.0	<1	<2.0	<2.0	<2	M	<2.00	<2	<1.0	1	<.10	<.10	<1.00

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRONTIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THALLIUM, DIS-SOLVED (UG/L AS TL) (01057)	THALLIUM, TOTAL (UG/L AS TL) (01059)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDIMENT, DISCHARGE, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
NOV 28...	<1	1.9	1.6	<1.0	<1.00	670	<2.00	<2.0	<2	<2	1	31
MAR 08...	<1	2.0	2.1	<1.0	<1.00	680	<2.00	<2.0	3	3	--	--
MAY 22...	<1	2.5	1.6	<1.0	<1.00	720	<2.00	<2.0	6	7	2	45
JUN 19...	<1	1.7	1.5	<1.0	<1.00	730	<2.00	<2.0	<2	<2	1	26
JUN 19...	<1	1.5	1.6	<1.0	<1.00	720	<2.00	<2.0	6	6	--	--

Remark codes used in this report:

< -- Less than  
E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range

## COLORADO RIVER MAIN STEM

## 09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
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NOV	28...	0845	2	<.02	<.030	<.1	<.02	<.01	<.20	<.020	<3	<.5	<1.00	<.50
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DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
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NOV	28...	<1.0	<2.0	<2	<2.00	<1.0	<1.00	<2
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Remark codes used in this report:

< -- Less than



**COLORADO RIVER MAIN STEM**

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**09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued**

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	696	688	693	721	693	708	699	696	698	689	684	686
2	703	689	695	713	696	706	701	697	699	687	684	686
3	705	695	700	704	689	696	699	694	697	685	681	683
4	701	695	698	694	688	690	694	689	691	685	680	684
5	705	690	700	696	688	691	698	688	690	684	679	682
6	709	696	701	714	686	696	698	693	695	685	678	681
7	705	697	700	714	689	700	698	695	697	683	677	681
8	701	691	696	695	689	691	703	698	701	686	679	682
9	697	687	692	699	690	694	702	699	700	688	677	682
10	697	690	692	698	681	690	702	695	698	682	672	678
11	711	687	699	706	683	697	715	696	706	680	669	674
12	714	699	709	705	686	695	712	702	706	669	662	665
13	707	684	693	697	687	693	711	707	709	700	664	678
14	689	683	685	693	689	691	709	701	705	720	692	708
15	702	685	690	693	686	690	708	698	700	704	693	698
16	704	692	698	695	688	691	730	708	723	695	673	684
17	696	687	692	694	688	691	723	703	712	689	669	678
18	699	688	694	700	688	694	720	708	714	689	673	681
19	700	690	695	701	688	694	721	702	712	682	669	676
20	694	687	690	701	697	699	716	705	707	675	669	671
21	693	685	690	698	690	695	708	701	705	671	665	668
22	692	676	684	697	693	695	702	696	699	684	671	675
23	690	683	687	694	684	690	696	691	694	686	681	684
24	695	683	689	688	680	683	697	691	693	685	672	679
25	704	694	698	692	686	688	699	691	695	688	670	676
26	701	690	696	701	691	697	695	676	683	705	679	694
27	695	679	687	705	700	703	689	672	679	685	670	679
28	703	684	688	704	701	703	689	681	684	677	667	672
29	703	686	694	704	697	700	685	677	681	702	666	677
30	696	685	690	704	695	698	684	674	677	735	701	718
31	712	689	694	---	---	---	689	684	687	733	724	728
MONTH	714	676	694	721	680	695	730	672	698	735	662	683
	FEBRUARY			MARCH			APRIL			MAY		
1	726	692	706	740	725	734	772	766	769	803	772	789
2	702	692	699	736	723	728	794	758	777	826	781	806
3	703	695	700	732	723	727	813	774	796	807	775	789
4	697	692	695	742	726	736	811	768	793	828	783	807
5	697	689	694	751	728	738	799	768	781	813	774	787
6	692	687	689	750	738	745	835	791	814	814	778	796
7	762	686	713	744	735	740	839	773	822	831	769	790
8	762	727	745	742	728	734	858	770	817	792	780	785
9	771	734	751	742	718	729	859	763	804	807	778	789
10	757	722	737	755	737	744	839	766	799	804	783	792
11	733	714	725	760	748	753	843	812	826	808	785	795
12	728	700	715	772	750	761	834	794	809	795	776	786
13	710	693	700	781	751	766	854	805	823	788	772	779
14	709	692	704	790	769	783	814	797	806	805	767	784
15	724	708	718	787	756	774	823	806	816	784	772	779
16	723	708	716	758	744	750	820	772	792	801	765	784
17	710	704	707	823	752	787	785	772	777	793	767	780
18	711	704	707	773	753	762	802	784	790	807	779	791
19	712	704	710	812	773	790	816	790	804	808	767	788
20	715	707	711	782	761	772	838	801	815	786	768	777
21	717	707	713	762	757	760	851	787	819	801	764	782
22	713	703	709	767	761	764	822	795	808	792	769	781
23	725	706	713	770	757	766	848	794	819	786	772	778
24	734	707	724	778	762	770	826	799	815	792	777	785
25	757	731	740	778	772	775	822	785	806	783	771	777
26	749	721	735	774	769	772	797	774	785	778	765	773
27	748	737	743	798	772	783	786	774	783	784	768	776
28	747	737	742	803	767	787	796	774	787	780	769	775
29	---	---	---	816	778	796	818	780	799	782	763	771
30	---	---	---	828	774	801	831	772	798	792	771	782
31	---	---	---	808	772	786	---	---	---	775	759	767
MONTH	771	686	716	828	718	762	859	758	802	831	759	785

## COLORADO RIVER MAIN STEM

## 09380000 COLORADO RIVER AT LEES FERRY, AZ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	772	762	768	763	759	762	770	746	762	747	736	741
2	780	766	771	768	755	762	770	743	753	752	731	737
3	786	774	781	766	750	760	766	736	750	748	732	738
4	798	762	778	756	746	751	761	743	752	744	736	739
5	807	778	795	769	742	752	755	739	748	743	730	737
6	778	754	769	778	753	766	772	748	759	740	731	736
7	769	741	754	780	746	764	761	744	752	741	727	734
8	773	763	769	774	756	770	753	736	747	746	720	734
9	779	767	774	769	741	757	757	737	751	730	719	725
10	773	762	766	775	741	759	763	743	752	745	729	734
11	785	771	778	780	756	769	759	737	750	751	735	743
12	783	771	776	784	746	768	758	745	751	741	733	738
13	782	755	769	782	760	771	764	744	752	741	731	735
14	812	759	784	767	748	756	754	744	749	739	725	733
15	784	740	766	761	750	756	747	735	742	738	724	731
16	771	740	749	761	735	750	756	738	747	730	725	728
17	771	759	764	772	756	763	756	743	750	733	726	729
18	774	765	769	780	745	764	758	739	747	738	729	733
19	778	763	770	760	747	752	758	741	747	740	729	735
20	784	766	774	772	745	756	757	744	749	737	729	733
21	772	763	769	770	748	757	757	736	750	735	728	732
22	763	756	758	765	758	761	762	734	741	737	728	733
23	769	756	762	769	750	759	765	733	749	737	727	732
24	782	760	770	773	756	764	757	738	745	735	722	728
25	772	745	759	772	754	763	758	749	753	730	719	725
26	769	730	758	763	744	756	749	735	741	728	721	725
27	764	734	756	769	752	759	747	733	739	730	722	727
28	768	757	762	770	739	754	745	735	741	732	723	728
29	769	758	762	753	740	747	750	735	742	732	724	729
30	769	759	764	765	744	753	751	735	742	730	723	727
31	---	---	---	770	727	752	753	735	745	---	---	---
MONTH	812	730	768	784	727	759	772	733	748	752	719	733
YEAR	859	662	737									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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



## PARIA RIVER BASIN

## 09382000 PARIA RIVER AT LEES FERRY, AZ

**LOCATION**--Lat 36° 52' 20", long 111° 35' 38", in NW 1/4 NE 1/4 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.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 24 .....	0500	1,600	9.97
Oct. 28.....	0400	83,220	*12.19

Minimum daily discharge, 2.7 ft<sup>3</sup>/s June 13, 19--22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	e117	14	17	12	41	20	14	3.0	e4.2	9.4	e8.6
2	e18	e57	13	17	15	31	21	12	3.0	e3.5	8.1	e4.7
3	e8.2	e37	13	17	17	26	23	11	3.0	3.5	7.9	4.7
4	e5.6	30	13	16	19	26	23	11	2.9	3.7	15	4.5
5	5.4	25	13	15	24	27	21	12	3.0	3.8	8.2	4.3
6	7.6	22	13	15	28	24	16	12	3.0	5.1	7.2	4.3
7	6.6	24	14	17	34	33	17	11	3.0	e4.3	7.2	3.9
8	5.6	19	15	17	37	162	20	9.4	3.3	e4.2	4.3	3.8
9	5.2	18	15	16	28	66	31	6.1	3.0	e4.2	e107	3.8
10	5.4	21	16	23	18	124	24	4.8	3.0	e11	e43	4.1
11	165	24	16	22	20	154	27	4.1	2.9	e7.4	45	4.3
12	e83	22	15	26	24	91	23	3.9	2.8	e6.5	e27	4.3
13	e24	15	15	27	21	66	15	3.6	2.7	5.4	45	23
14	19	11	15	20	20	e54	e14	18	2.8	5.3	57	e56
15	13	16	15	19	22	e35	e16	e7.1	3.2	e70	31	21
16	8.0	20	14	19	18	e26	16	e4.8	3.2	e19	e18	22
17	5.8	15	12	17	18	e24	16	e4.3	3.2	e11	e8.3	e59
18	4.4	14	13	16	18	22	14	e4.1	3.0	e8.3	e6.0	e8.8
19	3.7	14	11	12	20	21	11	e5.8	2.7	7.2	e5.2	5.7
20	3.3	14	12	13	20	25	7.6	e4.8	2.7	7.1	5.5	5.2
21	3.2	16	12	17	22	30	6.6	3.7	2.7	7.0	6.8	5.0
22	283	20	12	17	24	33	9.0	3.6	2.7	6.6	16	5.0
23	e723	19	16	17	25	37	21	3.6	3.2	6.7	20	4.9
24	e589	18	15	18	30	41	16	3.6	3.9	6.3	10	4.9
25	e80	17	16	21	23	39	14	3.6	3.6	5.6	6.5	4.9
26	38	15	16	20	21	32	11	3.4	90	6.4	5.0	4.9
27	124	13	14	20	22	29	8.6	3.0	e189	6.2	4.5	4.9
28	1010	15	13	23	30	25	11	3.6	e29	5.9	4.3	4.9
29	e282	14	15	21	---	10	11	3.4	e8.5	6.2	4.3	4.9
30	e167	14	17	19	---	16	15	3.0	e5.0	6.3	22	4.9
31	e220	---	18	17	---	24	---	3.0	---	7.8	20	---
TOTAL	3954.0	696	441	571	630	1394	498.8	201.3	397.0	265.7	584.7	305.2
MEAN	128	23.2	14.2	18.4	22.5	45.0	16.6	6.49	13.2	8.57	18.9	10.2
MAX	1010	117	18	27	37	162	31	18	189	70	107	59
MIN	3.2	11	11	12	12	10	6.6	3.0	2.7	3.5	4.3	3.8
AC-FT	7840	1380	875	1130	1250	2760	989	399	787	527	1160	605

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2001, BY WATER YEAR (WY)

	MEAN	30.6	23.5	21.0	22.6	37.8	38.9	20.9	10.5	7.24	24.4	54.3	53.2
MAX	288	123	69.4	96.7	242	216	93.3	52.4	58.3	172	237	424	
(WY)	1926	1958	1967	1969	1980	1979	1979	1934	1972	1936	1932	1927	
MIN	5.99	10.1	8.81	8.03	15.5	8.86	4.93	2.03	1.97	2.32	4.51	4.18	
(WY)	1956	1991	1931	1931	1961	1972	1930	1927	1926	1939	1976	1968	

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1924 - 2001

ANNUAL TOTAL	8176.5	9938.7	
ANNUAL MEAN	22.3	27.2	28.7
HIGHEST ANNUAL MEAN			65.1
LOWEST ANNUAL MEAN			11.4
HIGHEST DAILY MEAN	1010	Oct 28	6750
LOWEST DAILY MEAN	2.8	Aug 14	1.0
ANNUAL SEVEN-DAY MINIMUM	3.1	Jul 15	1.0
ANNUAL RUNOFF (AC-FT)	16220	19710	20780
10 PERCENT EXCEEDS	25	37	42
50 PERCENT EXCEEDS	12	15	14
90 PERCENT EXCEEDS	3.3	3.6	3.8

e Estimated



PARIA RIVER BASIN

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09382000 PARIA RIVER AT LEES FERRY, AZ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Oct. 1948 to Sept. 1976, Sept. 1990 to current year.

INSTRUMENTATION.--Automatic pumping sampler since Sept. 1990.

REMARKS.--Suspended-sediment total and sand discharge computed from sample data and by interpretation of a sample based suspended-sediment and streamflow discharge curve. Record for days when instantaneous discharge over the crest of the dam exceeds 30 ft<sup>3</sup>/s from Sept. 1990 to current year.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	e3250	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	1070	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	38200	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	9960
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	e44500	---	---
17	---	---	---	1970	---	---	---	---	---	e10500	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	25600	---	---	---	---	---	---	---
22	---	---	---	---	88000	---	---	---	---	---	---	---
23	---	---	---	---	12400	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	e15900	13400	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	e90000
3	e14400	---	---	e88800	1390	---	2860	---	---	---	---	108000
4	10200	---	---	90200	---	---	6440	---	---	---	---	34700
5	---	---	---	1120	---	---	5210	---	---	---	---	19900
6	---	---	---	---	---	---	1770	---	---	---	e15400	22600
7	---	---	815	---	---	---	---	---	---	---	---	546000
8	---	---	---	---	---	---	---	---	---	---	---	21300
9	---	---	---	---	---	---	---	---	---	---	---	9810
10	---	---	1590	---	---	1140	---	---	---	---	533000	10100
11	---	---	6150	---	---	e1500	---	---	4490	---	e270000	15400
12	---	---	917	---	---	e3140	---	---	---	---	e20000	49600
13	---	---	---	---	---	e1950	235	---	---	---	16700	10500
14	---	---	---	---	---	e2470	---	---	---	---	7850	59700
15	---	---	---	---	---	---	---	---	---	---	---	1590000
16	---	---	---	---	---	---	---	---	---	---	---	524000
17	---	---	---	---	1550	---	---	---	---	---	---	16100
18	---	---	---	---	1430	---	---	---	---	---	---	4800
19	---	---	---	---	1290	---	---	---	---	---	---	2110
20	---	---	---	---	---	---	---	---	---	---	---	3350
21	---	---	e526	---	---	---	---	---	---	---	---	1970
22	---	---	e845	---	---	---	---	---	---	---	---	---
23	---	1560	1110	---	---	---	---	---	---	---	---	---
24	---	586	614	2810	---	---	---	---	---	---	---	---
25	---	---	---	841	---	---	---	---	---	---	---	---
26	---	---	---	3570	---	---	---	---	---	---	---	390000
27	---	---	---	e16200	---	---	---	---	---	---	---	76600
28	3050	---	---	1610	1130	---	---	---	---	---	---	5450
29	754	---	---	681	---	---	---	---	---	---	13500	---
30	---	---	---	---	---	---	---	---	---	36200	e7440	---
31	---	---	---	---	---	---	---	---	---	e12400	e4630	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

**PARIA RIVER BASIN**  
**09382000 PARIA RIVER AT LEES FERRY, AZ--Continued**

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	194000	---	---	---	---	---	---	---	---	---	---	---
4	9450	---	---	---	---	---	10200	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	1360000
6	---	---	---	---	---	---	---	---	---	43800	---	e74100
7	---	---	---	---	---	502	---	---	---	20900	---	e7760
8	---	---	233	---	---	---	---	---	---	---	---	e6160
9	---	---	200	---	710	---	---	---	---	---	---	e2990
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	e270000
13	---	---	---	---	---	---	---	---	---	---	---	e41700
14	---	---	---	---	---	---	---	---	---	---	---	6150
15	---	---	---	---	---	814	---	---	---	---	---	12400
16	---	---	---	---	376	992	---	---	---	---	---	---
17	---	---	---	---	---	747	---	---	---	---	---	---
18	---	---	---	---	---	1380	---	---	---	---	---	---
19	---	---	---	---	---	1230	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	e230000	---	---
25	---	---	---	---	562	---	---	---	---	e23800	---	---
26	---	---	---	---	---	---	---	---	---	21400	---	---
27	---	---	---	---	---	---	---	---	---	e9040	---	---
28	---	---	---	---	---	---	---	---	---	172000	---	---
29	---	---	---	---	---	---	---	---	---	e29900	---	---
30	---	---	---	---	---	---	---	---	---	e13600	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	1480	---	---	---	---	---	---	---	e65800	e30800
2	---	---	---	---	---	---	---	---	---	---	e21100	18000
3	---	---	---	---	---	---	---	---	---	---	24000	8750
4	---	---	---	---	---	---	---	---	---	---	16300	2370
5	---	---	---	---	---	---	---	---	---	---	95400	---
6	---	---	---	---	---	---	---	---	---	---	e46400	---
7	---	---	---	---	---	---	---	---	---	---	e26700	4010
8	---	---	---	---	---	---	---	---	---	6710	e8520	---
9	---	e13900	---	---	---	---	---	---	---	e49600	---	---
10	---	e3420	---	---	---	---	---	---	---	e48300	---	---
11	---	1080	---	---	---	---	---	---	---	e40000	e157000	---
12	---	985	---	---	---	---	---	---	---	22500	e30400	21600
13	---	---	---	---	---	---	---	---	---	11200	---	6930
14	---	---	---	---	---	---	---	---	---	9570	---	---
15	---	---	---	---	---	---	---	---	---	57300	---	e101000
16	---	---	---	---	---	---	---	---	---	e16100	---	e401000
17	---	---	---	---	---	---	---	---	---	e811	---	e7800
18	---	---	---	---	---	---	---	---	---	---	39600	---
19	---	---	---	---	---	---	---	---	---	---	e23100	2480
20	---	---	---	---	---	---	---	---	---	---	e14700	9430
21	---	---	---	---	---	---	---	---	---	---	e580000	5500
22	32700	---	---	---	---	---	---	---	---	---	e28100	1550
23	25200	---	---	---	---	---	---	---	---	---	e9680	---
24	10000	---	---	---	---	---	2570	---	---	---	---	---
25	6140	---	---	---	---	---	683	---	---	---	---	---
26	e45700	---	---	---	---	---	728	---	---	---	---	---
27	e82700	---	---	---	---	---	---	---	---	23700	4160	---
28	e9880	---	---	---	---	---	---	---	---	e23800	57100	---
29	3480	1300	---	---	---	---	---	---	---	e43200	24400	---
30	e2160	3260	---	---	---	---	---	---	---	e50600	278000	---
31	---	---	---	---	---	---	---	---	---	e18600	e764000	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

PARIA RIVER BASIN

09382000 PARIA RIVER AT LEES FERRY, AZ--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	982	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	1170	---	---	---	44600	---	---
10	---	---	---	---	---	1280	---	---	---	e9730	---	---
11	---	---	---	---	---	868	---	---	---	---	---	---
12	---	---	---	---	---	1170	---	---	---	---	---	---
13	---	---	---	---	---	1630	---	---	---	---	---	---
14	---	---	---	---	---	1600	---	---	---	---	---	---
15	---	---	---	---	---	936	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	11800	---
20	---	---	---	---	---	---	---	---	---	---	7450	---
21	---	---	---	---	---	---	---	---	---	---	2210	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	1140	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED, SIEVE DIAM. GREATER THAN .062 MM (TONS/DAY)  
WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	e496	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	90	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	3100	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	400
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	e6670	---	---
17	---	---	---	231	---	---	---	---	---	e495	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	6940	---	---	---	---	---	---	---
22	---	---	---	---	38800	---	---	---	---	---	---	---
23	---	---	---	---	2130	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	e652	606	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

## PARIA RIVER BASIN

## 09382000 PARIA RIVER AT LEES FERRY, AZ--Continued

SEDIMENT DISCHARGE, SUSPENDED, SIEVE DIAM. GREATER THAN .062 MM (TONS/DAY)  
WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	158	---	---	---	---	e32400
3	e7240	---	---	e44000	48	---	425	---	---	---	---	20300
4	1550	---	---	30400	---	---	370	---	---	---	---	2560
5	---	---	---	61	---	---	213	---	---	---	---	884
6	---	---	---	---	---	---	76	---	---	---	e339	95
7	---	---	31	---	---	---	---	---	---	---	---	316000
8	---	---	---	---	---	---	---	---	---	---	---	423
9	---	---	---	---	---	---	---	---	---	---	---	98
10	---	---	96	---	---	46	---	---	---	---	182000	403
11	---	---	449	---	---	e71	---	---	73	---	e70500	3090
12	---	---	43	---	---	e162	---	---	---	---	e1480	13700
13	---	---	---	---	---	e95	13	---	---	---	666	264
14	---	---	---	---	---	e122	---	---	---	---	100	9040
15	---	---	---	---	---	---	---	---	---	---	---	915000
16	---	---	---	---	---	---	---	---	---	---	---	278000
17	---	---	---	---	67	---	---	---	---	---	---	384
18	---	---	---	---	52	---	---	---	---	---	---	48
19	---	---	---	---	51	---	---	---	---	---	---	21
20	---	---	---	---	---	---	---	---	---	---	---	33
21	---	---	e16	---	---	---	---	---	---	---	---	20
22	---	---	e28	---	---	---	---	---	---	---	---	---
23	---	109	45	---	---	---	---	---	---	---	---	---
24	---	22	20	208	---	---	---	---	---	---	---	---
25	---	---	---	35	---	---	---	---	---	---	---	---
26	---	---	---	270	---	---	---	---	---	---	---	221000
27	---	---	---	e2240	---	---	---	---	---	---	---	12500
28	244	---	---	88	40	---	---	---	---	---	---	101
29	22	---	---	29	---	---	---	---	---	---	318	---
30	---	---	---	---	---	---	---	---	---	1920	e77	---
31	---	---	---	---	---	---	---	---	---	e372	e55	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED, SIEVE DIAM. GREATER THAN .062 MM (TONS/DAY)  
WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	58400	---	---	---	---	---	---	---	---	---	---	---
4	605	---	---	---	---	---	1010	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	819000
6	---	---	---	---	---	---	---	---	---	6230	---	e19700
7	---	---	---	---	---	39	---	---	---	647	---	e292
8	---	---	22	---	---	---	---	---	---	---	---	e184
9	---	---	18	---	70	---	---	---	---	---	---	e82
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	e140000
13	---	---	---	---	---	---	---	---	---	---	---	e7330
14	---	---	---	---	---	---	---	---	---	---	---	e133
15	---	---	---	---	---	82	---	---	---	---	---	25
16	---	---	---	---	33	112	---	---	---	---	---	---
17	---	---	---	---	---	64	---	---	---	---	---	---
18	---	---	---	---	---	129	---	---	---	---	---	---
19	---	---	---	---	---	112	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	e84600	---	---
25	---	---	---	---	45	---	---	---	---	e2520	---	---
26	---	---	---	---	---	---	---	---	---	668	---	---
27	---	---	---	---	---	---	---	---	---	e181	---	---
28	---	---	---	---	---	---	---	---	---	40900	---	---
29	---	---	---	---	---	---	---	---	---	e949	---	---
30	---	---	---	---	---	---	---	---	---	e385	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated



PARIA RIVER BASIN

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09382000 PARIA RIVER AT LEES FERRY, AZ--Continued

SEDIMENT DISCHARGE, SUSPENDED, SIEVE DIAM. GREATER THAN .062 MM (TONS/DAY)  
WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	31	---	---	---	---	---	---	---	e13700	e5080
2	---	---	---	---	---	---	---	---	---	---	e1630	2360
3	---	---	---	---	---	---	---	---	---	---	2740	1150
4	---	---	---	---	---	---	---	---	---	---	1210	186
5	---	---	---	---	---	---	---	---	---	---	17400	---
6	---	---	---	---	---	---	---	---	---	---	e6030	---
7	---	---	---	---	---	---	---	---	---	---	e2500	264
8	---	---	---	---	---	---	---	---	---	435	e302	---
9	---	e2250	---	---	---	---	---	---	---	e10500	---	---
10	---	e74	---	---	---	---	---	---	---	e3470	---	---
11	---	e12	---	---	---	---	---	---	---	3580	e37100	---
12	---	10	---	---	---	---	---	---	---	999	e11400	2630
13	---	---	---	---	---	---	---	---	---	515	---	350
14	---	---	---	---	---	---	---	---	---	692	---	---
15	---	---	---	---	---	---	---	---	---	9570	---	e2700
16	---	---	---	---	---	---	---	---	---	e2030	---	e165000
17	---	---	---	---	---	---	---	---	---	e197	---	e2190
18	---	---	---	---	---	---	---	---	---	---	6190	---
19	---	---	---	---	---	---	---	---	---	---	e2110	712
20	---	---	---	---	---	---	---	---	---	---	e842	602
21	---	---	---	---	---	---	---	---	---	---	e1070	128
22	3300	---	---	---	---	---	---	---	---	---	e103000	8.0
23	1300	---	---	---	---	---	---	---	---	---	e2960	---
24	554	---	---	---	---	113	---	---	---	---	e630	---
25	315	---	---	---	---	86	---	---	---	---	---	---
26	e8270	---	---	---	---	87	---	---	---	---	---	---
27	e19700	---	---	---	---	---	---	---	---	3600	---	---
28	e761	---	---	---	---	---	---	---	---	e1530	10200	---
29	101	55	---	---	---	---	---	---	---	e1710	2460	---
30	e43	136	---	---	---	---	---	---	---	e1120	159000	---
31	---	---	---	---	---	---	---	---	---	e434	e410000	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED, SIEVE DIAM. GREATER THAN .062 MM (TONS/DAY)  
WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	135	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	154	---	---	---	11800	---	---
10	---	---	---	---	---	155	---	---	---	e1760	---	---
11	---	---	---	---	---	111	---	---	---	---	---	---
12	---	---	---	---	---	146	---	---	---	---	---	---
13	---	---	---	---	---	255	---	---	---	---	---	---
14	---	---	---	---	---	238	---	---	---	---	---	---
15	---	---	---	---	---	138	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	1410	---
20	---	---	---	---	---	---	---	---	---	---	525	---
21	---	---	---	---	---	---	---	---	---	---	90	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	175	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

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 NE1/4SE1/4 sec. 23, T.40 N., R.7 E., Coconino County, Hydrologic Units 14070006, 15010001, (see REMARKS), 1.0 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--62), 17,760 ft<sup>3</sup>/s, 12,870,000 acre-ft/yr; 37 years (water years 1965--2001), 14,200 ft<sup>3</sup>/s, 10,290,000 acre-ft/yr.

## Monthly discharge, water year October 2000 to September 2001

Month	Mean, in cubic feet per second	Runoff, in acre-feet
October.....	10,170	625,100
November.....	13,690	814,600
December.....	13,640	838,900
Calendar year 2000.....	11,950	8,672,000
January.....	13,930	856,600
February.....	11,780	654,200
March.....	10,700	658,100
April.....	10,370	617,000
May.....	9,972	613,200
June.....	9,888	588,400
July.....	13,150	808,300
August.....	13,440	826,200
September.....	7,736	460,300
Water year 2001.....	11,550	8,361,000

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

**COLORADO RIVER MAIN STEM**

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**09383100 COLORADO RIVER ABOVE LITTLE COLORADO RIVER NEAR DESERT VIEW, AZ**

**LOCATION.**--Lat 36° 12'08", long 111° 48'59", Coconino County, Hydrologic Unit 15010001, in Grand Canyon National Park, on the right bank 0.2 mi upstream from the confluence with the Little Colorado River, 11 mi east-northeast of Desert View, 77.1 mi downstream of Glen Canyon Dam, and 293 mi upstream from Hoover Dam.

**DRAINAGE AREA.**--114,272 mi<sup>2</sup> approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming and 108 mi<sup>2</sup> on the Paria Plateau, which is noncontributing.

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

**GAGE.**--Water-stage recorder on right bank. Elevation of gage is 2,686.74 ft above National Geodetic Vertical Datum of 1929, from GPS levels. Prior to Sept. 1989, recording gages and reference points within 100 ft of present gage, at different datum.

**REMARKS.**--Records good except for estimated daily discharges, which are poor. Flow regulated since Mar. 13, 1963, by Lake Powell 77.1 mi upstream.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 96,200 ft<sup>3</sup>/s, June 29, 1983, gage height, unknown; minimum, 2,940 ft<sup>3</sup>/s, Oct. 30, 1990, gage height 21.38 ft.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge since at least 1868, about 300,000 ft<sup>3</sup>/s, July 7, 1884, based on flood studies at Lees Ferry.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 19,100 ft<sup>3</sup>/s, gage height 31.25 ft, recorded Mar. 20. Minimum daily, 7,080 ft<sup>3</sup>/s, recorded Sept. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8220	11500	14200	12800	14600	11900	9740	10900	11600	8350	14400	13800
2	9730	14300	14300	13200	12200	11300	8000	10600	11000	8610	14300	8540
3	10300	14300	13000	14200	12300	11100	11000	10600	10700	13700	14300	7170
4	10300	14000	13400	14200	11500	10400	11100	10500	7790	14100	14200	7130
5	10300	13200	14400	14200	11200	10100	11000	10500	10800	9830	14200	8000
6	10200	13300	14500	14000	12000	11600	11000	10500	10800	14300	9980	8020
7	10200	14200	14300	12900	12100	11200	11000	7800	10800	14300	e14000	8010
8	9590	14000	14100	13500	12100	11400	11000	13600	10800	14100	e14300	8010
9	9750	14100	14200	14400	12200	11200	7950	12800	10900	9900	e14300	7960
10	10100	14100	12700	14500	12000	11100	10900	10600	9920	14400	e14300	7100
11	10400	14000	13300	14600	11600	10500	11000	10500	7710	14300	e14200	7990
12	10400	13400	14200	14500	11200	10500	10900	10500	10700	14500	e14300	8030
13	10400	13400	14200	14200	12100	11200	11000	10400	10900	14500	e10000	8060
14	10200	14100	14100	13000	12100	11400	11100	7820	10900	14500	e14000	8110
15	9750	14000	14000	13600	12200	11400	11100	8890	10800	14100	e14200	8110
16	9370	14000	13800	14600	14600	11300	8110	8900	10900	9950	e14200	8220
17	10600	14100	12900	14500	12100	11000	11000	8770	9950	14300	e14200	7350
18	10400	13900	13100	14300	11600	10500	11000	8810	7910	14400	e14200	8100
19	10400	13400	14000	14500	11400	10400	11200	10400	10800	14300	14000	8050
20	10400	13100	14000	14600	12100	15400	11300	10300	10900	14400	9630	8110
21	10300	14400	14000	12700	12100	14300	11300	7810	10900	14400	14100	8190
22	10100	14100	14000	12800	12000	11400	11200	10100	10900	14000	14200	8080
23	e10200	13900	13800	14800	11900	11200	8140	10300	10900	10000	14200	7970
24	e10800	13000	12700	14300	11900	11000	10900	10400	10900	14400	14200	7080
25	e10800	14000	13000	14200	11400	e10300	10900	10400	8000	14300	14200	8000
26	e10800	13500	13100	14300	10500	e10100	11000	10400	10900	14400	13800	7960
27	e10600	13200	13800	14300	12100	9890	11000	10400	11200	14600	9520	8000
28	e11000	14200	13700	12900	12100	10000	11000	7820	10900	14500	14000	7970
29	e10000	14200	13800	12500	---	9950	10900	10500	8260	14200	14100	8020
30	10100	14100	13700	15000	---	9940	7980	11000	8360	10100	14100	7940
31	e10500	---	13400	14500	---	10800	---	10900	---	14400	14200	---
TOTAL	316210	413000	425700	432600	337200	343780	314720	313720	307800	410140	421830	243080
MEAN	10200	13770	13730	13950	12040	11090	10490	10120	10260	13230	13610	8103
MAX	11000	14400	14500	15000	14600	15400	11300	13600	11600	14600	14400	13800
MIN	8220	11500	12700	12500	10500	9890	7950	7800	7710	8350	9520	7080
AC-FT	627200	819200	844400	858100	668800	681900	624200	622300	610500	813500	836700	482100

CAL YR 2000    TOTAL 4410790    MEAN 12050    MAX 32400    MIN 8200    AC-FT 8749000  
WTR YR 2001    TOTAL 4279780    MEAN 11730    MAX 15400    MIN 7080    AC-FT 8489000

e Estimated

## COLORADO RIVER MAIN STEM

## 09383100 COLORADO RIVER ABOVE LITTLE COLORADO RIVER NEAR DESERT VIEW, AZ--Continued

## WATER-QUALITY RECORDS

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

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 1990 to Apr. 1993, July 1993 to current year.

SPECIFIC CONDUCTANCE: July 1990 to Apr. 1993, Apr. 1998 to current year.

pH: July 1990 to Apr. 1993.

DISSOLVED OXYGEN: July 1990 to Apr. 1993.

SUSPENDED SEDIMENT DISCHARGE: June 1983 to Dec. 1983, Sept. 1985 to Feb. 1986.

TURBIDITY: Apr. 1999 to Sept. 2000

INSTRUMENTATION.--Water temperature recorder July 1990 to Apr. 1993, July 1993 to current year; specific conductance recorder: July 1990 to Apr. 1993, Apr. 1998 to current year.

REMARKS.--Temperature record and specific conductance records are good except for estimated days and Sept. 1--15, which are fair.

## EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum recorded 13.9°C, July 2, 2001; minimum recorded 5.7°C on Dec. 24, 25, 1990.

SPECIFIC CONDUCTANCE: Maximum recorded 1,080 microsiemens, Oct. 29, 2000; minimum recorded 620 microsiemens, July 7, 1998.

pH: Maximum recorded 8.5 units, Mar. 9, 1993; minimum recorded, 8.0 units, Nov. 9, 12, 1990, Dec. 19, 20, 1992, Feb. 5, 1993, Apr. 7, 1993.

DISSOLVED OXYGEN: Maximum recorded, 11.7 mg/L, Nov. 29, 1990; minimum recorded, 9.1 mg/L, Oct. 27, 1993.

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

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 13.9°C July 2; minimum recorded, 7.9°C Feb. 10.

SPECIFIC CONDUCTANCE: Maximum recorded, 1080 microsiemens Oct. 29; minimum recorded, 679 microsiemens Jan. 13.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	12.7	12.0	12.3	10.4	10.1	10.2	10.3	10.1	10.2	9.6	9.5	9.5
2	12.5	11.9	12.2	10.3	9.9	10.1	10.3	10.1	10.2	9.6	9.3	9.4
3	12.6	11.9	12.2	10.2	9.8	10.0	10.3	10.0	10.2	9.6	9.3	9.4
4	12.2	11.7	12.0	10.4	10.1	10.2	10.1	9.9	10.0	9.5	9.2	9.4
5	12.3	11.7	11.9	10.5	10.3	10.4	10.3	9.9	10.1	9.5	9.2	9.3
6	12.1	11.5	11.8	10.4	10.0	10.2	10.4	10.1	10.3	9.5	9.2	9.4
7	11.9	11.5	11.6	10.0	9.7	9.9	10.3	10.1	10.2	9.5	9.3	9.4
8	12.1	11.4	11.7	9.7	9.4	9.5	10.5	10.2	10.3	9.4	9.2	9.3
9	12.2	11.5	11.8	10.0	9.4	9.7	10.6	10.3	10.4	9.5	9.2	9.4
10	11.9	11.6	11.7	10.2	9.8	10.0	10.4	10.4	10.4	9.7	9.4	9.5
11	11.9	11.3	11.6	10.0	9.8	9.9	10.5	10.2	10.3	9.7	9.5	9.6
12	11.5	10.9	11.2	9.9	9.6	9.7	10.3	10.0	10.2	9.7	9.5	9.6
13	11.1	10.5	10.8	9.6	9.3	9.5	10.1	9.8	9.9	9.6	9.3	9.5
14	11.0	10.4	10.6	9.7	9.2	9.4	10.0	9.8	9.9	9.3	9.1	9.2
15	11.3	10.5	10.9	9.8	9.4	9.6	10.1	9.8	9.9	9.1	8.9	9.0
16	11.4	10.7	10.9	9.8	9.6	9.7	10.1	9.9	10.0	9.2	8.9	9.0
17	11.2	10.7	10.9	9.7	9.4	9.6	9.9	9.1	9.6	9.1	8.9	9.0
18	11.2	10.7	10.9	9.6	9.2	9.4	9.4	9.0	9.2	9.0	8.7	8.9
19	11.3	10.8	11.0	9.5	9.3	9.4	9.2	8.9	9.1	8.9	8.5	8.7
20	11.4	10.8	11.1	9.7	9.4	9.5	9.4	9.1	9.2	9.1	8.6	8.8
21	11.4	10.9	11.1	9.8	9.5	9.6	9.6	9.1	9.3	9.0	8.8	8.9
22	11.2	11.0	11.1	9.9	9.6	9.7	9.7	9.4	9.5	9.0	8.7	8.8
23	11.2	10.9	11.0	10.1	9.8	9.9	9.8	9.5	9.6	9.3	8.9	9.1
24	11.2	10.9	11.0	10.3	9.9	10.1	9.8	9.5	9.6	9.2	9.0	9.1
25	11.2	10.8	11.0	10.5	10.1	10.3	9.8	9.6	9.7	9.1	8.9	9.0
26	11.2	10.9	11.0	10.3	10.1	10.2	9.9	9.6	9.7	9.0	8.8	8.9
27	10.9	10.5	10.7	10.1	9.9	10.0	9.9	9.4	9.6	8.9	8.6	8.7
28	10.8	10.5	10.6	10.2	9.8	10.0	9.8	9.5	9.7	8.9	8.7	8.7
29	10.7	10.5	10.6	10.4	10.0	10.1	9.8	9.5	9.6	9.0	8.7	8.8
30	10.6	10.3	10.5	10.4	10.1	10.3	9.8	9.5	9.6	8.8	8.5	8.7
31	10.6	10.1	10.4	---	---	---	9.8	9.5	9.6	8.6	8.1	8.4
MONTH	12.7	10.1	11.2	10.5	9.2	9.9	10.6	8.9	9.8	9.7	8.1	9.1



**COLORADO RIVER MAIN STEM**  
**09383100 COLORADO RIVER ABOVE LITTLE COLORADO RIVER NEAR DESERT VIEW, AZ--Continued**

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TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	8.5	8.0	8.2	9.2	8.9	9.1	11.1	10.2	10.6	12.4	11.2	11.8
2	8.4	8.1	8.2	9.3	8.8	9.0	11.6	10.4	10.9	12.0	10.8	11.4
3	8.6	8.3	8.4	9.4	8.9	9.1	11.4	10.6	10.9	11.0	10.3	10.7
4	8.9	8.5	8.6	9.7	9.0	9.3	10.9	10.4	10.7	10.3	9.6	10.0
5	9.1	8.6	8.8	9.5	9.3	9.4	10.5	10.2	10.4	10.9	9.9	10.4
6	9.1	8.7	8.9	9.4	9.2	9.3	10.4	10.0	10.2	11.5	10.3	10.9
7	9.0	8.7	8.9	9.4	9.2	9.3	10.0	9.5	9.8	12.8	11.0	11.7
8	8.8	8.5	8.7	9.8	9.2	9.5	10.0	9.4	9.6	12.2	11.3	11.8
9	8.5	8.0	8.3	9.8	9.4	9.6	10.2	9.4	9.8	11.7	10.8	11.3
10	8.3	7.9	8.1	9.6	9.1	9.4	9.9	9.5	9.7	11.6	11.2	11.4
11	8.5	8.0	8.2	9.5	9.0	9.2	9.7	9.3	9.5	12.0	11.0	11.5
12	8.8	8.2	8.5	9.5	8.8	9.1	9.8	9.0	9.4	11.9	11.2	11.6
13	8.7	8.4	8.5	9.5	8.9	9.2	10.4	9.4	9.9	12.0	11.5	11.8
14	8.8	8.4	8.6	10.0	9.3	9.6	10.6	9.9	10.2	13.1	11.2	12.0
15	8.8	8.4	8.6	9.9	9.2	9.5	11.0	10.1	10.5	12.7	11.5	12.1
16	8.9	8.4	8.6	9.7	9.2	9.5	11.5	10.4	10.9	12.7	11.7	12.2
17	8.8	8.4	8.6	9.9	9.2	9.5	11.7	10.5	11.1	13.0	11.8	12.4
18	8.9	8.6	8.8	10.0	9.3	9.5	11.5	10.7	11.1	12.6	11.7	12.2
19	9.3	8.7	9.0	10.4	9.4	9.8	11.3	10.9	11.1	12.6	11.7	12.0
20	9.3	8.9	9.1	10.2	9.7	9.9	11.0	10.6	10.8	12.2	11.2	11.7
21	9.4	8.9	9.2	10.2	9.4	9.8	10.7	9.8	10.2	12.5	11.3	11.9
22	9.3	9.0	9.1	10.3	9.8	10.0	10.5	9.7	10.1	12.9	11.7	12.2
23	9.2	8.9	9.1	10.7	10.0	10.3	10.9	9.7	10.3	12.6	11.5	12.1
24	9.0	8.7	8.8	10.7	10.0	10.3	11.4	10.4	10.8	12.3	11.5	12.0
25	8.9	8.5	8.7	10.5	10.0	10.2	11.5	10.6	11.0	12.5	11.5	12.0
26	9.1	8.8	8.9	10.7	10.0	10.2	11.6	10.7	11.2	12.6	11.6	12.1
27	9.1	8.9	9.0	10.5	9.9	10.1	11.4	11.0	11.2	12.5	11.8	12.2
28	9.3	8.9	9.1	10.8	9.9	10.3	11.7	10.8	11.2	13.0	11.9	12.5
29	---	---	---	10.5	10.1	10.3	11.7	10.8	11.2	13.1	12.0	12.6
30	---	---	---	10.8	9.9	10.3	12.3	11.1	11.7	12.8	11.8	12.3
31	---	---	---	10.9	10.1	10.4	---	---	---	12.7	11.9	12.3
MONTH	9.4	7.9	8.7	10.9	8.8	9.7	12.3	9.0	10.5	13.1	9.6	11.8
JUNE				JULY			AUGUST			SEPTEMBER		
1	12.5	11.8	12.2	13.6	12.5	13.1	12.4	11.3	11.9	11.7	10.7	11.3
2	12.3	11.9	12.0	13.9	12.7	13.3	12.4	11.5	12.0	12.0	11.1	11.5
3	12.6	11.6	12.0	13.5	12.2	12.7	12.2	11.6	11.9	12.8	11.5	12.1
4	13.1	11.9	12.5	12.6	11.6	12.2	12.0	11.2	11.6	13.1	12.2	12.7
5	13.0	11.9	12.5	12.8	12.2	12.5	12.1	11.1	11.6	13.2	12.4	12.8
6	12.7	11.6	12.1	12.4	12.2	12.3	12.8	11.8	12.2	13.0	12.4	12.8
7	12.7	11.7	12.2	12.5	11.4	12.0	12.5	11.8	12.3	13.0	12.1	12.5
8	12.9	11.9	12.4	12.2	11.4	11.8	12.0	11.0	11.6	12.5	12.0	12.3
9	12.8	12.0	12.4	12.4	11.7	12.0	12.0	11.2	11.7	12.6	11.4	11.9
10	13.1	12.1	12.6	12.1	11.4	11.8	12.6	11.4	11.9	12.3	11.4	11.9
11	13.7	12.2	12.9	11.7	11.1	11.4	12.4	11.2	11.8	12.4	11.8	12.1
12	13.5	12.4	13.0	12.2	11.0	11.6	12.1	11.3	11.8	12.7	12.0	12.1
13	13.1	12.0	12.3	12.1	11.1	11.6	12.1	11.5	11.9	12.6	12.0	12.3
14	12.2	11.4	11.8	11.8	10.9	11.4	11.8	11.3	11.6	12.6	11.9	12.1
15	12.0	11.0	11.5	12.2	11.0	11.5	11.7	10.7	11.2	12.7	12.1	12.4
16	12.4	11.4	11.9	12.6	11.5	12.0	11.5	10.9	11.3	12.4	11.7	12.1
17	13.0	11.8	12.4	12.5	11.8	12.1	11.9	10.8	11.3	12.4	11.7	12.1
18	13.6	12.1	12.9	---	---	---	11.9	10.9	11.5	12.2	11.4	11.8
19	13.5	12.3	12.9	---	---	---	11.9	11.1	11.5	12.1	11.3	11.7
20	13.0	12.1	12.6	12.4	11.2	11.8	11.7	11.2	11.5	12.0	11.4	11.7
21	12.7	12.0	12.3	12.5	11.4	12.0	11.6	11.2	11.3	12.0	11.3	11.7
22	12.6	11.9	12.3	12.4	11.3	11.9	11.7	10.6	11.2	12.0	11.3	11.7
23	12.7	12.0	12.4	12.3	11.7	12.0	11.9	10.9	11.4	12.1	11.3	11.7
24	12.7	11.9	12.3	12.2	11.7	11.9	11.8	10.8	11.4	12.1	11.4	11.7
25	12.9	11.9	12.4	11.9	11.0	11.4	11.8	11.0	11.4	12.0	11.3	11.7
26	13.2	12.3	12.8	11.3	10.8	11.1	11.7	10.8	11.3	12.0	11.3	11.6
27	13.0	12.1	12.6	12.1	10.7	11.3	12.1	11.3	11.6	11.9	11.2	11.6
28	12.8	11.9	12.4	12.2	11.1	11.7	11.7	11.4	11.6	11.9	11.3	11.6
29	13.5	12.1	12.8	12.2	11.1	11.7	11.6	11.0	11.3	11.8	11.2	11.5
30	13.8	12.2	13.0	12.6	12.1	12.3	11.9	10.9	11.3	11.8	11.2	11.5
31	---	---	---	12.4	12.1	12.3	11.9	11.0	11.5	---	---	---
MONTH	13.8	11.0	12.4	---	---	---	12.8	10.6	11.6	13.2	10.7	11.9

**COLORADO RIVER MAIN STEM**  
**09383100 COLORADO RIVER ABOVE LITTLE COLORADO RIVER NEAR DESERT VIEW, AZ--Continued**

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	736	729	732	732	714	720	720	713	716	704	693	701
2	736	725	730	741	718	728	722	714	717	709	702	705
3	739	718	724	734	719	728	720	716	718	705	700	702
4	746	719	729	730	711	722	721	715	717	705	697	700
5	745	721	725	717	709	713	716	707	712	704	698	700
6	745	722	727	713	708	710	711	706	707	704	697	700
7	729	721	726	716	706	711	713	707	710	705	696	701
8	734	723	727	732	708	723	718	713	715	702	695	698
9	730	723	726	715	707	710	719	715	717	701	696	698
10	730	717	722	716	708	712	722	719	720	703	695	699
11	723	713	716	720	701	711	721	717	719	701	689	696
12	759	715	724	722	701	715	729	714	718	697	686	691
13	765	736	748	722	705	714	731	719	724	689	679	683
14	747	724	737	715	705	710	730	720	726	694	680	684
15	729	708	716	716	707	711	729	721	725	734	694	721
16	716	708	713	713	704	709	723	716	719	734	710	717
17	726	716	721	712	705	709	747	717	733	714	692	706
18	723	716	720	715	706	709	744	722	731	693	686	690
19	719	712	716	717	709	714	740	727	734	704	689	697
20	722	714	719	713	708	710	734	721	727	699	685	692
21	721	711	717	720	713	717	739	722	728	697	686	692
22	711	707	709	721	710	715	726	721	723	691	684	687
23	710	704	708	717	710	713	724	715	719	692	683	688
24	807	706	771	719	708	714	720	711	715	701	692	699
25	847	740	774	708	698	702	718	710	713	702	691	699
26	842	731	757	707	699	705	717	710	713	695	687	690
27	731	717	726	716	707	712	718	697	707	717	689	707
28	749	707	717	721	716	719	701	689	695	708	697	701
29	1080	713	849	726	720	722	707	697	701	699	688	693
30	970	747	796	724	716	720	705	694	700	695	680	685
31	747	720	729	---	---	---	699	691	694	744	695	721
MONTH	1080	704	734	741	698	714	747	689	717	744	679	698
FEBRUARY			MARCH			APRIL			MAY			
1	751	738	744	771	761	768	856	816	841	853	833	843
2	751	724	738	768	762	764	825	805	814	856	835	845
3	724	710	717	766	748	755	805	788	797	868	844	860
4	722	716	719	759	753	756	848	796	828	871	840	856
5	723	714	719	764	752	757	862	837	851	865	845	856
6	716	710	714	767	754	760	864	824	841	876	841	857
7	715	707	711	776	754	769	870	833	850	876	841	850
8	720	707	711	771	764	766	882	864	873	850	813	829
9	780	720	765	770	763	767	883	838	869	830	816	825
10	771	754	760	765	750	757	904	838	875	835	829	833
11	794	749	777	774	750	766	869	821	838	836	829	833
12	762	740	752	787	772	779	894	834	879	836	833	834
13	755	739	747	802	784	790	888	869	874	840	826	833
14	741	721	728	807	786	797	898	858	870	833	825	831
15	729	715	722	816	782	795	900	851	872	825	817	820
16	738	728	733	819	812	815	884	851	871	828	813	822
17	746	737	740	819	775	790	884	840	861	832	813	824
18	741	728	734	825	775	786	840	827	834	835	811	823
19	735	729	733	843	789	816	846	830	839	826	811	819
20	734	726	730	827	783	804	858	846	850	844	819	831
21	737	730	734	814	794	802	877	858	867	835	818	827
22	738	730	735	794	786	788	895	869	883	821	812	816
23	741	730	736	793	787	789	878	858	863	825	813	820
24	733	728	731	797	791	793	900	852	875	841	825	832
25	752	730	742	803	791	796	895	858	871	840	824	831
26	761	746	755	808	794	801	886	871	878	840	823	829
27	776	745	758	805	801	803	871	840	852	827	818	820
28	771	749	763	808	800	803	842	833	838	820	814	817
29	---	---	---	823	801	814	851	838	844	827	811	819
30	---	---	---	829	801	822	862	845	854	825	810	816
31	---	---	---	840	805	819	---	---	---	828	810	821
MONTH	794	707	737	843	748	787	904	788	855	876	810	831

**COLORADO RIVER MAIN STEM**  
**09383100 COLORADO RIVER ABOVE LITTLE COLORADO RIVER NEAR DESERT VIEW, AZ--Continued**

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SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	834	801	817	---	---	e806	---	---	e792	---	---	e775
2	818	805	812	---	---	e816	---	---	---	---	---	e780
3	811	805	809	---	---	e806	---	---	---	---	---	---
4	825	808	816	---	---	e803	---	---	e778	---	---	e799
5	825	803	816	---	---	e806	---	---	e786	---	---	e780
6	832	803	820	---	---	e803	---	---	e784	---	---	e776
7	828	799	812	---	---	e802	---	---	e782	---	---	e773
8	803	772	786	---	---	e800	---	---	e785	---	---	e776
9	798	774	790	---	---	e805	---	---	e784	---	---	e775
10	808	792	800	---	---	e807	---	---	e798	---	---	e778
11	828	802	813	---	---	e791	---	---	e793	---	---	e767
12	819	796	804	---	---	e802	---	---	e782	---	---	e775
13	828	797	812	---	---	e808	---	---	e792	---	---	e782
14	828	794	810	---	---	e804	---	---	e782	---	---	e777
15	831	779	809	---	---	e794	---	---	e787	---	---	e773
16	837	806	822	---	---	e797	---	---	e776	782	770	775
17	825	777	793	---	---	e798	---	---	e774	778	769	773
18	---	---	e799	---	---	e796	---	---	e781	770	764	767
19	811	788	802	---	---	e798	---	---	e776	772	766	769
20	814	801	805	---	---	e781	---	---	e787	773	769	771
21	818	799	810	---	---	---	---	---	e776	774	770	772
22	825	801	812	---	---	---	---	---	e774	773	768	770
23	808	792	801	---	---	---	---	---	e769	771	767	769
24	799	791	794	---	---	---	---	---	---	773	770	772
25	834	796	813	---	---	---	---	---	---	774	764	771
26	---	782	803	---	---	---	---	---	---	766	764	765
27	---	---	---	---	---	---	---	---	---	764	759	762
28	---	---	---	---	---	e782	---	---	---	764	760	762
29	---	---	---	---	---	e786	---	---	e773	766	763	764
30	---	---	e810	---	---	e788	---	---	e769	768	764	766
31	---	---	---	---	---	e782	---	---	e771	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

## 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 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 20 .....	1845	*839	*6.07

Minimum daily discharge, 0.11 ft<sup>3</sup>/s, July 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	8.2	4.9	e3.0	e2.5	5.5	182	33	8.1	.32	3.7	6.7
2	.70	7.8	5.0	e2.5	e2.5	5.4	199	27	7.4	.17	5.8	6.3
3	.73	7.2	5.1	e2.5	e2.5	5.2	200	25	6.3	.14	7.2	4.7
4	.73	7.7	5.0	e2.5	e3.2	5.3	189	28	6.4	.16	6.6	3.7
5	.65	10	5.0	e2.5	4.2	5.3	161	25	3.6	.11	5.5	2.2
6	.55	13	4.9	4.1	3.9	5.1	144	41	1.4	.15	6.5	2.6
7	.54	12	4.9	4.2	4.1	5.4	114	39	.83	4.4	7.6	1.5
8	.54	9.9	4.8	4.2	e5.0	5.8	120	31	.57	9.6	7.9	1.5
9	.67	8.6	5.0	4.3	e5.0	6.6	124	25	.91	5.4	11	1.8
10	.94	9.3	5.3	4.2	5.2	6.5	120	24	2.0	3.9	8.2	1.2
11	2.2	9.5	5.3	4.1	5.2	6.9	97	25	2.1	4.5	34	1.1
12	3.7	8.5	5.3	3.9	5.0	7.2	93	19	1.1	4.8	11	1.6
13	3.4	7.8	5.3	e3.5	4.7	6.8	92	24	.82	5.1	52	3.4
14	2.9	6.5	e5.1	e2.5	4.6	6.6	98	34	.99	5.3	57	2.3
15	2.0	8.0	e4.8	e2.5	4.7	6.8	106	38	.60	5.8	39	2.6
16	1.6	7.7	e4.0	e2.5	e3.5	7.4	111	36	.72	5.9	27	3.4
17	1.8	e6.5	e3.5	e3.0	e3.5	8.3	97	31	.57	5.3	19	5.4
18	2.9	e6.2	e3.5	e3.5	4.6	9.2	94	29	.48	4.8	14	5.7
19	3.0	e6.0	e3.0	e2.5	4.8	9.3	97	27	.26	3.2	12	4.5
20	2.8	e6.0	e3.5	e3.5	4.7	10	123	48	.16	2.7	115	3.5
21	1.8	5.7	e3.0	e2.0	5.4	12	146	42	.18	2.0	18	2.9
22	3.0	5.8	e3.0	e2.5	5.4	33	103	35	.42	3.3	18	2.6
23	9.3	5.7	e3.5	e4.0	5.5	61	91	28	.64	3.4	13	2.2
24	7.9	5.6	e3.5	e3.0	5.7	78	74	23	.77	4.7	10	2.0
25	6.8	5.4	4.2	e4.0	5.7	92	61	20	1.5	4.7	9.2	1.6
26	5.3	e5.0	4.3	e3.5	5.6	132	51	18	1.8	3.5	8.4	1.2
27	4.8	5.0	e4.0	4.4	5.5	169	51	14	1.7	3.9	7.4	1.1
28	6.2	4.9	e2.5	e3.5	5.4	148	56	13	2.2	2.6	6.5	.88
29	9.1	5.0	e2.5	e2.5	---	130	56	10	.65	2.5	5.5	.74
30	10	4.9	e3.0	e3.0	---	152	44	8.4	.29	2.4	5.6	.70
31	8.6	---	e3.0	e2.5	---	173	---	7.5	---	1.8	5.4	---
TOTAL	105.69	219.4	129.7	100.4	127.6	1314.6	3294	827.9	55.46	106.55	557.0	81.62
MEAN	3.41	7.31	4.18	3.24	4.56	42.4	110	26.7	1.85	3.44	18.0	2.72
MAX	10	13	5.3	4.4	5.7	173	200	48	8.1	9.6	115	6.7
MIN	.54	4.9	2.5	2.0	2.5	5.1	44	7.5	.16	.11	3.7	.70
AC-FT	210	435	257	199	253	2610	6530	1640	110	211	1100	162

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

	MEAN	9.42	8.09	10.0	10.7	12.6	30.6	94.4	36.3	9.38	9.84	23.1	13.0
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	.074	.32	.83	2.08	2.84	1.89	1.26	.44	.010	.000	.59	.017	
(WY)	1957	1957	1957	1957	1957	1990	1996	2000	1959	1963	2000	1960	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1941 - 2001
ANNUAL TOTAL	1367.15	6919.92	
ANNUAL MEAN	3.74	19.0	22.3
HIGHEST ANNUAL MEAN			71.6
LOWEST ANNUAL MEAN			2.94
HIGHEST DAILY MEAN	15	200	1660
LOWEST DAILY MEAN	.09	.11	.00
ANNUAL SEVEN-DAY MINIMUM	.10	.19	.00
ANNUAL RUNOFF (AC-FT)	2710	13730	16130
10 PERCENT EXCEEDS	8.3	56	43
50 PERCENT EXCEEDS	2.8	5.1	7.0
90 PERCENT EXCEEDS	.23	1.1	1.1

e Estimated



LITTLE COLORADO RIVER BASIN

73

09386020 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 bench mark on highway bridge.

REMARKS.--No estimated daily discharges. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,070 ft<sup>3</sup>/s Aug. 9, 2001, gage height, 9.86 ft; no flow most of each year.

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. 9.....	1900	*1,070	*9.86
Sept. 13.....	0430	810	9.41

No flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.20	.00	.00	.00	.00	.00	.00	.00	.00	13	.00
2	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	2.6	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.8	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	17	.00
5	.00	.33	.00	.00	.00	.00	.00	.00	.00	.00	9.3	.00
6	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	14	.00
7	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	5.3	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.1	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	387	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	312	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	94	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	294	34
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e252	194
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	108	.58
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	98	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	21	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	12	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.8	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.2	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	37	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	17	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.4	.00
24	9.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	5.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	2.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.47	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.0	.00
28	8.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00
29	6.8	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	1.5	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.61	---	.00	.00	---	.00	---	.00	---	.00	.01	---
TOTAL	34.28	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1715.62	228.58
MEAN	1.11	.020	.000	.000	.000	.000	.000	.000	.000	.000	55.3	7.62
MAX	9.0	.33	.00	.00	.00	.00	.00	.00	.00	.00	387	194
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	68	1.2	.00	.00	.00	.00	.00	.00	.00	.00	3400	453

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

	1998	1999	2000	2001
MEAN	.38	.007	.000	.000
MAX	1.11	.020	.000	.000
(WY)	2001	2001	1999	1999
MIN	.000	.000	.000	.000
(WY)	2000	1999	1999	1999

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1998 - 2001

ANNUAL TOTAL	104.76	179.08	
ANNUAL MEAN	.29	5.42	2.50
HIGHEST ANNUAL MEAN			5.42
LOWEST ANNUAL MEAN			.19
HIGHEST DAILY MEAN	45 Aug 30	387 Aug 9	387 Aug 9 2001
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Aug 27 1998
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Aug 27 1998
ANNUAL RUNOFF (AC-FT)	208	3930	1810
10 PERCENT EXCEEDS	.00	.12	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

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 high stages.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 590 ft<sup>3</sup>/s July 31, 1994, gage height, 4.16 ft; minimum daily, 0.00 ft<sup>3</sup>/s Sept. 18-21.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 152 ft<sup>3</sup>/s Aug. 10, gage height, 2.67 ft; minimum daily, 0.00 ft<sup>3</sup>/s Sept. 18-21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	2.4	1.5	.25	.30	.15	.27	.06	.06	.02	.05	.03
2	.05	1.5	1.8	.24	.27	.15	.43	.05	.05	.02	.03	.03
3	.05	1.4	2.0	.17	.70	.15	.61	.05	.06	.02	.03	.02
4	.03	2.1	1.9	.18	1.1	.15	.68	.05	.06	.02	.03	.02
5	.03	12	1.9	.16	1.2	.15	1.0	.05	.04	.02	.03	.02
6	.03	6.1	.85	.26	1.1	.15	1.3	.05	.04	.02	.03	.02
7	.03	4.5	.80	.56	.89	.15	1.7	.05	.04	.02	.02	.02
8	.02	3.7	1.6	.78	.61	.15	1.8	.10	.04	.02	.02	.02
9	.02	2.9	1.5	1.0	.53	.17	1.6	.10	.03	.02	.02	.02
10	.28	2.5	1.5	1.0	.56	.20	.29	.08	.03	.02	16	.02
11	.59	2.3	1.4	.74	.56	.36	.15	.07	.03	.02	61	.02
12	.88	2.2	1.3	.71	.46	.52	.15	.05	.03	.02	30	.02
13	.53	1.6	1.5	.72	.35	.49	.17	.05	.03	.02	12	.06
14	.49	1.4	1.3	.58	.40	.38	.20	.07	.03	.03	19	.35
15	.54	2.0	1.2	.41	.40	.24	.17	.13	.03	.03	12	.40
16	.56	1.6	1.0	.54	.26	.20	.13	.11	.03	.03	3.3	.48
17	.31	1.7	.97	.44	.25	.15	.11	.08	.03	.02	.67	.33
18	.23	1.3	.86	.51	.33	.21	.11	.06	.03	.02	.10	.00
19	.22	1.0	.78	.37	.39	.25	.10	.05	.03	.03	.68	.00
20	.21	1.3	.62	.39	.36	.22	.09	.05	.03	.03	1.1	.00
21	.23	1.7	.58	.34	.26	.23	.09	.32	.03	.02	10	e.00
22	.42	2.0	.88	.43	.17	.27	.08	.17	.03	.02	1.3	e.02
23	7.3	2.0	1.0	.52	.15	.27	.08	.08	.03	.02	.17	.05
24	21	2.2	.94	.62	.15	.25	.08	.06	.03	.02	.11	.05
25	4.3	1.9	.63	1.4	.15	.27	.08	.06	.03	.02	.11	.06
26	2.7	1.7	.58	1.1	.15	.25	.07	.06	.03	.02	.11	.06
27	2.1	1.6	.41	1.1	.15	.23	.06	.06	.03	.02	.07	.06
28	20	1.9	.28	.95	.15	.22	.06	.06	.02	.02	.04	.06
29	14	1.1	.25	.68	---	.26	.07	.06	.02	.02	.03	.06
30	4.7	1.3	.25	.64	---	.27	.06	.06	.02	.02	.03	.06
31	3.3	---	.22	.42	---	.27	---	.06	---	.03	.03	---
TOTAL	85.20	72.9	32.30	18.21	12.35	7.38	11.79	2.41	1.02	0.68	168.11	2.36
MEAN	2.75	2.43	1.04	.59	.44	.24	.39	.078	.034	.022	5.42	.079
MAX	21	12	2.0	1.4	1.2	.52	1.8	.32	.06	.03	61	.48
MIN	.02	1.0	.22	.16	.15	.15	.06	.05	.02	.02	.02	.00
AC-FT	169	145	64	36	24	15	23	4.8	2.0	1.3	333	4.7

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2001, BY WATER YEAR (WY)

	7.72	6.98	8.12	8.17	8.46	10.9	17.3	10.5	2.41	3.18	6.90	4.14
MEAN	7.72	6.98	8.12	8.17	8.46	10.9	17.3	10.5	2.41	3.18	6.90	4.14
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	.074	.076	.082	.092	.44	.24	.39	.045	.034	.022	.23	.079
(WY)	1998	1998	1998	1998	2000	2001	2001	2000	2001	2001	1991	2001

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1976 - 2001

ANNUAL TOTAL	576.20	414.71	
ANNUAL MEAN	1.57	1.14	
HIGHEST ANNUAL MEAN			7.91
LOWEST ANNUAL MEAN			26.8
HIGHEST DAILY MEAN	35 Aug 28	61 Aug 11	1.10 1985
LOWEST DAILY MEAN	.01 Jul 23	.00 Sep 18	.01 1998
ANNUAL SEVEN-DAY MINIMUM	.01 Jul 22	.02 Sep 18	.01 Apr 28 1979
ANNUAL RUNOFF (AC-FT)	1140	823	5730
10 PERCENT EXCEEDS	2.8	1.8	13
50 PERCENT EXCEEDS	.36	.17	3.7
90 PERCENT EXCEEDS	.03	.02	.09

e Estimated

## LITTLE COLORADO RIVER BASIN

75

## 09386100 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.**--No estimated daily discharges. 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.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 2,430 ft<sup>3</sup>/s Aug. 11, 2001, gage height, 11.77 ft; minimum daily, no flow on many days.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 2,430 ft<sup>3</sup>/s Aug. 11, gage height, 11.77 ft; minimum daily, no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.11	.00	.00	.00	.00	.00	.00	.17
2	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00	.17
3	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.07
4	.00	.05	.00	.00	.21	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.25	.00	.00	.00	.00	.00	.00	.00
6	.00	.03	.00	.00	.22	.00	.00	.00	.00	.00	.00	.00
7	.00	.01	.00	.00	.09	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.04	.00
11	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	708	.00
12	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	334	.01
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	299	.02
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	264	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	113	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	84	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	45	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.6	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.7	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.79	.00
21	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.39	.00
22	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.57	.00
23	.09	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.9	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.3	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.84	.00
26	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.52	.00
27	.03	.00	.00	.19	.00	.00	.00	.00	.00	.00	.37	.00
28	.10	.00	.00	2.5	.00	.00	.00	.00	.00	.00	.30	.00
29	.00	.00	.00	3.2	---	.00	.00	.00	.00	.00	.23	.00
30	.00	.00	.00	.23	---	.00	.00	.00	.00	.00	.19	.00
31	.14	---	.00	.10	---	.00	---	.00	---	.67	.21	---
TOTAL	0.40	0.09	0.00	6.25	1.63	0.00	0.00	0.00	0.00	0.67	1860.95	0.44
MEAN	.013	.003	.000	.20	.058	.000	.000	.000	.000	.022	60.0	.015
MAX	.14	.05	.00	3.2	.25	.00	.00	.00	.00	.67	708	.17
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.8	.2	.00	12	3.2	.00	.00	.00	.00	1.3	3690	.9

CAL YR 2000 TOTAL 44.66 MEAN .12 MAX 1.3 MIN .00 AC-FT 89  
WTR YR 2001 TOTAL 1870.43 MEAN 5.12 MAX 708 MIN .00 AC-FT 3710

**LITTLE COLORADO RIVER BASIN**  
**09386100 LITTLE COLORADO RIVER BELOW ZION RESERVOIR, NEAR ST. JOHNS, AZ--Continued**  
**WATER-QUALITY RECORDS**

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

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

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

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	<.10	1.7
2	---	---	---	---	---	---	---	---	---	---	<.10	2.8
3	---	---	---	---	---	---	---	---	---	---	---	3.0
4	---	---	---	---	---	---	---	---	---	---	---	2.8
5	---	---	---	---	---	---	---	---	---	---	<.10	2.3
6	---	---	---	---	---	---	---	---	---	---	<.10	2.3
7	---	---	---	---	---	---	---	---	---	---	<.10	2.9
8	---	---	---	---	---	---	---	---	---	---	<.10	2.8
9	---	---	---	---	---	---	---	---	---	---	<.10	44
10	---	---	---	---	---	---	---	---	---	<.10	<.10	3.5
11	---	---	---	---	---	---	---	---	---	<.10	---	3.3
12	---	---	---	---	---	---	---	---	---	<.10	---	2.1
13	---	---	---	---	---	---	---	---	---	<.10	---	.34
14	---	---	---	---	---	---	---	---	---	<.10	<.10	<.10
15	---	---	---	---	---	---	---	---	---	<.10	<.10	.12
16	---	---	---	---	---	---	---	---	---	<.10	.10	1.8
17	---	---	---	---	---	---	---	---	---	<.10	.63	1.8
18	---	---	---	---	---	---	---	---	---	<.10	.80	.86
19	---	---	---	---	---	---	---	---	---	<.10	.88	.46
20	---	---	---	---	---	---	---	---	---	<.10	.92	.31
21	---	---	---	---	---	---	---	---	---	<.10	.92	.16
22	---	---	---	---	---	---	---	---	---	<.10	.85	<.10
23	---	---	---	---	---	---	---	---	---	<.10	.69	<.10
24	---	---	---	---	---	---	---	---	---	<.10	.44	<.10
25	---	---	---	---	---	---	---	---	---	.20	.11	<.10
26	---	---	---	---	---	---	---	---	---	3.8	<.10	<.10
27	---	---	---	---	---	---	---	---	---	46	<.10	<.10
28	---	---	---	---	---	---	---	---	---	13	<.10	---
29	---	---	---	---	---	---	---	---	---	2.3	.86	---
30	---	---	---	---	---	---	---	---	---	.28	.97	---
31	---	---	---	---	---	---	---	---	---	<.10	1.2	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

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



## LITTLE COLORADO RIVER BASIN

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## 09386100 LITTLE COLORADO RIVER BELOW ZION RESERVOIR, NEAR ST. JOHNS, AZ--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	1.6	.48	<.10	.28	---	---	<.10	---	---
2	---	---	---	1.7	.49	<.10	.29	---	---	---	---	---
3	---	---	---	1.3	.27	<.10	.23	---	---	---	---	---
4	---	---	---	.45	.21	<.10	<.10	---	---	---	---	---
5	---	---	---	.19	.13	<.10	<.10	---	---	---	---	---
6	---	---	---	.14	<.10	<.10	<.10	---	---	---	---	---
7	---	---	---	.11	<.10	<.10	<.10	---	---	---	---	---
8	---	---	---	<.10	<.10	<.10	<.10	---	---	---	---	---
9	---	---	---	<.10	<.10	<.10	<.10	---	---	<.10	---	---
10	---	---	<.10	<.10	<.10	<.10	<.10	---	---	---	---	---
11	---	---	<.10	.11	<.10	<.10	<.10	---	---	---	---	---
12	---	---	<.10	.44	<.10	<.10	<.10	---	---	---	<.10	---
13	---	---	<.10	1.9	<.10	<.10	<.10	---	---	---	---	---
14	---	---	<.10	2.4	<.10	<.10	---	---	---	---	---	---
15	---	---	<.10	2.4	<.10	<.10	---	---	---	---	<.10	---
16	---	---	<.10	2.4	<.10	<.10	---	---	---	---	---	---
17	---	---	<.10	2.5	<.10	<.10	---	---	---	---	---	---
18	---	---	<.10	2.5	<.10	<.10	---	---	---	---	<.10	---
19	---	---	<.10	2.5	<.10	<.10	---	---	---	---	---	---
20	---	---	<.10	2.5	---	<.10	---	---	---	---	---	---
21	---	---	<.10	2.4	---	<.10	---	---	---	---	---	---
22	---	---	<.10	2.0	<.10	<.10	---	---	---	---	---	---
23	---	---	<.10	1.4	<.10	<.10	---	---	---	---	---	---
24	---	---	<.10	1.1	<.10	<.10	---	---	---	---	---	---
25	---	---	<.10	.85	<.10	<.10	---	---	---	---	---	---
26	---	---	<.10	.47	<.10	<.10	---	---	---	---	---	---
27	---	---	.13	.13	<.10	<.10	---	---	---	---	<.10	---
28	---	---	.22	.10	<.10	<.10	---	---	<.10	---	<.10	---
29	---	---	.36	<.10	<.10	<.10	---	---	---	---	<.10	---
30	---	---	.71	<.10	---	<.10	---	---	---	---	---	---
31	---	---	.88	<.10	---	.15	---	---	---	---	---	---
TOTAL	---	---	---	34.19	---	3.15	---	---	---	---	---	---
MEAN	---	---	---	1.1	---	.10	---	---	---	---	---	---
MAX	---	---	---	2.5	---	.15	---	---	---	---	---	---
MIN	---	---	---	.10	---	.10	---	---	---	---	---	---

&lt; Actual value is known to be less than the value shown

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	<.10	---	---	---	---	---	---	<.10
2	---	---	---	---	<.10	---	---	---	---	---	---	<.10
3	---	<.10	---	---	<.10	---	---	---	---	---	---	<.10
4	---	<.10	---	---	<.10	---	---	---	---	---	---	---
5	---	---	---	---	<.10	---	---	---	---	---	---	---
6	---	<.10	---	---	<.10	---	---	---	---	---	---	---
7	---	<.10	---	---	<.10	---	---	---	---	---	---	---
8	---	---	---	---	<.10	---	---	---	---	---	---	---
9	---	---	---	---	<.10	---	---	---	---	---	---	---
10	---	---	---	---	<.10	---	---	---	---	---	<.10	---
11	---	---	---	---	<.10	---	---	---	---	---	8410	---
12	---	---	---	---	<.10	---	---	---	---	---	2580	<.10
13	---	---	---	---	---	---	---	---	---	---	1940	<.10
14	---	---	---	---	---	---	---	---	---	---	1700	---
15	---	---	---	---	---	---	---	---	---	---	589	---
16	---	---	---	---	---	---	---	---	---	---	341	---
17	---	---	---	---	---	---	---	---	---	---	126	---
18	---	---	---	---	---	---	---	---	---	---	8.8	---
19	---	---	---	---	---	---	---	---	---	---	2.3	---
20	---	---	---	---	---	---	---	---	---	---	.70	---
21	<.10	---	---	---	---	---	---	---	---	---	.21	---
22	<.10	---	---	---	---	---	---	---	---	---	.25	---
23	<.10	---	---	---	---	---	---	---	---	---	1.0	---
24	---	---	---	---	---	---	---	---	---	---	.81	---
25	---	---	---	---	---	---	---	---	---	---	.54	---
26	---	---	---	<.10	---	---	---	---	---	---	.30	---
27	<.10	---	---	<.10	---	---	---	---	---	---	.18	---
28	<.10	---	---	.50	---	---	---	---	---	---	.12	---
29	---	---	---	.73	---	---	---	---	---	---	<.10	---
30	---	---	---	<.10	---	---	---	---	---	---	<.10	---
31	<.10	---	---	<.10	---	---	---	---	---	.43	<.10	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

&lt; 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 9.....	0100	102	3.10
Apr. 8.....	0015	*169	*3.36

Minimum daily discharge, 0.30 ft<sup>3</sup>/s, Dec. 21 and 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	4.4	.47	2.4	3.4	33	6.5	3.2	1.0	6.3	2.1	1.6
2	.93	5.0	.44	2.4	3.0	33	5.7	2.4	1.0	6.3	.85	1.5
3	.91	5.7	.44	2.4	3.1	37	5.2	1.9	.95	6.3	1.1	1.5
4	1.1	37	.43	2.2	4.6	29	4.7	1.6	.85	6.4	.80	1.6
5	1.1	34	.49	2.4	10	23	5.3	2.0	.88	6.3	.50	1.6
6	.82	14	.52	2.9	25	27	25	2.5	6.6	6.4	.42	1.6
7	.87	9.2	.54	3.8	41	42	74	2.4	7.6	6.5	.60	1.6
8	1.2	6.2	.58	3.5	39	60	118	2.4	7.7	7.6	.66	1.7
9	.84	5.4	.57	4.2	25	86	77	2.0	7.5	7.4	.54	1.7
10	.88	4.7	.58	5.4	24	78	45	1.7	7.3	6.5	.45	1.6
11	2.1	6.2	.61	5.1	22	59	31	2.1	7.2	1.6	.63	1.8
12	2.9	6.7	.61	4.8	18	52	21	3.2	6.9	1.0	.66	2.0
13	1.4	5.7	.60	5.3	15	67	17	3.2	6.8	1.1	2.6	2.2
14	1.6	5.6	.59	4.4	18	60	12	2.9	6.9	1.1	2.8	3.6
15	1.3	5.6	.57	3.5	15	48	9.1	1.8	6.6	1.1	1.8	2.5
16	2.2	4.7	.54	3.8	13	39	7.2	1.1	6.5	1.1	1.2	2.8
17	2.4	e3.9	.57	3.8	10	33	5.8	.80	6.4	1.1	.65	2.7
18	2.4	e3.4	.48	3.3	13	28	4.9	.66	6.7	1.2	.61	1.5
19	2.6	e2.6	.34	3.2	28	23	4.4	1.6	6.7	1.1	.91	1.0
20	2.9	e2.2	.31	3.1	33	23	2.9	2.5	6.6	1.1	.88	.97
21	3.0	e1.6	.30	2.9	33	27	2.0	1.8	6.6	1.1	.76	.95
22	3.3	.83	.31	2.8	31	28	2.4	1.3	6.6	1.0	.64	1.5
23	5.0	.75	.30	3.8	28	23	2.2	1.0	6.5	.99	1.2	3.3
24	2.3	.73	.35	4.6	14	18	1.9	.97	6.2	.94	1.4	1.4
25	.95	.74	.40	4.5	10	15	1.7	1.0	6.1	.84	.84	.56
26	.54	.68	1.6	4.2	11	13	2.6	1.2	6.2	.72	1.6	.66
27	.87	.64	4.3	4.5	15	11	5.2	1.3	6.3	.63	1.8	.73
28	6.1	.58	3.8	5.3	20	9.5	5.8	1.4	6.5	.50	1.9	.76
29	3.2	.56	3.2	4.5	---	8.9	5.3	1.3	6.6	.82	1.8	.66
30	2.0	.48	2.9	3.7	---	8.4	4.3	1.1	6.4	3.0	1.9	.64
31	4.5	---	2.6	3.5	---	7.5	---	.99	---	2.7	1.7	---
TOTAL	64.11	179.79	30.34	116.2	525.1	1049.3	515.1	55.32	172.68	90.74	36.30	48.23
MEAN	2.07	5.99	.98	3.75	18.8	33.8	17.2	1.78	5.76	2.93	1.17	1.61
MAX	6.1	37	4.3	5.4	41	86	118	3.2	7.7	7.6	2.8	3.6
MIN	.54	.48	.30	2.2	3.0	7.5	1.7	.66	.85	.50	.42	.56
AC-FT	127	357	60	230	1040	2080	1020	110	343	180	72	96

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2001, BY WATER YEAR (WY)

	MEAN	5.93	5.50	21.3	13.4	30.7	44.1	19.3	7.42	6.11	5.66	5.47	4.61
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	.73	.29	.20	.10	.19	.63	.97	1.68	1.82	1.07	1.17	.59	
(WY)	1965	1971	1965	1971	1964	2000	1957	1960	1990	1996	2001	2000	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1954 - 2001
ANNUAL TOTAL	1028.14	2883.21	
ANNUAL MEAN	2.81	7.90	14.1
HIGHEST ANNUAL MEAN			56.8
LOWEST ANNUAL MEAN			1.61
HIGHEST DAILY MEAN	37	118	3520
LOWEST DAILY MEAN	.07	.30	.00
ANNUAL SEVEN-DAY MINIMUM	.14	.33	.00
ANNUAL RUNOFF (AC-FT)	2040	5720	10190
10 PERCENT EXCEEDS	6.1	24	20
50 PERCENT EXCEEDS	1.7	2.8	4.4
90 PERCENT EXCEEDS	.43	.61	.73

e Estimated

## LITTLE COLORADO RIVER BASIN

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## 09391000 SHOW LOW LAKE NEAR SHOW LOW, AZ

**LOCATION.**--Lat 34°11'35", long 110°00'15", in NW1/4 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 current year. 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 6580.0 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, 6,280 acre-ft Apr. 8, elevation 6,570.52 ft; minimum contents 2,490 acre-ft Oct.10--11; minimum elevation 6,547.57 ft Oct. 10--11.

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 (ACRE-Feet), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2550	2640	3050	3110	3370	4590	6190	5720	4650	3890	3330	3240
2	2540	2650	3050	3110	3380	4660	6170	5690	4620	3870	3340	3240
3	2540	2670	3050	3120	3390	4730	6150	5650	4580	3850	3340	3230
4	2530	2770	3050	3120	3400	4790	6130	5620	4540	3820	3340	3220
5	2530	2850	3060	3130	3420	4840	6120	5590	4500	3800	3340	3210
6	2520	2880	3060	3130	3480	4890	6170	5550	4480	3790	3340	3200
7	2510	2910	3060	3140	3570	4990	6250	5510	4450	3770	3340	3190
8	2500	2920	3060	3150	3650	5130	6240	5480	4430	3760	3340	3180
9	2500	2930	3060	3160	3700	5340	6220	5440	4410	3740	3350	3170
10	2490	2950	3060	3180	3750	5540	6210	5410	4380	3720	3350	3160
11	2500	2960	3060	3190	3800	5680	6200	5370	4360	3690	3350	3160
12	2500	2980	3060	3200	3840	5800	6200	5340	4330	3660	3350	3150
13	2500	2990	3060	3210	3880	5960	6190	5310	4310	3620	3360	3160
14	2500	3000	3060	3220	3920	6100	6180	5280	4280	3590	3360	3150
15	2510	3010	3060	3230	3960	6210	6170	5240	4260	3550	3360	3150
16	2510	3020	3060	3240	3990	6220	6150	5210	4230	3520	3360	3140
17	2510	3030	3060	3240	4010	6220	6130	5170	4210	3490	3360	3140
18	2520	3030	3060	3250	4040	6210	6100	5130	4190	3450	3360	3130
19	2520	3040	3060	3260	4100	6210	6070	5110	4160	3420	3360	3120
20	2530	3040	3060	3260	4160	6210	6040	5070	4140	3400	3350	3110
21	2540	3040	3060	3270	4230	6210	6010	5040	4120	3400	3340	3100
22	2550	3040	3060	3280	4300	6210	5980	5010	4090	3390	3330	3090
23	2560	3040	3060	3290	4360	6210	5950	4970	4070	3370	3320	3090
24	2570	3050	3060	3300	4390	6210	5910	4940	4050	3360	3310	3080
25	2570	3050	3070	3310	4410	6200	5880	4900	4020	3360	3290	3070
26	2570	3050	3070	3310	4440	6200	5850	4870	4000	3350	3290	3060
27	2580	3050	3080	3330	4470	6200	5830	4830	3980	3340	3280	3050
28	2600	3050	3080	3340	4520	6200	5810	4790	3950	3330	3270	3040
29	2610	3050	3090	3350	---	6200	5780	4760	3930	3320	3270	3030
30	2620	3050	3100	3360	---	6200	5750	4720	3910	3320	3260	3020
31	2630	---	3100	3370	---	6200	---	4690	---	3320	3250	---
MAX	2630	3050	3100	3370	4520	6220	6250	5720	4650	3890	3360	3240
MIN	2490	2640	3050	3110	3370	4590	5750	4690	3910	3320	3250	3020
(*)	6548.61	6551.61	6551.96	6553.76	6560.92	6570.10	6567.79	6561.92	6557.23	6553.48	6552.99	6551.40
(**)	+70	+420	+50	+270	+1150	+1680	-450	-1060	-780	-590	-70	-230

CAL YR 2000 MAX 3630 MIN 2480 (\*\*) -220  
WTR YR 2001 MAX 6250 MIN 2490 (\*\*) +460

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

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

## LITTLE COLORADO RIVER BASIN

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

**LOCATION.**--Lat 34° 11' 47", long 110° 00' 13", in NW 1/4 sec. 10, T. 9 N., R. 22 E., Navajo County, Hydrologic Unit 15020005, on right bank just downstream from Jacques 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 current year. Monthly discharge only Nov. 1941 to Jan. 1945, published in WSP 1313. Published as "at Jacques 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.**--No estimated daily discharges. 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 1/4 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.**--48 years (water years 1954-2001), 8.95 ft<sup>3</sup>/s, 6,480 acre-ft/yr; median of yearly mean discharges, 4.32 ft<sup>3</sup>/s, 3,130 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, 157 ft<sup>3</sup>/s Apr. 8; minimum daily 0.12 ft<sup>3</sup>/s, Aug. 5--16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	.29	.29	.44	.42	.44	12	3.9	4.4	5.1	.16	4.7
2	4.1	.32	.29	.44	.44	.41	5.8	3.9	4.4	5.1	.16	4.7
3	4.1	.32	.29	.44	.44	.44	.16	3.9	4.9	5.1	.16	4.7
4	4.1	.36	.29	.44	.44	.40	1.1	4.2	5.1	5.1	.14	4.7
5	4.2	.36	.29	.44	.44	.36	2.0	4.4	5.0	5.1	.12	4.7
6	4.2	.36	.29	.44	.44	.36	.16	4.4	4.9	5.1	.12	4.7
7	4.2	.34	.29	.44	.44	.36	38	4.5	4.9	5.1	.12	4.7
8	4.2	.29	.29	.44	.44	.36	157	4.6	4.9	5.1	.12	4.8
9	4.2	.29	.29	.44	.44	.35	90	4.6	4.9	5.1	.12	4.9
10	4.2	.29	.29	.44	.44	.34	48	4.6	4.9	5.1	.12	4.9
11	4.2	.29	.29	.44	.44	.36	28	4.6	4.9	5.1	.12	4.9
12	1.6	.29	.33	.44	.39	.36	17	4.6	4.9	5.1	.12	4.9
13	.29	.29	.36	.44	.36	.36	13	4.6	4.9	5.1	.12	4.8
14	.32	.29	.36	.44	.36	.36	7.8	4.6	4.9	5.0	.12	4.7
15	.40	.29	.36	.44	.36	4.9	2.9	4.6	4.9	4.9	.12	4.7
16	.44	.29	.36	.44	.35	46	3.5	4.6	4.9	4.9	.12	4.7
17	.44	.29	.36	.44	.36	45	3.9	4.5	4.9	4.9	.25	4.7
18	.44	.29	.36	.44	.36	40	3.9	4.5	4.9	4.9	1.0	4.7
19	.44	.29	.36	.40	.36	37	3.9	4.4	4.9	4.9	1.8	4.7
20	.44	.29	.36	.44	.36	36	3.9	4.4	4.9	4.9	3.3	4.7
21	.33	.29	.36	.44	.36	38	3.9	4.4	4.9	4.9	4.7	4.7
22	.29	.29	.36	.44	.36	37	3.9	4.4	4.9	4.9	4.7	4.7
23	.29	.29	.36	.44	.37	34	3.9	4.4	4.9	4.9	4.7	4.7
24	.29	.29	.36	.44	.39	29	3.9	4.4	4.9	4.9	4.7	4.7
25	.29	.29	.40	.44	.41	24	3.9	4.4	5.1	4.9	4.7	4.7
26	.29	.29	.44	.44	.43	20	3.9	4.4	5.1	4.9	4.7	4.7
27	.29	.29	.44	.44	.44	18	3.9	4.4	5.1	4.9	4.7	4.7
28	.29	.29	.44	.44	.40	16	3.9	4.4	5.1	4.9	4.7	4.7
29	.29	.29	.44	.44	---	16	3.9	4.4	5.1	4.9	4.7	4.7
30	.29	.29	.44	.44	---	15	3.9	4.4	5.1	4.9	4.7	4.7
31	.29	---	.44	.44	---	13	---	4.4	---	3.7	4.7	---
TOTAL	53.84	9.02	10.88	13.60	11.24	474.16	481.02	136.8	147.5	153.4	60.11	142.0
MEAN	1.74	.30	.35	.44	.40	15.3	16.0	4.41	4.92	4.95	1.94	4.73
MAX	4.2	.36	.44	.44	.44	46	157	4.6	5.1	5.1	4.7	4.9
MIN	.29	.29	.29	.40	.35	.34	.16	3.9	4.4	3.7	.12	4.7
AC-FT	107	18	22	27	22	940	954	271	293	304	119	282
CAL YR 2000	TOTAL	837.39	MEAN	2.29	MAX	4.9	MIN	.22	AC-FT	1660		
WTR YR 2001	TOTAL	1693.57	MEAN	4.64	MAX	157	MIN	.12	AC-FT	3360		



## LITTLE COLORADO RIVER BASIN

81

## 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 high-water mark in gage well, Dec. 19, 1978; no flow at times in most years prior to 1960 and in 1974, 1976, 1983, 1999, 2000, 2001.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 1 .....	1550	*1750	*11.78

Minimum daily discharge, no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	93	2.3	2.6	2.5	2.1	.93	e1.1	.22	.00	531	12
2	5.6	27	2.2	2.8	2.4	2.4	.93	.41	.22	.01	180	11
3	4.2	14	2.2	2.5	2.3	2.3	.93	.53	.14	.00	94	e6.7
4	8.3	21	2.6	2.3	2.3	2.0	.47	.50	.08	.00	195	e3.2
5	8.1	30	2.7	2.4	2.3	2.1	.19	.87	.02	.00	279	3.2
6	3.6	34	2.7	2.3	2.3	2.6	.67	.93	.00	9.9	e62	3.3
7	4.3	15	2.7	2.4	2.3	2.7	1.1	.39	.00	7.3	e29	2.3
8	6.4	9.6	2.7	2.6	2.3	2.3	.94	.03	.00	.79	163	2.3
9	6.6	7.6	2.7	2.8	2.3	1.5	.93	.06	.05	18	442	1.9
10	9.1	4.3	2.7	2.7	2.3	2.2	.93	.24	.01	30	81	1.2
11	7.0	3.7	2.7	2.7	2.2	2.6	.59	.20	.00	23	37	1.9
12	5.2	4.2	2.7	3.5	2.2	2.2	.26	.24	.00	15	293	3.3
13	5.0	14	2.7	3.6	2.2	2.2	.38	94	.00	3.4	613	105
14	6.6	7.6	2.7	3.1	2.2	2.2	.75	69	.00	159	467	128
15	8.1	4.7	2.7	3.0	2.2	2.0	.93	e9.8	.00	62	536	22
16	7.3	3.6	2.7	3.0	2.2	1.8	.93	e1.8	.00	10	321	18
17	3.4	3.3	2.5	3.0	2.2	1.3	.93	1.2	.00	42	163	290
18	2.7	3.0	2.3	2.9	2.2	1.4	.48	.79	.00	127	240	e52
19	2.6	3.2	1.7	2.8	2.2	1.6	.09	.91	.00	26	113	e24
20	2.6	3.2	2.1	2.7	2.2	1.8	.10	.91	.00	15	258	e12
21	3.0	2.7	1.7	2.8	1.5	1.9	.14	.85	.00	11	e216	8.0
22	5.3	2.7	2.3	2.7	.85	1.7	.40	.67	.00	5.8	e40	6.1
23	116	2.7	2.6	2.7	1.8	1.3	.87	.80	.00	5.8	22	6.7
24	217	2.7	2.6	2.7	2.0	1.3	.51	2.0	.00	3.0	16	4.8
25	58	2.7	2.7	2.7	2.0	1.3	.25	2.3	.00	2.8	11	3.4
26	12	2.4	3.1	2.7	2.0	1.1	.59	1.8	.00	2.9	9.5	8.8
27	7.9	2.3	3.0	2.7	2.0	.53	210	1.3	.00	2.4	8.0	8.1
28	143	2.6	3.9	2.7	2.0	.12	187	.60	.00	2.1	6.3	5.2
29	120	2.7	4.1	2.7	---	.40	e22	.30	.00	1.8	9.2	4.8
30	41	2.7	4.7	2.7	---	.30	e2.7	.27	.00	1.1	31	5.7
31	98	---	3.9	2.4	---	.74	---	.29	---	.66	18	---
TOTAL	942.9	332.2	84.9	85.2	59.45	51.99	437.92	195.09	0.74	587.76	5484.0	764.9
MEAN	30.4	11.1	2.74	2.75	2.12	1.68	14.6	6.29	.025	19.0	177	25.5
MAX	217	93	4.7	3.6	2.5	2.7	210	94	.22	159	613	290
MIN	2.6	2.3	1.7	2.3	.85	.12	.09	.03	.00	.00	6.3	1.2
AC-FT	1870	659	168	169	118	103	869	387	1.5	1170	10880	1520

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2001, BY WATER YEAR (WY)

	MEAN	39.0	23.9	33.8	41.1	57.7	75.9	55.2	20.8	6.34	71.4	142	84.0
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	.90	1.24	1.12	.91	.88	.003	.000	.000	.53	3.57	.71	
(WY)	1951	2000	2000	2000	2000	1999	1956	1929	1929	1942	1950	1956	

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1905 - 2001

ANNUAL TOTAL	2791.20	9027.05	
ANNUAL MEAN	7.63	24.7	48.8
HIGHEST ANNUAL MEAN			161
LOWEST ANNUAL MEAN			4.36
HIGHEST DAILY MEAN	236	Aug 29	613
LOWEST DAILY MEAN	.00	May 12	.00
ANNUAL SEVEN-DAY MINIMUM	.00	May 24	.00
MAXIMUM PEAK STAGE			22.90
ANNUAL RUNOFF (AC-FT)	5540	17910	35340
10 PERCENT EXCEEDS	11	54	104
50 PERCENT EXCEEDS	1.1	2.6	7.0
90 PERCENT EXCEEDS	.00	.11	1.0

e Estimated

## LITTLE COLORADO RIVER BASIN

## 09396100 PUERCO RIVER NEAR CHAMBERS, AZ

**LOCATION.**--Lat 35° 10'56", long 109° 26'47", in NW1/4NE1/4 sec. 35, T.21 N., R.27 E., Apache County, Hydrologic Unit 15020007, on right bank 0.5 mi upstream from Atchison, Topeka, and Santa Fe Railway Co. bridge, and 1.0 mi southwest of Chambers.

**DRAINAGE AREA.**--2,156 mi<sup>2</sup>, of which 50 mi<sup>2</sup> is noncontributing.

**PERIOD OF RECORD.**--Water years 1971--72 (annual maximums only), Jan. 1973 to current year (daily mean discharge above 500 ft<sup>3</sup>/s only).

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

**GAGE.**--Water-stage recorder. Elevation of gage is 5,720 ft above sea level, from topographic map. Prior to Mar. 7, 1989, water stage recorder at site 0.5 mi downstream at different datum, now used as supplementary gage.

**REMARKS.**--Records poor. Only daily mean discharges above 500 ft<sup>3</sup>/s are published. Small diversions above station for irrigation and livestock. Red Lake, near the headwaters of Black Creek, was built in 1954; the capacity was 9,700 acre-ft, but capacity may have been reduced by silting.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 17,800 ft<sup>3</sup>/s Sept. 30, 1971, gage height, 9.65 ft, site and datum then in use; no flow observed on many days each year.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23 .....	1900	*2,070	*3.26

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	e597	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	512	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	e508	---	---	---	---	---	---	---	---	---	507	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	625
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	e506	---	---	---	---	---	---	---	---	---	---	---
24	e505	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

## LITTLE COLORADO RIVER BASIN

83

## 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 (Corps of Engineers bench mark). 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23 .....	1815	*6,200	*5.74

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	471	---
2	---	---	---	---	---	---	---	---	---	---	e913	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	123	---	---	---	---	---	---	---	---	---	---
5	---	e247	---	---	---	---	---	---	---	---	477	---
6	---	---	---	---	---	---	---	---	---	---	e709	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	e239	---	---	---	---	---	610	---
10	---	---	---	---	---	---	---	---	---	---	e604	---
11	---	---	---	---	---	---	---	---	---	---	e858	---
12	---	---	---	---	---	---	---	---	---	---	e1400	---
13	e339	---	---	---	---	---	---	---	---	---	e1360	e1080
14	---	---	---	---	---	---	---	---	---	32	e1200	e510
15	---	---	---	---	---	---	---	---	---	---	796	---
16	---	---	---	---	---	---	---	---	---	---	e570	---
17	---	---	---	---	---	---	---	---	---	---	---	400
18	---	---	---	---	---	---	---	---	---	---	---	e326
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	e156	---
21	276	---	---	---	---	---	---	---	---	---	e528	---
22	e854	---	---	---	---	---	---	---	---	---	---	---
23	e2020	---	---	---	---	---	---	---	---	---	---	---
24	e1950	---	---	---	---	---	---	---	---	---	---	---
25	e246	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	e501	---	---	---	---	---	391	---	---	---	---	---
29	710	---	---	---	---	---	---	---	---	---	---	---
30	473	---	---	---	---	---	---	---	---	---	---	---
31	e549	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

**LITTLE COLORADO RIVER BASIN**  
**09397300 LITTLE COLORADO RIVER NEAR JOSEPH CITY, AZ--Continued**

**WATER-QUALITY RECORDS**

**PERIOD OF RECORD.**--Oct. 1979 to current year.

**INSTRUMENTATION.**--Automatic pumping sampler since Oct. 1981.

**REMARKS.**--Suspended-sediment discharge computed from sample data and by interpretation of a sample based suspended-sediment and streamflow discharge curve. Record for days when instantaneous discharge over the crest of the dam exceeds 500 ft<sup>3</sup>/s.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	52500	---
2	---	---	---	---	---	---	---	---	---	---	62300	---
3	---	---	---	---	---	---	---	---	---	---	24900	---
4	---	---	---	---	---	---	---	---	---	---	---	42200
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	564000	---
19	---	---	---	---	---	---	---	---	---	---	139000	---
20	---	---	---	---	---	---	---	---	---	---	24800	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	31700	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	51400	---	---
27	---	---	---	---	---	---	---	---	---	34800	---	---
28	---	---	---	---	---	---	---	---	---	20400	---	---
29	---	---	---	---	---	---	---	---	---	14200	---	---
30	---	---	---	---	---	---	---	---	---	22600	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	47700
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	e3260
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	e1000	---	58500
8	---	---	---	---	---	---	---	---	---	96600	---	---
9	---	---	---	---	---	---	---	---	---	14500	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	e1280	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	223000	e10200	---
15	---	---	---	---	---	---	---	---	---	240000	203000	---
16	---	---	---	---	---	---	---	---	---	53100	231000	---
17	---	---	---	---	---	---	---	---	---	e1900	140000	---
18	---	---	---	---	---	---	---	---	---	e2660	61700	---
19	---	---	---	---	---	---	---	---	---	---	---	45700
20	---	---	---	---	---	---	---	---	---	---	---	64100
21	---	---	---	---	---	---	---	---	---	---	---	145000
22	---	---	---	---	---	---	---	---	---	---	---	57700
23	---	---	---	---	---	---	---	---	---	---	---	56800
24	---	---	---	---	---	---	---	---	---	---	---	47600
25	---	---	---	---	---	---	---	---	---	---	---	37100
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated



09397300 LITTLE COLORADO RIVER NEAR JOSEPH CITY, AZ--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991  
DAILY MEAN VALUES

[illegible]

e Estimated

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

[illegible]

## LITTLE COLORADO RIVER BASIN

## 09397300 LITTLE COLORADO RIVER NEAR JOSEPH CITY, AZ--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993  
DAILY MEAN VALUES

[illegible]

e Estimated

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994  
DAILY MEAN VALUES

[illegible]

## LITTLE COLORADO RIVER BASIN

87

## 09397300 LITTLE COLORADO RIVER NEAR JOSEPH CITY, AZ--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	8340	---	---	---	---	---	---	---	---	---	---
5	---	---	---	84900	---	---	---	---	---	---	---	---
6	---	---	241000	48500	---	---	---	---	---	---	---	206
7	---	---	9360	---	---	149000	---	---	---	---	---	1550
8	---	---	---	---	---	28100	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	9940	---	---	---	816000	---	---	---	---	---	---	---
16	205000	---	---	---	167000	---	---	---	---	---	---	---
17	124000	---	---	---	46700	---	---	---	---	---	---	---
18	25300	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	8640	---	---	---	---	---	3850	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	5460
29	---	---	---	---	---	---	---	---	---	---	---	8400
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	e20400	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	e4700
12	---	---	---	---	---	---	---	---	---	---	---	21800
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	e385000
15	---	---	---	---	---	---	---	---	---	---	---	e680000
16	---	---	---	---	---	---	---	---	---	---	---	e73400
17	---	---	---	---	---	---	---	---	---	11000	---	---
18	---	---	---	---	---	---	---	---	---	---	---	32100
19	---	---	---	---	---	---	---	---	---	---	---	e137000
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	e74300	254000
27	---	---	---	---	---	---	---	---	---	---	---	139000
28	---	---	---	---	---	---	---	---	---	---	---	43400
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

## LITTLE COLORADO RIVER BASIN

## 09397300 LITTLE COLORADO RIVER NEAR JOSEPH CITY, AZ--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	9640	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	17700	---
4	---	---	---	e17200	---	---	---	---	---	---	81400	---
5	---	---	---	---	---	---	---	---	---	---	e42700	---
6	---	---	---	e20600	---	---	---	---	---	---	e44700	48000
7	---	---	37500	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	43100	---	---	86600
10	---	---	---	---	---	---	---	---	---	---	6450	---
11	---	---	---	---	---	---	---	---	---	---	e320000	---
12	---	---	---	---	---	---	---	---	---	---	167000	110000
13	---	---	---	---	---	---	---	---	---	---	e32600	177000
14	---	---	---	30000	---	---	---	---	---	---	---	e83800
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	30800	---	20200
23	---	---	---	17300	---	---	---	---	---	---	---	e33000
24	---	---	---	27500	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	71000	---	---	---	---	---	---	---	---
27	---	---	---	e51100	---	---	---	---	---	---	---	---
28	5310	---	---	---	---	---	---	---	---	---	---	---
29	25300	---	---	---	---	---	---	---	---	---	---	---
30	e8900	---	---	---	---	---	---	---	---	10900	68000	---
31	---	---	---	---	---	---	---	---	---	14900	70200	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	804000	---
2	---	---	---	---	---	---	---	---	---	---	e262000	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	893	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	3390	---	---
8	---	---	17100	---	---	---	---	---	---	e44700	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	e28700	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	38400	---	---	---	---	---	---
16	---	---	---	---	---	e105000	---	---	---	---	---	---
17	---	---	---	---	---	e75100	---	---	---	---	---	---
18	---	---	---	---	---	e56200	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	104000	---	---
22	e4970	---	---	---	---	---	---	---	---	e285000	---	---
23	---	---	---	---	---	---	---	---	---	e9990	43000	---
24	---	---	---	---	---	---	---	---	---	e42300	181000	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	16800	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	38300	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated



## LITTLE COLORADO RIVER BASIN

89

## 09397300 LITTLE COLORADO RIVER NEAR JOSEPH CITY, AZ--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e34800	---	---	---	---	---	---	---	---	---	124000
2	---	---	---	---	---	---	---	---	---	---	e10800	20700
3	---	---	14800	---	---	---	---	---	---	---	e24100	5270
4	---	---	---	---	---	---	---	---	---	---	e154000	e1170
5	---	---	---	---	---	---	---	---	---	---	e143000	---
6	---	---	---	---	---	---	---	---	---	---	e60200	---
7	---	---	---	---	---	---	---	---	---	---	e104000	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	9910	---	---
11	---	---	---	---	---	---	---	---	---	10800	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	39200	---	---
15	---	---	---	---	---	---	---	---	---	e28500	97700	e108000
16	---	---	---	---	---	---	---	---	---	---	e358000	---
17	---	---	---	---	---	---	---	---	---	---	e80400	---
18	---	---	---	---	---	---	---	---	---	---	e156000	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	e29300	---
21	---	---	---	---	---	---	---	---	---	---	e29200	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	21800	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	e59700	---	16300
25	---	---	---	---	---	---	---	---	---	e105000	---	---
26	e457000	---	---	---	---	---	---	---	---	e46000	e4220	---
27	e900000	---	---	---	---	---	---	---	---	e16500	e43400	---
28	e123000	---	---	---	---	---	---	---	---	e198000	e477000	---
29	---	---	---	---	---	---	---	---	---	e14000	e314000	---
30	e13600	---	---	---	---	---	---	---	---	91700	e122000	---
31	e436000	---	---	---	---	---	---	---	---	e48200	e33400	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	11500	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	77300	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	37800	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	e78500	---
30	---	---	---	---	---	---	---	---	---	---	e108000	---
31	---	---	---	---	---	---	---	---	---	---	e75300	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

**LITTLE COLORADO RIVER BASIN**  
**09397300 LITTLE COLORADO RIVER NEAR JOSEPH CITY, AZ--Continued**

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	68300	---
2	---	---	---	---	---	---	---	---	---	---	e168000	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	13000	---	---	---	---	---	---	---	---	---	---
5	---	e28200	---	---	---	---	---	---	---	---	49100	---
6	---	---	---	---	---	---	---	---	---	---	e128000	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	e41000	---	---	---	---	---	123000	---
10	---	---	---	---	---	---	---	---	---	---	e133000	---
11	---	---	---	---	---	---	---	---	---	---	e147000	---
12	---	---	---	---	---	---	---	---	---	---	e362000	---
13	e38800	---	---	---	---	---	---	---	---	---	e370000	e376000
14	---	---	---	---	---	---	---	---	---	4850	e326000	108000
15	---	---	---	---	---	---	---	---	---	---	141000	---
16	---	---	---	---	---	---	---	---	---	---	e93600	---
17	---	---	---	---	---	---	---	---	---	---	---	61300
18	---	---	---	---	---	---	---	---	---	---	---	e68000
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	e20300	---
21	51900	---	---	---	---	---	---	---	---	---	e39500	---
22	183000	---	---	---	---	---	---	---	---	---	---	---
23	e1480000	---	---	---	---	---	---	---	---	---	---	---
24	e567000	---	---	---	---	---	---	---	---	---	---	---
25	e34900	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	e77800	---	---	---	---	---	64800	---	---	---	---	---
29	122000	---	---	---	---	---	---	---	---	---	---	---
30	57100	---	---	---	---	---	---	---	---	---	---	---
31	e81700	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

## LITTLE COLORADO RIVER BASIN

91

## 09397500 CHEVELON CREEK BELOW WILDCAT CANYON NEAR WINSLOW, AZ

**LOCATION.**--Lat 34°38'11", long 110°42'49", in SW1/4 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 bench mark.

**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; no flow on 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)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29.....	1300	350	4.52	Mar. 22.....	1530	359	4.50
Nov. 6.....	1045	*557	*5.12	Apr. 10.....	1745	288	4.24

No flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	109	20	.00	6.9	52	48	10	.00	.00	.00	.00
2	.00	129	26	.00	6.5	53	40	7.3	.00	.00	.00	.00
3	.00	157	29	.00	5.9	52	33	4.9	.00	.00	.00	.00
4	.00	149	26	.00	5.8	61	27	3.8	.00	.00	.00	.00
5	.00	290	24	.00	6.1	61	22	2.0	.00	.00	.00	.00
6	.00	483	21	.00	6.9	70	24	.91	.00	.00	.00	.00
7	.00	277	16	.00	46	92	33	.45	.00	.00	.00	.00
8	.00	141	14	.00	114	145	34	.25	.00	.00	.00	.00
9	.00	85	11	.00	97	167	144	.14	.00	.00	.00	.00
10	.00	62	8.6	.00	76	255	251	.07	.00	.00	.00	.00
11	.00	50	7.4	.00	64	226	223	.01	.00	.00	.00	.00
12	.00	42	6.2	.00	52	165	160	.00	.00	.00	.00	.00
13	.00	35	4.5	.00	43	131	147	.00	.00	.00	.00	.00
14	.00	31	3.9	.00	41	161	169	.00	.00	.00	.00	.00
15	.00	33	2.9	.00	34	223	206	.00	.00	.00	.00	.00
16	.00	32	2.3	.00	26	233	171	.00	.00	.00	.00	.00
17	.00	31	1.6	.00	23	195	123	.00	.00	.00	.00	.00
18	.00	28	1.1	.00	23	187	83	.00	.00	.00	.00	.00
19	.00	24	.73	.00	22	179	58	.00	.00	.00	.00	.00
20	.00	19	.48	.00	20	209	43	.00	.00	.00	.00	.00
21	.00	15	.37	.00	40	271	33	.00	.00	.00	.00	.00
22	.00	12	.25	.00	67	319	24	.00	.00	.00	.00	.00
23	.00	10	.17	.00	94	322	19	.00	.00	.00	.00	.00
24	.00	11	.11	.00	102	271	16	.00	.00	.00	.00	.00
25	.00	15	.09	.00	82	214	30	.00	.00	.00	.00	.00
26	.00	18	.07	.00	62	174	44	.00	.00	.00	.00	.00
27	47	18	.04	.00	52	139	36	.00	.00	.00	.00	.00
28	45	17	.02	.00	50	108	30	.00	.00	.00	.00	.00
29	276	15	.00	.00	---	84	22	.00	.00	.00	.00	.00
30	208	17	.00	.00	---	69	15	.00	.00	.00	.00	.00
31	112	---	.00	4.7	---	58	---	.00	---	.00	.00	---
TOTAL	688.00	2355	227.83	4.70	1268.1	4946	2308	29.83	0.00	0.00	0.00	0.00
MEAN	22.2	78.5	7.35	.15	45.3	160	76.9	.96	.000	.000	.000	.000
MAX	276	483	29	4.7	114	322	251	10	.00	.00	.00	.00
MIN	.00	10	.00	.00	5.8	52	15	.00	.00	.00	.00	.00
AC-FT	1360	4670	452	9.3	2520	9810	4580	59	.00	.00	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2001, BY WATER YEAR (WY)

MEAN	2.95	9.99	36.8	75.9	54.5	155	149	9.10	.069	.23	13.6	15.0
MAX	45.9	108	320	523	308	473	658	47.4	1.70	4.45	205	210
(WY)	1959	1960	1966	1952	1957	1960	1952	1955	1964	1951	1970	1970
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1949	1949	1951	1951	1954	1996	1996	1947	1947	1948	1948	1948

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1947 - 2001

ANNUAL TOTAL	4246.66	11827.46	
ANNUAL MEAN	11.6	32.4	43.0
HIGHEST ANNUAL MEAN			132
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	483	Nov 6	6860
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
ANNUAL RUNOFF (AC-FT)	8420	23460	31130
10 PERCENT EXCEEDS	25	130	90
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

## LITTLE COLORADO RIVER BASIN

## 09398300 BLUE RIDGE RESERVOIR NEAR PINE, AZ

**LOCATION.**--Lat 34° 33'19", long 111° 11'00", in NE1/4SE1/4 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.**--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, 17,230 acre-ft Feb. 19, 1993, elevation, 6,727.56 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, 15,220 acre-ft Apr. 16, elevation, 6,720.86 ft; minimum daily contents, 2,880 acre-ft Oct. 20; minimum elevation 6,649.53 ft Oct. 21.

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2930	4660	6190	6260	6130	7190	14360	14970	13870	12520	11150	10130
2	2930	4780	6210	6250	6120	7240	e14510	14950	13810	12480	11110	10090
3	2920	4890	6240	6250	6120	7300	14620	14940	13760	12430	11070	10050
4	2920	5070	6260	6240	6120	7350	14720	14910	13700	12380	11040	10010
5	2920	5390	6280	6230	6120	7430	14830	14890	13650	12330	11000	9970
6	2920	5640	6290	6230	6150	7530	14950	14870	13610	12290	10960	9920
7	2920	5770	6310	6220	6220	7680	15050	14850	13560	12240	10930	9880
8	2910	5840	6320	6220	6290	7850	15140	14820	13510	12200	10910	9840
9	2910	5900	6320	6220	6330	8090	15170	14800	13460	12160	10900	9800
10	2910	5940	6330	6210	6370	8370	15190	14770	13410	12130	10890	9760
11	2910	5980	6340	6210	6400	8580	15160	14750	13360	12100	10880	9720
12	2900	6000	6340	6210	6430	8740	15140	14730	13310	12050	10850	9680
13	2900	6020	6350	6200	6450	8910	15130	14720	13260	12010	10860	9650
14	2900	6040	6350	6200	6470	9100	15170	14700	13210	11960	10840	9610
15	2900	6060	6340	6190	6480	9320	15220	14680	13160	11900	10800	9570
16	2890	6070	6340	6190	6500	9520	15210	14640	13110	11860	10760	9530
17	2890	6080	6340	6190	6510	9730	15180	14590	13060	11810	10720	9490
18	2890	6080	6340	6180	6530	9940	15150	14540	13010	11760	10680	9450
19	2890	6080	6330	6180	6560	10190	15120	14530	12970	11710	10640	9410
20	2880	6090	6330	6170	6610	10530	15090	14500	12920	11660	10600	9370
21	2890	6090	6320	6170	6690	10990	15080	14460	12880	11610	10560	9330
22	2920	6090	6320	6160	6770	11510	15060	14410	12870	11570	10520	9290
23	2980	6100	6310	6150	6870	12030	15050	14360	12860	11520	10480	9250
24	3400	6110	6300	6150	6940	12450	15040	14300	12840	11480	10450	9220
25	3550	6120	6300	6150	6990	12840	15030	14250	12810	11450	10410	9180
26	3600	6120	6300	6140	7040	13190	15030	14200	12760	11400	10360	9140
27	3660	6130	6290	6140	7090	13460	15020	14140	12710	11360	10330	9100
28	4000	6140	6280	6140	7140	13690	15010	14090	12660	11320	10290	9060
29	4260	6150	6280	6140	---	13900	15000	14040	12620	11280	10250	9020
30	4380	6170	6270	6130	---	14070	14990	13980	12570	11240	10210	8980
31	4530	---	6270	6130	---	14210	---	13930	---	11190	10160	---
MAX	4530	6170	6350	6260	7140	14210	15220	14970	13870	12520	11150	10130
MIN	2880	4660	6190	6130	6120	7190	14360	13930	12570	11190	10160	8980
(*)	6665.07	6677.05	6677.76	6676.79	6683.53	6716.98	6719.95	6715.89	6710.29	6704.43	6699.52	6693.58
(**)	+1600	+1600	+100	-140	+1010	+7070	+780	-1060	-1360	-1380	-1030	-1180
CAL YR 2000	MAX	6350	MIN	2880	(**)	+3250						
WTR YR 2001	MAX	15220	MIN	2880	(**)	+6050						

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

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

e Estimated

## LITTLE COLORADO RIVER BASIN

93

## 09400662 ORAIBI WASH NEAR TOLANI LAKE, AZ

**LOCATION.**--Lat 35° 34' 47", long 110° 46' 24", NW1/4SW1/4SE1/4 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, 0.00 ft<sup>3</sup>/s on many days.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 287 ft<sup>3</sup>/s, Aug. 6, gage height 7.70 ft; minimum daily discharge, no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	4.9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	e.35	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.77	e.70	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	e.20	.00	.00	.00	.00	.00	.00	.00	.00	36	.00
6	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	156	.00
7	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	17	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	48	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	88	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	20	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	13	32	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.0	124	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.4	44	.00
14	.00	.00	.00	.00	.00	.00	.00	.01	.00	1.4	27	.00
15	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.04	12	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.5	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.7	3.5	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.0	2.2	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.58	.30	.00
20	.00	.00	.00	.00	.00	.00	.00	1.5	.00	.01	.01	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	2.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	93	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	49	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	11	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00
27	12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	25	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	18	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	32	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	262.77	6.25	0.00	0.00	0.00	0.00	0.00	1.51	0.00	37.17	613.51	0.00
MEAN	8.48	.21	.000	.000	.000	.000	.000	.049	.000	1.20	19.8	.000
MAX	93	4.9	.00	.00	.00	.00	.00	1.5	.00	13	156	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	521	12	.00	.00	.00	.00	.00	3.0	.00	74	1220	.00
CFSM	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2001, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1995	5.27	19.0	1998	.000	1996
1996	.063	.21	2001	.000	2000
1997	.000	.001	1998	.000	1996
1998	.000	.000	1996	.000	1996
1999	.000	1.41	1998	.000	1996
2000	.16	.94	2001	.000	1996
2001	.008	.049	2000	.000	1996
2002	.082	.49	1999	.000	1995
2003	1.99	5.74	1999	.000	1996
2004	12.0	29.4	1997	.000	2001
2005	7.22	22.8	1997	.000	2001

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1995 - 2001

	ANNUAL TOTAL	ANNUAL MEAN	HIGHEST ANNUAL MEAN	LOWEST ANNUAL MEAN	HIGHEST DAILY MEAN	LOWEST DAILY MEAN	ANNUAL SEVEN-DAY MINIMUM	ANNUAL RUNOFF (AC-FT)	ANNUAL RUNOFF (CFSM)	10 PERCENT EXCEEDS	50 PERCENT EXCEEDS	90 PERCENT EXCEEDS
2000	452.83	1.24										
2001	921.21	2.52										
1995			2.48									
1996			5.67									
1997			.50									
1998			276									
1999			.00									
2000			.00									
2001			.00									
2002			1790									
2003			.004									
2004			.24									
2005			.00									
2006			.00									

e Estimated



## LITTLE COLORADO RIVER BASIN

## 09400568 POLACCA WASH NEAR SECOND MESA, AZ

LOCATION.--Lat 35° 39'21", long 110° 33'41", SE 1/4 NE 1/4 SW 1/4 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 reader. Elevation of gage is 5,240 ft above sea level, from topographic map.

REMARKS.--Records poor.

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 on many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 677 ft<sup>3</sup>/s, Oct. 24, gage height 7.36 ft; minimum daily discharge, no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	4.5	.06	.06	e.16	.16	.17	.13	.07	.01	.15	.10
2	.01	1.3	.06	.07	e.17	.15	.16	.11	.07	.01	.01	.09
3	.01	.52	.06	.06	.18	.14	.15	.15	.05	.01	.00	.08
4	.04	.30	.06	.07	.18	.13	.15	.15	.05	.01	.00	.06
5	.02	.21	.07	.07	.18	.13	.15	.16	.07	.01	.00	.03
6	.01	.16	.06	.10	.19	.12	.72	.13	.08	.00	16	.01
7	.01	.13	.06	.08	.16	.15	.20	.12	.08	.01	27	.00
8	.01	.12	.06	.10	.17	.14	.16	.12	.08	.02	3.5	.00
9	.01	.12	.06	.47	.16	.13	.15	.12	.07	.02	.04	.00
10	85	.11	.06	.19	.16	1.9	.18	.11	.06	201	102	.00
11	9.7	.11	.05	.16	.14	3.4	.18	.10	.06	73	95	.00
12	53	.10	.06	e.15	.14	2.0	.18	.10	.05	54	115	.00
13	1.7	.10	.06	e.16	.15	1.2	.17	.33	.04	3.3	96	.00
14	.35	.09	.04	e.15	.26	.32	.16	.47	.07	2.5	57	.00
15	.08	.09	.05	e.13	.17	.20	.16	.12	.08	71	11	.01
16	.06	.09	.04	e.12	.15	.18	.16	.10	.08	45	41	.00
17	.05	.09	.06	e.11	.15	.18	.15	.11	.08	2.3	.50	.00
18	.04	.07	.05	.11	.16	.19	.14	.10	.07	.24	.14	76
19	.03	.07	.05	.09	.14	.19	.13	.19	.05	.10	.08	5.2
20	.02	.07	e.05	e.13	.13	.18	.13	.20	.05	.05	.06	.04
21	.02	.08	.05	e.13	.13	.18	.13	.11	.05	.03	.71	.02
22	47	.08	.06	e.14	.14	.19	.16	.09	.05	.03	152	.01
23	25	.07	.07	e.18	.14	.19	.15	.09	.05	.02	92	.01
24	365	.07	.07	.24	.12	.16	.15	.08	.06	.02	5.2	.01
25	286	.07	e.07	.20	.12	.19	.15	.07	.08	.02	1.1	.01
26	142	.06	e.07	.18	.29	.18	.14	.07	.08	.04	.64	.01
27	6.0	.07	.07	e.18	.16	.17	.17	.07	.06	.02	.49	.01
28	11	.07	.07	e.18	.27	.17	.17	.08	.02	.02	.39	.00
29	12	.06	.07	e.17	---	.17	.14	.07	.01	.01	.33	.00
30	1.7	.06	.07	.17	---	.16	.13	.08	.01	.00	.29	.00
31	5.0	---	.06	.16	---	.16	---	.07	---	.00	.19	---
TOTAL	1050.88	9.04	1.85	4.51	4.67	13.11	5.24	4.00	1.78	452.80	817.82	81.70
MEAN	33.9	.30	.060	.15	.17	.42	.17	.13	.059	14.6	26.4	2.72
MAX	365	4.5	.07	.47	.29	3.4	.72	.47	.08	201	152	76
MIN	.01	.06	.04	.06	.12	.12	.13	.07	.01	.00	.00	.00
AC-FT	2080	18	3.7	8.9	9.3	26	10	7.9	3.5	898	1620	162

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	MEAN	7.85	.31	.19	.24	.28	.28	.23	.15	.068	2.99	12.1	5.77
MAX	33.9	.96	.35	.40	.55	.42	.37	.25	.092	14.6	31.2	21.5	
(WY)	2001	1999	1995	1995	1995	2001	1994	1995	1998	2001	1999	1997	
MIN	.074	.12	.060	.15	.17	.20	.16	.090	.032	.037	.061	.011	
(WY)	1995	1997	2001	2001	2001	1997	1997	2000	2000	1994	1994	2000	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1994 - 2001
ANNUAL TOTAL	1327.15	2447.40	
ANNUAL MEAN	3.63	6.71	2.65
HIGHEST ANNUAL MEAN			6.71
LOWEST ANNUAL MEAN			.096
HIGHEST DAILY MEAN	365 Oct 24	365 Oct 24	365 Oct 24 2000
LOWEST DAILY MEAN	.00 Jul 21	.00 Jul 6	.00 Nov 6 1999
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 21	.00 Sep 7	.00 Jul 21 2000
ANNUAL RUNOFF (AC-FT)	2630	4850	1920
10 PERCENT EXCEEDS	.34	2.4	.40
50 PERCENT EXCEEDS	.08	.11	.15
90 PERCENT EXCEEDS	.01	.01	.03

e Estimated

## LITTLE COLORADO RIVER BASIN

95

## 09400583 JEDDITO WASH NEAR JEDDITO, AZ

**LOCATION.**--Lat 35°34'39", long 110°27'42", NE1/4NW1/4NW1/4 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 current year.

**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, 1,220 ft<sup>3</sup>/s, Aug. 19, 1999, gage height 9.31 ft; minimum daily discharge, no flow for many days.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 572 ft<sup>3</sup>/s, Aug. 13, gage height 5.70 ft, from highwater mark; minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	2.2	.00
4	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.09	.00
5	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	e.10	.00
6	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
7	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
8	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.1	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.5	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e29	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e5.0	e24
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	35	.14	e1.5
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.47	e.00	e.50
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
23	13	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
24	13	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
25	e.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.44	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.14	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.09	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	e.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	26.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.47	44.13	26.00
MEAN	.86	.000	.000	.000	.000	.000	.000	.000	.000	1.14	1.42	.87
MAX	13	.00	.00	.00	.00	.00	.00	.00	.00	35	29	24
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MED	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	53	.00	.00	.00	.00	.00	.00	.00	.00	70	88	52
CFSM	.01	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01	.01

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	MEAN	.49	.000	.000	.000	.000	.000	.000	.000	.000	.70	1.49	.36
MAX	2.81	.000	.000	.000	.000	.000	.000	.000	.000	.000	2.48	6.86	1.73
(WY)	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1999	1999	1994
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1995	1994	1994	1994	1994	1994	1994	1994	1994	1994	1996	1998	1995

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1994 - 2001

ANNUAL TOTAL	72.71	132.37	
ANNUAL MEAN	.20	.36	.26
HIGHEST ANNUAL MEAN			.83
LOWEST ANNUAL MEAN			.002
HIGHEST DAILY MEAN	44	44	75
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Jul 9 1999
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1993
ANNUAL RUNOFF (AC-FT)	144	263	187
ANNUAL RUNOFF (CFSM)	.001	.002	.002
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.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, 2,540 ft<sup>3</sup>/s, Aug. 11, gage height 12.53 ft., minimum daily discharge, 0.07 ft<sup>3</sup>/s, Sept. 11, 2001.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 2,540 ft<sup>3</sup>/s, Aug. 11, gage height 12.53 ft; minimum daily discharge, 0.07 ft<sup>3</sup>/s, Sept 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	3.2	.34	.34	.37	.48	.36	.36	.20	.18	.19	.22
2	.20	.58	.36	.35	.42	.43	.34	.32	.18	.18	1.1	.20
3	.21	.26	.34	.35	.45	.55	.32	.33	.17	.17	22	.20
4	.27	.33	.33	.34	.47	.47	.34	.35	.17	.16	55	.20
5	.25	.30	.36	.34	.48	.43	.35	.39	.18	.16	140	.19
6	.24	.22	.34	.41	.49	.43	.89	.36	.18	.17	13	.16
7	.24	.23	.37	.39	.47	.56	.44	.35	.19	.20	5.4	.16
8	.22	.24	.40	.41	.44	.60	.36	.36	.18	.20	2.2	.17
9	.23	.27	.37	.59	.41	.44	.36	.35	.16	.21	21	.18
10	.26	.28	.37	.52	.43	.59	.40	.32	.16	e193	7.6	.08
11	.23	.44	.35	.46	.42	.79	.44	.31	.15	e30	556	.07
12	.24	.33	.37	.47	.41	.52	.38	.30	.14	e15	204	.15
13	.26	.26	.38	.42	.40	.38	.40	.32	.13	2.4	30	.17
14	.28	.30	.35	.39	.50	.45	.41	.33	.16	.89	16	.18
15	.27	.30	.33	.41	.44	.37	.41	.31	.18	6.8	5.8	.19
16	.28	.28	.32	.47	.42	.40	.42	.30	.17	39	24	.18
17	.30	.26	.33	.47	.44	.39	.41	.30	.16	7.6	4.0	7.4
18	.31	.26	.27	.32	.46	.39	.39	.31	.15	1.5	13	9.9
19	.30	.25	.28	.31	.44	.41	.33	.40	.14	.32	4.0	7.3
20	.31	.30	.30	.37	.43	.42	.32	.48	.14	.25	.65	1.1
21	.33	.33	.35	.38	.43	.42	.31	.30	.14	.20	6.7	.28
22	2.9	.36	.36	.44	.44	.41	.36	.28	.14	.17	.42	.24
23	18	.35	.37	.52	.40	.42	.36	.27	.13	.15	.31	.23
24	91	.33	.38	.54	.38	.43	.38	.27	.16	.15	.24	.22
25	14	.32	.43	.49	.39	.43	.39	.25	.16	.17	.23	.22
26	3.5	.30	.38	.45	.52	.43	.38	.23	.18	.24	.21	.22
27	2.2	.34	.31	.52	.51	.40	.38	.22	.17	.16	.21	.22
28	38	.34	.32	.50	.65	.39	.42	.22	.16	.14	.20	.15
29	14	.33	.33	.44	---	.37	.37	.21	.15	.14	5.4	.12
30	4.4	.34	.34	.44	---	.38	.36	.21	.16	.14	1.3	.14
31	40	---	.33	.37	---	.36	---	.20	---	.26	.25	---
TOTAL	233.44	12.23	10.76	13.22	12.51	13.94	11.78	9.51	4.84	300.31	1140.41	30.44
MEAN	7.53	.41	.35	.43	.45	.45	.39	.31	.16	9.69	36.8	1.01
MAX	91	3.2	.43	.59	.65	.79	.89	.48	.20	193	556	9.9
MIN	.20	.22	.27	.31	.37	.36	.31	.20	.13	.14	.19	.07
AC-FT	463	24	21	26	25	28	23	19	9.6	596	2260	60
CFSM	.02	.00	.00	.00	.00	.00	.00	.00	.00	.02	.08	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2001, BY WATER YEAR (WY)

	MEAN	4.83	.48	.44	.47	.44	.91	.39	.32	.33	4.02	12.1	8.88
MAX	19.2	.62	.57	.67	.58	2.69	.50	.44	.98	13.8	36.8	31.9	
(WY)	1998	1997	1994	1995	1994	1998	1994	1994	1999	1999	2001	1997	
MIN	.25	.30	.30	.35	.33	.37	.27	.21	.16	.17	.29	.18	
(WY)	1996	2000	2000	2000	2000	1995	1997	1997	2001	2000	1994	2000	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1993 - 2001
ANNUAL TOTAL	391.28	1793.39	
ANNUAL MEAN	1.07	4.91	2.97
HIGHEST ANNUAL MEAN			6.16
LOWEST ANNUAL MEAN			.45
HIGHEST DAILY MEAN	91	556	556
LOWEST DAILY MEAN	.09	.07	.07
ANNUAL SEVEN-DAY MINIMUM	.11	.14	.11
ANNUAL RUNOFF (AC-FT)	776	3560	2150
ANNUAL RUNOFF (CFSM)	.002	.010	.006
10 PERCENT EXCEEDS	.43	3.0	.67
50 PERCENT EXCEEDS	.29	.35	.37
90 PERCENT EXCEEDS	.13	.17	.20

e Estimated

## 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; 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 PERIOD.**--Peak discharges greater than base discharge of 1,200 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 11.....	1215	5,000	9.51	Aug. 11.....	0345	*5,470	*9.95
Aug. 5.....	0645	4,320	9.01	Aug. 17.....	0630	1,390	6.44

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e35	e23	.92	e.73	e1.6	2.5	1.1	1.5	.00	.00	.00	.06
2	e9.8	e4.3	1.1	e.73	e1.6	1.9	.94	1.4	.00	.00	.00	.00
3	e1.5	1.4	1.2	e.65	2.5	2.6	1.3	1.6	.00	.00	.00	.00
4	.45	2.8	1.2	e.60	2.4	2.2	2.1	1.8	.00	.00	.00	.00
5	.62	.80	1.1	e.55	2.0	1.7	2.3	1.9	.00	.00	1140	.00
6	.09	.34	1.1	e.64	2.4	1.8	5.6	1.6	.00	.00	83	.00
7	.04	.10	.99	e.75	2.2	3.1	7.7	1.5	.00	14	15	.00
8	.03	.04	1.2	e.81	2.1	3.4	3.5	1.3	.00	16	e13	.00
9	108	.06	1.1	e.75	2.0	2.3	2.3	1.1	.00	127	e73	.00
10	e5.0	.05	1.3	e2.2	1.6	4.2	2.1	.89	.00	129	e12	.00
11	e3.2	.10	1.0	e2.1	1.9	6.6	4.3	.49	.00	891	1510	.00
12	e.60	.11	.87	e1.8	1.6	7.3	3.6	.32	.00	e28	956	.00
13	.15	.09	.58	e1.5	1.6	4.7	2.9	.34	.00	7.0	259	.00
14	.10	.20	.41	e1.1	1.9	3.7	3.1	.70	.00	.82	261	.00
15	.12	.28	.38	e1.0	1.4	3.8	3.7	.50	.00	.06	187	1.9
16	.27	.18	e.46	e.95	2.0	3.5	3.8	.22	.00	e.40	90	4.9
17	.38	.49	e.44	e.84	2.0	3.6	4.7	.09	.00	e.10	438	79
18	.40	.42	e.53	e.89	2.3	3.4	4.6	.05	.00	e.20	178	51
19	.56	e.50	e.53	e1.0	2.0	3.4	4.1	.11	.00	e.00	75	3.3
20	.58	e.60	e.70	e1.1	1.8	3.3	4.2	28	.00	e.00	30	.06
21	.63	e.90	e.73	e1.2	1.9	2.8	4.7	4.5	.00	e.00	22	.02
22	e134	e.90	e.75	e1.3	1.6	3.6	4.7	e.22	.00	.00	134	.01
23	e31	e.92	e.78	e1.4	1.2	2.8	1.7	e.40	.00	.00	e35	.00
24	e15	1.0	e.78	e1.5	1.1	2.5	2.1	e.40	.00	.00	e.83	.00
25	e7.6	e1.1	e.75	1.5	.96	2.1	2.2	.17	.00	.00	.01	.00
26	e10	e1.4	e.88	1.2	2.0	2.0	2.4	.03	.00	.00	.00	.00
27	2.8	1.4	e.88	2.1	2.4	2.1	2.6	.00	.00	.00	.00	.00
28	e23	1.3	e.78	2.0	3.1	2.3	2.6	.00	.00	.00	.00	.00
29	e19	1.4	e.85	1.6	---	1.5	2.2	.00	.00	.00	.00	.00
30	e6.3	1.3	e.80	e1.4	---	1.6	1.9	.00	.00	.00	70	.00
31	e152	---	e.78	e1.4	---	1.3	---	.00	---	.00	9.9	---
TOTAL	568.22	47.48	25.87	37.29	53.16	93.6	95.04	51.13	0.00	1213.58	5591.74	140.25
MEAN	18.3	1.58	.83	1.20	1.90	3.02	3.17	1.65	.000	39.1	180	4.68
MAX	152	23	1.3	2.2	3.1	7.3	7.7	28	.00	891	1510	79
MIN	.03	.04	.38	.55	.96	1.3	.94	.00	.00	.00	.00	.00
AC-FT	1130	94	51	74	105	186	189	101	.00	2410	11090	278

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2001, BY WATER YEAR (WY)

	MEAN	10.7	6.21	3.35	4.74	7.26	3.79	2.41	2.16	.63	13.9	32.2	24.8
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	.24	1.14	.62	1.20	1.90	1.68	1.01	.31	.000	.000	.000	.000	
(WY)	1992	1981	1981	2001	2001	1997	1979	1984	1984	1979	1978	1979	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1977 - 2001
ANNUAL TOTAL	1638.66	7917.36	
ANNUAL MEAN	4.48	21.7	9.37
HIGHEST ANNUAL MEAN			21.7
LOWEST ANNUAL MEAN			2.14
HIGHEST DAILY MEAN	436	1510	3500
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	3250	15700	6780
10 PERCENT EXCEEDS	5.1	13	6.4
50 PERCENT EXCEEDS	.79	1.0	2.0
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

## LITTLE COLORADO RIVER BASIN

## 09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ

**LOCATION.**--Lat 35°55'35", long 111°34'00", in NW¼ 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 good except for estimated daily discharges, which are poor. 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.

**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 maximum (\*)

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 22 .....	1900	*3,420	*7.89

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	510	.55	.00	.35	84	233	126	e.00	.00	.00	e6.6
2	9.9	568	.58	.00	.12	65	200	78	e.00	.00	.00	e.31
3	3.9	286	.58	.00	.08	54	173	53	e.00	.00	.00	e.02
4	1.8	156	.39	.00	.38	44	144	38	e.00	.00	329	e.00
5	1.7	102	.48	.00	.98	36	126	26	e.00	.00	408	e.00
6	.81	232	.46	.00	.96	31	135	15	.00	.00	326	.00
7	.35	300	.51	.00	.69	30	123	4.8	.00	.00	388	.00
8	.18	211	.62	.00	.58	49	102	1.4	.00	.00	1110	.00
9	3.0	327	.73	.00	.50	41	92	.27	.00	.00	249	.00
10	41	284	.77	.73	.49	107	76	.08	.00	.95	411	.00
11	5.8	212	.79	1.7	.54	139	73	.07	.00	83	1210	.00
12	2.4	138	.67	1.7	.65	77	69	.05	.00	297	1420	.00
13	.72	96	.61	4.4	.57	198	255	.09	.00	74	1140	.00
14	.31	74	.53	1.6	.60	303	400	14	.00	38	1230	4.5
15	.13	e54	.53	1.0	18	230	298	.33	.00	22	1680	296
16	21	e36	.47	1.0	16	181	245	.09	.00	16	1320	339
17	72	e26	.31	.78	27	156	223	.07	.00	11	707	213
18	37	e19	.10	.60	24	183	312	.06	.00	7.0	450	72
19	22	e14	.06	.39	17	303	470	.05	.00	5.3	202	53
20	9.7	e11	.03	.09	9.4	275	416	.03	.00	7.5	95	321
21	12	2.8	.00	.06	15	245	345	4.1	.00	3.6	78	133
22	739	1.4	.00	.03	17	225	249	2.0	.00	.71	96	79
23	275	1.7	.00	.40	11	247	208	e.33	16	.26	142	43
24	657	1.4	.00	1.1	6.8	457	154	e.02	5.3	.10	159	26
25	1200	1.0	.00	1.0	14	614	114	e.00	.07	.07	55	12
26	e1720	.56	.00	.58	31	658	88	e.00	.03	.05	26	4.4
27	e992	.22	.00	.76	28	571	67	e.00	.00	.46	17	2.0
28	e1790	.17	.00	1.0	85	492	56	e.00	.00	.13	14	e.84
29	e215	.22	.00	3.3	---	430	40	e.00	.00	.07	18	e.24
30	374	.51	.00	1.8	---	371	28	e.00	.00	.04	25	e.07
31	883	---	.00	.82	---	303	---	e.00	---	.01	e26	---
TOTAL	9171.70	3665.98	9.77	24.84	326.69	7199	5514	363.84	21.40	567.25	13331.00	1605.98
MEAN	296	122	.32	.80	11.7	232	184	11.7	.71	18.3	430	53.5
MAX	1790	568	.79	4.4	85	658	470	126	16	297	1680	339
MIN	.13	.17	.00	.00	.08	30	28	.00	.00	.00	.00	.00
AC-FT	18190	7270	19	49	648	14280	10940	722	42	1130	26440	3190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2001, BY WATER YEAR (WY)

	MEAN	208	74.2	98.5	229	256	471	570	131	16.0	108	364	222
MAX	4192	753	1689	4692	2723	1873	3970	2882	595	616	2264	832	
(WY)	1973	1988	1979	1993	1993	1978	1973	1973	1955	1954	1955	1970	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
(WY)	1951	1956	1957	1964	1964	1951	1971	1950	1950	1960	1960	1979	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1948 - 2001
ANNUAL TOTAL	17885.87	41801.45	
ANNUAL MEAN	48.9	115	229
HIGHEST ANNUAL MEAN			1127
LOWEST ANNUAL MEAN			14.1
HIGHEST DAILY MEAN	1790	Oct 28	18400
LOWEST DAILY MEAN	.00	Jan 8	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 21	.00
ANNUAL RUNOFF (AC-FT)	35480	82910	167200
10 PERCENT EXCEEDS	111	8.1	625
50 PERCENT EXCEEDS	.54	3.0	2.8
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated



## LITTLE COLORADO RIVER BASIN

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## 09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Oct. 1956 to Sept. 1970, Oct. 1989 to current year.

INSTRUMENTATION.--Automatic pumping sampler since Oct. 1990.

REMARKS.--Suspended-sediment total and sand discharge computed from sample data and by interpretation of a sample based suspended-sediment and streamflow discharge curve. Record for days when instantaneous discharge over the crest of the dam exceeds 20 ft<sup>3</sup>/s from Oct. 1989 to current year.SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	97300	---	---	---	---	---	---	---	---	---	e7000
2	29000	60700	---	---	---	---	---	---	---	---	2260	e5810
3	17100	4000	---	---	---	---	---	---	---	---	6330	38700
4	9720	---	---	---	---	---	---	---	---	---	---	8910
5	7960	---	---	---	---	---	---	---	---	---	---	5740
6	5020	---	---	---	---	---	---	---	---	---	---	---
7	2680	---	---	---	---	---	---	---	---	---	---	e8660
8	---	---	---	---	---	---	---	---	---	---	---	5790
9	---	---	---	---	---	---	---	---	---	---	---	5350
10	---	---	---	---	---	---	---	---	---	---	---	4680
11	---	---	---	---	---	---	---	---	---	---	---	3880
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	61700
15	---	---	---	---	---	---	---	---	---	---	---	49600
16	---	---	---	---	---	---	---	---	---	---	---	129000
17	---	---	---	---	---	---	---	---	---	7000	---	319000
18	---	---	---	---	---	---	---	---	---	3320	---	93900
19	---	---	---	---	---	---	---	---	---	---	---	31600
20	---	---	---	---	---	---	---	---	---	---	---	13500
21	---	---	---	---	---	---	---	---	---	---	---	125000
22	---	---	---	---	---	---	---	---	---	---	---	43800
23	---	---	---	---	---	---	---	---	---	---	---	16300
24	---	---	---	---	---	---	---	---	---	---	---	7390
25	---	---	---	---	---	---	---	---	---	---	---	9460
26	---	---	---	---	---	---	---	---	---	---	---	6430
27	---	---	---	---	---	---	---	---	---	---	e2300	3680
28	---	---	---	---	---	---	---	---	---	---	---	110000
29	---	---	---	---	---	---	---	---	---	---	---	83300
30	---	---	---	---	---	---	---	---	---	---	e11200	38300
31	---	---	---	---	---	---	---	---	---	---	e13400	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11500	12800	---	---	12100	390	1430	---	---	---	3030	6890
2	5320	31100	---	---	7160	291	1350	---	---	---	4170	63100
3	3680	15100	---	---	5330	211	1260	---	---	---	6570	88600
4	3350	10600	---	---	3720	142	10200	---	---	---	13500	81400
5	1790	6630	---	---	2660	86	14400	---	---	---	78000	22900
6	---	4300	---	---	1690	---	e2470	---	---	---	280000	67100
7	---	---	---	---	---	---	e837	---	---	---	69100	86200
8	---	---	---	5830	---	---	e494	---	---	---	46500	48800
9	---	---	---	21200	---	---	e231	---	---	---	25900	49500
10	---	---	7960	13600	---	---	e97	---	---	---	11400	38000
11	---	---	7840	5390	---	---	e65	---	---	---	6110	65500
12	---	---	4390	3960	---	---	51	---	---	---	92200	187000
13	---	---	2560	2880	e332	61	4990	---	---	---	174000	93400
14	---	---	1980	2600	e424	2950	6020	---	---	---	112000	195000
15	---	---	---	4530	324	9510	4570	---	---	---	20200	e194000
16	---	---	---	1700	245	26100	2760	---	---	---	7120	e166000
17	---	---	---	17900	---	38600	1440	---	---	---	3360	e236000
18	---	---	---	6400	---	33500	969	---	---	---	27000	e122000
19	---	---	---	2280	---	36500	652	---	---	---	7050	e172000
20	---	---	---	1780	---	40400	379	---	---	---	---	e32400
21	---	---	---	1780	---	24900	206	---	---	---	---	e14000
22	---	---	---	2770	---	21200	117	---	---	---	---	e8480
23	---	3200	---	3070	---	22900	94	---	---	---	---	2520
24	---	---	---	---	---	21600	67	---	---	---	---	---
25	---	---	---	2700	---	42600	48	---	---	e19100	---	47400
26	---	11000	---	5000	---	26700	---	---	---	6680	---	21100
27	---	30900	---	17100	206	14600	---	---	---	2570	12400	7960
28	---	---	---	40000	427	8070	---	---	---	1840	21400	2620
29	---	---	---	121000	---	5160	---	---	---	e3400	---	917
30	---	---	---	30600	---	3210	---	---	---	e20900	---	---
31	---	---	---	16900	---	1760	---	---	---	3760	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

**LITTLE COLORADO RIVER BASIN**  
**09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ--Continued**

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	22600	13400	---	---	---	---
2	---	---	---	---	---	10100	14000	10600	---	---	e53600	688
3	228000	---	---	---	---	9920	11500	9080	---	---	228000	---
4	93300	---	---	---	---	3720	11000	9960	---	---	43100	---
5	26500	---	---	---	---	1190	12500	11500	---	---	10000	293000
6	6070	---	---	---	---	---	13400	9270	---	---	6390	185000
7	29000	---	---	---	---	---	16400	6230	---	---	3130	60700
8	160000	---	---	---	---	---	21300	5610	---	---	1410	14700
9	e56300	---	4680	---	---	228	20300	4210	---	---	---	2810
10	e12000	---	4140	---	---	---	12600	2920	---	---	---	4580
11	3830	---	24500	---	---	---	9080	2180	---	---	---	333000
12	---	---	19500	---	---	19	8130	1530	---	1540	---	28700
13	4450	---	8600	---	---	132	24100	1050	---	6600	---	6970
14	---	---	---	---	---	305	62500	687	---	3030	---	---
15	---	---	---	---	129	425	73400	376	---	1030	---	---
16	---	---	---	---	84	314	40700	261	---	---	---	---
17	---	---	---	4240	77	8800	25800	206	---	---	---	---
18	---	---	---	---	53	57700	15100	157	---	---	---	---
19	---	---	---	---	---	42000	8510	101	---	---	---	---
20	---	---	5970	---	---	44300	4870	64	---	---	---	---
21	---	---	8240	---	e90	62400	3030	49	---	---	3160	---
22	---	---	5190	---	138	55000	3000	28	---	---	---	---
23	---	---	10500	---	125	36700	30800	---	---	71000	---	---
24	---	---	4580	---	120	31700	57900	---	---	284000	---	---
25	49900	---	3350	---	242	32400	77100	---	---	56000	---	---
26	25700	---	---	---	161	33700	87000	---	---	60100	---	---
27	14100	---	---	---	91	46900	72600	---	---	57400	15100	---
28	8570	---	---	---	60	55800	38600	---	---	70000	5820	---
29	5420	---	---	---	---	78700	20800	---	---	24700	1960	---
30	3410	---	---	---	---	49600	16400	---	---	13400	1170	---
31	---	---	---	---	---	35200	---	---	---	4300	---	---
MAX	---	---	---	---	---	---	87000	---	---	---	---	---
MIN	---	---	---	---	---	---	3000	---	---	---	---	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	52400	---	---	---	---	---	---	---	---	144000	519000
2	---	317000	---	---	---	---	---	---	---	---	96000	e409000
3	---	109000	---	---	---	---	---	---	---	36900	202000	189000
4	---	41000	---	---	---	---	---	---	---	---	74500	67200
5	---	17400	---	---	---	---	---	---	---	---	13600	29500
6	---	7870	---	---	---	---	---	---	---	---	156000	15100
7	---	4170	---	---	---	---	---	---	---	---	239000	4840
8	---	2620	---	---	---	---	---	---	---	10400	160000	2000
9	---	1660	---	---	---	---	---	---	---	17200	69400	950
10	---	---	---	---	---	---	---	---	---	47400	13400	560
11	---	---	---	---	---	---	---	---	---	36700	3330	176000
12	---	---	---	---	---	---	---	---	---	3820	1470	51300
13	---	---	---	---	---	---	---	---	---	---	815	7940
14	---	---	---	---	---	---	---	---	---	e125000	539	18100
15	---	3060	---	---	---	---	---	---	---	e334000	69600	34100
16	---	3200	---	---	---	---	---	---	---	e132000	75100	119000
17	---	2050	---	---	---	---	---	---	---	e47200	220000	131000
18	---	1500	---	---	---	---	---	---	---	e37500	222000	49800
19	---	---	---	---	---	---	927	---	---	e31300	e187000	22100
20	---	---	---	---	---	---	7910	---	---	7130	269000	10500
21	---	---	---	---	---	---	6180	---	---	4660	78600	4590
22	---	---	---	---	---	---	6110	---	---	---	68700	2580
23	333	---	---	---	---	---	6250	---	---	---	46600	23400
24	---	---	---	---	---	---	4430	---	---	---	15000	36500
25	---	---	---	---	---	---	2890	---	---	32000	6290	99800
26	14300	---	---	---	---	---	1680	---	---	324000	5690	54100
27	54000	---	---	---	---	---	846	---	---	184000	3770	27000
28	264000	---	---	---	---	---	490	---	---	510000	53700	14500
29	338000	---	---	---	---	---	305	---	---	160000	180000	7250
30	71800	---	---	---	---	---	207	---	---	207000	566000	4500
31	48500	---	---	---	---	---	---	---	---	97800	364000	---
MAX	---	---	---	---	---	---	---	---	---	---	566000	519000
MIN	---	---	---	---	---	---	---	---	---	---	539	560

e Estimated

## LITTLE COLORADO RIVER BASIN

101

## 09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2940	---	---	---	---	---	---	---	---	---	---	55000
2	1580	---	---	---	---	---	---	---	---	---	---	e56400
3	---	---	---	---	---	---	---	---	---	---	---	e16400
4	---	---	---	---	---	---	---	---	---	---	---	e6470
5	---	---	---	---	---	---	---	---	---	---	---	e3120
6	---	---	---	---	---	---	---	---	---	---	---	e945
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	32500
9	---	---	---	---	---	---	---	---	---	---	---	4490
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	56	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	124000	---	2200	---
19	---	---	---	---	---	---	---	---	18100	---	3230	---
20	---	---	---	---	---	---	---	---	---	---	1630	---
21	---	---	---	---	---	---	---	---	---	---	4770	---
22	---	---	---	---	---	---	---	---	---	---	5050	---
23	---	---	---	---	---	---	---	---	---	---	1290	---
24	---	---	---	---	---	---	---	---	---	---	4960	---
25	---	---	---	---	---	---	---	---	---	---	6900	---
26	---	---	---	---	---	---	---	---	---	---	58500	---
27	---	---	---	---	---	---	---	---	---	---	15700	---
28	---	---	---	---	---	---	---	---	---	---	26600	---
29	---	---	---	---	---	---	---	---	---	---	11900	---
30	---	---	---	---	---	---	---	---	---	---	12000	5600
31	---	---	---	---	---	---	---	---	---	---	79900	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED, SIEVE DIAM. GREATER THAN .062 MM (TONS/DAY)  
WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	3690	---	---	---	---	---	---	---	---	---	e65
2	552	1060	---	---	---	---	---	---	---	---	57	e40
3	200	40	---	---	---	---	---	---	---	---	129	551
4	97	---	---	---	---	---	---	---	---	---	---	89
5	80	---	---	---	---	---	---	---	---	---	---	57
6	50	---	---	---	---	---	---	---	---	---	---	---
7	27	---	---	---	---	---	---	---	---	---	---	e86
8	---	---	---	---	---	---	---	---	---	---	32	---
9	---	---	---	---	---	---	---	---	---	---	---	24
10	---	---	---	---	---	---	---	---	---	---	---	10
11	---	---	---	---	---	---	---	---	---	---	---	4.2
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	3390
15	---	---	---	---	---	---	---	---	---	---	---	2090
16	---	---	---	---	---	---	---	---	---	---	---	7990
17	---	---	---	---	---	---	---	---	---	89	---	24100
18	---	---	---	---	---	---	---	---	---	33	---	3400
19	---	---	---	---	---	---	---	---	---	---	---	337
20	---	---	---	---	---	---	---	---	---	---	---	32
21	---	---	---	---	---	---	---	---	---	---	---	4560
22	---	---	---	---	---	---	---	---	---	---	---	536
23	---	---	---	---	---	---	---	---	---	---	---	23
24	---	---	---	---	---	---	---	---	---	---	---	7.4
25	---	---	---	---	---	---	---	---	---	---	---	9.5
26	---	---	---	---	---	---	---	---	---	---	---	6.4
27	---	---	---	---	---	---	---	---	---	---	e92	3.7
28	---	---	---	---	---	---	---	---	---	---	---	5920
29	---	---	---	---	---	---	---	---	---	---	---	2090
30	---	---	---	---	---	---	---	---	---	---	e85	345
31	---	---	---	---	---	---	---	---	---	---	e117	---

e Estimated

**LITTLE COLORADO RIVER BASIN**  
**09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ--Continued**

SEDIMENT DISCHARGE, SUSPENDED, SIEVE DIAM. GREATER THAN .062 MM (TONS/DAY)  
 WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	128	---	---	131	.38	14	---	---	---	3.0	60
2	29	290	---	---	37	.25	13	---	---	---	4.2	1230
3	14	67	---	---	13	.21	13	---	---	---	48	1960
4	4.4	31	---	---	4.2	.16	289	---	---	---	230	1260
5	1.8	7.8	---	---	2.7	.11	1080	---	---	---	2780	209
6	---	4.3	---	---	1.7	---	e55	---	---	---	15100	832
7	---	---	---	---	---	---	e9.0	---	---	---	1730	2200
8	---	---	---	58	---	---	e3.8	---	---	---	749	838
9	---	---	---	334	---	---	e1.1	---	---	---	295	495
10	---	---	78	159	---	---	e.08	---	---	---	107	380
11	---	---	41	30	---	---	e.08	---	---	---	34	1700
12	---	---	5.8	18	---	---	.05	---	---	---	3180	8500
13	---	---	2.6	4.7	e.32	.08	112	---	---	---	5550	e6000
14	---	---	2.0	2.6	e.44	71	166	---	---	---	2720	10500
15	---	---	---	4.5	.32	322	96	---	---	---	236	e9720
16	---	---	---	1.7	.25	1350	52	---	---	---	67	e6670
17	---	---	---	389	---	2390	16	---	---	---	17	e3020
18	---	---	---	33	---	1750	9.7	---	---	---	517	e1220
19	---	---	---	3.1	---	2190	6.1	---	---	---	43	e574
20	---	---	---	1.8	---	2480	2.1	---	---	---	---	e299
21	---	---	---	1.8	---	1520	.84	---	---	---	---	e65
22	---	---	---	2.8	---	1270	.12	---	---	---	---	e9.7
23	---	9.3	---	3.1	---	1370	.08	---	---	---	---	2.5
24	---	---	---	1.7	---	1300	.07	---	---	---	---	---
25	---	---	---	2.7	---	2560	.05	---	e196	---	---	1080
26	---	185	---	38	---	1440	---	---	---	39	---	242
27	---	406	---	269	.21	569	---	---	---	3.3	416	75
28	---	---	---	2990	.43	243	---	---	---	1.8	394	13
29	---	---	---	9310	---	110	---	---	---	e9.5	---	1.2
30	---	---	---	747	---	60	---	---	---	e75	---	---
31	---	---	---	330	---	20	---	---	---	6.8	---	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED, SIEVE DIAM. GREATER THAN .062 MM (TONS/DAY)  
 WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	3250	1050	---	---	---	---
2	---	---	---	---	---	10	1670	692	---	---	536	.66
3	11700	---	---	---	---	9.9	1100	422	---	---	5510	---
4	2420	---	---	---	---	3.7	943	456	---	---	572	---
5	300	---	---	---	---	1.1	1010	726	---	---	59	17100
6	9.8	---	---	---	---	---	1180	565	---	---	15	6600
7	1070	---	---	---	---	---	1260	312	---	---	1.9	1490
8	5680	---	---	---	---	---	1980	276	---	---	.71	187
9	e603	---	4.7	---	---	.23	2010	169	---	---	---	28
10	e18	---	4.1	---	---	---	1140	92	---	---	---	46
11	3.8	---	300	---	---	---	660	63	---	---	---	28100
12	---	---	77	---	---	---	620	32	---	12	---	930
13	4.5	---	11	---	---	.41	3000	19	---	54	---	122
14	---	---	---	---	---	3.5	10400	7.7	---	16	---	---
15	---	---	---	---	.17	3.8	12900	3.8	---	3.2	---	---
16	---	---	---	---	.12	1.6	6130	2.6	---	---	---	---
17	---	---	---	4.2	.08	5.8	3130	2.0	---	---	---	---
18	---	---	---	---	.05	7760	1480	1.5	---	---	---	---
19	---	---	---	---	---	4520	613	.57	---	---	---	---
20	---	---	9.9	---	---	4590	285	.31	---	---	---	---
21	---	---	8.2	---	.10	8060	124	.19	---	---	16	---
22	---	---	5.2	---	.14	8360	93	.07	---	---	---	---
23	---	---	57	---	.13	4870	4040	---	---	3650	---	---
24	---	---	6.2	---	.12	3840	8720	---	---	15300	---	---
25	854	---	3.4	---	.24	3480	13700	---	---	1270	---	---
26	281	---	---	---	.16	3710	16300	---	---	1020	---	---
27	60	---	---	---	.09	6100	12200	---	---	1280	233	---
28	10	---	---	---	.06	7600	5230	---	---	1840	55	---
29	5.4	---	---	---	---	12500	2670	---	---	282	10	---
30	3.4	---	---	---	---	5730	1670	---	---	134	2.3	---
31	---	---	---	---	---	5010	---	---	---	34	---	---

e Estimated

## LITTLE COLORADO RIVER BASIN

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## 09402000 LITTLE COLORADO RIVER NEAR CAMERON, AZ--Continued

SEDIMENT DISCHARGE, SUSPENDED, SIEVE DIAM. GREATER THAN .062 MM (TONS/DAY)  
WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	1810	---	---	---	---	---	---	---	---	4960	64000
2	---	23500	---	---	---	---	---	---	---	1280	1540	e45200
3	---	3040	---	---	---	---	---	---	---	---	16700	18900
4	---	821	---	---	---	---	---	---	---	---	4100	4990
5	---	194	---	---	---	---	---	---	---	---	202	984
6	---	73	---	---	---	---	---	---	---	---	4670	310
7	---	22	---	---	---	---	---	---	---	---	8810	54
8	---	5.9	---	---	---	---	---	---	---	246	6670	18
9	---	1.9	---	---	---	---	---	---	---	1370	1470	2.5
10	---	---	---	---	---	---	---	---	---	981	219	1.1
11	---	---	---	---	---	---	---	---	---	539	19	17500
12	---	---	---	---	---	---	---	---	---	12	7.0	2340
13	---	---	---	---	---	---	---	---	---	---	2.4	97
14	---	---	---	---	---	---	---	---	---	e2910	.64	592
15	---	15	---	---	---	---	---	---	---	e13800	9150	1610
16	---	15	---	---	---	---	---	---	---	e4180	7560	5520
17	---	4.8	---	---	---	---	---	---	---	e608	18500	6600
18	---	1.7	---	---	---	---	---	---	---	e514	18200	1650
19	---	---	---	---	---	---	9.3	---	---	e350	e10100	449
20	---	---	---	---	---	---	79	---	---	36	15200	115
21	---	---	---	---	---	---	62	---	---	5.9	2410	43
22	---	---	---	---	---	---	61	---	---	---	1810	14
23	1.2	---	---	---	---	---	63	---	---	---	941	1330
24	---	---	---	---	---	---	44	---	---	---	170	3180
25	---	---	---	---	---	---	28	---	---	800	58	7810
26	315	---	---	---	---	---	11	---	---	11800	30	2850
27	1330	---	---	---	---	---	2.7	---	---	5970	56	842
28	13100	---	---	---	---	---	.62	---	---	54300	2050	290
29	23100	---	---	---	---	---	.30	---	---	7750	17000	73
30	2780	---	---	---	---	---	.21	---	---	9730	78200	17
31	1020	---	---	---	---	---	---	---	---	2530	47100	---

e Estimated

SEDIMENT DISCHARGE, SUSPENDED, SIEVE DIAM. GREATER THAN .062 MM (TONS/DAY)  
WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	---	---	---	---	---	---	---	---	---	---	1260
2	1.5	---	---	---	---	---	---	---	---	---	---	e1200
3	---	---	---	---	---	---	---	---	---	---	---	e183
4	---	---	---	---	---	---	---	---	---	---	---	e58
5	---	---	---	---	---	---	---	---	---	---	---	e12
6	---	---	---	---	---	---	---	---	---	---	---	e1.5
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	1610
9	---	---	---	---	---	---	---	---	---	---	---	51
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	.06	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	9850	---	34	---
19	---	---	---	---	---	---	---	---	459	---	33	---
20	---	---	---	---	---	---	---	---	---	---	7.7	---
21	---	---	---	---	---	---	---	---	---	---	33	---
22	---	---	---	---	---	---	---	---	---	---	48	---
23	---	---	---	---	---	---	---	---	---	---	6.3	---
24	---	---	---	---	---	---	---	---	---	---	41	---
25	---	---	---	---	---	---	---	---	---	---	248	---
26	---	---	---	---	---	---	---	---	---	---	3130	---
27	---	---	---	---	---	---	---	---	---	---	470	---
28	---	---	---	---	---	---	---	---	---	---	742	---
29	---	---	---	---	---	---	---	---	---	---	119	---
30	---	---	---	---	---	---	---	---	---	---	244	85
31	---	---	---	---	---	---	---	---	---	---	2960	---

e Estimated



## COTTONWOOD CREEK BASIN

## 09402450 COTTONWOOD SPRING ABOVE CONFLUENCE WITH COTTONWOOD CREEK, NEAR GRAND CANYON, AZ

LOCATION.--Lat 36° 01'25", long 111° 59'15", in sec. 32, T.31 N., R.4 E. (unsurveyed), Hydrologic Unit 15010002, on the right bank 8 mi northeast of Grand Canyon Village, AZ.

DRAINAGE AREA.--0.54 mi<sup>2</sup>.

PERIOD OF RECORD.--Sept. 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,920 ft above sea level, from topographic map.

REMARKS.--Records poor. Daily discharges are not calculated for periods of no gage-height record and when instantaneous discharge exceeds 0.03 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	.010	.009	.012	.010	.009	.005	.001	.000	.000	.000	.000
2	---	.009	.008	.011	.010	.009	.005	.001	.000	.000	.000	.000
3	---	.009	.009	.011	.010	.009	.005	.001	.000	.000	.000	.000
4	---	.009	.009	.011	.010	.008	.004	.001	.000	.000	.000	.000
5	---	.009	.009	.011	.010	.008	.004	.002	.000	.000	.000	.000
6	---	.009	.009	.012	.010	.009	.008	.002	.000	.000	.000	.000
7	---	.009	.009	.011	.010	.008	.007	.001	.000	.000	.000	.000
8	.017	.009	.009	.011	.010	.009	.006	.001	.000	.000	.000	.000
9	.016	.009	.009	.011	.010	.009	.006	.001	.000	.000	.000	.000
10	.014	.010	.009	.013	.011	.028	.006	.000	.000	.000	.011	.000
11	.012	.012	.011	.013	.011	.005	.006	.000	.000	.000	---	.000
12	.011	.012	.011	.020	.011	.005	.006	.001	.000	.000	---	.000
13	.010	.011	.011	.017	.011	.006	.005	.001	.000	.000	---	.000
14	.009	.011	.011	.012	.011	.009	.005	.000	.000	.000	---	.001
15	.009	.011	.010	.012	.011	.009	.005	.000	.000	.000	---	.001
16	.007	.010	.012	.011	.011	.008	.005	.000	.000	.000	---	.000
17	.006	.010	.012	.011	.011	.008	.004	.000	.000	.000	---	.000
18	.006	.010	.011	.010	.011	.008	.004	.000	.000	.000	---	.000
19	.005	.011	.010	.010	.011	.008	.003	.000	.000	.000	---	.000
20	.005	.010	.010	.010	.011	.008	.004	.000	.000	.000	---	.000
21	.005	.009	.012	.009	.011	.008	.007	.000	.000	.000	---	.000
22	.006	.008	.012	.009	.012	.008	.009	.000	.000	.000	---	.001
23	.009	.009	.011	.009	.012	.017	.005	.000	.000	.000	---	.001
24	.014	.009	.010	.009	.012	.018	.005	.000	.000	.000	---	.001
25	.011	.009	.011	.009	.012	.019	.004	.000	.000	.000	---	.001
26	.010	.009	.011	.008	.011	.016	.004	.000	.000	.000	---	.001
27	.017	.009	.010	.008	.009	.010	.004	.000	.000	.000	---	.001
28	.011	.009	.011	.009	.009	.009	.005	.000	.000	.000	---	.001
29	.010	.009	.012	.009	---	.008	.005	.000	.000	.000	---	.000
30	.010	.010	.012	.009	---	.006	.003	.000	.000	.000	.000	.000
31	.010	---	.012	.009	---	.005	---	.000	---	.000	.000	---
TOTAL	---	0.290	0.322	0.337	0.299	0.304	0.154	0.013	0.000	0.000	---	0.009
MEAN	---	.010	.010	.011	.011	.010	.005	.000	.000	.000	---	.000
MAX	---	.012	.012	.020	.012	.028	.009	.002	.000	.000	---	.001
MIN	---	.008	.008	.008	.009	.005	.003	.000	.000	.000	---	.000
AC-FT	---	.6	.6	.7	.6	.6	.3	.03	.00	.00	---	.02

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**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.

### WATER-DISCHARGE RECORDS

**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 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8800	11700	14400	13200	15300	12400	10500	11100	12000	8890	14600	14400
2	10100	14600	14800	13400	12600	11700	8810	11100	11400	8930	14600	9750
3	10600	14800	13500	14500	12800	11600	11200	11000	11100	13500	14500	7610
4	10600	14600	13500	14500	11900	10900	11500	10900	8560	14600	14500	7410
5	10600	13700	14700	14500	11500	10500	11400	10900	11000	10100	14800	8250
6	10500	13500	14800	14600	12400	11900	11400	10900	11200	14400	10400	8400
7	10500	14600	14700	13200	12400	11500	11400	8530	11200	14400	14800	8350
8	10000	14500	14300	13700	12500	11700	11400	13100	11200	14600	15600	8340
9	10000	14500	14600	14800	12500	11600	8760	13300	11200	10100	15200	8320
10	10500	14600	13300	14800	12500	11600	11100	11100	10400	14500	15000	7470
11	10600	14600	13400	15000	11900	11000	11400	10900	8490	14500	15400	8230
12	10700	13800	14600	14800	11500	10800	11300	10900	10900	14700	15700	8370
13	10700	13700	14500	14700	12400	11500	11300	10800	11300	14700	11500	8400
14	10600	14400	14400	13300	12400	11700	11500	8580	11200	14700	15400	8460
15	10000	14400	14300	13600	12600	11900	11600	9210	11200	14600	15600	8490
16	9770	14300	14300	14900	14800	11800	8950	9450	11300	10200	15800	8660
17	10900	14500	13400	14700	12600	11500	11200	9280	10500	14400	15200	7940
18	10600	14400	13300	14600	12000	11000	11400	9280	8640	14600	15000	8540
19	10700	13800	14400	14700	11600	10700	11600	10700	11000	14500	14700	8530
20	10700	13200	14400	15200	12500	15300	11700	10800	11300	14500	10000	8550
21	10700	14700	14400	13100	12400	14700	11800	8530	11200	14600	14300	8740
22	10400	14500	14400	12800	12300	12200	11600	10400	11300	14500	14400	8600
23	11600	14500	14400	15100	12300	11600	8940	10700	11300	10300	14500	8450
24	11700	13200	13200	14700	12300	11500	11100	10700	11300	14400	14500	7560
25	11900	14400	13400	14500	11900	11200	11300	10800	8770	14600	14500	8320
26	12100	13800	13300	14500	10800	10800	11300	10900	11000	14600	14400	8400
27	11800	13300	14200	14900	12300	10700	11400	10800	11600	14700	9880	8430
28	12900	14500	14100	13300	12500	10600	11300	8560	11300	14700	14200	8390
29	12300	14500	14200	12600	---	10500	11300	10600	8810	14700	14400	8450
30	10600	14500	14200	15200	---	10500	8750	11300	8900	10300	14400	8390
31	11600	---	13900	14800	---	11300	---	11300	---	14500	14400	---
TOTAL	335070	424100	437300	442200	347500	358200	328210	326420	320570	417320	442180	256200
MEAN	10810	14140	14110	14260	12410	11550	10940	10530	10690	13460	14260	8540
MAX	12900	14800	14800	15200	15300	15300	11800	13300	12000	14700	15800	14400
MIN	8800	11700	13200	12600	10800	10500	8750	8530	8490	8890	9880	7410
AC-FT	664600	841200	867400	877100	689300	710500	651000	647500	635900	827800	877100	508200
CAL YR 2000	TOTAL 4570540		MEAN 12490	MAX 32300		MIN 8600		AC-FT 9066000				
WTR YR 2001	TOTAL 4435270		MEAN 12150	MAX 15800		AC-FT 8797000						

## COLORADO RIVER MAIN STEM

## 09402500 COLORADO RIVER AT GRAND CANYON, AZ--Continued

## WATER-QUALITY RECORDS

**PERIOD OF RECORD**--Oct. 1925 to Nov. 1942, Sept. 1943 to Dec. 1987, Aug. 1990 to Apr. 1993, Apr. 1998 to current year.

**PERIOD OF DAILY RECORD**--

**WATER TEMPERATURE**: Oct. 1940 to Oct. 1942, Sept. 1943 to Sept. 1976, Apr. 1983 to Dec. 1987, Aug. 1990 to Apr. 1993, Apr. 1998 to current year.

**SPECIFIC CONDUCTANCE**: Oct. 1964 to Mar. 1974, Apr. 1983 to Dec. 1987, Aug. 1990 to Apr. 1993, Apr. 1998 to current year.

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

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

**SUSPENDED-SEDIMENT DISCHARGE**: Oct. 1925 to Nov. 1942, Sept. 1943 to Sept. 1972, June 1983 to Dec. 1983, Sept. 1985 to Feb. 1986.

**TURBIDITY**: Feb. 1998 to Sept. 2000.

**INSTRUMENTATION**--Water-temperature recorder Nov. 1952 to Sept. 1976, Apr. 1983 to Dec. 1987, Aug. 1990 to Apr. 1993, Apr. 1998 to current year. Specific conductance recorder Oct. 1964 to Mar. 1974, Apr. 1983 to Dec. 1987, Aug. 1990 to Apr. 1993, Apr. 1998 to current year.

**REMARKS**--Temperature and specific conductance records are good. Unpublished chemical analyses for period Oct. 1930 to Sept. 1940, daily specific conductance measurements Oct. 1937 to Nov. 1942, Sept. 1943 to Sept. 1964, and daily water temperature Oct. 1936 to Sept. 1940, available from the district office in Tucson, AZ.

**EXTREMES FOR PERIOD OF RECORD**--

**WATER TEMPERATURE** (Apr. 1983 to Dec. 1987, Aug. 1990 to Apr. 1993, Apr. 1998 to Sept. 1998): Maximum recorded, 16.0°C on Aug. 26, 1984; minimum recorded, 5.7°C on Dec. 24, 25, 1990.

**SPECIFIC CONDUCTANCE** (Apr. 1983 to Dec. 1987, Aug. 1990 to Apr. 1993, Apr. 1998 to Sept. 1998): Maximum recorded, 1,440 microsiemens on Mar. 20, 1986; minimum recorded, 631 microsiemens Dec. 22, 1986.

**pH**: Maximum recorded 8.6 units, Nov. 5, 1990; minimum recorded, 7.7 units Nov. 5, 1990.

**DISSOLVED OXYGEN**: Maximum recorded, 11.4 mg/l, Jan. 23, 1993; minimum recorded, 9.8 mg/l, Nov. 27-30, 1991, May 26, 1992, Mar. 21 and 23, 1993.

**TURBIDITY**: Minimum daily 1.1 NTU on many days.

**EXTREMES FOR CURRENT YEAR**--

**WATER TEMPERATURE**: Maximum recorded, 15.2°C July 2-3; minimum recorded, 8.0°C Feb. 1 and 10.

**SPECIFIC CONDUCTANCE**: Maximum recorded, 1,180 microsiemens, Aug. 8; minimum recorded, 738 microsiemens Jan. 30.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	13.7	13.0	13.2	10.8	10.2	10.5	10.6	10.2	10.4	9.8	9.5	9.7
2	13.7	13.2	13.4	10.7	10.3	10.4	10.5	10.2	10.4	9.7	9.3	9.5
3	13.4	12.9	13.2	10.4	10.2	10.3	10.6	10.1	10.3	9.7	9.3	9.5
4	13.3	12.8	13.1	10.5	10.1	10.3	10.5	10.0	10.2	9.6	9.2	9.4
5	13.1	12.5	12.8	10.8	10.4	10.6	10.5	10.0	10.2	9.6	9.2	9.4
6	13.0	12.4	12.7	10.6	10.5	10.5	10.6	10.1	10.3	9.7	9.4	9.5
7	12.9	12.2	12.5	10.5	9.9	10.1	10.7	10.3	10.5	9.7	9.2	9.4
8	12.9	12.3	12.5	10.0	9.6	9.8	10.8	10.3	10.5	9.7	9.2	9.4
9	12.9	12.4	12.6	10.1	9.3	9.6	10.8	10.5	10.7	9.6	9.4	9.5
10	12.8	12.4	12.6	10.1	9.9	10.0	10.8	10.6	10.7	10.0	9.5	9.7
11	12.6	12.1	12.3	10.1	9.8	10.0	10.7	10.2	10.4	9.9	9.7	9.8
12	12.4	11.6	11.9	10.0	9.7	9.8	10.5	10.3	10.5	9.8	9.6	9.8
13	12.0	11.2	11.6	9.8	9.4	9.6	10.3	9.8	10.1	9.7	9.4	9.5
14	11.6	10.9	11.2	9.7	9.3	9.5	10.3	9.8	10.0	9.6	9.2	9.4
15	11.7	11.0	11.3	9.8	9.4	9.6	10.2	9.7	10.0	9.4	9.1	9.2
16	11.9	11.2	11.5	10.1	9.5	9.7	10.3	9.9	10.1	9.4	9.0	9.1
17	11.8	11.2	11.5	9.9	9.4	9.6	10.2	9.7	10.0	9.3	9.0	9.1
18	11.7	11.1	11.4	9.7	9.2	9.5	9.8	8.9	9.2	9.2	8.7	8.9
19	11.7	11.3	11.5	9.7	9.2	9.4	9.3	8.9	9.1	9.0	8.6	8.8
20	11.9	11.3	11.6	9.8	9.3	9.5	9.5	8.9	9.1	9.1	8.7	8.9
21	11.9	11.6	11.7	9.8	9.5	9.6	9.6	9.1	9.3	9.2	8.7	8.9
22	11.8	11.6	11.7	10.0	9.7	9.8	9.8	9.3	9.5	9.3	8.8	9.0
23	12.2	11.6	11.8	10.4	9.8	10.0	9.9	9.5	9.6	9.5	9.1	9.2
24	11.8	11.3	11.5	10.5	9.9	10.1	10.0	9.4	9.7	9.5	9.3	9.4
25	11.7	11.4	11.6	10.6	10.1	10.3	9.9	9.7	9.8	9.3	8.9	9.1
26	11.9	11.5	11.7	10.5	10.1	10.3	10.0	9.5	9.7	9.2	8.9	9.0
27	11.9	11.1	11.6	10.4	10.0	10.2	9.9	9.4	9.6	9.1	8.8	8.9
28	11.5	11.0	11.1	10.4	9.9	10.1	9.9	9.5	9.7	9.0	8.7	8.8
29	11.3	10.8	11.0	10.5	10.0	10.2	9.9	9.4	9.7	9.1	8.6	8.8
30	11.1	10.9	10.9	10.7	10.3	10.4	9.9	9.5	9.7	9.1	8.7	8.8
31	10.9	10.5	10.7	---	---	---	10.0	9.5	9.7	8.7	8.4	8.6
MONTH	13.7	10.5	11.9	10.8	9.2	10.0	10.8	8.9	10.0	10.0	8.4	9.2

**COLORADO RIVER MAIN STEM**

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**09402500 COLORADO RIVER AT GRAND CANYON , AZ--Continued**

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	8.6	8.0	8.3	9.7	9.3	9.4	11.8	11.2	11.4	13.2	12.6	12.9
2	8.7	8.2	8.4	9.7	9.2	9.4	12.2	11.5	11.7	13.0	12.5	12.8
3	9.0	8.3	8.5	9.9	9.3	9.5	12.2	11.7	11.9	12.5	11.4	11.7
4	9.2	8.6	8.8	10.0	9.5	9.7	11.7	11.3	11.5	11.8	10.9	11.2
5	9.4	8.8	9.0	10.0	9.8	9.9	11.6	11.0	11.2	11.6	10.5	11.0
6	9.6	9.0	9.2	10.0	9.7	9.8	11.0	10.6	10.8	12.1	11.3	11.6
7	9.5	9.2	9.3	10.2	9.7	9.9	10.9	10.3	10.5	13.1	11.8	12.3
8	9.3	8.7	8.9	10.4	9.6	9.9	10.6	9.9	10.2	13.1	12.6	12.9
9	8.8	8.2	8.5	10.4	10.0	10.1	10.6	9.9	10.2	12.9	12.2	12.5
10	8.7	8.0	8.4	10.3	9.9	10.1	10.6	10.0	10.2	13.1	11.9	12.4
11	8.8	8.1	8.4	9.9	9.3	9.5	10.2	9.7	9.9	13.0	12.0	12.6
12	9.1	8.4	8.6	9.9	9.3	9.6	10.2	9.7	9.9	13.0	12.4	12.6
13	9.1	8.7	8.9	10.1	9.4	9.7	10.9	9.8	10.3	12.8	12.5	12.6
14	8.9	8.5	8.7	10.5	9.7	10.0	11.6	10.5	10.9	13.5	12.6	12.9
15	9.2	8.5	8.8	10.5	9.6	10.0	11.8	10.9	11.3	13.5	12.9	13.3
16	9.1	8.6	8.8	10.4	9.8	10.1	12.3	11.3	11.7	13.6	12.9	13.3
17	9.2	8.7	8.9	10.4	9.6	10.0	12.3	11.8	12.1	13.9	13.0	13.4
18	9.5	8.9	9.1	10.6	9.9	10.2	12.4	12.0	12.2	13.8	13.3	13.6
19	9.7	9.1	9.3	10.9	10.1	10.4	12.3	11.9	12.1	13.6	13.1	13.3
20	9.8	9.2	9.5	10.8	10.3	10.6	12.2	11.5	11.7	13.3	12.5	12.9
21	9.9	9.5	9.7	10.7	10.4	10.5	11.5	10.8	11.2	13.6	12.7	13.1
22	9.9	9.4	9.6	11.2	10.4	10.7	11.3	10.1	10.7	13.6	12.7	13.2
23	9.8	9.5	9.6	11.4	10.7	11.0	11.6	10.7	11.1	13.6	13.1	13.4
24	9.5	8.8	9.1	11.4	10.8	11.1	12.1	11.1	11.5	13.6	13.0	13.3
25	9.5	8.9	9.1	11.4	11.0	11.2	12.4	11.8	12.0	13.6	12.8	13.2
26	9.4	9.1	9.2	11.6	10.9	11.2	12.4	11.9	12.1	13.7	13.1	13.4
27	9.7	9.2	9.4	11.5	11.0	11.2	12.3	11.9	12.1	13.7	13.2	13.4
28	9.7	9.3	9.4	11.5	10.8	11.0	12.4	11.7	12.0	14.0	13.1	13.5
29	---	---	---	11.5	11.2	11.3	12.5	12.0	12.2	14.0	13.4	13.8
30	---	---	---	11.5	10.8	11.0	13.2	12.1	12.5	13.9	13.5	13.7
31	---	---	---	11.6	11.0	11.3	---	---	---	13.9	13.2	13.5
MONTH	9.9	8.0	9.0	11.6	9.2	10.3	13.2	9.7	11.3	14.0	10.5	12.9
JUNE				JULY			AUGUST			SEPTEMBER		
1	13.8	13.1	13.5	14.8	14.1	14.5	13.9	12.9	13.2	12.6	12.1	12.4
2	13.7	13.1	13.4	15.2	14.0	14.5	13.7	13.0	13.3	13.1	12.0	12.4
3	13.6	12.5	13.1	15.2	14.0	14.3	13.1	12.8	12.9	13.3	12.7	13.0
4	14.0	12.9	13.4	14.1	13.3	13.7	12.8	12.3	12.6	14.2	13.2	13.6
5	14.0	13.3	13.6	14.2	13.2	13.6	13.0	12.3	12.6	14.5	13.7	14.1
6	13.7	13.4	13.6	---	---	---	14.6	12.9	13.4	14.6	13.9	14.3
7	13.6	12.9	13.3	---	---	---	14.6	13.4	13.9	14.5	13.5	13.9
8	14.0	13.2	13.5	---	---	---	14.8	12.6	13.3	14.0	13.2	13.6
9	14.0	13.4	13.7	---	---	---	14.0	12.9	13.4	13.8	12.9	13.2
10	14.3	13.3	13.8	13.5	12.7	13.0	13.4	12.8	13.1	13.3	12.5	12.9
11	14.6	13.6	14.0	12.7	12.0	12.4	13.7	13.0	13.3	13.5	12.6	13.0
12	14.6	13.9	14.3	12.8	12.2	12.5	13.8	13.2	13.6	13.9	12.9	13.3
13	14.2	13.3	13.8	13.2	12.4	12.8	14.5	13.2	14.1	13.8	13.3	13.6
14	13.3	12.5	12.9	12.8	12.2	12.5	14.4	13.0	13.7	14.1	13.4	13.7
15	13.1	12.5	12.8	12.7	12.1	12.3	13.5	12.5	13.0	14.1	13.3	13.7
16	13.6	12.4	12.9	13.7	12.5	13.0	13.6	13.0	13.4	14.1	13.5	13.7
17	14.0	12.9	13.4	13.6	12.7	13.2	13.5	12.6	13.0	13.9	13.7	13.8
18	14.6	13.5	14.0	13.5	13.0	13.2	13.1	12.7	12.9	13.8	13.2	13.4
19	14.6	14.0	14.3	13.2	12.7	12.9	13.3	12.6	12.9	13.3	12.6	12.8
20	14.3	13.9	14.1	13.3	12.6	12.9	13.2	12.5	12.9	13.0	12.7	12.9
21	14.1	13.5	13.8	13.4	12.8	13.1	13.1	12.0	12.5	13.3	12.6	13.0
22	14.0	13.4	13.7	13.3	12.9	13.1	12.8	11.9	12.2	13.1	12.7	12.9
23	14.0	13.3	13.7	13.7	12.7	13.1	12.6	12.0	12.3	13.2	12.7	12.9
24	14.0	13.3	13.6	13.6	12.6	13.1	12.7	12.2	12.5	13.3	12.6	12.9
25	13.9	13.4	13.6	13.5	12.2	12.7	12.7	12.2	12.5	13.3	12.7	12.9
26	14.1	13.5	13.8	12.8	12.0	12.3	12.6	12.2	12.4	13.1	12.6	12.9
27	14.1	13.7	13.9	12.6	11.6	12.2	13.4	12.2	12.6	13.1	12.5	12.7
28	14.1	13.5	13.8	13.1	12.5	12.7	13.4	12.3	12.8	12.9	12.4	12.7
29	14.5	13.3	13.8	13.3	12.6	12.9	13.1	12.1	12.6	12.9	12.4	12.6
30	14.5	13.9	14.2	13.9	12.9	13.4	12.8	11.8	12.3	12.9	12.4	12.6
31	---	---	---	14.0	13.2	13.6	12.7	12.4	12.6	---	---	---
MONTH	14.6	12.4	13.6	---	---	---	14.8	11.8	13.0	14.6	12.0	13.2

**COLORADO RIVER MAIN STEM**  
**09402500 COLORADO RIVER AT GRAND CANYON , AZ--Continued**

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	854	840	848	901	787	819	792	767	777	779	755	768
2	900	822	852	813	792	802	788	765	774	791	768	777
3	833	793	815	819	787	799	790	766	778	788	761	771
4	830	794	806	807	780	790	797	772	782	785	758	768
5	834	796	811	798	781	787	790	761	773	782	758	767
6	829	796	808	795	770	782	782	756	766	782	758	767
7	834	795	810	799	771	787	779	756	766	785	758	774
8	834	796	815	805	775	789	787	761	774	783	763	770
9	838	806	819	800	777	788	790	767	777	780	756	764
10	832	794	812	803	772	785	793	769	783	779	756	764
11	828	789	805	794	772	782	802	777	787	779	753	762
12	828	793	807	781	769	774	795	767	779	777	753	759
13	853	793	821	796	768	781	799	768	784	769	741	753
14	846	804	820	794	764	777	796	776	785	766	741	755
15	837	797	816	791	767	776	801	778	788	783	747	770
16	815	796	805	789	763	773	799	771	784	814	768	787
17	821	788	801	785	763	771	794	771	783	800	767	778
18	832	792	813	783	763	771	827	789	809	782	750	762
19	831	792	812	785	763	773	807	787	799	771	751	761
20	824	793	803	792	768	778	816	787	798	775	752	759
21	827	793	805	788	765	773	804	787	796	773	752	765
22	820	787	802	792	767	776	804	783	792	776	758	765
23	1070	767	844	787	763	772	801	778	789	771	743	752
24	853	762	796	791	764	780	801	778	789	772	746	759
25	980	826	866	788	753	769	799	777	787	783	759	766
26	1020	826	892	776	753	764	798	776	786	780	750	761
27	837	795	818	784	760	773	796	769	782	772	750	761
28	929	794	821	790	769	776	782	753	768	800	763	781
29	816	747	779	794	770	780	776	753	766	788	762	774
30	1120	773	941	796	769	779	781	761	769	778	738	754
31	888	807	853	---	---	---	780	755	766	777	739	764
MONTH	1120	747	823	901	753	781	827	753	782	814	738	766
FEBRUARY			MARCH			APRIL			MAY			
1	819	776	800	859	831	843	915	873	889	933	873	903
2	834	797	819	871	839	854	918	905	914	915	875	893
3	819	783	802	863	830	843	907	862	888	907	881	893
4	816	783	800	862	833	844	878	859	868	930	892	906
5	816	792	804	859	836	845	904	878	888	912	882	894
6	810	784	795	859	827	840	910	870	886	928	881	905
7	809	782	791	850	827	839	907	865	880	917	887	902
8	803	779	787	866	836	848	939	874	904	929	846	894
9	843	779	805	858	832	843	958	901	936	873	844	857
10	859	823	841	871	831	845	949	895	929	899	856	879
11	867	824	849	854	830	837	938	867	917	914	883	892
12	858	831	845	887	854	876	929	863	891	917	883	893
13	840	809	826	871	842	853	955	910	929	918	887	896
14	838	797	816	903	855	879	971	908	928	924	890	906
15	819	789	799	910	856	882	969	900	928	932	890	917
16	819	779	792	901	865	885	928	897	912	919	889	901
17	824	787	810	902	869	885	956	897	930	920	895	903
18	835	813	825	870	856	862	907	871	889	930	900	912
19	827	807	815	925	856	893	895	868	881	908	874	891
20	825	797	807	917	827	864	903	880	889	910	883	892
21	823	799	807	876	834	855	904	878	893	936	901	917
22	824	801	808	853	834	846	922	895	904	926	873	903
23	828	802	813	861	847	853	938	903	926	913	876	887
24	825	800	811	866	849	858	928	884	913	912	874	889
25	824	802	814	899	855	873	951	884	914	914	876	891
26	845	813	830	884	848	864	930	893	910	924	877	893
27	852	827	841	868	856	862	931	882	907	917	874	889
28	844	824	835	872	858	865	903	872	884	918	874	897
29	---	---	---	879	865	872	897	872	880	925	879	900
30	---	---	---	888	872	881	919	879	898	902	873	885
31	---	---	---	898	878	890	---	---	---	892	866	877
MONTH	867	776	814	925	827	861	971	859	904	936	844	895



**COLORADO RIVER MAIN STEM**

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**09402500 COLORADO RIVER AT GRAND CANYON , AZ--Continued**

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	906	869	884	908	903	906	855	822	839	842	817	826
2	892	865	872	907	902	905	857	807	831	872	824	849
3	896	867	875	904	842	874	863	826	843	912	872	888
4	911	869	892	865	836	846	848	820	834	920	876	894
5	933	879	905	878	837	861	932	820	863	913	864	886
6	898	876	884	---	---	---	979	838	866	903	863	876
7	928	882	901	---	---	---	979	834	870	907	860	877
8	904	860	881	---	---	---	1180	781	870	903	858	873
9	879	853	862	---	---	---	861	816	832	902	858	873
10	903	861	879	878	833	856	863	765	824	908	862	881
11	922	874	900	864	815	836	967	765	877	904	848	879
12	925	867	899	855	823	843	908	821	852	896	848	867
13	905	867	882	1000	829	877	912	831	867	909	856	877
14	902	875	884	850	818	834	910	812	845	955	848	879
15	899	860	879	847	824	834	856	820	838	899	852	870
16	927	860	887	860	823	843	853	824	836	1020	854	883
17	914	860	880	860	822	844	827	809	818	1070	879	944
18	888	857	871	837	822	827	842	822	834	961	846	886
19	920	862	888	854	824	836	846	807	829	885	846	860
20	896	862	873	865	815	835	874	822	850	889	855	867
21	901	868	879	853	826	834	874	816	841	1020	854	902
22	907	866	879	850	826	838	847	822	829	908	860	876
23	901	858	874	884	826	860	860	813	833	897	854	873
24	887	853	866	884	833	856	848	813	830	904	854	877
25	901	858	878	856	833	841	863	816	837	911	862	884
26	912	876	895	859	835	844	839	817	827	893	852	869
27	882	858	868	856	833	842	873	825	853	889	846	862
28	895	859	873	854	824	836	873	805	836	887	843	857
29	908	849	879	858	834	842	834	805	819	886	843	858
30	909	903	906	871	838	854	836	813	820	889	843	858
31	---	---	---	872	820	843	840	815	824	---	---	---
MONTH	933	849	882	---	---	---	1180	765	841	1070	817	875

## PUMP HOUSE WASH SPRING BASIN

## 09403013 PUMP HOUSE WASH SPRING NEAR GRAND CANYON, AZ

**LOCATION.**--Lat 36°04'43", long 112°07'31", in sec.13, T.31 N., R.2 E. (unsurveyed), Coconino County, Hydrologic Unit 15010002, on right bank at Indian Garden, 100 ft northeast of pump station and 2 mi north of Grand Canyon Village in Grand Canyon National Park.

**DRAINAGE AREA.**--Less than 0.05 mi<sup>2</sup>.

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

**GAGE.**--Water-stage recorder. Elevation of gage is 3,800 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.09	.09	.11	.11	.10	.11	.10	.09	.11	.11	.11
2	.09	.09	.09	.11	.11	.10	.11	.10	.09	.11	.11	.11
3	.09	.09	.10	.11	.11	.10	.11	.10	.09	.11	.11	.11
4	.09	.09	.10	.11	.11	.10	.11	.10	.09	.11	.11	.11
5	.10	.09	.10	.11	.11	.09	.09	.10	.09	.11	.11	.11
6	.10	.09	.10	.11	.11	.09	.09	.10	.09	.11	.11	.11
7	.10	.09	.10	.11	.11	.09	.09	.10	.09	.11	.11	.11
8	.09	.09	.10	.11	.11	.09	.09	.10	.09	.11	.10	.11
9	.09	.09	.10	.11	.11	.09	.09	.10	.09	.11	.10	.11
10	.09	.09	.10	.11	.11	.09	.09	.10	.09	.11	.10	.11
11	.09	.09	.10	.11	.11	.09	.09	.10	.09	.11	.10	.11
12	.09	.09	.10	.11	.11	.09	.09	.10	.09	.11	.10	.11
13	.09	.09	.10	.11	.11	.09	.09	.10	.09	.11	.10	.11
14	.09	.09	.10	.11	.11	.09	.10	.10	.09	.11	.10	.11
15	.09	.09	.10	.11	.11	.09	.10	.09	.09	.10	.10	.11
16	.09	.09	.10	.11	.11	.09	.10	.09	.09	.10	.10	.11
17	.09	.09	.10	.11	.11	.09	.10	.09	.09	.10	.10	.11
18	.09	.09	.10	.11	.11	.09	.10	.09	.09	.10	.10	.11
19	.09	.09	.11	.11	.10	.09	.10	.09	.09	.10	.10	.11
20	.09	.09	.11	.11	.10	.09	.11	.09	.11	.10	.10	.11
21	.09	.09	.11	.11	.10	.09	.10	.09	.11	.09	.10	.11
22	.09	.09	.11	.11	.10	.10	.10	.09	.11	.09	.10	.11
23	.09	.09	.11	.11	.10	.10	.09	.09	.11	.09	.10	.11
24	.09	.09	.11	.11	.10	.10	.09	.09	.11	.09	.10	.11
25	.09	.09	.11	.11	.10	.10	.11	.09	.11	.09	.11	.11
26	.09	.09	.11	.11	.10	.10	.10	.09	.11	.09	.11	.11
27	.09	.09	.11	.11	.10	.11	.10	.09	.11	.10	.11	.11
28	.09	.09	.11	.11	.10	.11	.10	.09	.11	.11	.11	.11
29	.09	.09	.11	.11	---	.11	.10	.09	.11	.11	.11	.10
30	.09	.09	.11	.11	---	.11	.10	.09	.11	.11	.11	.10
31	.09	---	.11	.11	---	.11	---	.09	---	.11	.11	---
TOTAL	2.83	2.70	3.21	3.41	2.98	2.98	2.95	2.93	2.92	3.22	3.24	3.28
MEAN	.091	.090	.10	.11	.11	.096	.098	.095	.097	.10	.10	.11
MAX	.10	.09	.11	.11	.11	.11	.11	.10	.11	.11	.11	.11
MIN	.09	.09	.09	.11	.10	.09	.09	.09	.09	.09	.10	.10
AC-FT	5.6	5.4	6.4	6.8	5.9	5.9	5.9	5.8	5.8	6.4	6.4	6.5

CAL YR 2000 TOTAL 35.26 MEAN .096 MAX .11 MIN .08 AC-FT 70  
WTR YR 2001 TOTAL 36.65 MEAN .10 MAX .11 MIN .09 AC-FT 73

## HERMIT CREEK BASIN

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## 09403043 HERMIT CREEK ABOVE TONTO TRAIL NEAR GRAND CANYON, AZ

**LOCATION.**--Lat 36°04'51", long 112°12'47", in sec. 7, T.31 N., R.2 E. (unsurveyed), Hydrologic Unit 15010002, on the right bank approximately 1/4 mi upstream of Tonto Trail crossing, and 5 mi northwest of Grand Canyon Village in Grand Canyon National Park.

**DRAINAGE AREA.**--10.50 mi<sup>2</sup>.

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

**GAGE.**--Water-stage recorder. Elevation of gage is 2,920 ft above sea level, from topographic map.

**REMARKS.**--Records poor. Daily discharges are not calculated when instantaneous discharge exceeds 1.5 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	.76	.71	.71	.71	.80	.80	.80	.76	.80	.76	.71
2	.63	.76	.71	.71	.71	.80	.80	.80	.76	.80	.76	.71
3	.63	.76	.71	.71	.71	.81	.80	.80	.76	.80	.78	.71
4	.65	.76	.71	.71	.71	.79	.80	.80	.76	---	.80	.71
5	.66	.74	.71	.71	.71	.79	.80	.80	.76	.86	.79	.71
6	.67	.71	.71	.71	.71	.80	.80	.80	.76	.84	.76	.71
7	.67	.71	.71	.71	.71	.80	.80	.80	.76	.82	.76	.71
8	.67	.71	.71	.71	.71	.79	.80	.80	.76	.81	.81	.71
9	.67	.71	.71	.72	.71	.78	.80	.80	.74	.81	.82	.71
10	.67	.71	.71	.71	.71	.88	.82	.80	.71	.80	.83	.71
11	.67	.71	.71	.73	.71	.91	.82	.76	.71	.81	.80	.71
12	.67	.71	.72	.80	.71	.85	.80	.76	.71	.82	.80	.74
13	.67	.71	.71	.76	.72	.82	.80	.76	.71	.80	---	.76
14	.67	.71	.71	.76	.72	.80	.80	.74	.71	.80	.82	.75
15	.67	.71	.71	.76	.71	.80	.80	.71	.71	.80	.78	.74
16	.67	.71	.71	.76	.71	.80	.80	.71	.71	.80	.76	.75
17	.66	.71	.71	.75	.71	.80	.80	.71	.71	.80	.74	.75
18	.63	.71	.71	.71	.71	.80	.80	.72	.71	.80	.72	.78
19	.64	.71	.71	.71	.71	.80	.80	.76	.71	.80	.72	.80
20	.67	.71	.71	.71	.71	.80	.80	.75	.71	.80	.76	.80
21	.69	.71	.71	.71	.71	.80	.80	.74	.71	.80	.74	.77
22	.73	.71	.71	.71	.71	.80	.80	.71	.71	.80	.73	.78
23	.71	.71	.71	.71	.71	.80	.80	.71	.74	.80	.72	.80
24	.71	.71	.71	.71	.71	.78	.80	.72	.76	.80	.73	.80
25	.71	.71	.71	.71	.71	.76	.80	.71	.76	.80	.73	.80
26	.71	.71	.71	.71	.73	.76	.80	.71	.76	---	.72	.76
27	.93	.71	.71	.73	.79	.76	.82	.74	.76	.82	.73	.76
28	.76	.71	.71	.76	.80	.80	.82	.76	.76	.80	.71	.76
29	.76	.71	.71	.74	---	.81	.80	.76	.76	.80	.73	.76
30	.84	.71	.71	.73	---	.80	.80	.76	.78	.80	.71	.76
31	.76	---	.71	.71	---	.80	---	.76	---	.79	.72	---
TOTAL	21.48	21.53	22.02	22.49	20.09	24.89	24.08	23.46	22.13	---	---	22.43
MEAN	.69	.72	.71	.73	.72	.80	.80	.76	.74	---	---	.75
MAX	.93	.76	.72	.80	.80	.91	.82	.80	.78	---	---	.80
MIN	.63	.71	.71	.71	.71	.76	.80	.71	.71	---	---	.71

**KANAB CREEK BASIN**  
**09403600 KANAB CREEK NEAR KANAB, UT**

**LOCATION.**--Lat 37°06'02", long 112°32'50", in NE1/4NE1/4SW1/4 sec. 5, T. 43 S., R. 6 W., Kane County, Hydrologic Unit 15010003, on left bank at upstream side of bridge on U.S. Highway 89, 300 ft upstream from Tiny Canyon and 3.5 mi north of Kanab.

**DRAINAGE AREA.**--198 mi<sup>2</sup>.

**PERIOD OF RECORD.**--July 1959 to Sept. 1968 (peaks only), Jan. 1979 to current year

**REVISED RECORDS.**--WDR UT-98-1: 1997, daily values.

**GAGE.**--Water-stage recorder and crest-stage gage. Elevation of gage is 5,060 ft above sea level, from topographic map. A crest-stage gage from July 22, 1959 to Sept. 30, 1968 at different datum. July 6, 1979 to Sept. 18, 1984 water-stage recorder at same site, different datum.

**REMARKS.**--Records poor. Several diversions above station for irrigation and stock watering.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 3,030 ft<sup>3</sup>/s, Sep 8, 1961, gage height, 8.39 ft, from rating curve extended above 31 ft<sup>3</sup>/s on basis of slope area measurement at gage height, 7.09 ft; minimum daily discharge, 2.9 ft<sup>3</sup>/s, Jul 27, 2000.

**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. 21.....	2200	*253	*7.58

Minimum daily discharge, 3.2 ft<sup>3</sup>/s, Aug 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	8.0	7.0	7.4	e7.5	9.7	14	6.5	4.7	4.3	3.7	4.5
2	5.7	7.8	7.2	6.4	e8.0	11	14	6.8	4.6	4.4	3.5	4.4
3	5.4	7.4	6.3	7.5	e8.6	11	16	7.2	4.7	4.5	3.5	4.7
4	5.4	7.3	6.3	7.3	e9.0	10	16	7.3	4.9	4.4	3.5	4.8
5	5.3	7.2	5.3	7.5	e9.4	10	15	6.0	4.9	4.2	3.2	4.8
6	5.0	7.1	5.2	6.7	e9.6	10	16	5.6	4.5	4.4	3.6	4.9
7	5.0	6.5	5.3	7.3	9.8	20	18	5.6	4.4	4.1	4.3	5.3
8	4.8	6.5	5.8	7.2	9.5	30	20	5.4	4.6	4.1	4.4	5.3
9	4.9	6.3	6.1	6.4	e8.0	33	19	5.9	4.5	4.2	5.0	5.4
10	6.2	5.8	6.1	6.9	e8.0	27	18	5.3	4.6	4.4	5.0	5.2
11	6.9	6.1	6.3	7.7	8.1	20	18	5.5	4.4	4.7	4.7	4.8
12	6.1	5.8	6.1	7.6	8.3	17	19	5.3	4.4	4.3	4.6	4.6
13	6.3	6.1	6.1	8.3	8.7	20	20	5.1	4.7	4.3	4.5	4.5
14	6.1	6.3	5.7	7.2	9.2	21	16	5.3	4.9	4.4	4.6	9.9
15	6.0	6.4	5.5	7.4	8.2	18	14	5.8	4.6	4.3	4.4	6.0
16	5.9	5.8	5.1	8.2	8.2	16	11	5.0	4.4	4.4	4.6	37
17	6.1	6.7	5.2	e7.5	8.5	16	9.8	5.2	4.4	4.3	4.6	54
18	6.7	6.5	e5.0	e7.0	8.1	16	9.2	5.8	4.4	4.0	4.5	28
19	6.8	7.2	e4.8	e7.5	9.6	18	8.6	6.1	4.3	3.8	4.5	17
20	7.3	6.6	e5.0	7.8	8.8	20	8.4	6.1	4.3	3.8	6.8	8.7
21	8.2	6.4	5.4	8.7	9.1	20	9.1	5.7	4.4	3.7	22	7.8
22	44	5.8	5.7	7.6	10	21	9.6	5.3	4.4	3.6	28	9.1
23	16	6.7	6.1	7.4	11	21	9.2	5.5	4.6	3.8	4.9	9.0
24	15	6.4	6.0	7.1	9.1	19	8.2	5.1	4.8	3.7	4.2	8.6
25	10	7.3	6.0	7.4	8.7	18	7.5	5.4	4.6	3.7	4.0	8.9
26	8.4	7.3	6.4	7.1	8.9	17	7.2	5.2	4.6	4.0	3.9	8.4
27	31	7.2	7.3	7.4	9.0	16	7.0	4.9	4.9	4.1	3.8	7.5
28	28	8.2	6.7	8.0	11	14	7.0	5.4	4.8	3.8	4.2	6.8
29	8.4	7.9	7.2	8.0	---	15	6.5	5.2	4.7	3.6	4.4	6.0
30	14	8.2	7.3	7.8	---	14	6.6	5.0	4.5	3.6	4.7	5.6
31	14	---	7.2	e7.0	---	15	---	4.8	---	3.7	4.7	---
TOTAL	314.7	204.8	186.7	230.3	249.9	543.7	377.9	174.3	137.5	126.6	176.3	301.5
MEAN	10.2	6.83	6.02	7.43	8.93	17.5	12.6	5.62	4.58	4.08	5.69	10.1
MAX	44	8.2	7.3	8.7	11	33	20	7.3	4.9	4.7	28	54
MIN	4.8	5.8	4.8	6.4	7.5	9.7	6.5	4.8	4.3	3.6	3.2	4.4
AC-FT	624	406	370	457	496	1080	750	346	273	251	350	598

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2001, 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
MEAN	10.7	10.2	11.0	12.7	16.4	24.5	23.1	9.75	7.04	7.16	8.41	10.2										
MAX	25.7	15.2	21.7	27.9	45.1	72.4	132	27.6	12.1	13.8	16.5	28.1										
(WY)	1982	1988	1980	1997	1980	1983	1980	1980	1981	1981	1981	1998										
MIN	5.46	6.58	5.31	6.18	8.93	9.68	6.81	5.62	4.37	3.90	4.07	5.43										
(WY)	1996	1990	1990	1987	2001	1988	1990	2001	1986	2000	1995	1989										

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1980 - 2001
ANNUAL TOTAL	2621.3	3024.2	
ANNUAL MEAN	7.16	8.29	12.6
HIGHEST ANNUAL MEAN			28.4
LOWEST ANNUAL MEAN			7.07
HIGHEST DAILY MEAN	44	Oct 22	354
LOWEST DAILY MEAN	2.9	Jul 27	2.9
ANNUAL SEVEN-DAY MINIMUM	3.2	Jul 26	3.0
ANNUAL RUNOFF (AC-FT)	5200		9100
10 PERCENT EXCEEDS	11		19
50 PERCENT EXCEEDS	6.4		9.1
90 PERCENT EXCEEDS	4.0		5.4

e Estimated

# HAVASU CREEK BASIN

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## 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 fair 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 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 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 FOR CURRENT YEAR.**--Maximum discharge, unknown, July 14, gage height, 20.48 ft.; minimum daily, 58 ft<sup>3</sup>/s on many days.

### DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	64	60	64	64	61	65	67	65	65	65	66
2	69	64	61	62	64	61	64	67	65	64	64	66
3	69	64	63	61	63	62	64	65	67	65	63	65
4	69	63	64	60	61	62	64	64	66	65	63	63
5	68	63	64	59	62	62	65	64	65	65	63	63
6	66	63	65	59	63	62	65	64	65	e150	62	63
7	66	63	66	58	66	62	66	62	65	e72	62	63
8	65	63	68	58	66	64	67	62	65	e70	62	63
9	65	65	68	58	64	64	67	62	66	e69	71	62
10	67	65	66	58	64	64	68	62	66	e64	e150	62
11	67	64	68	60	64	64	66	61	66	e64	e116	62
12	65	61	69	80	64	62	66	61	68	e67	e67	63
13	65	61	71	72	64	62	65	60	69	65	e67	62
14	65	61	69	71	64	62	65	60	70	e100	69	62
15	64	61	69	71	63	63	65	60	70	e75	68	65
16	63	59	68	70	61	64	65	61	68	e66	67	66
17	62	58	67	68	61	64	66	61	68	e65	67	65
18	62	58	67	66	61	63	67	61	68	e65	66	65
19	62	58	67	65	61	62	69	61	69	e65	67	65
20	62	58	67	65	61	62	70	62	68	65	67	65
21	63	58	66	64	61	64	70	62	68	64	69	65
22	63	58	65	65	62	64	70	62	64	64	68	64
23	62	58	65	64	62	64	69	62	e72	64	68	64
24	62	59	66	65	62	64	69	62	e65	63	67	64
25	62	59	65	65	61	64	69	61	e65	64	67	64
26	62	59	65	65	63	64	69	63	e66	65	66	65
27	e164	59	65	65	63	65	69	65	67	65	66	64
28	e107	60	65	65	63	65	69	65	64	65	67	65
29	e68	60	66	64	---	65	68	65	65	65	67	65
30	e68	61	66	65	---	65	67	64	64	66	67	64
31	e67	---	66	63	---	65	---	65	---	65	66	---
TOTAL	2158	1827	2047	1995	1758	1961	2008	1943	1999	2156	2184	1920
MEAN	69.6	60.9	66.0	64.4	62.8	63.3	66.9	62.7	66.6	69.5	70.5	64.0
MAX	164	65	71	80	66	65	70	67	72	150	150	66
MIN	62	58	60	58	61	61	64	60	64	63	62	62
AC-FT	4280	3620	4060	3960	3490	3890	3980	3850	3970	4280	4330	3810
CFSM	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.03	.02
CAL YR 2000	TOTAL 24189 MEAN 66.1 MAX 184 MIN 58 AC-FT 47980 CFSM .02											
WTR YR 2001	TOTAL 23956 MEAN 65.6 MAX 164 MIN 58 AC-FT 47520 CFSM .02											

e Estimated



## HAVASU CREEK BASIN

## 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, 69.0 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 fair. Several diversions and small impoundments upstream for irrigation and public supply.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 13,400 ft<sup>3</sup>/s, Feb. 21, 1991, gage height, 23.4 ft; 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, 1,240 ft<sup>3</sup>/s, Aug. 11, gage height, 11.77 ft; minimum daily 66 ft<sup>3</sup>/s Oct. 2,3,8,9,12, Nov. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	69	69	71	72	73	70	70	69	70	70	72
2	66	69	70	71	72	73	70	70	68	69	70	73
3	66	69	70	71	73	72	70	70	69	70	78	73
4	68	69	70	71	73	72	70	70	69	71	71	73
5	67	68	70	71	73	72	71	70	69	71	71	73
6	67	68	70	72	74	72	71	70	69	142	71	72
7	67	67	71	72	73	72	70	70	69	77	71	73
8	66	68	71	72	73	72	71	70	69	74	72	72
9	66	68	71	74	72	73	71	70	69	75	83	72
10	67	68	71	73	72	73	71	70	69	74	157	71
11	67	68	71	74	73	74	70	70	69	73	141	71
12	66	68	72	84	72	72	70	70	70	72	77	72
13	67	68	71	74	73	72	70	71	70	72	75	72
14	67	68	71	73	73	72	70	71	70	104	74	72
15	67	68	71	73	73	71	69	70	70	76	74	75
16	67	68	71	73	72	72	69	71	70	71	73	85
17	67	67	72	72	72	71	69	71	70	72	72	73
18	67	66	71	72	72	71	69	71	70	71	72	73
19	67	67	72	71	72	71	69	71	70	71	73	72
20	67	67	73	71	72	71	70	71	70	70	79	71
21	68	67	72	71	72	71	71	70	70	69	75	71
22	70	68	72	72	72	71	70	70	72	69	72	71
23	69	68	72	72	72	71	70	70	78	70	71	71
24	68	68	72	72	72	71	70	70	72	70	72	70
25	68	68	72	72	72	71	70	70	71	71	72	70
26	68	68	72	73	73	71	70	70	72	71	71	70
27	208	68	71	74	73	71	70	70	71	71	71	70
28	101	69	72	74	74	71	70	70	70	71	72	70
29	72	69	72	73	---	71	70	70	70	71	72	70
30	72	69	72	73	---	71	70	69	70	71	72	70
31	71	---	71	73	---	70	---	68	---	71	72	---
TOTAL	2271	2040	2208	2254	2031	2221	2101	2174	2104	2320	2416	2163
MEAN	73.3	68.0	71.2	72.7	72.5	71.6	70.0	70.1	70.1	74.8	77.9	72.1
MAX	208	69	73	84	74	74	71	71	78	142	157	85
MIN	66	66	69	71	72	70	69	68	68	69	70	70
AC-FT	4500	4050	4380	4470	4030	4410	4170	4310	4170	4600	4790	4290

WTR YR 2001 TOTAL 26303 MEAN 72.1 MAX 208 MIN 66 AC-FT 52170

**COLORADO RIVER MAIN STEM**

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**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.

**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, 21,200 ft<sup>3</sup>/s, Aug. 9, gage height, 51.67 ft; minimum daily, 7,600 ft<sup>3</sup>/s Sept. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8730	11800	14700	14100	15400	12700	11400	9370	e11300	9030	15300	e15200
2	8780	11800	14700	13300	15800	12700	10800	11200	12400	8990	15600	e15200
3	9950	14900	15000	13600	12900	12000	9100	11600	11700	9010	15600	e10100
4	10900	15200	13600	14800	13000	11800	11100	11500	11300	13600	15600	e8000
5	10900	15000	13600	14900	12000	11000	11800	11400	8980	15600	15500	7600
6	10900	14000	15000	14900	11600	10600	11800	11400	10800	11100	15700	8160
7	10700	13800	15100	15000	12600	12100	11800	11400	11500	15900	10800	8460
8	10700	15000	15000	13400	12600	11900	11700	9040	11500	15900	15500	8440
9	10200	14900	14600	14000	12700	12000	11700	13100	11500	15500	17200	8430
10	10200	15000	14800	15200	12700	11900	9160	14100	11500	10600	16400	8430
11	10700	15000	13500	15200	12700	11900	10800	11800	10700	15200	15900	7840
12	10800	15000	13600	15600	12000	11400	11600	11400	8920	15500	16000	8140
13	10900	14100	14800	15400	e11700	11000	11400	11400	e11000	15600	16500	8460
14	10900	13800	14800	15200	e12600	11800	11400	11300	e11400	15800	11900	8520
15	10800	14600	14700	13500	e12600	12000	11600	9200	e11400	15800	16200	8560
16	10200	14600	14600	14000	e12800	12100	11700	9310	11600	15800	16600	8890
17	9960	14600	14600	15300	e15000	11900	9360	9810	11600	e10600	16900	8700
18	11000	14700	13500	15200	12900	11700	11100	9610	10800	e15100	16100	8250
19	10900	14700	13400	15100	12200	11100	11700	9620	9030	e15300	16100	8490
20	10900	14000	14600	15100	11800	10800	11900	11000	10900	e15200	16400	8610
21	11000	13300	14600	15700	12800	15600	12200	e11100	11600	e15200	10600	8640
22	11100	15000	14700	13300	12600	15200	12300	e9100	11600	e15300	15100	8810
23	10700	14700	14700	13000	12600	12700	12100	e10300	11700	e15300	15500	8700
24	11800	14700	14700	15600	12500	11800	9540	e11100	11700	e10800	15500	8560
25	12100	13300	13400	15200	12500	11700	11200	e10900	11600	e15300	15600	7930
26	12300	14600	13500	14900	12100	11300	11800	e11100	9290	15700	15600	8210
27	12500	14000	13500	15000	11000	10900	11800	e11200	11000	15600	15400	8490
28	13600	13500	14400	15500	12500	10900	11900	e11000	11900	15800	10200	8520
29	13400	14800	14400	13600	---	10700	11800	e9160	11700	15700	14900	8480
30	12800	14800	14500	12900	---	10700	11800	e10800	9230	15800	15400	8530
31	11000	---	14500	15700	---	10600	---	e11400	---	10800	e15200	---
TOTAL	341320	429200	445100	453200	356200	366500	339360	335720	331150	436430	470800	267350
MEAN	11010	14310	14360	14620	12720	11820	11310	10830	11040	14080	15190	8912
MAX	13600	15200	15100	15700	15800	15600	12300	14100	12400	15900	17200	15200
MIN	8730	11800	13400	12900	11000	10600	9100	9040	8920	8990	10200	7600
AC-FT	677000	851300	882900	898900	706500	727000	673100	665900	656800	865700	933800	530300
CAL YR 2000	TOTAL 4676920	MEAN 12780	MAX 33100	MIN 8630	AC-FT 9277000							
WTR YR 2001	TOTAL 4572330	MEAN 12530	MAX 17200	MIN 7600	AC-FT 9069000							

e Estimated

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

**SPECIFIC CONDUCTANCE:** Aug. 1990 to Apr. 1993

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

**WATER TEMPERATURES:** Aug. 1990 to Apr. 1993.

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

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

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST.	TUR- BID- ITY	BARO- METRIC PRES- SURE	OXYGEN, DIS- SOLVED	OXYGEN, DIS- SOLVED	PH WATER WHOLE	SPE- CIFIC CON- DUCT-	TEMPER- ATURE AIR	TEMPER- ATURE WATER	HARD- NESS NONCARB DISSOLV	HARD- NESS TOTAL
			CUBIC FEET	(NTU)	(MM OF HG)	(PER- CENT	(STAND- ARD	(CON- DUCT-	(DEG C)	(DEG C)	FLD. AS CACO3	(MG/L AS CACO3)	
			PER SECOND (00061)	(00076)	(00025)	(00300)	(00301)	(00400)	(00095)	(00020)	(00010)	(00904)	(00900)
NOV													
14...	1040	9	15100	4	730	10.3	96	8.3	787	6.0	10.0	110	250
14...	1050	7	15100	--	--	--	--	--	--	6.0	10.0	--	--
DEC													
19...	1030	9	14100	4.6	741	10.9	98	8.3	869	6.0	9.5	110	250
19...	1040	7	14100	--	--	--	--	--	--	6.0	9.5	--	--
JAN													
30...	1100	9	13100	5.0	734	10.9	99	8.2	766	10.5	9.5	99	240
30...	1110	7	13100	5.1	734	10.9	99	8.3	778	10.5	9.5	95	240
MAR													
13...	1230	9	11200	120	720	10.2	98	8.3	867	5.5	11.0	99	250
13...	1240	7	11200	--	--	--	--	--	--	5.5	11.0	--	--
APR													
25...	0750	9	9600	57	731	10.8	109	8.3	890	18.0	13.5	120	270
25...	0800	7	9600	--	--	--	--	--	--	18.0	13.5	--	--
JUN													
05...	0750	9	8820	--	725	7.5	81	8.2	894	19.0	17.0	130	280
05...	0800	7	8820	--	725	7.5	81	8.4	873	19.0	17.0	130	280
JUL													
10...	0800	9	10500	--	727	7.9	86	8.4	846	22.2	17.0	120	270
10...	0810	7	10500	--	--	--	--	--	--	22.2	17.0	--	--
AUG													
28...	0800	9	10200	--	725	8.2	86	8.3	820	28.0	15.0	110	260
28...	0810	7	10200	--	--	--	--	--	--	28.0	15.0	--	--

[illegible]

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[illegible]

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[illegible][illegible]



COLORADO RIVER MAIN STEM

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09404200 COLORADO RIVER ABOVE DIAMOND CREEK NEAR PEACH SPRINGS, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	U-238 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75940)	URANIUM -238 WATER DISSOLV (PCI/L) (22603)	RA-226 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75943)	RA-226 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75944)	U-234 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75941)	U-234 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75942)	U-235 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75947)	U-235 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/L) (75975)	U-238 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (04113)	SED. SUSP. SIEVE % FINER THAN .062 MM (70331)	SEDI- MENT, DIAM. MENT, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
NOV												
14...	--	--	--	--	--	--	--	--	--	86	462	18800
14...	--	--	--	--	--	--	--	--	--	86	468	19100
DEC												
19...	--	--	--	--	--	--	--	--	--	37	62	2360
19...	--	--	--	--	--	--	--	--	--	41	51	1940
JAN												
30...	--	--	--	--	--	--	--	--	--	40	40	1410
30...	--	--	--	--	--	--	--	--	--	35	44	1560
MAR												
13...	.09	1.14	.03	.14	.04	.05	.01	.01	.05	88	238	7200
13...	--	--	--	--	--	--	--	--	--	85	250	7560
APR												
25...	--	--	--	--	--	--	--	--	--	94	142	3680
25...	--	--	--	--	--	--	--	--	--	94	136	3530
JUN												
05...	--	--	--	--	--	--	--	--	--	69	12	286
05...	--	--	--	--	--	--	--	--	--	82	20	476
JUL												
10...	--	--	--	--	--	--	--	--	--	66	59	1670
10...	--	--	--	--	--	--	--	--	--	72	49	1390
AUG												
28...	.06	1.21	.02	.09	.05	.10	.01	.01	.04	95	444	12200
28...	--	--	--	--	--	--	--	--	--	--	424	11700

Remark codes used in this report:

< -- Less than

E -- Estimated value

Value qualifier codes used in this report:

v -- Analyte detected in laboratory blank

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

			HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, INOR- GANIC, PARTIC. TOTAL (MG/L AS C) (00688)	
DATE	TIME	SAMPLE TYPE												
NOV 14...	1048	2	0	.03	.003	<.025	M	.004	--	<.001	<.005	E.004	--	
DEC 19...	1034	2	--	<.002	<.001	<.025	<.02	--	--	--	--	--	--	
19...	1035	2	0	.01	.004	<.025	<.02	--	--	--	--	--	--	
19...	1036	2	0	.07	.021	M	<.02	--	--	--	--	--	--	
19...	1037	2	0	.09	.025	.1	.3	--	--	--	--	--	--	
19...	1038	2	0	.08	.022	M	<.02	V.006	--	<.001	<.005	<.007	--	
APR 25...	0758	2	0	.01	.001	<.025	M	--	--	--	--	--	--	
JUN 05...	0758	2	--	--	--	--	--	--	--	--	--	--	<.1	
JUL 10...	0808	2	--	.02	<.008	<.1	<.1	.002	--	<.001	.007	<.007	--	
AUG 28...	0808	2	--	--	--	--	--	V.023	.004	.001	.005	<.007	<.1	
DATE		CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L AS C) (00694)	NITRO- GEN, PAR TICULATE WAT FLT SUSP (MG/L AS N) (49570)	UV ABSORB- ANCE 280 NM, WTR FLT (UNITS (61726)	UV ABSORB- ANCE 254 NM, WTR FLT (UNITS (50624)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
NOV 14...	--	--	--	--	<.3	<.20	--	<.2	<.20	<2	<.30	<.2	<.20	
DEC 19...	--	--	--	--	2	<.20	--	<.2	<.20	<2	<.30	3.9	<.20	
19...	--	--	--	--	M	<.20	--	<.2	<.20	<2	<.30	<.2	<.20	
19...	--	--	--	--	12	<.20	--	.2	<.20	<2	<.30	<.2	<.20	
19...	--	--	--	--	21	<.20	--	.2	<.20	<2	<.30	<.2	<.20	
19...	--	--	--	--	16	<.20	--	.2	<.20	<2	<.30	<.2	<.20	
APR 25...	--	--	--	--	<.3	<.20	--	<.2	<.20	<2	<.30	<.2	<.20	
JUN 05...	.2	.052	<.004	<.004	--	--	--	--	--	--	--	--	--	
JUL 10...	--	--	--	--	<1	<.05	<.2	<1.0	<.06	<7	<.04	<.8	<.02	
AUG 28...	.2	.048	<.004	<.004	--	--	--	--	--	--	--	--	--	
DATE		COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THALI- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
NOV 14...	<.2	<3	<.30	--	<.1	<.2	<.50	--	<.2	<.10	<.10	--	M	
DEC 19...	.9	<3	<.30	--	.9	<.2	<.50	--	<.2	<.10	<.10	--	4	
19...	<.2	<3	<.30	--	<.1	<.2	<.50	--	<.2	<.10	<.10	--	<.5	
19...	<.2	M	<.30	--	.5	<.2	<.50	--	<.2	.38	<.10	--	2	
19...	.3	V30	<.30	--	.6	<.2	<.50	--	<.2	.41	<.10	--	2	
19...	.4	V20	<.30	--	.6	<.2	<.50	--	<.2	.38	<.10	--	2	
APR 25...	<.2	<3	<.30	--	<.1	<.2	<.50	--	<.2	<.10	<.10	--	<.5	
JUN 05...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUL 10...	<.2	<10	<.08	<.3	E.1	<.2	E.04	<.3	<1.0	E.05	<.04	<.2	V7	
AUG 28...	--	--	--	--	--	--	--	--	--	--	--	--	--	

COLORADO RIVER MAIN STEM

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09404200 COLORADO RIVER ABOVE DIAMOND CREEK NEAR PEACH SPRINGS, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)
NOV			
14...	<.20	<.15	--
DEC			
19...	<.20	--	--
19...	<.20	--	--
19...	<.20	--	--
19...	<.20	--	--
19...	<.20	--	--
APR			
25...	<.20	--	--
JUN			
05...	--	.56	.2
JUL			
10...	<.02	--	--
AUG			
28...	--	E.27	.2

Remark codes used in this report:

< -- Less than  
E -- Estimated value  
V -- Contamination

Null value remark codes used in this report:

M -- Presence verified, not quantified

## 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 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 27 .....	1500	*479	*9.92

Minimum daily discharge, 1.0 ft<sup>3</sup>/s, July 8--11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	e4.0	2.9	4.5	5.1	2.4	4.4	4.4	2.3	2.0	1.4	1.9
2	2.7	e4.0	2.9	4.8	5.1	2.6	4.4	4.1	2.5	1.9	1.5	1.8
3	2.7	e4.0	2.9	5.3	5.1	e2.6	4.5	4.0	2.7	1.9	1.7	1.7
4	2.7	e4.0	2.9	5.1	5.0	e2.6	4.5	3.9	2.8	2.0	1.6	1.7
5	2.7	e4.0	2.9	4.8	4.8	e2.6	4.4	3.9	2.8	3.3	1.6	1.6
6	2.8	e4.0	2.9	4.8	4.7	e2.6	4.3	4.0	3.0	e1.5	1.6	1.6
7	2.8	e4.0	2.9	4.8	4.5	e8.0	4.3	3.8	2.8	e1.2	1.6	1.6
8	2.7	4.0	2.9	4.6	4.5	e4.5	4.1	3.8	2.9	e1.0	1.6	1.7
9	2.7	4.0	2.9	4.5	4.5	e4.0	3.9	3.7	2.9	e1.0	1.6	1.8
10	2.9	3.9	2.8	4.3	4.5	e10	4.0	3.5	2.8	e1.0	1.6	1.9
11	2.9	4.5	2.8	4.6	4.5	e4.0	4.2	3.5	2.5	1.0	1.6	2.1
12	2.9	4.1	2.9	6.0	4.5	3.4	3.9	3.5	2.6	1.1	1.6	2.6
13	3.0	4.0	2.9	5.6	4.4	3.8	3.7	3.5	2.7	1.2	1.6	2.9
14	2.9	4.1	2.9	5.4	4.4	3.4	3.7	3.5	2.7	1.2	1.6	3.2
15	2.8	3.8	3.0	5.4	4.3	3.2	3.5	3.3	2.6	1.2	1.6	3.1
16	2.8	3.8	3.4	5.4	4.3	3.4	3.5	3.3	2.3	1.2	1.6	3.3
17	2.9	3.9	3.8	5.4	4.3	3.5	3.7	3.2	2.3	1.2	1.6	3.0
18	2.9	3.8	4.4	5.3	4.2	3.5	3.8	3.1	2.3	1.3	2.1	2.8
19	2.9	3.9	5.0	5.1	3.6	3.4	3.8	3.2	2.3	1.3	4.2	2.6
20	2.9	3.9	5.4	4.9	3.5	3.7	3.9	2.9	2.2	1.3	e7.0	2.2
21	3.0	3.8	5.3	4.8	3.5	3.5	4.6	2.9	2.2	1.3	e2.8	2.0
22	3.2	3.7	5.1	4.8	3.5	3.6	4.5	2.8	2.2	1.4	e2.8	1.9
23	3.5	3.5	4.9	4.8	3.3	3.8	4.4	2.7	2.2	1.4	2.7	1.9
24	3.5	3.5	4.8	4.7	3.1	4.2	4.3	2.7	2.2	1.3	2.8	1.9
25	3.3	3.6	4.6	4.7	3.1	4.5	4.7	2.5	2.2	1.3	2.6	2.0
26	3.0	3.5	4.3	4.5	3.1	4.5	4.7	2.6	2.2	1.6	2.5	2.4
27	e15	3.2	4.5	5.7	2.9	4.5	4.4	2.5	2.2	1.5	2.6	2.8
28	e7.5	3.1	4.0	6.1	2.5	4.5	4.4	2.3	2.0	1.5	2.4	3.1
29	e4.0	3.1	2.9	5.7	---	4.3	4.4	2.3	2.0	1.4	2.2	3.2
30	e4.0	3.0	3.0	5.1	---	4.4	4.3	2.2	2.0	1.5	2.1	3.0
31	e4.0	---	4.2	5.1	---	4.3	---	2.2	---	1.4	1.9	---
TOTAL	110.3	113.7	113.0	156.6	114.8	123.9	125.2	99.8	73.4	44.4	67.7	69.3
MEAN	3.56	3.79	3.65	5.05	4.10	4.00	4.17	3.22	2.45	1.43	2.18	2.31
MAX	15	4.5	5.4	6.1	5.1	10	4.7	4.4	3.0	3.3	7.0	3.3
MIN	2.7	3.0	2.8	4.3	2.5	2.4	3.5	2.2	2.0	1.0	1.4	1.6
AC-FT	219	226	224	311	228	246	248	198	146	88	134	137

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2001, BY WATER YEAR (WY)

	MEAN	3.12	3.70	4.05	4.48	4.43	5.27	3.85	2.91	2.52	6.01	4.50	4.83
MAX	3.57	4.56	4.79	5.34	5.01	11.3	4.51	3.27	3.81	25.8	19.2	18.6	
(WY)	1999	1999	1999	1997	2000	1995	1998	1999	2000	1999	2000	1999	
MIN	2.71	3.05	3.17	3.29	3.70	4.00	3.52	2.32	1.92	1.09	1.89	2.26	
(WY)	1994	1996	1995	1995	1995	2001	1994	1994	1994	1993	1993	1995	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1993 - 2001
ANNUAL TOTAL	1887.75	1212.1	
ANNUAL MEAN	5.16	3.32	4.25
HIGHEST ANNUAL MEAN			7.07
LOWEST ANNUAL MEAN			3.16
HIGHEST DAILY MEAN	484	15	484
LOWEST DAILY MEAN	.73	1.0	.64
ANNUAL SEVEN-DAY MINIMUM	1.9	1.1	.82
ANNUAL RUNOFF (AC-FT)	3740	2400	3080
10 PERCENT EXCEEDS	5.0	4.8	4.8
50 PERCENT EXCEEDS	3.4	3.2	3.3
90 PERCENT EXCEEDS	2.7	1.6	2.0

e Estimated

## LITTLE COLORADO RIVER BASIN

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## 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 2.0 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 fair except for estimated daily discharges and days above 20 ft<sup>3</sup>/s, which are 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, 1.3 ft<sup>3</sup>/s, Aug. 22-29, 2001.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 719 ft<sup>3</sup>/s, Aug. 18, gage height, 7.51 ft from highwater mark; minimum daily discharge, 1.3 ft<sup>3</sup>/s, Aug. 22-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	e1.9	2.0	1.9	1.9	2.2	1.9	1.9	1.8	1.7	1.8	1.4
2	1.8	2.0	2.1	1.9	1.9	2.2	1.9	1.9	1.8	1.7	1.9	1.4
3	1.8	2.0	2.1	1.9	1.9	2.2	2.1	1.9	1.8	1.7	1.8	1.4
4	1.8	2.0	2.0	1.9	1.9	2.2	2.1	1.8	1.8	1.7	1.7	1.4
5	1.8	2.0	2.1	1.9	1.9	2.2	2.2	1.8	1.8	2.1	1.7	1.4
6	1.9	2.0	2.2	1.9	1.9	2.2	2.0	1.8	1.7	1.7	1.6	1.4
7	1.8	2.0	2.2	1.9	1.9	2.2	2.1	1.8	1.8	1.7	1.6	1.4
8	1.8	2.0	2.2	1.9	2.0	2.2	2.0	1.7	1.8	3.1	1.6	1.4
9	1.8	2.0	2.2	1.9	2.0	2.2	2.0	1.7	1.7	1.9	1.6	1.4
10	1.8	2.0	2.2	1.9	2.0	2.4	1.9	1.7	1.7	1.7	1.7	1.4
11	1.8	2.1	2.3	1.9	2.0	2.2	1.9	1.7	1.8	1.7	1.6	1.4
12	1.8	2.1	2.3	1.9	2.0	2.2	2.0	1.7	1.7	1.7	2.3	1.4
13	1.8	2.0	2.3	1.9	2.0	2.1	2.1	1.7	1.7	1.8	1.9	1.4
14	1.9	2.0	2.3	1.9	2.0	2.0	2.1	1.7	1.7	1.8	1.8	1.4
15	1.9	2.0	2.3	1.9	2.0	2.0	2.1	1.7	1.8	1.7	1.7	1.4
16	1.8	2.0	2.3	1.9	2.0	2.0	2.1	1.7	1.8	1.7	1.7	1.4
17	1.8	2.0	2.3	1.9	2.1	2.0	2.1	1.7	1.8	1.8	1.8	1.4
18	1.8	2.0	2.2	1.9	2.1	2.0	2.1	1.7	1.7	1.8	e69.0	1.4
19	1.9	2.0	2.2	1.8	2.0	2.0	2.2	1.7	1.7	1.7	e9.50	1.4
20	1.8	1.9	2.2	1.8	2.0	2.1	2.3	1.7	1.7	1.7	e1.4	1.4
21	1.8	1.8	2.2	1.8	2.1	2.1	2.3	1.8	1.6	1.7	e1.4	1.4
22	1.9	1.8	2.2	1.8	2.0	2.2	2.3	1.8	1.6	1.7	e1.3	1.4
23	1.9	1.8	2.2	1.8	2.1	2.3	2.1	1.8	1.6	1.6	e1.3	1.5
24	1.9	1.9	2.2	1.8	2.0	2.3	1.9	1.8	1.6	1.6	e1.3	1.5
25	1.9	1.9	2.2	1.8	2.0	2.3	1.9	1.8	1.6	1.7	e1.3	1.5
26	1.9	1.9	2.2	1.8	2.0	2.2	1.9	1.8	1.6	1.7	e1.3	1.5
27	2.0	2.0	2.2	1.9	2.1	2.3	1.9	1.7	1.6	1.7	e1.3	1.5
28	2.0	2.0	2.2	1.9	2.2	2.2	1.9	1.7	1.7	1.7	e1.3	1.5
29	1.9	2.0	2.2	1.9	---	2.1	1.9	1.7	1.7	1.7	e1.3	1.5
30	2.0	2.0	2.0	1.9	---	1.9	1.9	1.7	1.7	1.8	1.4	1.6
31	e2.0	---	1.9	1.9	---	1.9	---	1.8	---	1.8	1.4	---
TOTAL	57.6	59.1	67.7	58.1	56.0	66.6	61.2	54.4	51.4	55.1	124.30	42.9
MEAN	1.86	1.97	2.18	1.87	2.00	2.15	2.04	1.75	1.71	1.78	4.01	1.43
MAX	2.0	2.1	2.3	1.9	2.2	2.4	2.3	1.9	1.8	3.1	69	1.6
MIN	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.7	1.6	1.6	1.3	1.4
MED	1.8	2.0	2.2	1.9	2.0	2.2	2.0	1.7	1.7	1.7	1.6	1.4
AC-FT	114	117	134	115	111	132	121	108	102	109	247	85

CAL YR 2000 TOTAL 803.3 MEAN 2.19 MAX 28 MIN 1.8 MED 2.0 AC-FT 1590  
WTR YR 2001 TOTAL 754.40 MEAN 2.07 MAX 69 MIN 1.3 MED 1.9 AC-FT 1500

e Estimated



## COLORADO RIVER BASIN

## 09404343 TRUXTON WASH NEAR VALENTINE, AZ

**LOCATION**--Lat 35°23'03", long 113°39'25", in SE1/4NE1/4NW1/4, 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-feet. Several minor diversions.

**EXTREMES OUTSIDE CURRENT PERIOD**--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 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 on many days.

**EXTREMES FOR CURRENT YEAR**--Maximum discharge, 4,920 ft<sup>3</sup>/s, Aug. 12, 2001, gage height, 12.07 ft, from floodmark; minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.08	.10	.15	.08	.08	.07	.01	.05	e.00	.00	.00
2	.08	.09	.11	.16	.09	.09	.08	.02	.06	e.00	.00	.04
3	.08	.09	.11	.19	.10	.08	.09	.02	.05	e.00	.00	.07
4	.07	.09	.11	.78	.10	.07	.09	.02	.04	e.00	.00	.04
5	.07	.09	.11	.57	.11	.09	.09	.02	.04	e.00	.00	.02
6	.08	.09	.11	.30	.09	.08	.09	.03	.02	14	.00	.01
7	.08	.08	.10	4.9	.08	.07	.05	.04	.00	.00	.00	.01
8	.08	.08	.10	2.1	.08	.07	.03	.05	.00	.00	.00	.00
9	.08	.09	.10	2.9	.08	.07	.03	.06	.00	.00	.00	.00
10	.07	.08	.10	1.5	.09	.07	.03	.07	.00	.00	.00	.00
11	.06	.08	.10	.16	.08	.07	.02	.06	.00	.00	.00	.00
12	.06	.08	.11	.44	.09	.08	.02	.10	.00	.00	136	.00
13	.06	.09	.11	2.7	.07	.06	.02	.11	.00	.00	.41	.00
14	.07	.08	.11	.13	.07	.09	.03	.10	.00	.00	.15	.00
15	.08	.08	.10	.18	.07	.14	.03	.09	.00	.00	.00	.00
16	.08	.08	.11	.12	.07	.13	.02	.08	.00	.00	.00	.00
17	.09	.08	.13	e.10	.08	.11	.02	.08	.00	.00	.00	.00
18	.09	.08	.13	e.10	.10	.10	.02	.08	.00	.00	.00	.00
19	.10	.09	.13	.08	.09	.10	.02	.07	.00	.00	.68	.00
20	.10	.09	.13	.09	.09	.09	.02	.11	.00	.00	82	.00
21	.10	.08	.14	.08	.09	.08	.02	.23	.00	.00	e.20	.00
22	.09	.09	.14	.09	.10	.09	.60	.22	.00	.00	.00	.00
23	.09	.09	.14	.09	.10	.09	.04	e.10	.00	.00	.00	.00
24	.09	.08	.14	.09	.08	.09	.10	e.01	.00	.00	.00	.00
25	.10	.08	.13	.08	.08	.08	.02	.01	.00	7.3	.00	.00
26	.10	.09	.13	.08	.08	.08	.00	.03	.00	3.6	.00	.00
27	.10	.09	.15	.08	.07	.08	.01	.05	.00	.00	.00	.00
28	.09	.09	.17	.08	.07	.06	.01	.06	e.00	.00	.00	.00
29	.10	.10	.16	.07	---	e.08	.02	.05	e.00	.00	.00	.00
30	.63	.10	.16	.07	---	e.07	.02	.06	e.00	.00	.00	.00
31	.07	---	.21	.07	---	.07	---	.06	---	.00	.00	---
TOTAL	3.12	2.58	3.88	18.53	2.38	2.61	1.71	2.10	0.26	24.90	219.44	0.19
MEAN	.10	.086	.13	.60	.085	.084	.057	.068	.009	.80	7.08	.006
MAX	.63	.10	.21	4.9	.11	.14	.60	.23	.06	14	136	.07
MIN	.06	.08	.10	.07	.07	.06	.00	.01	.00	.00	.00	.00
AC-FT	6.2	5.1	7.7	37	4.7	5.2	3.4	4.2	.5	49	435	.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2001, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	.32	.31	.41	1.25	1.67	2.34	.48	.41	.77
MAX	.77	.76	.81	7.09	11.1	16.1	1.26	1.12	3.17
(WY)	1994	1996	1994	1995	1995	1993	1993	2000	1999
MIN	.076	.086	.13	.14	.085	.084	.057	.068	.009
(WY)	1999	2001	2001	1998	2001	2001	2001	2001	2000

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1993 - 2001

	2000	2001	1993-2001
ANNUAL TOTAL	274.16	281.70	
ANNUAL MEAN	.75	.77	1.38
HIGHEST ANNUAL MEAN			3.37
LOWEST ANNUAL MEAN			.38
HIGHEST DAILY MEAN	94	136	283
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	544	559	998
10 PERCENT EXCEEDS	.19	.14	.98
50 PERCENT EXCEEDS	.10	.07	.24
90 PERCENT EXCEEDS	.01	.00	.06

e Estimated

## VIRGIN RIVER BASIN

125

## 09413700 VIRGIN RIVER ABOVE THE NARROWS NEAR LITTLEFIELD, AZ

**LOCATION.**--Lat 36°55'16", long 113°49'52", in NE1/4SE1/4 sec. 29, T.41 N., R.14 W., Mohave County, Hydrologic Unit 15010010, on right bank, 50 ft east of edge of roadway of I-15, 225 ft south of mile marker 15, 6.8 mi upstream from Littlefield, and 43 mi upstream from Lake Mead.

**DRAINAGE AREA.**--4,415 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

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

**GAGE.**--Water-stage recorder. Elevation of gage is 2,000 ft above sea level, from topographic map.

**REMARKS.**--Records good except for estimated daily discharges, which are poor. See schematic diagram of Colorado River Basin at beginning of Colorado River Basin section.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Flood of Jan. 1, 1989, 61,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow at site about 1.0 mi downstream, due to failure of Quail Creek Dam.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge 1,430 ft<sup>3</sup>/s, July 17, gage height, 9.99 ft; no flow several days in June and July.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	246	70	96	e92	181	125	314	23	.00	17	26
2	32	199	71	90	e92	146	158	358	23	.00	10	17
3	38	165	67	88	e92	160	199	286	22	.00	9.7	17
4	23	159	74	91	86	151	228	227	27	.00	20	20
5	18	168	81	89	92	133	135	198	27	.00	64	23
6	20	160	96	91	95	130	190	181	17	24	40	21
7	14	130	82	100	100	149	197	210	19	162	23	22
8	21	114	82	100	104	173	212	203	20	36	17	24
9	17	102	75	109	95	153	249	199	16	20	12	33
10	24	106	78	115	92	359	186	206	4.2	27	86	37
11	141	106	82	112	100	300	174	206	.07	39	101	33
12	131	97	81	146	100	254	153	195	1.9	36	74	26
13	80	86	88	130	98	196	165	189	.04	22	42	34
14	72	74	82	106	100	248	157	244	.53	33	63	40
15	72	77	80	105	118	211	137	200	5.8	42	35	41
16	70	74	84	94	112	151	162	197	13	33	14	31
17	73	69	82	93	122	153	186	e244	11	32	8.8	39
18	54	64	80	85	127	140	214	e223	10	24	9.4	19
19	58	66	96	84	115	135	228	e201	7.2	22	11	31
20	48	72	100	91	90	136	240	e157	.08	22	14	26
21	51	79	107	92	90	154	267	98	.00	15	22	17
22	82	74	101	86	87	132	221	110	.00	4.0	161	13
23	151	76	95	85	79	147	199	63	.00	3.4	158	20
24	202	79	100	88	90	131	188	46	2.5	1.7	50	25
25	201	80	94	92	80	129	221	45	.41	3.7	41	45
26	151	81	98	92	92	129	252	42	2.5	2.4	36	46
27	236	77	94	95	110	126	286	48	1.6	7.5	27	21
28	371	79	88	94	147	133	293	41	.00	5.4	23	24
29	220	73	89	93	---	120	324	27	.00	2.4	18	27
30	294	70	94	e93	---	147	316	29	.00	7.7	16	37
31	493	---	91	e93	---	136	---	31	---	13	27	---
TOTAL	3487	3102	2682	3018	2797	5143	6262	5018	254.83	640.20	1249.9	835
MEAN	112	103	86.5	97.4	99.9	166	209	162	8.49	20.7	40.3	27.8
MAX	493	246	107	146	147	359	324	358	27	162	161	46
MIN	14	64	67	84	79	120	125	27	.00	.00	8.8	13
AC-FT	6920	6150	5320	5990	5550	10200	12420	9950	505	1270	2480	1660

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

	MEAN	105	132	129	124	150	144	171	123	22.4	73.0	52.8	129
	MAX	145	212	216	172	180	194	209	162	49.3	153	81.5	376
	(WY)	1999	1999	1999	1999	1999	2000	2001	2001	1999	1998	1999	1998
	MIN	57.4	79.4	85.2	97.4	99.9	72.3	99.7	73.7	8.49	8.50	38.0	27.8
	(WY)	2000	2000	2000	2001	2001	1999	1999	2000	2001	2000	2000	2001

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1998 - 2001

	ANNUAL TOTAL	34629.20	34488.93	
	ANNUAL MEAN	94.6	94.5	104
	HIGHEST ANNUAL MEAN			128
	LOWEST ANNUAL MEAN			87.9
	HIGHEST DAILY MEAN	493 Oct 31	493 Oct 31	2600 Sep 12 1998
	LOWEST DAILY MEAN	.50 Jun 17	.00 Jun 21	.00 Jun 21 2001
	ANNUAL SEVEN-DAY MINIMUM	2.4 Jul 1	.00 Jun 28	.00 Jun 28 2001
	MAXIMUM PEAK FLOW		1430 Jul 7	61000 Jan 1 1989
	MAXIMUM PEAK STAGE		9.99 Jul 7	
	ANNUAL RUNOFF (AC-FT)	68690	68410	75050
	10 PERCENT EXCEEDS	212	202	215
	50 PERCENT EXCEEDS	80	85	87
	90 PERCENT EXCEEDS	7.3	10	13

e Estimated

**VIRGIN RIVER BASIN**  
**09413700 VIRGIN RIVER ABOVE THE NARROWS NEAR LITTLEFIELD, AZ--Continued**  
**WATER-QUALITY RECORDS**

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

**REMARKS.**--In June 1998, station was established in cooperation with the Southern Nevada Water Authority to characterize the hydraulics and water quality of the Virgin River Basin.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT										
12...	0925	ENVIRONMENTAL	142	1940	8.3	16.0	14.5	710	98.6	9.3
NOV										
17...	0930	ENVIRONMENTAL	67	3120	8.4	6.0	5.0	715	99.6	11.8
JAN										
05...	0800	ENVIRONMENTAL	87	2780	8.4	6.0	3.5	714	101	12.5
FEB										
13...	0815	ENVIRONMENTAL	105	2540	8.4	--	9.0	704	103	10.9
MAR										
20...	0815	ENVIRONMENTAL	138	2240	8.4	--	13.5	712	100	9.6
MAY										
16...	0845	ENVIRONMENTAL	164	1440	8.5	--	19.0	707	98	8.4
JUL										
19...	1015	ENVIRONMENTAL	22	3340	8.5	22.0	22.5	707	122	9.7
SEP										
05...	0855	ENVIRONMENTAL	26	3210	8.4	--	22.0	706	101	8.1

**LOCATION.**--Lat 36° 53' 30", long 113° 55' 25", in SW 1/4 SW 1/4 sec. 4, T. 40 N., R. 15 W., Mohave County, Hydrologic Unit 15010010, on right bank, 0.5 mi downstream from Beaver Dam Wash, 0.4 mi upstream from Littlefield, and 36 mi upstream from Lake Mead.

### WATER-DISCHARGE RECORDS

**REVISED RECORDS.--**WSP 959: 1932. WSP 979: 1930-31, 1933-37. WSP 1313: 1940 (M).

**REMARKS.**--Records fair except for estimated daily discharges, which are poor. See schematic diagram of Colorado River Basin.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
July 7.....	unknown	*1,500	unknown

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	304	128	159	147	190	189	317	83	e71	66	83
2	79	255	128	152	151	176	203	327	82	e71	57	73
3	84	218	125	150	158	181	219	309	83	e71	60	73
4	77	211	134	153	157	174	241	272	88	e71	72	75
5	73	212	139	150	154	167	204	257	88	e71	110	78
6	75	222	157	153	154	160	219	247	82	e84	81	75
7	70	194	147	168	156	167	227	256	78	e225	72	80
8	77	188	146	170	162	180	233	251	78	e100	68	79
9	75	171	140	188	152	170	262	252	76	e80	63	91
10	80	180	144	191	149	282	231	258	70	67	120	94
11	173	182	146	210	161	291	224	255	68	74	128	94
12	206	177	142	228	163	257	212	248	67	73	167	85
13	136	162	142	199	161	224	216	246	65	68	107	89
14	123	142	145	165	163	240	224	272	64	65	142	99
15	122	147	137	179	186	228	213	258	64	68	112	99
16	117	147	140	175	170	197	218	234	67	68	79	95
17	134	132	140	182	175	191	231	263	64	67	66	101
18	107	124	136	162	174	188	248	250	62	62	69	85
19	130	124	153	163	169	185	263	225	60	62	73	92
20	135	134	165	170	140	184	268	202	55	60	81	91
21	132	146	172	169	138	188	288	162	54	59	89	80
22	159	137	164	164	140	185	269	158	65	e45	204	69
23	282	135	156	160	140	192	255	141	72	e45	260	76
24	290	139	165	160	145	187	244	125	73	e43	110	84
25	261	140	156	159	141	186	264	119	75	e45	90	108
26	200	143	161	165	145	187	276	114	74	e44	84	127
27	238	133	153	160	165	187	297	105	72	e50	74	73
28	396	137	145	160	181	192	313	104	e72	e49	76	75
29	284	133	149	161	---	189	331	94	e72	e44	67	83
30	288	127	160	153	---	197	323	90	e72	e49	69	92
31	761	---	152	155	---	197	---	87	---	e55	76	---
TOTAL	5440	4996	4567	5233	4397	6119	7405	6498	2145	2106	2992	2598
MEAN	175	167	147	169	157	197	247	210	71.5	67.9	96.5	86.6
MAX	761	304	172	228	186	291	331	327	88	225	260	127
MIN	70	124	125	150	138	160	189	87	54	43	57	69
MED	132	146	146	163	156	188	237	247	72	67	79	84
AC-FT	10790	9910	9060	10380	8720	12140	14690	12890	4250	4180	5930	5150

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2001, BY WATER YEAR (WY)

MEAN	149	192	224	237	320	366	407	422	142	108	176	153
MAX	602	552	1247	775	2330	1805	1385	2122	1119	381	976	737
(WY)	1947	1947	1967	1969	1980	1995	1969	1941	1983	1932	1932	1939
MIN	53.4	101	111	108	110	85.4	61.6	49.9	46.8	51.6	50.0	53.3
(WY)	1965	1991	1964	1964	1991	1977	1934	1990	1964	1965	1966	1964

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1930 - 2001
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ANNUAL TOTAL	55912		54496					
ANNUAL MEAN	153		149			241		
HIGHEST ANNUAL MEAN						697		1983
LOWEST ANNUAL MEAN						100		1991
HIGHEST DAILY MEAN	761	Oct 31	761	Oct 31		17000	Mar 3	1938
LOWEST DAILY MEAN	49	Jun 10	43	Jul 24		40	Aug 6	1966
ANNUAL SEVEN-DAY MINIMUM	58	Jun 9	46	Jul 23		41	Aug 3	1966
MAXIMUM PEAK FLOW			1500	Jul 7		61000	Jan 1	1989
MAXIMUM PEAK STAGE						22.37	Jan 1	1989
ANNUAL RUNOFF (AC-FT)	110900		108100			174500		
10 PERCENT EXCEEDS	279		253			425		
50 PERCENT EXCEEDS	138		146			149		
90 PERCENT EXCEEDS	63		68			62		

e Estimated

**VIRGIN RIVER BASIN**  
**09415000 VIRGIN RIVER AT LITTLEFIELD, AZ--Continued**

**WATER-QUALITY RECORDS**

**PERIOD OF RECORD**--Water years 1948 to current year.

**PERIOD OF DAILY RECORD**--

**CHEMICAL ANALYSES:** July 1949 to Sept. 1969.

**SPECIFIC CONDUCTANCE:** Oct. 1947 to Mar. 1988.

**WATER TEMPERATURE:** Oct. 1947 to Mar. 1988.

**SEDIMENT DATA:** Oct. 1947 to Sept. 1968, Oct. 1992 to Sept. 1995.

**REMARKS**--Data was collected in cooperation with the Southern Nevada Water Authority to characterize the hydraulics and water quality of the Virgin River Basin and to establish information on chemical loading into Lake Mead. Streamflow is not completely homogenous chemically from bank to bank. Flow adjacent to north (right) bank is generally more dilute than average, particularly at times of low streamflow; monthly data collected during June 1975-Sept. 1976 indicate that specific conductance off north bank was 93 to 100 percent of streamwide average (range of discharge, 60-230 ft<sup>3</sup>/s). Water temperature characteristically shows little or no variation from bank to bank. Detailed sampling information for period since June 1975 is available from U.S. Geological Survey, Carson City, Nevada.

**EXTREMES MEASURED FOR PERIOD OF DAILY RECORD**--

**SPECIFIC CONDUCTANCE:** Maximum, 4,650 microsiemens/cm, Aug. 21, 1966; minimum, 615 microsiemens/cm, May 27, 28, 30, 31, 1983.

**WATER TEMPERATURE:** Maximum, 33.5°C, July 7, 1953; minimum, 2.0°C Jan. 4, 1949, Jan. 4, 1950, Jan. 4, 5, 1971.

**WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	E COLI, MTEC MF (COL/100 ML) (31633)
OCT 26...	0900	ENVIRONMENTAL	192	2420	7.8	--	16.5	180	250	711	90	8.1	E82
DEC 20...	0800	ENVIRONMENTAL	174	2890	7.8	1.0	8.0	33	38	717	95	10.5	--
FEB 26...	0900	ENVIRONMENTAL	141	2740	7.9	--	14.5	35	46	713	98	9.3	--
APR 24...	0900	ENVIRONMENTAL	263	2050	7.9	23.0	17.0	52	82	719	96	8.6	E63
JUN 06...	0755	ENVIRONMENTAL	77	2990	7.9	23.0	21.0	--	2.7	712	109	9.0	--
AUG 29...	0900	ENVIRONMENTAL	69	3170	7.7	--	23.0	--	58	709	90	7.1	--
DATE	COLI-FORM, STREP, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	FECAL STRP, KF WATER (COL/100 ML) (31673)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT 26...	370	1000	222	64.9	3.59	218	3	244	297	286	.8	17.7	647
DEC 20...	--	--	245	75.4	22.9	273	4	268	327	375	.8	18.9	773
FEB 26...	--	--	249	79.3	20.8	244	3	262	320	325	.9	17.6	759
APR 24...	73	170	178	53.6	15.3	176	3	239	292	225	.5	15.1	516
JUN 06...	--	--	294	88.2	4.94	252	3	266	325	350	.9	13.5	910
AUG 29...	--	--	312	93.6	24.1	263	3	298	364	370	.9	18.7	975
DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, PAR TICULATE WAT FLT (MG/L AS N) (49570)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	UV ABSORB-ANCE 280 NM, (CM) (61726)	CARBON, INORG + ORGANIC PARTIC. (MG/L AS C) (00694)	CARBON, INOR-GANIC, PARTIC. (MG/L AS C) (00688)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
OCT 26...	<.041	E.09	.67	1.17	E.004	.231	.083	.079	.459	.028	3.9	.2	1710
DEC 20...	<.041	.17	.21	1.36	E.003	.082	.077	.076	.200	.019	1.4	<.1	2040
FEB 26...	<.041	.13	.26	1.33	E.005	.046	E.039	.060	.162	--	.7	<.1	1880
APR 24...	<.041	E.10	.35	.767	E.005	.174	.127	.078	.208	.036	3.0	<.1	1450
JUN 06...	<.040	E.06	.24	.399	.014	.115	<.060	<.020	<.060	.012	.7	<.1	2220
AUG 29...	E.041	E.06	.32	E.846	E.003	.169	E.036	E.050	.171	.014	3.7	.1	2290



**VIRGIN RIVER BASIN**  
**09415000 VIRGIN RIVER AT LITTLEFIELD, AZ--Continued**

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC DIS- SOLVED (UG/L) AS AS (01000)	BORON, DIS- SOLVED (UG/L) AS B (01020)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	LITHIUM DIS- SOLVED (UG/L) AS LI (01130)	SELE- NIUM, DIS- SOLVED (UG/L) AS SE (01145)	STRON- TIUM, DIS- SOLVED (UG/L) AS SR (01080)	VANA- DIUM, DIS- SOLVED (UG/L) AS V (01085)	2,4,5-T DIS- SOLVED (UG/L) (39742)	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (38746)	2,6-DI- ETHYL ANILINE WAT FLT GF, REC (82660)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (49308)
OCT 26...	1620	10.4	637	<30	265	E1.2	2860	2.3	<.04	<.11	<.10	<.002	<.22
DEC 20...	1960	9.8	758	<30	333	1.6	3320	1.5	<.04	<.11	<.10	<.002	<.11
FEB 26...	1860	9.5	278	<10	42.5	1.8	3220	6.1	<.04	<.11	<.10	<.002	<.11
APR 24...	1330	9.0	462	<10	199	1.1	2320	2.3	<.04	E.07	<.10	<.002	<.11
JUN 06...	2080	7.4	813	<30	303	2.0	3950	1.6	<.04	.13	<.10	<.002	<.11
AUG 29...	2240	8.5	847	<10	349	2.2	3880	1.8	<.04	<.11	<.10	<.002	<.11
DATE	ACETO- CHLOR, WATER, FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, FLTRD, DISS, (UG/L) (46342)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BDMC, SURROG, WATER, UNFLTRD REC (PERCENT) (99835)	BEN- FLUR- ALIN WAT FLD GF, REC (UG/L) (82673)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)
OCT 26...	<.004	<.05	<.002	<.20	<.02	<.21	<.005	<.007	68	<.010	<.04	<.09	<.07
DEC 20...	<.004	<.05	<.002	<.20	<.57	<.21	<.005	<.007	79	<.010	<.04	<.09	<.07
FEB 26...	<.004	<.05	<.002	<.20	<.17	<.35	<.005	<.007	88	<.010	<.04	.43	<.07
APR 24...	<.004	<.05	<.002	<.20	<.12	<.21	<.005	<.007	93	<.010	<.04	<.09	<.07
JUN 06...	<.004	<.05	<.002	<.20	<.02	<.21	<.005	<.007	56	<.010	<.04	<.09	<.07
AUG 29...	<.004	<.05	<.002	<.20	<.02	<.21	<.005	<.007	82	<.010	<.04	<.09	<.07
DATE	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR- BARYL WATER FLTRD GF, REC (UG/L) (82680)	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO- FURAN WATER FLTRD GF, REC (UG/L) (82674)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L) AS C (00689)	CHLOR- AMBEN, METHYL ESTER WATER FLTRD (UG/L) (61188)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)
OCT 26...	<.002	<.02	<.041	<.29	<.020	1.6	3.7	<.14	<.13	<.005	<.42	<.018	<.07
DEC 20...	<.002	<.02	<.041	<.29	<.020	1.1	1.3	<.14	<.13	<.005	<.42	<.018	<.07
FEB 26...	<.002	<.02	<.041	<.29	<.020	1.5	.7	<.14	<.13	<.005	<.42	<.018	<.07
APR 24...	<.002	<.02	<.041	<.29	<.020	1.9	2.9	<.14	<.13	.008	<.42	<.018	<.07
JUN 06...	<.002	<.02	<.041	<.29	<.020	1.2	.7	<.14	<.13	<.005	<.42	<.018	<.07
AUG 29...	<.002	<.02	<.041	<.29	<.020	1.2	3.5	<.14	<.13	<.005	<.42	<.018	<.07
DATE	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, FLTRD, DISS, REC (UG/L) (04040)	<sup>a</sup> DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO- BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)
OCT 26...	<.003	<.006	105	<.005	<.04	<.05	<.05	<.005	<.09	<.021	<.06	<.25	<.002
DEC 20...	<.003	<.006	101	E.005	<.04	<.05	<.05	<.005	<.09	<.021	<.06	<.25	<.002
FEB 26...	<.003	<.006	83	E.003	<.04	<.05	<.05	<.005	<.09	<.021	.42	<.25	<.002
APR 24...	<.003	<.006	97	E.004	<.04	<.05	<.05	<.005	<.09	<.021	<.06	<.25	<.002
JUN 06...	<.003	E.002	115	.007	.07	<.05	<.05	<.005	<.09	<.021	<.06	<.25	<.002
AUG 29...	<.003	<.006	106	E.005	<.04	<.05	<.05	<.005	<.09	<.021	<.06	<.25	<.002

**VIRGIN RIVER BASIN**  
**09415000 VIRGIN RIVER AT LITTLEFIELD, AZ--Continued**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	<sup>a</sup> HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (UG/L) (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
OCT 26...	<.009	<.005	<.07	<.06	<.003	108	<.004	<.02	<.035	<.027	<.08	<.13	<.07
DEC 20...	<.009	<.005	<.15	<.06	<.003	107	<.004	<.02	<.035	<.027	<.08	<.13	<.07
FEB 26...	<.009	<.005	<.07	<.06	<.003	77	<.004	<.02	<.035	<.027	<.08	<.13	<.07
APR 24...	<.009	<.005	<.07	<.06	<.003	81	<.004	<.02	<.035	<.027	<.08	<.13	<.07
JUN 06...	<.009	<.005	<.07	<.06	<.003	90	<.004	<.02	<.035	<.027	<.08	<.13	<.07
AUG 29...	<.009	<.005	<.13	<.06	<.003	88	<.004	<.02	<.035	<.027	<.08	<.13	<.07
DATE	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)
OCT 26...	<.02	<.050	<.006	<.013	<.006	<.002	<.007	<.02	<.04	<.28	<.02	<.003	<.007
DEC 20...	<.20	<.050	<.006	<.013	<.006	<.002	<.007	<.02	<.04	<.36	<.25	<.003	<.007
FEB 26...	<.02	<.050	<.006	<.013	<.006	<.002	<.007	<.02	<.04	<.28	<.02	<.003	<.007
APR 24...	<.02	<.050	<.006	<.013	<.006	<.002	<.007	<.02	<.04	<.28	<.11	<.003	<.007
JUN 06...	<.02	<.050	<.006	<.013	<.006	<.002	<.007	<.02	<.04	<.28	<.11	<.003	<.007
AUG 29...	<.02	<.050	<.006	<.013	<.006	<.002	<.007	<.02	<.04	<.28	<.02	<.003	<.007
DATE	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	SILVEX, DIS- SOLVED (UG/L) (39762)
OCT 26...	<.002	<.010	<.006	<.011	<.09	<.015	<.004	<.010	<.011	<.023	<.09	<.12	<.03
DEC 20...	<.002	<.010	<.006	<.011	<.09	E.001	<.004	<.010	<.011	<.023	<.09	<.12	<.03
FEB 26...	<.002	<.010	<.006	<.011	<.09	<.015	<.004	<.010	<.011	<.023	<.09	<.12	<.03
APR 24...	<.002	<.010	<.006	<.011	<.09	E.005	<.004	<.010	<.011	<.023	<.09	<.12	<.03
JUN 06...	<.002	<.010	<.006	<.011	<.09	E.003	<.004	<.010	<.011	<.023	<.09	<.12	<.03
AUG 29...	<.002	<.010	<.006	<.011	<.09	<.015	<.004	<.010	<.011	<.023	<.09	E.02	<.03

**COLORADO RIVER MAIN STEM**

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**09421000 LAKE MEAD AT HOOVER DAM, AZ-NV**

**LOCATION**--Lat 36°00'58", long 114°44'13", in NE1/4SW1/4 sec. 3, T.30 N., R.23 W., Gila and Salt River meridian, Mohave-Clark Counties, Hydrologic Unit 15010005, in center of Hoover Dam on Colorado River.

**DRAINAGE AREA**--171,700 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

**RESERVOIR-CONTENTS RECORDS**

**PERIOD OF RECORD**--Contents: Feb. 1935 to current year. Diversions (monthly totals only): to Boulder City area, since Oct. 1935; to Henderson and Las Vegas areas, since Apr. 1942; combined diversions since Oct. 1968. Prior to 1946 published as "at Boulder Dam."

**REVISED RECORDS**--WSP 899: 1935--39.

**GAGE**--Water-stage indicator read once daily at midnight, with supplementary water-stage recorder. Datum of gage is 0.00 ft to Local Powerhouse datum.

**REMARKS**--Reservoir is formed by concrete arch-gravity dam; storage began Feb. 1, 1935; dam completed Mar. 1, 1936. Total capacity (based on 1963-64 resurvey by Coast and Geodetic Survey; capacity table put into use Apr. 1, 1967), 29,755,000 acre-ft, consisting of the following: Dead storage, 2,378,000 acre-ft below gage height 895.0 ft--gate sills in outlet towers; usable contents, 26,159,000 acre-ft between gage heights 895.0 ft and 1,221.4 ft (top of automatic spillway gates in raised position); uncontrolled storage, 1,218,000 acre-ft between gage heights 1,221.4 ft and 1,229.0 ft (maximum water surface). Reservoir is used to store water for flood control, irrigation, municipal water supply, power development, and recreation. Figures given herein represent usable contents. See schematic diagram of Colorado River Basin.

**DIVERSIONS FROM LAKE MEAD**--Diversions to Boulder City area at dam; diversions to Henderson and Las Vegas areas from intakes 6 mi upstream. Diversions measured by Venturi meters. Water used for municipal and industrial purposes.

**COOPERATION**--Records of gage height and contents furnished by Bureau of Reclamation. Records of diversions from Lake Mead furnished by Bureau of Reclamation and Colorado River Commission of Nevada.

**EXTREMES FOR PERIOD OF RECORD**--Maximum contents, 27,790,000 acre-ft, July 29, 30, 1941 (on basis of original bathymetry), gage height, 1,220.45 ft; maximum gage height, 1,225.85 ft, July 24, 1983 (equivalent to 26,868,000 acre-ft on basis of resurveyed bathymetry of 1963-64); minimum contents (since 1940), 10,695,000 acre-ft, Apr. 26, 1956, gage height, 1,083.21 ft.

**EXTREMES FOR CURRENT YEAR**--Maximum contents, 22,544,000 acre-ft, Feb. 4, gage height 1,197.42 ft; minimum, 19,873,000 acre-ft, Sept. 28 and 30, gage height, 1,177.96 ft.

RESERVOIR STORAGE, IN THOUSANDS OF ACRE FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22447	22427	22397	22368	22523	22414	22137	21587	21106	20532	20230	20147
2	22440	22420	22392	22362	22526	22392	22116	21564	21112	20501	20221	20148
3	22437	22415	22395	22361	22539	22382	22097	21548	21112	20487	20206	20142
4	22427	22417	22381	22355	22544	22375	22069	21526	21105	20469	20215	20134
5	22430	22425	22372	22352	22543	22361	22052	21519	21082	20474	20217	20124
6	22434	22420	22364	22347	22533	22345	22018	21508	21063	20473	20210	20115
7	22441	22407	22354	22347	22527	22332	22014	21486	21037	20473	20206	20105
8	22445	22394	22337	22341	22524	22331	22007	21462	21010	20471	20188	20104
9	22433	22401	22328	22337	22520	22338	21985	21440	20995	20477	20189	20097
10	22424	22405	22323	22337	22524	22348	21969	21424	20978	20470	20201	20092
11	22435	22415	22314	22331	22529	22357	21944	21409	20969	20455	20198	20080
12	22438	22424	22304	22331	22526	22354	21933	21403	20952	20436	20193	20058
13	22443	22407	22296	22344	22514	22352	21918	21400	20927	20410	20192	20037
14	22451	22398	22300	22358	22503	22345	21918	21380	20908	20399	20180	20013
15	22453	22394	22304	22358	22494	22338	21910	21367	20878	20388	20173	19999
16	22441	22391	22314	22358	22488	22332	21889	21344	20861	20376	20170	19991
17	22431	22385	22314	22362	22488	22334	21859	21326	20846	20364	20162	19989
18	22421	22388	22320	22368	22490	22340	21824	21304	20819	20340	20160	19980
19	22420	22388	22311	22378	22477	22321	21799	21305	20791	20326	20160	19962
20	22414	22387	22315	22397	22480	22304	21783	21297	20765	20317	20170	19954
21	22421	22387	22317	22414	22470	22294	21783	21283	20738	20314	20169	19940
22	22427	22390	22325	22431	22454	22294	21779	21264	20712	20306	20165	19936
23	22421	22405	22340	22440	22447	22288	21758	21233	20702	20302	20162	19925
24	22420	22417	22348	22460	22448	22286	21735	21210	20685	20291	20162	19913
25	22418	22417	22352	22473	22445	22287	21712	21191	20672	20271	20168	19903
26	22425	22423	22351	22481	22447	22272	21685	21196	20654	20265	20174	19890
27	22425	22420	22351	22493	22434	22247	21661	21192	20630	20251	20172	19878
28	22438	22410	22352	22510	22430	22220	21642	21196	20604	20258	20169	19873
29	22437	22402	22351	22513	---	22189	21626	21173	20576	20253	20156	19874
30	22411	22405	22354	22521	---	22168	21603	21145	20557	20257	20149	19873
31	22435	---	22358	22523	---	22154	---	21127	---	20245	20137	---
MAX	22453	22427	22397	22523	22544	22414	22137	21587	21112	20532	20230	20148
MIN	22411	22385	22296	22331	22430	22154	21603	21127	20557	20245	20137	19873
*	1196.6	1196.45	1196.12	1197.27	1196.62	1194.68	1190.76	1187.32	1183.12	1180.78	1179.97	1177.96
#	-9000	-30000	-47000	+165000	-93000	-276000	-551000	-476000	-570000	-312000	-108000	-264000
##	41763	33558	26362	29433	27000	31509	40912	49152	40244	47127	47382	42067

CAL YR 2000 MAX 25069 MIN 22296 # -2639000 ## 441881  
WTR YR 2001 MAX 22544 MIN 19873 # -2901000 ## 456509

\* Gage height, in feet, at end of month.  
# Change in contents, in acre-feet.  
## Diversions, in acre-feet.

## COLORADO RIVER MAIN STEM

**09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-NV**  
 (National Stream-Quality Accounting Network Station)

**LOCATION.**--Lat 36°00'55", long 114°44'16", in NE1/4SW1/4 sec. 3, T.30 N., R.23 W., Gila and Salt River meridian, or SW1/4NE1/4 sec. 29, T.22 S., R.65 E., Mount Diablo meridian, Mohave-Clark Counties, Hydrologic Unit 15030101, in powerhouse at downstream side of Hoover Dam.

**DRAINAGE AREA.**--171,700 mi<sup>2</sup>, approximately, including 3,959 mi<sup>2</sup> in Great Divide basin in southern Wyoming, which is noncontributing (previously considered part of the Missouri River basin).

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD.**--Oct. 1933 to current year (prior to Apr. 1934, monthly discharge only, published in WSP 1313). Published as "near Willow Beach" 1933-39 and as "below Boulder Dam" 1939-45.

**GAGE.**--Acoustical velocity meters on each turbine in Hoover Dam. Prior to Nov. 1, 1939, water-stage recorder at site 9 mi downstream at datum 594.8 ft above sea level. Nov. 1, 1939, to June 30, 1958, water-stage recorder at site 0.8 mi downstream at datum 600.35 ft above sea level. July 1, 1958, to Nov. 7, 1979, totalizing flowmeter on each turbine.

**REMARKS.**--Flow regulated by Hoover Dam on Lake Mead since Feb. 1, 1935. Many diversions above station for irrigation, industrial, and municipal use. See schematic diagram of Colorado River Basin.

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

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 50,800 ft<sup>3</sup>/s, July 29, 1983, no flow at Hoover Dam part of Feb. 10, 1935; minimum daily, 152 ft<sup>3</sup>/s, Feb. 10, 1935.

 DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7410	14200	16100	10400	14400	21400	17500	18600	18200	19500	16300	7870
2	10300	14500	14700	12500	12900	21500	18700	16800	6910	22800	18300	12000
3	9530	12500	13400	15800	7170	18400	17900	19000	8910	17800	18900	12000
4	12100	10600	19200	16100	9500	15700	21000	20700	12100	12800	9700	14500
5	9610	10300	19900	15000	11800	18000	21500	13300	18500	14100	10500	12400
6	7110	15700	18100	15000	12700	17400	23100	16900	19100	12000	17300	9680
7	6500	17100	20400	14500	13900	14700	15400	20200	21900	9180	16800	10200
8	7390	16800	19700	16100	14300	12500	13400	20800	22300	11900	15900	5360
9	12900	9430	18700	15600	13300	10800	19300	19600	16600	13100	14600	8400
10	9570	9800	15600	15100	8860	7550	18900	20800	17200	14500	11700	10600
11	5710	8890	18000	16600	9710	8130	20200	19300	15200	14700	12500	13200
12	5730	10300	16000	15600	13300	13200	18200	12300	17500	20900	15900	16700
13	6980	18000	18700	9670	16300	13600	16400	12500	16200	27100	15400	16400
14	5570	17500	12000	8480	17400	13400	13300	17900	18100	17600	16800	18800
15	7620	15500	12800	13100	16300	15800	14400	17200	22000	17400	16400	14300
16	13700	13500	8430	12200	14400	13000	21100	17300	19900	16800	16900	10300
17	14000	18600	11100	11100	14600	9520	23400	18500	15900	16700	17100	9020
18	13700	9370	12400	9960	11900	9010	21600	17500	23300	19100	14300	12000
19	11500	10100	15400	8720	15200	20200	21800	8070	21300	20000	12500	14200
20	11800	15600	11900	4900	13100	19600	20500	11200	21700	18100	12000	13200
21	5590	13400	11100	5540	15500	16000	13200	16400	21500	12100	11700	14400
22	6010	10600	9580	6860	15700	15200	13500	18800	22900	14400	11900	8560
23	11400	7290	8010	5690	15900	15200	21500	22400	14100	17400	13400	11900
24	12200	8780	8620	5820	12200	12500	21700	19800	16300	16800	14600	13800
25	10600	10100	9740	7560	12600	9810	21800	17500	15400	18200	10300	12200
26	10400	10200	11800	10200	15100	19400	22900	6890	17100	17200	9990	13100
27	10900	14800	12700	7750	21300	23100	23900	11300	20500	19000	13400	13000
28	6840	18800	14000	7760	18900	24100	16200	8090	21600	12300	14900	9960
29	10700	14100	14600	11000	---	24000	19900	18800	23800	11000	14600	6190
30	10700	15300	10100	11000	---	21700	22400	21000	18500	12300	14900	7710
31	12700	---	11700	11600	---	16800	---	19500	---	17900	18000	---
TOTAL	296770	391660	434480	347210	388240	491220	574600	518950	544520	504680	447490	351950
MEAN	9573	13060	14020	11200	13870	15850	19150	16740	18150	16280	14440	11730
MAX	14000	18800	20400	16600	21300	24100	23900	22400	23800	27100	18900	18800
MIN	5570	7290	8010	4900	7170	7550	13200	6890	6910	9180	9700	5360
AC-FT	588600	776900	861800	688700	770100	974300	1140000	1029000	1080000	1001000	887600	698100

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2001, BY WATER YEAR (WY)

	MEAN	11770	11620	12020	12310	12670	14830	16030	16270	15750	15650	15170	13360
MAX	34250	30530	33670	32700	30680	28790	26290	33330	34890	41870	39390	36750	
(WY)	1984	1942	1942	1942	1984	1984	1984	1986	1984	1983	1983	1983	
MIN	3109	3519	4444	3540	1106	5474	7297	8898	9786	10880	9961	6619	
(WY)	1935	1935	1935	1979	1993	1993	1935	1937	1940	1937	1936	1982	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1935 - 2001
ANNUAL TOTAL	5390660	5291770	
ANNUAL MEAN	14730	14500	13960
HIGHEST ANNUAL MEAN			30590
LOWEST ANNUAL MEAN			7674
HIGHEST DAILY MEAN	27100	Jul 7	50800
LOWEST DAILY MEAN	3710	Sep 23	152
ANNUAL SEVEN-DAY MINIMUM	6120	Sep 18	927
ANNUAL RUNOFF (AC-FT)	10690000	10500000	10120000
10 PERCENT EXCEEDS	21400	20800	21700
50 PERCENT EXCEEDS	14400	14400	13400
90 PERCENT EXCEEDS	8580	8530	6580



**COLORADO RIVER MAIN STEM**  
**09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-NV--Continued**

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**WATER-QUALITY RECORDS**

**PERIOD OF RECORD**--Water years 1940 to current year.

**PERIOD OF DAILY RECORD**--

**CHEMICAL ANALYSES**: Oct. 1939 to Sept. 1944, Oct. 1950 to Sept. 1957, Oct. 1967 to Mar. 1970.

**SPECIFIC CONDUCTANCE**: Oct. 1939 to July 1957, Oct. 1977 to Sept. 1987.

**WATER TEMPERATURE**: Oct. 1941 to July 1957, Oct. 1977 to Sept. 1987.

**REMARKS**--Samples collected at gaging station 0.3 mi downstream from Hoover Dam. Unpublished chemical analyses for period Oct. 1939 to Sept. 1940 available from the U.S. Geological Survey in Tucson, AZ. Quality-assurance samples are defined in the introductory text section titled "Water Quality-Control Data."

**COOPERATION**--Instantaneous-discharge data provided by Bureau of Reclamation, Boulder City, Nevada.

**EXTREMES MEASURED FOR PERIOD OF DAILY RECORD SINCE Oct. 1977**--

**SPECIFIC CONDUCTANCE**: Maximum, 1,180 microsiemens/cm, June 10, 1980; minimum, 787 microsiemens/cm, Apr. 20, 1987.

**WATER TEMPERATURE**: Maximum, 21.5xC, July 23, 1983; minimum, 9.0xC, Jan. 10, 1978.

**WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	TURBID-ITY LAB HACH 2100AN (NTU) (99872)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
OCT 18...	1100	ENVIRONMENTAL	8400	875	7.8	23.0	14.0	.5	1.0	745	70	7.0	68.3	
JAN 03...	1100	ENVIRONMENTAL	23100	902	8.0	14.0	13.5	.2	.4	756	76	7.8	69.4	
FEB 20...	1040	ENVIRONMENTAL	17800	901	8.2	18.0	12.5	.3	.4	746	85	8.8	68.2	
APR 19...	0950	FIELD BLANK	--	--	--	--	--	.3	1.6	--	--	--	E.01	
19...	1000	ENVIRONMENTAL	25600	889	8.1	24.5	12.5	.5	1.9	738	86	8.8	69.8	
JUN 07...	0950	FIELD BLANK	--	--	--	--	--	--	--	--	--	--	--	
07...	1015	ENVIRONMENTAL	37200	891	8.0	30.0	12.5	--	3.3	740	83	8.3	69.1	
AUG 30...	1000	ENVIRONMENTAL	7170	905	7.9	--	13.0	--	3.0	737	82	8.3	71.6	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 18...	24.2	3.81	74.3	2	130	159	63.2	.3	9.0	210	<.041	.26	.17	
JAN 03...	24.5	4.14	74.3	2	128	156	67.1	.3	8.7	222	<.041	.12	.15	
FEB 20...	24.9	4.13	76.5	2	123	150	72.2	.3	8.6	228	<.041	.15	.15	
APR 19...	<.008	<.09	M	--	--	--	<.1	<.2	<.1	<.1	<.041	<.10	<.08	
19...	24.7	3.79	75.2	2	132	161	67.0	.3	8.7	213	<.041	.14	.17	
JUN 07...	--	--	--	--	--	--	--	--	--	--	--	--	--	
07...	24.9	3.88	77.7	2	128	157	67.0	.3	9.1	216	<.040	.12	.16	
AUG 30...	24.6	3.75	79.0	2	141	172	68.0	.3	9.0	214	<.040	.15	.15	
DATE		NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, PAR TICULATE SUSP (MG/L AS N) (49570)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	UV ABSORB-ANCE 280 NM, WTR FLT (UNITS /CM) (61726)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L AS C) (00694)	CARBON, INOR-GANIC, PARTIC. TOTAL (MG/L AS C) (00688)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)
OCT 18...	.331	<.006	<.022	<.006	<.007	<.004	.028	.2	<.1	550	534	<1	.20	
JAN 03...	.386	E.003	<.022	<.006	<.007	.004	.028	<.1	<.1	580	550	<1	.17	
FEB 20...	.413	.008	<.022	E.005	<.007	.006	--	<.1	<.1	582	506	<1	.21	
APR 19...	<.047	<.006	<.022	<.006	<.007	<.004	.002	<.1	<.1	<10	--	<1	.08	
19...	.300	<.006	<.022	E.003	<.007	.005	.030	<.1	<.1	574	544	<1	.28	
JUN 07...	--	--	--	--	--	--	--	--	--	--	--	--	--	
07...	.332	<.006	<.022	<.006	<.007	.005	.026	.1	<.1	586	548	<1	.20	
AUG 30...	E.339	<.006	<.022	<.006	<.007	E.003	.023	<.1	<.1	585	556	<1	.22	



**COLORADO RIVER MAIN STEM**  
**09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-NV--Continued**

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)
OCT 18...	2.6	98.7	<.06	102	E.02	.9	.20	1.6	<10	<.08	36.9	.4	4.5
JAN 03...	2.8	97.6	<.06	113	E.02	<.8	.17	2.8	<10	E.05	37.9	.6	4.8
FEB 20...	3.0	94.4	<.06	110	E.02	<.8	.15	1.8	<10	E.04	38.0	.6	4.8
APR 19...	<.2	<1.0	<.06	<7	<.04	<.8	<.01	1.0	<10	<.08	<.3	<.1	<.2
19...	2.9	98.8	<.06	107	<.04	<.8	.14	1.9	<10	E.05	36.9	.3	4.4
JUN 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
07...	1.8	96.2	<.06	106	<.04	<.8	.14	2.3	<10	<.08	35.4	.3	4.6
AUG 30...	2.4	105	<.06	104	E.02	<.8	.09	3.3	<10	<.08	33.7	.5	4.5

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	2,4,5-T DIS- SOLVED (UG/L) (39742)	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI- ETHYL ANILINE WAT FLT GF 0.7U GF, REC (UG/L) (82660)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	ACETO- CHLOR, WATER, FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)
OCT 18...	1.38	E1.9	<1.0	940	<8.0	1	<.04	<.11	<.10	<.002	<.01	<.004	<.05
JAN 03...	.81	2.0	<1.0	990	2.8	2	<.04	<.11	<.10	<.002	<.01	<.004	<.05
FEB 20...	.23	2.2	<1.0	989	3.5	1	<.04	<.11	<.10	<.002	<.01	<.004	<.05
APR 19...	.12	<.3	<1.0	.09	<.2	1	--	--	--	--	--	--	--
19...	E.04	2.0	<1.0	938	2.7	1	<.04	<.11	<.10	<.002	<.11	<.004	<.05
JUN 07...	--	--	--	--	--	--	<.04	<.11	<.10	<.002	<.11	<.004	<.05
07...	.97	1.9	<1.0	974	2.6	2	<.04	<.11	<.10	<.002	<.11	<.004	<.05
AUG 30...	<.06	1.6	<1.0	942	2.3	2	<.04	<.11	<.10	<.002	<.11	<.004	<.05

DATE	ALA- CHLOR, WATER, DISS, REC (UG/L) (46342)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)
OCT 18...	<.002	<.26	<.02	<.21	<.005	E.003	75	<.010	<.04	<.09	<.07	<.002	<.02
JAN 03...	<.002	<.26	<.02	<.21	<.005	E.002	95	<.010	<.04	<.09	<.07	<.002	<.02
FEB 20...	<.002	<.26	<.02	<.21	<.005	E.002	81	<.010	<.04	<.09	<.07	<.002	<.02
APR 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.002	<.20	<.02	<.21	<.005	E.003	85	<.010	<.04	<.09	<.07	<.002	<.02
JUN 07...	<.002	<.20	<.02	<.21	<.005	<.007	89	<.010	<.04	<.09	<.07	<.002	<.02
07...	<.002	<.20	<.02	<.21	<.005	E.003	E35	<.010	<.04	<.09	<.07	<.002	<.02
AUG 30...	<.002	<.20	<.02	<.21	<.005	<.007	86	<.010	<.04	<.09	<.07	<.002	<.02

**COLORADO RIVER MAIN STEM**  
**09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-NV-Continued**

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**WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO-FURAN, WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L) AS C) (00689)	CHLOR-AMBN, METHYL ESTER WATER FLTRD (UG/L) (61188)	CHLORO-THALO- NIL, WAT, FLT GF 0.7U REC (UG/L) (49306)	CHLOR-PYRIFOS DIS- SOLVED (UG/L) (38933)	CLOPYR-ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DACHTHAL MONO- ACID, WAT, FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL- ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)
OCT 18...	<.041	<.29	<.020	2.5	.2	<.14	<.28	<.005	<.42	<.018	<.07	E.001	E.002
JAN 03...	<.041	<.29	<.020	2.5	<.1	<.14	<.28	<.005	<.42	<.018	<.07	E.002	E.003
FEB 20...	<.041	<.29	<.020	2.5	<.1	<.14	<.28	<.005	<.42	<.018	<.07	<.003	<.006
APR 19...	--	--	--	.24	<.1	--	--	--	--	--	--	--	--
19...	<.041	<.29	<.020	2.3	<.1	<.14	<.13	<.005	<.42	<.018	<.07	<.003	<.006
JUN 07...	<.041	<.29	<.020	--	--	<.14	<.13	<.005	<.42	<.018	<.07	<.003	<.006
07...	<.041	<.29	<.020	3.0	.1	<.14	<.13	<.005	<.42	<.018	<.07	<.003	<.006
AUG 30...	<.041	<.29	<.020	--	<.1	<.14	<.13	<.005	<.42	<.018	<.07	<.003	<.006

DATE	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI-AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI-ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	DNOC WAT, FLT GF 0.7U REC (UG/L) (49299)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
OCT 18...	114	<.005	<.04	<.05	<.05	<.005	<.09	<.021	<.05	<.25	<.002	<.009	<.005
JAN 03...	122	<.005	<.04	<.05	<.05	<.005	<.09	<.021	<.05	<.25	<.002	<.009	<.005
FEB 20...	88	<.005	<.04	<.05	<.05	<.005	<.09	<.021	<.05	<.25	<.002	<.009	<.005
APR 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	107	<.005	<.04	<.05	<.05	<.005	<.09	<.021	<.06	<.25	<.002	<.009	<.005
JUN 07...	110	<.005	<.04	<.05	<.05	<.005	<.09	<.021	<.06	<.25	<.002	<.009	<.005
07...	111	<.005	<.04	<.05	<.05	<.005	<.12	<.021	<.06	<.25	<.002	<.009	<.005
AUG 30...	106	<.005	<.04	<.05	<.05	<.005	<.12	<.021	<.06	<.25	<.002	<.009	<.005

DATE	FEN-URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOFOS WATER DISS (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC (UG/L) (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH-OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METHYL- AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
OCT 18...	<.07	<.06	<.003	104	<.004	<.02	<.035	<.027	<.08	<.13	<.07	<.02	<.050
JAN 03...	<.07	<.06	<.003	114	<.004	<.02	<.035	<.027	<.08	<.13	<.07	<.02	<.050
FEB 20...	<.07	<.06	<.003	89	<.004	<.02	<.035	<.027	<.08	<.13	<.07	<.02	<.050
APR 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<.07	<.06	<.003	92	<.004	<.02	<.035	<.027	<.08	<.13	<.07	<.22	<.050
JUN 07...	<.07	<.06	<.003	100	<.004	<.02	<.035	<.027	<.08	<.13	<.07	<.28	<.050
07...	<.07	<.06	<.003	104	<.004	<.02	<.035	<.027	<.08	<.13	<.07	<.02	<.050
AUG 30...	<.07	<.06	<.003	89	<.004	<.02	<.035	<.027	<.08	<.13	<.07	<.02	<.050

**COLORADO RIVER MAIN STEM**  
**09421500 COLORADO RIVER BELOW HOOVER DAM, AZ-NV--Continued**

**WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	METHYL- PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NORFLUR- AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
OCT 18...	<.006	E.003	<.006	<.002	<.007	<.02	<.04	<.28	<.02	<.003	<.007	<.002	<.010
JAN 03...	<.006	E.001	<.006	<.002	<.007	<.02	<.04	<.49	<.02	<.003	<.007	<.002	<.010
FEB 20...	<.006	M	<.006	<.002	<.007	<.02	<.04	<.28	<.02	<.003	<.007	<.002	<.010
APR 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 19...	<.006	E.003	<.006	<.002	<.007	<.02	<.04	<.28	<.02	<.003	<.007	<.002	<.010
JUN 07...	<.006	<.013	<.006	<.002	<.007	<.02	<.04	<.28	<.02	<.003	<.007	<.002	<.010
AUG 07...	<.006	<.013	<.006	<.002	<.007	<.02	<.04	<.28	<.02	<.003	<.007	<.002	<.010
AUG 30...	<.006	<.013	<.006	<.002	<.007	<.02	<.04	<.28	<.02	<.003	<.007	<.002	<.010

DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	SILVEX, DIS- SOLVED REC (UG/L) (39762)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)
OCT 18...	<.006	<.011	<.09	E.003	<.004	<.010	<.011	<.023	<.09	<.12	<.03	<.011	E.003
JAN 03...	<.006	<.011	<.09	E.002	<.004	<.010	<.011	<.023	<.09	<.12	<.03	<.011	<.016
FEB 20...	<.006	<.011	<.09	<.015	<.004	<.010	<.011	<.023	<.09	<.12	<.03	<.011	<.016
APR 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 19...	<.006	<.011	<.09	E.003	<.004	<.010	<.011	<.023	<.09	<.12	<.03	<.011	E.004
JUN 07...	<.006	<.011	<.09	<.015	<.004	<.010	<.011	<.023	<.09	<.12	<.03	<.011	<.016
AUG 07...	<.006	<.011	<.09	<.015	<.004	<.010	<.011	<.023	<.09	<.12	<.03	<.011	E.004
AUG 30...	<.006	<.011	<.09	<.015	<.004	<.010	<.011	<.023	<.09	<.12	<.03	<.011	<.016

DATE	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER- BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	URANIUM NATURAL DIS- SOLVED (UG/L) AS U) (22703)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 18...	<.034	<.017	--	<.005	<.002	<.07	<.009	3.76	10	61
JAN 03...	<.034	<.017	E.003	<.005	<.002	<.15	<.009	3.76	2	69
FEB 20...	<.034	<.017	--	<.005	<.002	<.07	<.009	3.96	9	60
APR 19...	--	--	--	--	--	--	--	<.02	--	--
JUN 19...	<.034	<.017	--	<.005	<.002	<.07	<.009	3.95	7	39
JUN 07...	<.034	<.017	--	<.005	<.002	<.07	<.009	--	--	--
AUG 07...	<.034	<.017	--	<.005	<.002	<.07	<.009	3.99	3	60
AUG 30...	<.034	<.017	--	<.005	<.002	<.07	<.009	3.85	1	40

Remark Codes Used in This report:

< -- Less than

E: Estimated (see introductory text section titled "Long-Term Method Detection Levels and Laboratory Reporting Levels"). This does not apply to discharge.

Null Value Remark Codes Used in This Report:

M -- Presence verified, not quantified

\* Listed values are recovery percentages for the indicated compounds. These compounds are added to the sample to determine the relative recovery of other organic compounds that are detected using the same analytical method.

**COLORADO RIVER MAIN STEM**

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**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, 1,765,000 acre-ft May 10, elevation, 645.39 ft; minimum, 1,343,000 acre-ft Oct. 28, elevation, 629.37 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 (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1506000	1358000	1473000	1601000	1665000	1660000	1709000	1746000	1679000	1700000	1658000	1661000
2	1494000	1365000	1481000	1603000	1671000	1681000	1709000	1749000	1656000	1710000	1666000	1665000
3	1490000	1373000	1485000	1607000	1662000	1701000	1709000	1749000	1645000	1711000	1675000	1667000
4	1483000	1371000	1498000	1620000	1657000	1714000	1715000	1751000	1638000	1707000	1664000	1668000
5	1478000	1373000	1512000	1624000	1652000	1724000	1718000	1743000	1641000	1702000	1659000	1665000
6	1469000	1386000	1524000	1631000	1652000	1735000	1726000	1746000	1643000	1689000	1664000	1655000
7	1454000	1397000	1538000	1643000	1651000	1741000	1719000	1754000	1655000	1675000	1667000	1646000
8	1441000	1405000	1552000	1651000	1652000	1741000	1711000	1759000	1663000	1666000	1671000	1631000
9	1441000	1403000	1564000	1664000	1648000	1739000	1712000	1761000	1665000	1657000	1665000	1621000
10	1433000	1395000	1566000	1671000	1638000	1733000	1709000	1765000	1666000	1651000	1657000	1614000
11	1432000	1387000	1580000	1687000	1630000	1726000	1715000	1764000	1659000	1647000	1655000	1612000
12	1420000	1390000	1591000	1698000	1630000	1728000	1715000	1749000	1662000	1656000	1664000	1616000
13	1407000	1405000	1599000	1696000	1632000	1728000	1707000	1743000	1657000	1675000	1659000	1623000
14	1396000	1418000	1602000	1694000	1638000	1725000	1692000	1743000	1656000	1677000	1663000	1633000
15	1388000	1430000	1599000	1700000	1638000	1723000	1683000	1744000	1663000	1679000	1666000	1637000
16	1388000	1437000	1596000	1704000	1638000	1718000	1686000	1748000	1667000	1678000	1671000	1638000
17	1390000	1455000	1596000	1709000	1638000	1704000	1695000	1749000	1662000	1681000	1675000	1628000
18	1393000	1450000	1594000	1706000	1635000	1687000	1704000	1750000	1670000	1685000	1678000	1627000
19	1390000	1453000	1601000	1702000	1636000	1697000	1706000	1727000	1670000	1687000	1678000	1630000
20	1381000	1459000	1603000	1692000	1630000	1709000	1708000	1720000	1672000	1685000	1677000	1629000
21	1367000	1459000	1604000	1685000	1629000	1714000	1698000	1714000	1672000	1680000	1676000	1631000
22	1352000	1457000	1603000	1678000	1625000	1708000	1692000	1718000	1678000	1677000	1670000	1625000
23	1345000	1452000	1594000	1669000	1623000	1703000	1698000	1726000	1671000	1674000	1670000	1626000
24	1346000	1445000	1591000	1661000	1615000	1693000	1701000	1726000	1674000	1673000	1672000	1627000
25	1346000	1443000	1595000	1658000	1611000	1677000	1706000	1724000	1667000	1680000	1669000	1625000
26	1344000	1441000	1593000	1658000	1608000	1679000	1713000	1701000	1662000	1678000	1661000	1627000
27	1347000	1447000	1595000	1655000	1621000	1688000	1725000	1691000	1668000	1682000	1656000	1630000
28	1343000	1465000	1602000	1650000	1637000	1698000	1725000	1671000	1674000	1675000	1658000	1624000
29	1349000	1467000	1603000	1652000	---	1708000	1732000	1671000	1686000	1666000	1656000	1617000
30	1351000	1470000	1603000	1655000	---	1714000	1745000	1677000	1689000	1655000	1657000	1608000
31	1352000	---	1601000	1660000	---	1710000	---	1678000	---	1654000	1665000	---
MAX	1506000	1470000	1604000	1709000	1671000	1741000	1745000	1765000	1689000	1711000	1678000	1668000
MIN	1343000	1358000	1473000	1601000	1608000	1660000	1683000	1671000	1638000	1647000	1655000	1608000
(*)	-167000	+118000	+131000	+59000	-23000	+73000	+35000	-67000	+11000	-35000	+11000	-57000
(**)	629.75	634.40	639.39	641.57	640.71	643.40	644.67	642.23	642.64	641.37	641.76	639.63

CAL YR 2000 MAX 1765000 MIN 1343000 (\*\*) +14000  
WTR YR 2001 MAX 1765000 MIN 1343000 (\*\*) +89000

(\*) 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 SE1/4NE1/4 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 Hardville"). Mar. 1949 to current year.

REVISÉD 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 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.**--No estimated daily discharges. Records excellent. 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.

1949–2000: 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, 26,500 ft<sup>3</sup>/s May 4, elevation, 505.00 ft; minimum daily, 6,700 ft<sup>3</sup>/s Oct. 29

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14500	12100	15600	11600	10500	8830	19500	17800	18700	16200	16100	10800
2	14500	10800	12100	12700	10500	8670	19500	18100	18900	17700	15600	10700
3	14400	10200	12100	12700	12200	9360	19500	18200	17000	17700	15600	11800
4	14200	9470	12400	11700	12200	9450	19500	19400	16800	15100	14600	13100
5	14300	9600	12500	11500	14100	13900	19500	19000	17200	18200	14600	14500
6	14200	10500	12400	10400	14100	12900	19600	16600	17600	19300	15600	15800
7	14200	10500	12500	10400	14100	11700	19700	18100	18100	17800	15600	15700
8	12800	11300	13100	10400	15100	11400	19500	17500	17900	17600	16500	14000
9	12200	13600	13000	10500	15200	12600	19500	18700	17800	19100	17700	14000
10	12200	14600	12900	10500	14100	11000	19600	20500	17800	19200	17100	15100
11	12800	10600	12700	10400	14100	12700	19600	20500	17500	17500	14300	15100
12	12900	9520	12400	10400	15000	12800	20000	20600	18300	17200	13000	14000
13	13100	11000	12500	10400	15200	14200	21500	18600	19200	17400	15600	14100
14	12700	11100	12300	10100	15200	15300	22100	17100	18900	17500	14400	14000
15	12900	10200	12300	10100	16500	16300	20800	16800	19100	17000	13000	12300
16	13300	10000	11700	10000	16700	16700	20700	17000	18600	17000	13000	12100
17	13200	11000	11900	10100	14100	17500	19700	18200	19000	17100	12200	12800
18	13400	9940	12100	10100	14100	19100	19700	17800	20400	17800	11400	13000
19	14200	9510	10100	10300	15300	14400	19900	18600	22300	19100	11300	13600
20	16100	13100	11500	9990	17200	14300	19700	18300	22000	19500	11300	13900
21	14800	13200	11200	10200	17200	14300	19800	19800	21900	17000	11400	14000
22	14700	12600	11600	10300	17700	19100	18500	17400	21400	17000	12100	13100
23	14800	9190	11600	10400	17700	18200	20300	18800	17900	18100	12500	12500
24	12900	11700	10300	10500	16600	19200	20300	20200	16900	18200	13000	13700
25	10600	11700	10000	9540	16600	19300	20300	19200	19200	18100	11800	13800
26	10600	11600	11400	10500	17500	19300	19200	19300	20300	18100	11700	12600
27	10600	11700	11500	10400	15800	19300	19100	19400	18600	18000	13400	12600
28	9030	10600	11600	10400	12900	19400	17200	19500	18700	16700	13400	12600
29	6700	12100	11600	10400	---	19400	16700	19500	18200	16800	14500	11800
30	11600	15500	11600	10400	---	19500	17800	19500	17800	19000	15400	11400
31	11700	---	11500	10300	---	19500	---	19500	---	19100	14300	---
TOTAL	400130	338530	372000	327630	417500	469610	588300	579500	564000	551100	432000	398500
MEAN	12910	11280	12000	10570	14910	15150	19610	18690	18800	17780	13940	13280
MAX	16100	15500	15600	12700	17700	19500	22100	20600	22300	19500	17700	15800
MIN	6700	9190	10000	9540	10500	8670	16700	16600	16800	15100	11300	10700
AC-FT	793700	671500	737900	649900	828100	931500	1167000	1149000	1119000	1093000	856900	790400
CAL YR 2000	TOTAL 5402170		MEAN 14760		MAX 26100		MIN 6700		AC-FT 10720000			
WTR YR 2001	TOTAL 5438800		MEAN 14900		MAX 22300		MIN 6700		AC-FT 10790000			



**COLORADO RIVER MAIN STEM**

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**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, 469.88 ft Nov. 8.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	460.47	460.00	459.67	459.28	458.96	461.68	462.93	461.72	462.92	462.97	461.66
2	---	---	460.01	459.62	459.40	458.16	461.69	462.94	463.08	462.64	462.07	459.85
3	---	---	459.09	459.97	459.44	458.16	461.67	462.93	463.20	462.77	461.72	460.04
4	---	---	459.03	459.89	459.39	458.16	461.64	463.02	462.79	462.75	461.66	460.84
5	---	---	459.12	459.61	459.73	460.17	461.63	463.06	462.75	462.61	460.73	461.74
6	---	---	459.13	459.59	460.35	459.95	461.62	462.97	462.43	462.87	461.25	462.22
7	---	---	459.66	459.42	460.31	460.34	461.71	462.98	463.13	463.02	461.71	462.27
8	---	469.88	459.77	459.41	460.42	459.88	461.69	462.98	462.81	462.75	461.68	462.22
9	---	459.86	460.21	459.48	460.47	459.91	461.64	463.05	462.96	463.12	462.37	461.62
10	458.71	460.92	460.20	459.38	460.51	460.28	461.67	463.21	462.91	463.12	462.59	462.06
11	460.71	460.26	460.20	459.40	460.45	459.01	461.66	463.27	462.95	463.17	462.52	462.15
12	460.94	458.64	460.19	459.42	460.47	460.02	462.06	463.23	462.82	462.75	461.08	462.11
13	461.09	458.15	459.96	459.33	460.42	460.24	462.77	463.21	463.17	462.66	462.31	461.64
14	461.14	458.61	459.88	459.29	460.63	460.38	463.22	463.12	463.21	462.76	462.51	461.73
15	460.98	459.43	459.76	458.56	460.74	461.09	463.15	462.75	463.24	462.81	462.30	461.69
16	461.07	458.18	459.82	458.84	460.91	461.14	462.51	462.71	463.30	462.61	461.82	460.43
17	461.24	458.15	459.73	458.37	460.81	461.20	462.65	462.97	463.22	462.54	461.84	460.30
18	461.00	458.29	459.78	458.91	460.05	461.51	461.71	462.97	463.25	462.58	460.79	460.50
19	461.22	458.14	459.73	459.01	460.21	461.52	463.21	462.94	463.50	462.87	460.33	460.68
20	461.70	459.49	458.15	459.04	460.85	459.48	463.25	463.12	463.55	463.03	460.26	460.78
21	461.82	459.56	460.00	458.81	461.07	459.46	463.30	463.20	463.55	463.05	460.21	460.80
22	461.73	459.60	459.65	459.18	461.19	461.47	463.33	463.22	463.55	462.48	461.04	460.80
23	461.72	459.59	459.96	459.08	461.22	461.49	463.36	462.95	463.56	462.69	461.36	460.44
24	461.79	459.31	459.91	459.33	461.12	461.55	463.36	463.09	463.01	462.76	461.57	460.67
25	461.16	459.42	458.29	459.33	461.15	461.59	463.39	462.55	463.23	462.80	461.83	460.79
26	458.50	459.42	---	458.96	461.20	461.58	463.38	461.57	463.31	462.79	461.30	460.80
27	458.39	459.48	459.93	459.47	461.24	461.58	463.21	461.64	463.41	462.83	461.85	460.47
28	458.54	459.55	459.71	459.37	460.85	461.63	463.19	461.65	463.14	462.77	462.08	460.52
29	---	459.41	459.97	459.40	---	461.67	462.77	461.68	463.17	462.37	462.15	460.42
30	459.69	459.97	459.65	459.42	---	461.69	462.76	461.72	463.00	462.87	462.06	460.00
31	460.20	---	459.57	458.71	---	461.68	---	461.71	---	462.96	462.15	---
MAX	461.82	469.88	460.21	459.97	461.24	461.69	463.39	463.27	463.56	463.17	462.97	462.27
MIN	458.39	458.14	458.15	458.37	459.28	458.16	461.62	461.57	461.72	462.37	460.21	459.85

WTR YR 2001    MAX 469.88    MIN 458.14

## 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 NE1/4NW1/4 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.**--No estimated daily discharges. Records fair. 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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	50	36	25	17	12	126	78	130	78	22	55
2	81	34	38	27	17	7.1	126	82	109	92	20	29
3	69	24	22	32	15	8.8	126	83	104	98	20	29
4	67	22	22	28	18	8.5	126	91	80	77	18	49
5	67	21	22	25	22	20	125	97	125	88	17	64
6	69	21	22	24	48	14	125	72	74	116	17	79
7	64	24	27	24	43	31	125	83	133	107	19	84
8	49	17	29	22	59	17	125	65	90	97	20	70
9	43	24	31	24	63	19	126	100	103	43	24	64
10	39	66	29	21	48	28	128	97	102	.00	26	76
11	46	27	29	21	46	14	125	111	103	.00	19	78
12	60	20	32	24	59	18	121	104	92	.00	15	60
13	64	20	27	21	63	29	119	79	131	.00	20	55
14	66	21	28	22	64	43	137	81	115	.00	23	55
15	60	21	25	20	99	86	136	70	118	.00	20	46
16	63	21	28	20	112	85	121	72	114	11	19	26
17	57	22	27	18	59	101	125	89	116	23	22	28
18	64	20	28	13	31	133	120	80	134	21	16	36
19	66	21	27	17	42	79	107	89	158	25	15	43
20	112	22	22	17	119	22	115	96	156	29	14	46
21	88	32	28	15	127	19	110	105	154	23	14	49
22	87	31	24	20	134	95	98	75	149	21	12	38
23	88	25	31	18	137	125	116	97	115	22	30	34
24	90	20	29	21	122	127	118	121	84	25	71	41
25	36	27	21	18	113	131	119	112	121	24	64	49
26	22	24	21	17	125	128	112	110	119	25	56	35
27	20	25	29	20	132	128	109	111	136	25	68	38
28	25	25	27	17	64	128	79	111	102	22	79	32
29	17	18	29	17	---	130	83	112	107	22	78	25
30	18	46	25	20	---	127	94	111	102	26	79	18
31	43	---	25	17	---	126	---	114	---	28	68	---
TOTAL	1813	791	840	645	1998	2039.4	3522	2898	3476	1168.00	1005	1431
MEAN	58.5	26.4	27.1	20.8	71.4	65.8	117	93.5	116	37.7	32.4	47.7
MAX	112	66	38	32	137	133	137	121	158	116	79	84
MIN	17	17	21	13	15	7.1	79	65	74	.00	12	18
AC-FT	3600	1570	1670	1280	3960	4050	6990	5750	6890	2320	1990	2840
(*)	0	246	0	0	0	482	4130	4680	2740	2790	1750	0

CAL YR 2000 TOTAL 20625.40 MEAN 56.4 MAX 164 MIN .00 AC-FT 40910 (\*) 3340  
WTR YR 2001 TOTAL 21626.40 MEAN 59.3 MAX 158 MIN .00 AC-FT 42900 (\*) 16820

(\*) Return surface flow, in acre-feet, to Colorado River.

# DIVERSIONS FROM LAKE HAVASU

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## 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 U.S. 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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3938	3577	3457	3922	3404	2955	3925	3478	3484	3913	3431	3410
2	3660	3302	3439	3726	3416	2985	3875	3436	3445	3428	3923	3383
3	3951	3450	3416	3822	3415	3010	3055	3491	3484	2904	3913	3374
4	3389	3455	2841	3339	3425	3485	3374	3428	3471	3472	3859	2862
5	3426	3456	2982	3411	3440	3512	3455	3487	3459	3483	3959	3031
6	3436	3460	3811	3395	3412	3456	3496	3523	3447	3487	3283	2964
7	3431	3465	3268	1912	3425	3969	3920	3057	3449	3511	3400	2986
8	3406	3465	3413	2040	3452	3939	3902	3322	3467	3468	3430	3010
9	3401	3471	3888	2083	3437	3907	3883	3103	3776	3470	3388	2953
10	3563	3470	3865	1891	3464	3237	3026	3958	3897	3489	2964	3005
11	3242	3476	3845	1777	3435	3007	3318	3922	3869	3415	3655	3319
12	3438	3504	3415	2027	3433	3018	3466	4068	2890	3450	3883	3444
13	3449	3490	3434	2012	3432	3030	3452	3290	2936	3477	3861	3408
14	3460	2924	3876	3328	3448	3485	3527	3487	3902	3482	3583	2965
15	3444	3192	3870	3490	2880	3549	3422	3491	3878	3512	3286	3430
16	3429	3892	3844	3497	3483	3780	3442	3491	3864	3497	3450	3410
17	3522	3908	3406	3496	3842	3948	3575	3504	3412	3973	3470	3405
18	3358	3868	3428	3158	3960	3893	3297	3500	3415	3854	3795	3472
19	3409	3408	3452	3503	3844	3070	3457	3495	3596	3880	3880	3385
20	3470	3054	3441	3963	3878	3131	3475	3504	3327	3850	3870	2914
21	3483	3450	3470	3939	3211	3476	3792	3449	3450	3435	3061	2994
22	3916	3445	3451	3439	2969	3471	3920	3721	3465	3435	2874	2999
23	4091	3840	3451	3452	2984	3824	3978	3323	3440	3438	2966	3008
24	3761	3885	3528	2978	3670	3923	2785	3352	3440	3557	2990	3025
25	3121	3960	3377	2885	3920	3895	3398	3510	3435	3341	3927	3623
26	3428	3737	3436	3592	3899	3818	3465	3500	3513	3431	3902	3348
27	3600	3538	3410	3909	3890	2937	3480	3946	3421	3420	3869	3441
28	3718	3281	3444	3876	3412	2958	3500	3925	3634	3425	3901	3431
29	3808	3498	3469	3886	---	2982	3487	3946	3813	3437	3521	3440
30	3900	3374	3949	3422	---	3040	3483	3832	3909	3456	3248	3391
31	3425	---	3889	3435	---	3780	---	2838	---	3517	3437	---
TOTAL	110073	105295	109265	98605	97880	106470	105630	109377	105988	108907	109979	96830
MEAN	3551	3510	3525	3181	3496	3435	3521	3528	3533	3513	3548	3228
MAX	4091	3960	3949	3963	3960	3969	3978	4068	3909	3973	3959	3623
MIN	3121	2924	2841	1777	2880	2937	2785	2838	2890	2904	2874	2862
CAL YR 2000	TOTAL 1303148	MEAN 3561	MAX 4337	MIN 2316								
WTR YR 2001	TOTAL 1264299	MEAN 3464	MAX 4091	MIN 1777								

## BILL WILLIAMS RIVER BASIN

## 09424450 BIG SANDY RIVER NEAR WIKIEUP, AZ

**LOCATION.**--Lat 34°27'45", long 113°37'25", in SE1/4 sec. 16, T.13 N., R.13 W., Mohave County, Hydrologic Unit 15030201, on left bank 7 mi downstream from Burro Creek, 15 mi upstream from confluence with Santa Maria River, and 17 mi south of Wikieup.

**DRAINAGE AREA.**--2,742 mi<sup>2</sup>, of which 10.1 mi<sup>2</sup> are noncontributing.

**PERIOD OF RECORD.**--Mar. 1966 to current year.

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

**GAGE.**--Water-stage recorder. Elevation of gage is 1,400 ft, above sea level, from topographic map. Prior to Oct. 1, 1970, at datum 3.06 ft higher. Oct. 1, 1970, to Oct. 10, 1973, at datum 2.06 ft higher. Supplementary water-stage recorder for low flows at site 75 ft upstream at same datum from Apr. 10, 1975 to Mar. 1, 1978; Mar. 28 to Dec. 7, 1966, and Apr. 2, 1969, to Apr. 9, 1975, at site 0.8 mi downstream at different datum.

**REMARKS.**--Records fair, except estimated discharges, which are poor. Diversions above station for irrigation of about 3,800 acres, mostly by pumping from ground water.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 68,700 ft<sup>3</sup>/s Feb. 9, 1993, gage height, 16.00 ft, from rating curve extended above 2,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum daily, 1.3 ft<sup>3</sup>/s July 13, 1974.

**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)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 28 .....	0930	2090	4.68	Mar. 7 .....	1730	8090	6.89
Oct. 31 .....	1545	1040	3.97	Mar. 10 .....	1230	4610	5.73
Mar. 2 .....	1500	1640	4.50				

Minimum daily discharge, 2.5 ft<sup>3</sup>/s, Oct. 11, 12 and 14--26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	e133	e4.5	e4.3	9.4	771	20	3.5	4.4	3.2	3.7	2.8
2	2.8	e14	e4.5	e4.3	8.5	978	19	3.2	4.6	3.2	3.9	2.9
3	2.8	e5.0	e4.5	e4.3	8.4	485	15	3.5	4.4	3.3	3.7	2.9
4	2.8	e4.5	e4.5	e4.3	7.5	301	12	3.8	4.3	3.3	3.5	2.8
5	2.9	e5.0	e4.5	e4.3	6.4	157	10	3.6	4.2	3.3	3.5	2.8
6	2.8	e5.0	e4.5	e4.3	5.6	97	10	3.1	4.2	3.3	3.5	2.7
7	2.8	e4.9	e4.5	e4.3	5.4	2090	10	2.9	4.1	3.5	3.5	2.7
8	2.8	e4.9	e4.5	e4.3	5.7	2880	8.4	2.9	4.1	3.4	3.3	2.7
9	2.8	e4.9	e4.5	e4.3	7.7	e275	7.2	3.2	4.0	3.2	3.3	2.7
10	2.7	e4.9	e4.5	e4.3	9.9	e1560	6.7	3.3	4.0	3.2	3.3	2.7
11	2.5	e4.9	e4.5	e4.8	8.6	e1080	6.3	3.5	4.0	3.2	3.3	2.7
12	2.5	e4.9	e4.5	5.0	7.6	e506	6.0	3.8	4.0	3.3	10	2.7
13	2.6	e4.8	e4.5	5.0	10	e318	5.7	4.0	3.9	3.3	4.2	2.9
14	2.5	e4.8	e4.4	70	11	e247	5.8	4.0	3.8	3.1	3.8	3.0
15	2.5	e4.8	e4.4	61	17	e208	5.7	4.3	3.4	3.0	3.7	3.0
16	2.5	e4.8	e4.4	54	32	e188	5.7	4.2	3.2	3.1	3.7	3.0
17	2.5	e4.8	e4.4	41	23	145	5.6	3.6	3.0	3.2	3.6	3.0
18	2.5	e4.7	e4.4	46	45	117	5.2	3.5	3.0	3.2	3.5	3.0
19	2.5	e4.7	e4.4	37	46	100	5.2	3.7	3.0	3.2	3.4	3.0
20	2.5	e4.7	e4.4	23	179	85	5.9	3.7	3.1	3.3	3.3	3.0
21	2.5	e4.7	e4.4	14	187	74	6.5	4.0	2.9	3.3	3.3	3.0
22	2.5	e4.7	e4.4	10	115	65	4.7	4.2	2.8	3.3	3.3	3.0
23	2.7	e4.6	e4.4	8.9	80	57	4.3	3.8	2.8	3.2	3.2	3.0
24	2.5	e4.6	e4.4	19	39	51	4.4	3.6	2.9	3.2	3.2	3.0
25	2.5	e4.6	e4.4	38	22	46	4.3	3.8	3.0	3.3	3.2	3.0
26	2.5	e4.6	e4.4	32	15	41	4.1	3.9	3.0	3.3	3.2	3.0
27	47	e4.6	e4.4	28	10	35	3.9	3.6	3.0	3.3	3.1	3.0
28	874	e4.5	e4.4	25	46	29	3.6	3.6	3.1	3.3	3.0	3.0
29	321	e4.5	e4.4	19	---	27	3.5	3.8	3.2	3.5	2.9	3.0
30	93	e4.5	e4.3	17	---	24	3.7	4.0	3.2	3.5	2.8	3.0
31	374	---	e4.3	12	---	23	---	4.4	---	3.5	2.8	---
TOTAL	1777.4	280.4	137.5	612.7	967.7	13060	218.4	114.0	106.6	101.5	111.7	87.0
MEAN	57.3	9.35	4.44	19.8	34.6	421	7.28	3.68	3.55	3.27	3.60	2.90
MAX	874	133	4.5	70	187	2880	20	4.4	4.6	3.5	10	3.0
MIN	2.5	4.5	4.3	4.3	5.4	23	3.5	2.9	2.8	3.0	2.8	2.7
AC-FT	3530	556	273	1220	1920	25900	433	226	211	201	222	173
CFSM	.02	.00	.00	.01	.01	.15	.00	.00	.00	.00	.00	.00
IN.	.02	.00	.00	.01	.01	.18	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2001, BY WATER YEAR (WY)

	MEAN	11.0	19.9	72.9	170	363	298	39.2	8.63	5.05	5.26	20.7	20.2
MAX	100	252	737	2674	3892	1943	259	35.8	14.1	20.8	178	226	
(WY)	1973	1979	1985	1993	1993	1978	1998	1980	1980	1990	1971	1983	
MIN	2.06	2.44	2.14	2.38	2.08	3.73	3.55	2.02	2.10	1.86	2.69	2.84	
(WY)	2000	1991	1997	1992	2000	1999	1971	1990	1971	1974	1975	1975	

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1967 - 2001

ANNUAL TOTAL	3051.5	17574.9	
ANNUAL MEAN	8.34	48.2	84.8
HIGHEST ANNUAL MEAN			586
LOWEST ANNUAL MEAN			3.05
HIGHEST DAILY MEAN	874	Oct 28	26100
LOWEST DAILY MEAN	1.8	Feb 3	1.3
ANNUAL SEVEN-DAY MINIMUM	1.8	Feb 3	1.5
ANNUAL RUNOFF (AC-FT)	6050	34860	61450
ANNUAL RUNOFF (CFSM)	.003	.018	.031
ANNUAL RUNOFF (INCHES)	.04	.24	.42
10 PERCENT EXCEEDS	4.7	49	56
50 PERCENT EXCEEDS	3.0	4.3	4.9
90 PERCENT EXCEEDS	2.3	2.8	3.0

e Estimated

## 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. 28 .....	0800	961	2.85	Mar.11 .....	0845	759	2.65
Mar. 7 .....	1830	*2,090	*3.63				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e219	.00	.00	41	269	15	.00	.00	.00	.00	.00
2	.00	e105	.00	.00	37	365	13	.00	.00	.00	.00	.00
3	.00	e89	.00	.00	38	231	11	.00	.00	.00	.00	.00
4	.00	e77	.00	.00	34	142	12	.00	.00	.00	.00	.00
5	.00	e67	.00	.00	33	136	10	.00	.00	.00	.00	.00
6	.00	e59	.00	.00	28	121	7.3	.00	.00	.00	.00	.00
7	.00	e52	.00	.00	27	614	5.9	.00	.00	.00	.00	.00
8	.00	e46	.00	.00	26	683	5.4	.00	.00	.00	.00	.00
9	.00	e41	.00	.00	20	237	4.9	.00	.00	.00	.00	.00
10	.00	e36	.00	.00	19	282	e4.5	.00	.00	.00	.00	.00
11	.00	e32	.00	3.4	17	540	4.3	.00	.00	.00	.00	.00
12	.00	e29	.00	19	14	384	4.3	.00	.00	.00	.00	.00
13	.00	e26	.00	29	18	357	6.7	.00	.00	.00	.00	.42
14	.00	e23	.00	50	20	222	6.0	.00	.00	.00	.00	7.8
15	.00	e21	.00	52	25	166	3.9	.00	.00	.00	.00	.00
16	.00	e19	.00	58	28	130	2.6	.00	.00	.00	.00	.00
17	.00	e17	.00	58	27	91	1.6	.00	.00	.00	.00	.00
18	.00	e15	.00	67	33	76	1.0	.00	.00	.00	.00	.00
19	.00	e13	.00	60	37	60	.65	.00	.00	.00	.00	.00
20	.00	e12	.00	47	54	54	.12	.00	.00	.00	.00	.00
21	7.1	e11	.00	44	44	56	3.3	.00	.00	.00	.00	.00
22	17	e9.0	.00	38	32	46	10	.00	.00	.00	.00	.00
23	.00	e8.0	.00	43	30	49	9.1	.00	.00	.00	.00	.00
24	.00	e7.0	.00	37	28	40	9.6	.00	.00	.00	.00	.00
25	.00	e6.0	.00	49	25	37	3.6	.00	.00	.00	.00	.00
26	.00	e4.0	.00	45	32	38	.00	.00	.00	.00	.00	.00
27	159	e3.0	.00	43	38	36	.00	.00	.00	.00	.00	.00
28	641	e2.0	.00	33	62	32	.00	.00	.00	.00	.00	.00
29	297	e1.6	.00	40	---	25	.00	.00	.00	.00	.00	.00
30	167	.00	.00	39	---	22	.00	.00	.00	.00	.00	.00
31	e400	---	.00	40	---	16	---	.00	---	.00	.00	---
TOTAL	1688.10	1049.60	0.00	894.40	867	5557	155.77	0.00	0.00	0.00	0.00	8.22
MEAN	54.5	35.0	.000	28.9	31.0	179	5.19	.000	.000	.000	.000	.27
MAX	641	219	.00	67	62	683	15	.00	.00	.00	.00	7.8
MIN	.00	.00	.00	.00	14	16	.00	.00	.00	.00	.00	.00
AC-FT	3350	2080	.00	1770	1720	11020	309	.00	.00	.00	.00	16
CFSM	.05	.03	.00	.03	.03	.16	.00	.00	.00	.00	.00	.00
IN.	.06	.03	.00	.03	.03	.18	.01	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2001, BY WATER YEAR (WY)

	MEAN	22.4	20.1	70.1	114	204	214	35.0	6.73	1.70	2.92	14.9	19.0
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	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
(WY)	1967	1967	1969	1970	1967	1967	1967	1966	1966	1966	1966	1966	

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1966 - 2001

ANNUAL TOTAL	4963.20	10220.09	
ANNUAL MEAN	13.6	28.0	60.0
HIGHEST ANNUAL MEAN			232
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	641	Oct 28	8410
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
ANNUAL RUNOFF (AC-FT)	9840	20270	43430
ANNUAL RUNOFF (CFSM)	.012	.025	.053
ANNUAL RUNOFF (INCHES)	.16	.34	.72
10 PERCENT EXCEEDS	38	55	70
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated



## BILL WILLIAMS RIVER BASIN

## 09426000 BILL WILLIAMS RIVER BELOW ALAMO DAM, AZ

**LOCATION.**--Lat 34° 13'51", long 113° 36'29", in SE1/4SE1/4 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.

1969-2001: 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 high-water control.

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 272 ft<sup>3</sup>/s June 12; no flow on May 9, 30, 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	25	25	25	25	24	25	.60	9.1	25	52	50
2	23	25	25	25	25	24	25	.42	23	25	52	50
3	24	25	24	25	16	24	25	.31	25	25	52	50
4	24	25	24	25	15	25	25	.29	25	25	52	50
5	24	25	24	25	23	24	25	.25	25	25	52	50
6	24	25	24	25	23	25	25	.19	25	25	52	50
7	24	25	23	25	23	25	25	.22	25	25	52	50
8	24	25	24	25	23	25	25	.19	25	25	52	50
9	24	25	25	25	23	25	25	.00	25	25	52	50
10	25	25	25	25	23	25	25	.06	25	34	52	50
11	25	25	25	25	23	25	25	.10	164	43	52	50
12	25	25	25	25	23	25	25	.20	272	43	52	50
13	25	25	25	25	23	25	25	.31	256	43	52	50
14	25	25	25	25	23	25	25	.43	252	43	52	50
15	25	25	25	25	23	25	25	.43	117	43	52	50
16	25	25	25	25	23	25	25	.24	34	43	52	50
17	25	25	25	25	23	25	25	.10	31	43	52	50
18	25	25	25	25	23	25	25	.17	28	49	52	50
19	25	25	25	25	23	25	25	.18	25	52	52	50
20	25	25	25	25	23	19	25	.15	25	52	52	50
21	25	25	25	25	23	25	25	.14	25	52	51	50
22	25	25	25	25	24	25	25	.23	25	52	51	50
23	25	25	25	25	23	25	25	.08	25	52	51	50
24	25	25	25	25	24	25	25	.13	25	52	51	50
25	25	25	25	25	24	25	25	.11	25	52	51	50
26	24	25	25	25	24	25	25	.10	25	52	51	50
27	24	25	25	25	24	25	13	.07	25	52	51	50
28	24	25	25	25	24	25	2.7	.06	25	52	51	50
29	25	25	25	25	---	25	1.3	.02	25	52	51	50
30	25	25	25	25	---	25	.90	.00	25	52	51	50
31	25	---	25	25	---	25	---	.00	---	52	50	---
TOTAL	761	750	768	775	639	765	667.90	5.78	1686.1	1285	1600	1500
MEAN	24.5	25.0	24.8	25.0	22.8	24.7	22.3	.19	56.2	41.5	51.6	50.0
MAX	25	25	25	25	25	25	25	.60	272	52	52	50
MIN	23	25	23	25	15	19	.90	.00	9.1	25	50	50
AC-FT	1510	1490	1520	1540	1270	1520	1320	11	3340	2550	3170	2980
(*)	94200	92800	91100	90200	89900	127100	124800	122600	117000	112400	107900	103800
(**)	+4900	-1400	-1700	-900	-300	+37200	-2300	-2200	-5600	-4600	-4500	-4100

CAL YR 2000 TOTAL 8552.3 MEAN 23.4 MAX 25 MIN 7.3 AC-FT 16960 (\*\*)-12200  
WTR YR 2001 TOTAL 11202.78 MEAN 30.7 MAX 272 MIN .00 AC-FT 22220 (\*\*)+14500

(\*) Contents, in acre-feet, at end of month in Alamo Lake, furnished by Corps of Engineers.  
(\*\*) Change in contents, in acre-feet.

**BILL WILLIAMS RIVER BASIN**

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**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, 4.0 mi west of Planet Wash, 4.0 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 TEMPERATURES:** Oct. 1974 to Sept. 1981.

**REMARKS.**--Streamflow ungaged.

**WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CONDUCTANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
		MAR 27...	JUN 19...											
MAR 27...	1000	7.4	1.6	752	6.8	73	7.9	1050	22.0	18.0	13	250	64.8	
JUN 19...	0910	.40	--	748	7.3	95	8.1	985	30.0	27.7	6	210	48.9	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)
	MAR 27...	JUN 19...												
MAR 27...	21.3	6.86	3	110	238	290	128	1.5	33.4	86.3	.83	608	595	
JUN 19...	20.9	6.72	4	121	208	248	124	1.5	33.9	85.5	.80	590	566	
DATE		NITRO-GEN, AMMONIA + DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS WATER TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
	MAR 27...	JUN 19...												
MAR 27...	--	.16	--	--	--	--	<.060	--	E13k	<15	6.5	74.5	<.14	
JUN 19...	E.021	.15	<.050	E.004	<.060	<.020	<.060	E19	60	<15	6.2	62.8	<.10	
DATE		CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBAL-T, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)
	MAR 27...	JUN 19...												
MAR 27...	<.8	<13.0	<1.3	<10	<1.00	55.5	12.4	<.23	9.7	<2.40	<2.4	<.2	891	
JUN 19...	<.8	<13.0	<1.0	20	<1.00	65.7	E1.8	--	<50.0	<2.00	<2.0	<.2	796	

## BILL WILLIAMS RIVER BASIN

09426600 BILL WILLIAMS RIVER AT MINERAL WASH, NEAR PLANET, AZ

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
MAR 27...	<8.0
JUN 19...	12.0

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Value qualifier codes used in this report:

k -- Counts outside acceptable range

**BILL WILLIAMS RIVER BASIN**

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**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 (U.S. Bureau of Reclamation bench mark).

**REMARKS.**--Estimated daily discharge for entire water year. 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, 6,800 ft<sup>3</sup>/s Mar. 17-26, 1993; 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, 67 ft<sup>3</sup>/s Aug. 13; minimum daily, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	e.00	e5.6	e8.1	e9.2	e7.9	e6.0	.43	.00	.00	.00	.00
2	e.00	e.20	e5.7	e8.2	e9.1	e7.9	e5.9	.31	.00	.00	.00	.00
3	e.00	e.50	e5.8	e8.3	e9.1	e7.8	e5.8	.24	.00	.00	.00	.00
4	e.00	e.70	e5.9	e8.4	e9.0	e7.8	e5.7	.19	.00	.00	.00	.00
5	e.00	e1.0	e5.9	e8.4	e8.9	e7.8	e5.7	.18	.00	.00	.00	.00
6	e.00	e1.2	e6.0	e8.5	e8.8	e7.8	e5.6	.10	.00	.00	.00	.00
7	e.00	e1.4	e6.1	e8.6	e8.7	e7.8	e5.5	.00	.00	.00	.00	.00
8	e.00	e1.7	e6.2	e8.7	e8.6	e7.7	e5.4	.00	.00	.00	.00	.00
9	e.00	e1.9	e6.3	e8.8	e8.5	e7.7	e5.3	.00	.00	.00	.00	.00
10	e.00	e2.1	e6.4	e8.8	e8.5	e7.7	5.2	.00	.00	.00	.00	.00
11	e.00	e2.4	e6.4	e8.9	e8.4	e7.7	4.8	.00	.00	.00	.00	.00
12	e.00	e2.6	e6.5	e8.9	e8.3	e7.7	4.6	.00	.00	.00	.00	.00
13	e.00	e2.9	e6.6	e9.0	e8.2	e7.6	4.2	.00	.00	.00	67	.00
14	e.00	e3.1	e6.7	e9.0	e8.2	e7.6	4.0	.00	.00	.00	.02	25
15	e.00	e3.3	e6.8	e9.0	e8.2	e7.5	3.6	.00	.00	.00	.00	.00
16	e.00	e3.6	e6.9	e9.0	e8.1	e7.5	3.3	.00	.00	.00	.00	.00
17	e.00	e3.8	e6.9	e9.0	e8.1	e7.4	3.0	.00	.00	.00	.00	.00
18	e.00	e4.0	e7.0	e9.1	e8.1	e7.3	2.6	.00	.00	.00	.00	.00
19	e.00	e4.3	e7.1	e9.1	e8.1	e7.2	2.2	.00	.00	.00	.00	.00
20	e.00	e4.5	e7.2	e9.1	e8.1	e7.1	1.9	.00	.00	.00	.00	.00
21	e.00	e4.8	e7.3	e9.1	e8.0	e7.0	2.0	.00	.00	.00	.00	.00
22	e.00	e4.8	e7.4	e9.1	e8.0	e6.9	2.0	.00	.00	.00	.00	.00
23	e.00	e4.9	e7.4	e9.2	e8.0	e6.8	2.0	.00	.00	.00	.00	.00
24	e.00	e5.0	e7.5	e9.2	e8.0	e6.7	1.7	.00	.00	.00	.00	.00
25	e.00	e5.1	e7.6	e9.2	e8.0	e6.6	1.4	.00	.00	.00	.00	.00
26	e.00	e5.2	e7.7	e9.2	e7.9	e6.6	1.2	.00	.00	.00	.00	.00
27	e.00	e5.3	e7.7	e9.2	e7.9	e6.5	.85	.00	.00	.00	.00	.00
28	e.00	e5.3	e7.8	e9.3	e7.9	e6.4	.74	.00	.00	.00	.00	.00
29	e.00	e5.4	e7.9	e9.3	---	e6.3	.59	.00	.00	.00	.00	.00
30	e.00	e5.5	e8.0	e9.3	---	e6.2	.46	.00	.00	.00	.00	.00
31	e.00	---	e8.1	e9.3	---	e6.1	---	.00	---	.00	.00	---
TOTAL	0.00	96.50	212.4	276.3	233.9	224.6	103.24	1.45	0.00	0.00	67.02	25.00
MEAN	.000	3.22	6.85	8.91	8.35	7.25	3.44	.047	.000	.000	2.16	.83
MAX	.00	5.5	8.1	9.3	9.2	7.9	6.0	.43	.00	.00	67	25
MIN	.00	.00	5.6	8.1	7.9	6.1	.46	.00	.00	.00	.00	.00
AC-FT	.00	191	421	548	464	445	205	2.9	.00	.00	133	50
CAL YR 2000	TOTAL 1310.90	MEAN 3.58	MAX 9.0	MIN .00	AC-FT 2600							
WTR YR 2001	TOTAL 1240.41	MEAN 3.40	MAX 67	MIN .00	AC-FT 2460							

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, 6,704 acre-ft, May 28, 2001, June 3, 2001; no diversion on many days each year.

STREAMFLOW, DAILY, IN ACRE FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4276	1607	6024	6674	5792	6090	6690	5514	5891	4245	1567	4721
2	1386	1587	6030	5913	6149	5624	6197	4403	2003	2559	1567	4721
3	1449	1626	6664	6097	6664	5610	6114	5494	6704	2836	1567	4126
4	1437	1924	6026	6084	6664	5562	6235	5534	4225	3451	1567	1567
5	1442	5534	5814	6183	5792	5569	6172	5474	4443	3055	4721	1765
6	1440	2241	5911	6684	5693	5365	6690	5534	6268	2836	1369	1567
7	1270	5812	5990	6686	6069	5490	6689	5474	5653	3531	1170	1567
8	4373	5494	6169	5925	5831	6105	6692	4364	6129	4860	1170	1567
9	1439	5494	6149	6011	5931	6121	5461	4383	6327	2420	1269	4701
10	1728	5494	6664	5415	6050	6111	5500	4681	4502	2023	1567	1567
11	1735	5514	5911	6322	6664	6702	5500	4522	5177	2460	1567	1369
12	1160	5514	6169	6176	6050	6064	5496	4899	5177	2440	4721	615
13	1158	5494	6069	6308	6069	5986	5497	5534	5375	2440	1567	.00
14	1159	5494	6010	6699	6129	3854	5501	4364	6684	2360	1567	.00
15	3473	4998	6089	6094	5098	6188	5498	4364	6030	3134	1567	.00
16	1115	4998	6089	6215	6188	6109	5503	5534	5712	2301	1567	615
17	1158	4959	6684	6170	6149	4101	5506	4344	5911	2063	1587	1230
18	1158	5117	5911	6007	6625	6702	5505	5415	3868	2479	1587	1230
19	1159	5236	5990	6179	6248	4101	5506	5534	2360	2479	3848	1329
20	1160	5038	5613	6009	6149	4106	5505	5514	2360	2479	1567	1567
21	1161	5395	5613	6698	6069	4945	5502	5534	2261	2479	1567	1587
22	3484	6069	5613	6097	6089	5996	5502	4344	2241	4026	1884	1825
23	1163	6684	6069	6180	6030	6691	5251	4642	2836	2043	1567	4284
24	1164	6188	6684	6066	6089	5280	4842	5138	3193	2479	1587	1646
25	1155	6188	6684	6144	6684	6375	5298	5137	2698	2241	1567	1250
26	1269	6684	5911	6217	6089	5999	4929	6327	2519	2261	4721	1706
27	1512	6169	5970	6215	6010	5995	4929	6545	2797	2182	1567	1587
28	1605	5792	5990	6683	6188	5834	4379	6704	2678	2182	1567	1607
29	4545	5891	5950	6158	---	6087	4360	6307	2737	4721	1567	1607
30	1591	6010	5990	5684	---	6450	4457	6248	2936	1567	1567	2321
31	1594	---	6664	5448	---	5681	---	6030	---	1567	1567	---
TOTAL	54918	150245	189114	191441	171252	176893	166906	163835	127695	84199	59407	55244.00
MEAN	1772	5008	6100	6176	6116	5706	5564	5285	4256	2716	1916	1841
MAX	4545	6684	6684	6699	6684	6702	6692	6704	6704	4860	4721	4721
MIN	1115	1587	5613	5415	5098	3854	4360	4344	2003	1567	1170	.00

CAL YR 2000 TOTAL 1420750 MEAN 3882 MAX 6684 MIN 548  
WTR YR 2001 TOTAL 1591149.00 MEAN 4359 MAX 6704 MIN .00



**COLORADO RIVER MAIN STEM**

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**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, 610,600 acre-ft Oct. 28, elevation, 450.10 ft, affected by wind; minimum storage, 536,200 acre-ft Nov. 29, elevation, 446.18 ft.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	565400	596400	548300	549400	557700	607600	585100	594400	592700	591900	582700	578300
2	566000	602800	550400	554000	552600	608600	584200	594400	589900	590900	586500	571300
3	566900	603000	549500	558100	548500	606600	584600	597400	587600	588400	583800	561700
4	567500	600800	548100	568400	545800	605600	582700	595800	585500	588200	581000	557700
5	572000	593700	547200	572800	543200	605200	586500	595400	582500	586100	576400	554300
6	572400	591300	544700	573500	541300	606600	584600	592900	574300	586500	573200	561100
7	572600	585300	550300	576000	541300	610000	581300	588000	580400	584000	570300	563700
8	567500	580200	549200	577000	547200	609400	579800	587000	577000	582100	569400	563400
9	564300	581500	550100	583000	547600	609800	578500	586500	572800	584000	576400	555600
10	560300	584400	549000	584800	545900	609600	577200	593900	569700	586100	581900	557000
11	557000	585900	548100	589100	542700	607000	574500	595400	565200	586500	582300	555500
12	561900	578700	549000	593900	542200	598400	582300	594600	562000	594600	576600	557700
13	561300	572600	547000	595800	542700	594600	581300	592500	562000	592900	577500	565600
14	560500	571400	553400	596200	544100	594600	584600	590100	564900	592700	581100	568800
15	557700	569700	554100	595800	554100	600000	587600	587200	563200	591900	585500	569700
16	558800	568200	551700	590900	557300	599000	588900	580800	560000	588900	591500	567100
17	561500	564100	552500	593500	559600	598600	590300	584800	556600	586300	591900	564500
18	565000	558700	550600	595000	557200	598400	589100	580400	556400	580600	591100	563700
19	572400	550400	549700	595000	554500	600400	594600	575100	560500	585100	585900	562200
20	579000	552600	547000	591900	556000	594100	592500	574700	566400	584900	585900	566600
21	582100	554700	549200	585900	558800	584200	592500	573500	581100	584900	580400	566900
22	586600	555500	556800	582300	567300	583000	591700	572600	585500	579800	580600	565600
23	590700	559200	554900	579000	568100	581500	591300	571300	585500	578700	582800	561700
24	599800	552500	554700	574500	567700	580200	595800	579800	583400	577300	582700	561900
25	604800	548500	549900	576000	569400	578500	598200	586100	584200	577700	580200	565800
26	606400	545400	545000	574300	577300	577700	608000	581500	586600	584900	573400	568400
27	609200	544000	539800	571100	587800	576600	606400	583800	590300	584900	571800	571600
28	610600	541100	540500	566700	598600	577700	603400	583800	597400	584000	574300	572200
29	603000	536200	548500	562000	---	585900	602400	584800	597200	577300	576200	572200
30	595600	544000	551000	558700	---	586100	598000	585900	594400	577200	581300	569600
31	594400	---	550300	557000	---	586300	---	593500	---	578500	585100	---
MAX	610600	603000	556800	596200	598600	610000	608000	597400	597400	594600	591900	578300
MIN	557000	536200	539800	549400	541300	576600	574500	571300	556400	577200	569400	554300
(**)	+25200	-50400	+6300	+6700	+41600	-12300	+11700	-4500	+900	-15900	+6600	-15500
CAL YR 2000	MAX 611800	MIN 498500	(**) +5500									
WTR YR 2001	MAX 610600	MIN 536200	(**) +400									

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

## 09427500 LAKE HAVASU NEAR PARKER DAM, AZ-CA--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	447.77	449.39	446.85	446.91	447.36	449.95	448.81	449.29	449.20	449.16	448.68	448.45
2	447.80	449.71	446.97	447.16	447.09	450.00	448.76	449.29	449.06	449.11	448.88	448.08
3	447.85	449.72	446.92	447.38	446.86	449.90	448.78	449.44	448.94	448.98	448.74	447.57
4	447.88	449.61	446.84	447.93	446.71	449.85	448.68	449.36	448.83	448.97	448.59	447.36
5	448.12	449.25	446.79	448.16	446.57	449.83	448.88	449.34	448.67	448.86	448.35	447.18
6	448.14	449.13	446.65	448.20	446.46	449.90	448.78	449.21	448.24	448.88	448.18	447.54
7	448.15	448.82	446.96	448.33	446.46	450.07	448.61	448.96	448.56	448.75	448.03	447.68
8	447.88	448.55	446.90	448.38	446.79	450.04	448.53	448.91	448.38	448.65	447.98	447.66
9	447.71	448.62	446.95	448.70	446.81	450.06	448.46	448.88	448.16	448.75	448.35	447.25
10	447.50	448.77	446.89	448.79	446.72	450.05	448.39	449.26	448.00	448.86	448.64	447.32
11	447.32	448.85	446.84	449.02	446.54	449.92	448.25	449.34	447.76	448.88	448.66	447.24
12	447.58	448.47	446.89	449.26	446.51	449.49	448.66	449.30	447.59	449.30	448.36	447.36
13	447.55	448.15	446.78	449.36	446.54	449.30	448.61	449.19	447.59	449.21	448.41	447.78
14	447.51	448.09	447.13	449.38	446.62	449.30	448.78	449.07	447.74	449.20	448.60	447.95
15	447.36	448.00	447.17	449.36	447.17	449.57	448.94	448.92	447.65	449.16	448.83	448.00
16	447.42	447.92	447.04	449.11	447.34	449.52	449.01	448.58	447.48	449.01	449.14	447.86
17	447.56	447.70	447.08	449.24	447.46	449.50	449.08	448.79	447.30	448.87	449.16	447.72
18	447.75	447.41	446.98	449.32	447.33	449.49	449.02	448.56	447.29	448.57	449.12	447.68
19	448.14	446.97	446.93	449.32	447.19	449.59	449.30	448.28	447.51	448.81	448.85	447.60
20	448.49	447.09	446.78	449.16	447.27	449.27	449.19	448.26	447.82	448.80	448.85	447.83
21	448.65	447.20	446.90	448.85	447.42	448.76	449.19	448.20	448.60	448.80	448.56	447.85
22	448.89	447.24	447.31	448.66	447.87	448.70	449.15	448.15	448.83	448.53	448.57	447.78
23	449.10	447.44	447.21	448.49	447.91	448.62	449.13	448.08	448.83	448.47	448.69	447.57
24	449.56	447.08	447.20	448.25	447.89	448.55	449.36	448.53	448.72	448.40	448.68	447.58
25	449.81	446.86	446.94	448.33	447.98	448.46	449.48	448.86	448.76	448.42	448.55	447.79
26	449.89	446.69	446.67	448.24	448.40	448.42	449.97	448.62	448.89	448.80	448.19	447.93
27	450.03	446.61	446.38	448.07	448.95	448.36	449.89	448.74	449.08	448.80	448.11	448.10
28	450.10	446.45	446.42	447.84	449.50	448.42	449.74	448.74	449.44	448.75	448.24	448.13
29	449.72	446.18	446.86	447.59	---	448.85	449.69	448.79	449.43	448.40	448.34	448.13
30	449.35	446.61	447.00	447.41	---	448.86	449.47	448.85	449.29	448.39	448.61	447.99
31	449.29	---	446.96	447.32	---	448.87	---	449.24	---	448.46	448.81	---
MAX	450.10	449.72	447.31	449.38	449.50	450.07	449.97	449.44	449.44	449.30	449.16	448.45
MIN	447.32	446.18	446.38	446.91	446.46	448.36	448.25	448.08	447.29	448.39	447.98	447.18
WTR YR 2001	MAX	450.10	MIN	446.18								

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**LOCATION.**--Lat 34° 17' 44", long 114° 08' 22", in NW1/4NW1/4 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.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1313: 1941(M).

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, 16,800 ft<sup>3</sup>/s July 7; minimum daily, 2,940 ft<sup>3</sup>/s Dec. 22.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11000	8240	7550	6580	4690	3310	13700	14400	13800	14900	13600	12600
2	11000	5750	7560	3980	7620	5660	14100	14200	14100	14300	11600	11600
3	10500	7740	7040	5150	8000	6180	14100	10900	14000	16200	13900	12000
4	11000	7670	8060	3170	8020	6150	14600	14500	14300	14300	13700	11500
5	8480	8740	8040	4270	8470	7170	11900	14600	14900	13600	12600	12100
6	10500	8610	8060	5370	9420	8490	14600	14600	15800	15900	13600	9460
7	11000	8220	4690	4850	9150	7180	14700	14700	11400	16800	14700	12000
8	11000	7680	7590	5850	6070	7050	14600	14800	13900	14900	13000	13100
9	10900	5710	7090	4030	9430	6690	14700	14600	15000	14800	10100	13600
10	11000	8220	7610	5450	9820	8500	14700	10900	15000	14800	12000	11000
11	10400	8170	8070	4430	9280	8950	15100	15400	14900	15500	13000	13200
12	7420	8620	7110	4390	9430	11400	11500	15600	15000	11100	13100	11500
13	10500	8130	8040	5330	8940	11400	15200	15200	14600	15100	11000	7790
14	11000	7150	4310	5510	9440	10700	14700	14900	12300	14900	12000	11000
15	10500	7260	6520	6030	6580	8520	14700	14800	15100	14800	11500	12000
16	9900	6180	7500	7770	8990	12100	14700	15500	15400	15500	9400	11500
17	9370	8140	7010	4340	8450	11700	14300	12200	15500	15900	12000	11500
18	8810	8150	6980	4200	9490	12100	14800	15200	16000	16400	12000	11000
19	6800	9100	6510	4740	9390	12600	11200	15600	16100	13000	12000	11400
20	9300	5280	6470	6300	9470	13700	14800	14300	16100	16100	11000	8990
21	9810	7080	5510	7230	9950	14700	14900	15100	11900	15400	13000	11000
22	9770	7150	2940	6830	7560	11400	14000	14700	15900	16100	11200	7590
23	9250	4670	7430	6330	11400	13600	14800	14000	16700	14700	10400	10600
24	7170	7570	6020	7290	11300	13500	13500	11500	15700	15600	12000	10400
25	7080	8050	7380	4620	9920	13900	13900	12800	14800	15200	13500	9110
26	7180	7480	7590	5810	7530	14100	10800	15700	14700	11500	12600	9280
27	6630	7540	8540	6230	5540	14400	14600	12900	15300	15100	12100	8610
28	7210	7520	6030	6740	4780	13600	15000	13900	12400	15300	10900	9830
29	8140	8110	3120	7230	---	10400	13600	13500	15200	15700	11500	9930
30	8810	5170	5030	7270	---	13500	14900	13900	16200	15200	9960	9930
31	8790	---	6500	6260	---	13600	---	11200	---	15600	10500	---
TOTAL	290220	223100	207900	173580	238130	326250	422700	436100	442000	464200	373460	325120
MEAN												

## 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 water year 2000.

REMARKS.--Prior to Oct. 1968, published as 09428000.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3 (00902)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
NOV 29...	0945	4690	1.7	762	10.2	98	8.1	900	18.0	13.3	150	--	280
MAR 27...	1320	18400	2.5	748	8.9	95	8.2	915	26.0	17.5	150	--	280
JUN 19...	1215	19600	2.3	752	7.3	88	8.2	871	34.0	24.0	150	--	280
AUG 29...	0920	10700	.9	752	6.9	85	8.1	910	33.0	24.9	150	150	280
DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	BICAR- BONATE DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 29...	70.0	69.0	25.0	24.0	4.00	2	80.0	132	161	.0	67.0	.3	220
MAR 27...	71.0	70.0	25.0	25.0	4.00	2	80.0	133	162	--	66.0	.3	230
JUN 19...	72.0	71.0	24.0	24.0	4.40	2	79.0	131	155	--	67.0	.3	220
AUG 29...	69.0	70.0	26.0	26.0	4.20	2	85.0	131	157	.0	69.0	.3	220
DATE	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV 29...	4	.79	583	546	<.20	.02	.03	.2	--	--	--	<.020	<5
MAR 27...	3	.81	594	556	.29	.01	.01	.3	.28	.56	2.5	<.020	10
JUN 19...	5	.78	575	543	.22	.02	.03	.2	.20	.43	1.9	<.020	11
AUG 29...	3	.79	584	551	<.20	.03	.04	.2	--	--	--	<.020	9
DATE	E COLI, MTEC MF WATER (COLS/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS/ 100 ML) (31625)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
NOV 29...	--	E2k	<1.00	<1.0	<1.0	2	93.0	99.0	<1.00	<1.00	110	110	<.50
MAR 27...	2k	<1	<1.00	<1.0	1.4	2	94.0	95.0	<1.00	<1.00	110	110	<.50
JUN 19...	40	6k	<1.00	<1.0	1.3	1	98.0	99.0	<1.00	<1.00	110	110	<.50
AUG 29...	E7k	E4k	<1.00	<1.0	1.3	2	99.0	100	<1.00	<1.00	111	112	<.50

COLORADO RIVER MAIN STEM

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09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
NOV 29...	<.50	<1.0	<1	<2.0	<2.0	<2	50	<2.00	<2	<1.0	6	<.10	<.10
MAR 27...	<.50	<1.0	<1	<2.0	<2.0	<2	50	<2.00	<2	<1.0	5	<.10	<.10
JUN 19...	<.50	<1.0	<1	<2.0	<2.0	<2	100	<2.00	<2	<1.0	8	<.10	E.10
AUG 29...	<.50	<1.0	<1	<2.0	<2.0	<2	40	<2.00	<2	<1.0	8	<.10	<.10

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL RECOV- ERABLE (UG/L AS TL) (01059)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
NOV 29...	1.00	<1	2.0	2.0	<1.0	<1.00	910	<2.00	<2.0	<2	<2
MAR 27...	<1.00	<1	2.1	2.2	<1.0	<1.00	950	<2.00	<2.0	<2	<2
JUN 19...	<1.00	<1	1.4	1.4	<1.0	<1.00	940	<2.00	<2.0	<2	<2
AUG 29...	<1.00	1	1.1	1.5	<1.0	<1.00	980	<2.00	<2.0	<2	<2

Remark codes used in this report:

< -- Less than

E -- Estimated value

Value qualifier codes used in this report:

k -- Counts outside acceptable range



## COLORADO RIVER MAIN STEM

## 09427520 COLORADO RIVER BELOW PARKER DAM, AZ-CA--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
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MAR 27...	1315	2	<.02	<.030	<.1	<.20	<.01	<.02	<.020	<3	<.5	<1.00	<.50
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DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
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MAR 27...	<1.0	<2.0	<2	<2.00	<1.0	<1.00	<2
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Remark codes used in this report:

< -- Less than

**DIVERSIONS AND RETURN FLOWS BETWEEN PARKER DAM AND PALO VERDE DAM**

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**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.**--No estimated daily discharges. Records good. 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; three of these are equipped with water-stage recorders.

**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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	710	505	539	30	399	352	967	1040	1140	1230	1200	1010
2	715	558	509	13	415	342	888	1090	1190	1210	1200	982
3	789	565	408	.00	385	334	924	1180	1180	1170	1180	964
4	815	521	427	.00	315	331	1000	1220	1170	1150	1120	982
5	791	496	504	.00	386	431	1090	1130	1160	1140	1160	1030
6	759	470	501	.00	511	397	1120	995	1210	1180	1260	1080
7	751	530	501	.00	587	261	1020	940	1260	1180	1350	1100
8	747	530	499	.00	699	210	982	1030	1270	1140	1370	1060
9	733	530	538	.00	727	157	961	1200	1290	1120	1370	978
10	712	556	499	.00	726	161	989	1280	1290	1120	1320	926
11	692	522	480	.00	729	144	1110	1280	1300	1170	1260	877
12	688	373	512	.00	732	201	1190	1220	1300	1210	1220	897
13	698	348	439	.00	775	264	1150	1230	1300	1240	1190	956
14	610	395	235	.00	763	318	1060	1250	1350	1270	1170	928
15	584	420	285	.00	779	342	1000	1280	1340	1250	1080	890
16	585	446	304	.00	760	345	925	1300	1330	1220	1080	860
17	587	455	295	.00	760	447	1010	1330	1310	1230	1060	906
18	541	436	296	7.5	802	485	1050	1320	1260	1220	1050	955
19	542	428	301	345	841	550	1050	1280	1230	1240	1050	906
20	537	471	312	350	809	648	1070	1250	1240	1220	1140	822
21	511	513	518	344	716	796	1030	1240	1290	1200	1160	759
22	488	496	689	344	747	824	947	1250	1360	1160	1250	801
23	464	431	666	377	747	784	905	1210	1380	1110	1230	787
24	407	410	486	481	713	740	898	1220	1300	1080	1200	738
25	457	401	535	520	566	723	924	1190	1190	1140	1150	657
26	424	359	562	484	527	761	874	1150	1160	953	1080	741
27	424	358	664	449	384	795	894	1140	1150	1260	1100	736
28	412	406	697	390	305	765	908	1090	1240	1260	1090	811
29	357	482	694	392	---	826	936	1110	1290	1220	1060	816
30	353	518	596	382	---	924	1000	1130	1260	1140	1060	711
31	500	---	284	371	---	977	---	1130	---	1160	1030	---
TOTAL	18383	13929	14775	5279.50	17605	15635	29872	36705	37740	36593	36240	26666
MEAN	593	464	477	170	629	504	996	1184	1258	1180	1169	889
MAX	815	565	697	520	841	977	1190	1330	1380	1270	1370	1100
MIN	353	348	235	.00	305	144	874	940	1140	953	1030	657
AC-FT	36460	27630	29310	10470	34920	31010	59250	72800	74860	72580	71880	52890
(*)	19500	16420	17150	11840	15390	15040	18310	22640	25970	27010	26470	24520
CAL YR 2000	TOTAL 313073.00	MEAN 855	MAX 1450	MIN .00	AC-FT 621000	(*)	235900					
WTR YR 2001	TOTAL 289422.50	MEAN 793	MAX 1380	MIN .00	AC-FT 574100	(*)	240300					

(\*) Return surface flow, in acre-feet, to the Colorado River.

## 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. 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; 5 of these are equipped with water stage recorder and Parshall flume, 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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1350	980	864	.00	793	299	1270	1520	2130	1870	2290	1650
2	1320	933	692	.00	863	350	1390	1690	2060	1990	2250	1570
3	1410	926	531	.00	927	344	1310	1590	1920	2070	2130	1560
4	1570	913	733	.00	826	337	1460	1580	1960	2050	2020	1830
5	1560	696	689	.00	1120	531	1530	1410	1890	2180	1910	1740
6	1530	911	727	.00	1350	478	1500	1160	1960	1850	1940	1680
7	1160	787	791	.00	1280	142	1630	1400	2120	1480	1980	1660
8	942	851	603	.00	1250	149	1380	1530	2130	1150	2040	1560
9	1220	871	610	.00	1320	160	1730	1720	2110	1390	2080	1490
10	1280	837	441	113	1250	189	1750	1760	2060	1610	2160	1620
11	1370	645	631	151	959	207	1730	1810	2190	1700	2050	1730
12	1340	495	669	201	925	409	1710	1850	2290	1840	1720	1840
13	1270	732	622	227	936	565	1800	1710	2320	1960	1520	1950
14	1100	649	784	338	987	680	1430	1890	2270	1990	1460	1760
15	861	867	903	358	1050	688	856	1910	2220	1900	1480	1410
16	1080	1010	838	472	1100	701	1340	1990	2070	2270	1690	1290
17	1050	1010	718	395	1040	604	1720	1900	1770	2260	1570	1490
18	1090	911	910	443	1090	561	1820	1940	2080	2200	1250	1600
19	1150	842	1000	473	1090	810	1760	1930	2250	2210	1600	1710
20	1130	970	1130	344	1040	1050	1630	1670	2280	2200	1910	1590
21	961	974	1160	334	1170	1090	1420	1800	2170	1970	1980	1570
22	803	855	933	561	1210	1160	954	1780	2100	1680	2060	1230
23	911	588	687	766	1350	1210	1250	1890	2100	1930	1980	1030
24	907	670	433	789	1240	1090	1380	1950	1850	2030	1930	1250
25	891	652	263	851	1170	1090	1710	1860	2010	2030	1800	1240
26	968	535	1120	722	824	1180	1710	1870	2080	2000	1410	1260
27	839	771	1650	617	360	1620	1700	1690	2130	1990	1830	1480
28	622	837	1730	490	334	1500	1530	1750	2120	2070	1820	1350
29	516	773	1440	430	---	1350	1290	1770	1980	1940	1810	1150
30	852	870	106	476	---	1330	1400	1720	1820	2120	1930	991
31	875	---	.00	623	---	1400	---	1900	---	2160	1950	---
TOTAL	33928	24361	24408.00	10174.00	28854	23274	45090	53940	62440	60090	57550	45281
MEAN	1094	812	787	328	1030	751	1503	1740	2081	1938	1856	1509
MAX	1570	1010	1730	851	1350	1620	1820	1990	2320	2270	2290	1950
MIN	516	495	.00	.00	334	142	856	1160	1770	1150	1250	991
AC-FT	67300	48320	48410	20180	57230	46160	89440	107000	123800	119200	114200	89810
(*)	43630	37510	35660	25030	28540	29640	34960	39820	39960	41070	47040	47050
CAL YR 2000	TOTAL 495516.00	MEAN 1354	MAX 2250	MIN .00	AC-FT 982900	(*)	470800					
WTR YR 2001	TOTAL 469390.00	MEAN 1286	MAX 2320	MIN .00	AC-FT 931000	(*)	449900					

(\*) Return flow, in acre-feet, to the Colorado River.

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**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 11.0 mi upstream from Ehrenberg, AZ.

**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.

**REMARKS.**--No estimated daily discharges. Records fair. Many diversions above station for irrigation, municipal, and industrial uses. Flow regulated by Lake Mead, Lake Mohave, and Lake Havasu.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum daily discharge, 42,300 ft<sup>3</sup>/s June 30, 1983.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 15,100 ft<sup>3</sup>/s Apr. 24, gage height, 9.73 ft; minimum daily, 1,770 ft<sup>3</sup>/s Mar. 2.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9010	7210	4610	6430	4890	3990	10800	11300	7370	12000	10800	7950
2	8990	6840	6260	6670	4380	1770	10800	10700	9830	10700	9540	9620
3	8940	5090	6590	4870	6020	3870	10500	10700	9720	11300	8640	9190
4	8390	5990	6170	4960	6680	3850	11500	8380	9830	10800	10600	9250
5	8240	6490	6860	2930	6620	4510	10500	11300	10400	9640	10300	9130
6	7230	7230	6820	4090	6650	4420	10300	11600	11100	11400	9560	9520
7	8630	7190	6250	4900	7280	7000	11200	11100	10800	13200	10500	7590
8	9270	6840	4160	3670	6760	4680	12000	12000	7540	13000	9650	10200
9	9180	6390	6710	5350	5060	5260	11700	11200	10100	11400	9760	11500
10	9080	4810	6170	3640	7320	5070	11600	9600	10700	11700	7020	11400
11	9020	6930	6640	4770	8000	6390	11500	8630	10000	10900	8700	10400
12	7830	7230	6870	4020	7750	7070	11100	11600	10300	10800	9760	10900
13	7060	7440	6150	4050	7490	9380	9820	11900	10100	8590	9770	10500
14	8790	7050	6460	4380	7400	8540	11300	10800	10300	11000	8830	6650
15	9060	5810	4190	4560	7030	8520	12300	11400	8740	10800	9050	7930
16	8540	5690	5550	5480	5110	7120	12100	10800	10700	10600	8720	8920
17	7420	5550	6550	5960	6880	9760	11700	11000	11300	11900	7330	8440
18	7360	6750	6040	3030	6660	9650	11100	9070	11400	11500	9100	8200
19	6950	7060	5920	3910	7390	9880	10500	11100	11800	11500	9220	7580
20	6040	6870	5370	4540	7570	9980	9220	11200	11200	9910	8810	8550
21	7660	4760	4940	5620	7780	11700	11600	10900	9960	12000	8800	6660
22	8210	5880	4370	6230	7520	10800	12000	11300	9280	12000	10900	8490
23	8280	6010	2810	5940	6360	10200	11600	10000	11900	12500	6450	9360
24	7560	4250	6250	5300	8890	10700	11200	9660	12200	10800	7910	9320
25	6190	6440	5630	5690	9100	11000	10900	8380	11800	11400	9220	7850
26	6070	7030	6070	4110	8700	11400	9710	10300	10800	11900	10800	6640
27	6150	6510	5540	5090	5970	11400	8340	10800	11000	8070	10200	6580
28	5920	6450	6050	5650	5030	11700	11800	9800	10200	11600	9460	6290
29	6400	6460	3890	6030	---	9620	11500	10100	9610	11500	8380	7410
30	7000	6270	4220	6450	---	8960	11500	9990	11400	11900	8590	7330
31	7440	---	5100	6380	---	10900	---	9530	---	11600	7220	---
TOTAL	241910	190520	175210	154700	192290	249090	331690	326140	311380	347910	283590	259350
MEAN	7804	6351	5652	4990	6868	8035	11060	10520	10380	112		

CAL	YR	2000	TOTAL	3133170	MEAN	8561	MAX	13400	MIN	2810	AC-FT	6215000
WTR	YR	2001	TOTAL	3063780	MEAN	8394	MAX	13200	MIN	1770	AC-FT	6077000

## 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 SW1/4NW1/4 sec. 30, T.6 S., R.21 W., Gila and Salt River meridian, Yuma County, Hydrologic Unit 15030104; the California end is in NW1/4SW1/4 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 1934-2000.**--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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8110	7390	7160	5310	6840	6720	10000	11700	9960	9950	11000	7920
2	9100	7710	6640	6270	6440	6110	10900	11800	8980	10600	10700	7150
3	9380	7610	6080	6880	6140	4950	11400	11800	8300	11200	10100	8680
4	9460	7040	6930	6790	5410	4590	11300	11100	9440	11000	9180	9280
5	9380	6250	7000	6290	6700	5130	11500	9650	10100	11100	8910	9390
6	8720	6820	7120	5380	7210	5280	11200	9210	10400	10600	9620	9350
7	8250	7070	7470	4020	7310	5620	10500	11400	10600	9580	9640	8910
8	8220	7460	7500	5080	7390	6370	10100	11400	10500	10400	9600	8020
9	9040	7720	6350	5060	7220	7270	11100	11000	9170	12000	10200	7490
10	9840	7300	5950	4600	6720	6090	11200	10900	8560	12500	9360	8900
11	9380	6540	7050	5070	6050	6150	11700	10800	10100	11400	8870	9110
12	9920	6250	6870	4670	7640	6850	12000	9940	10400	11000	8180	9470
13	9790	7370	7190	5060	8270	7460	11200	9270	10400	10400	8750	9380
14	8220	7690	7240	4640	8420	8470	11100	11000	10900	9870	9480	9490
15	8260	7800	6630	5030	8190	9590	11100	11000	10000	9260	9060	7820
16	9270	7510	5900	5460	7840	8990	11300	11100	9120	10700	9000	7450
17	9460	6930	5150	5020	7480	8500	12000	11100	8760	10700	8850	8390
18	8960	5860	6330	5540	6470	8550	12100	10900	10500	11000	8210	8960
19	8330	6340	6750	5920	7170	10300	12200	9460	10900	10900	8160	9080
20	7960	7310	6750	5110	7670	10800	11300	9640	10900	10900	8940	9010
21	7170	7690	6590	4470	8000	11100	10400	10500	11000	9940	9000	8660
22	7660	7000	5800	5600	8330	11000	9960	10600	11000	9540	8900	7460
23	8440	5850	5030	6480	8230	10500	11500	10800	9840	11000	9100	8130
24	8600	6840	4810	6360	7950	9860	11900	11100	9170	11700	8840	8460
25	8760	6430	4710	6370	7920	10300	11500	9940	11200	11700	8050	9280
26	7930	5740	6340	5740	9570	11000	11300	9160	11300	10900	7510	9360
27	6940	6760	6560	5390	10100	11200	11300	8900	11600	10500	8520	8730
28	6540	7410	6880	5090	9350	11500	10300	10300	11000	10300	8720	7910
29	6600	7250	6550	5780	---	11800	9460	10300	10300	9030	9260	7130
30	7010	7250	5500	6190	---	11300	11300	10500	9590	10400	8670	6780
31	7230	---	4660	6570	---	10300	---	10200	---	10600	8670	---
TOTAL	261930	210190	197490	171240	212030	263650	334120	326470	303990	330670	281050	255150
MEAN	8449	7006	6371	5524	7572	8505	11140	10530	10130	10670	9066	8505
MAX	9920	7800	7500	6880	10100	11800	12200	11800	11600	12500	11000	9490
MIN	6540	5740	4660	4020	5410	4590	9460	8900	8300	9030	7510	6780
AC-FT	519500	416900	391700	339700	420600	522900	662700	647600	603000	655900	557500	506100
(*)	7428	4653	6100	6601	6469	7101	4939	5882	6646	6917	6350	6725
(**)	922	833	861	861	598	1110	893	922	893	922	922	833

CAL YR 2000 TOTAL 3281960 MEAN 8967 MAX 12700 MIN 4040 AC-FT 6510000 (\*\*) 10440  
WTR YR 2001 TOTAL 3147980 MEAN 8625 MAX 12500 MIN 4020 AC-FT 6244000 (\*\*) 10570

(\*) Monthend contents, in acre-feet, for Senator Wash Reservoir.

(\*\*) Diversion, in acre-feet, to Mittry Lake (09522400)



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**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.

**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."

REMARKS.--No estimated daily discharges. Records good. 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 Mitrtrv Lake and monthend contents of Senator Wash Reservoir also are published with sta 09429490.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 30,200 ft<sup>3</sup>/s Aug. 18, 19, 1983; minimum daily, 27 ft<sup>3</sup>/s Dec. 15-18, 1969.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	380	380	380	564	400	430	463	430	430	1520	913	920
2	380	598	380	380	400	430	430	430	430	475	423	924
3	541	447	535	380	400	430	430	430	561	420	704	918
4	670	380	418	270	400	430	430	430	430	410	516	916
5	905	380	380	270	400	430	430	430	430	410	919	913
6	396	380	380	270	400	451	430	652	430	410	875	909
7	731	380	537	270	400	749	430	938	430	410	490	903
8	1260	380	649	270	400	1130	430	663	506	1770	499	762
9	827	380	447	270	400	1010	430	430	489	2370	1040	762
10	1800	380	380	270	400	430	430	430	480	2180	924	762
11	961	380	380	270	400	430	430	430	420	906	1540	1020
12	1710	380	380	270	430	400	430	430	420	653	1660	1450
13	2070	380	380	270	430	400	822	430	420	448	855	1300
14	854	380	380	270	430	400	1680	430	420	598	1230	1990
15	1580	380	380	270	430	400	2590	430	420	727	800	1240
16	724	380	380	270	430	400	505	430	420	411	934	1360
17	1050	380	380	270	430	400	430	430	702	410	1380	785
18	750	380	380	270	488	400	430	430	420	410	1320	756
19	602	380	380	270	521	430	430	430	420	410	1420	672
20	547	380	380	270	430	430	430	1520	420	410	901	670
21	435	380	380	270	430	430	430	1120	420	427	808	672
22	1850	380	380	270	430	430	579	1100	420	586	597	616
23	2410	380	380	380	430	430	612	1100	420	865	400	2070
24	2700	380	380	380	430	501	482	1180	490	1140	400	737
25	1860	380	380	380	909	1430	546	554	420	1700	400	1390
26	380	380	380	380	2250	611	430	698	732	495	400	1600
27	380	380	380	380	2970	430	430	1530	944	458	400	594
28	380	380	380	481	2530	430	430	940	437	1240	476	556
29	380	380	380	380	---	430	430	732	420	410	1040	559
30	380	380	380	380	---	865	430	430	584	410	573	679
31	380	---	380	380	---	543	---	430	---	700	703	---
TOTAL	30273	11685	12466	9975	18798	16540	17309	20467	14385	24189	25540	29405
MEAN	977	390	402	322	671	534	577	660	480	780	824	980
MAX	2700	598	649	564	2970	1430	2590	1530	944	2370	1660	2070
MIN	380	380	380	270	400	400	430	430	420	410	400	556
AC-FT	60050	23180	24730	19790	37290	32810	34330	40600	28530	47980	50660	58320
CAL YR 2000	TOTAL 208343		MEAN 569	MAX 2700	MIN 290							

**LOCATION.**--Lat 32°48'44", long 114°30'51", in SE1/4NE1/4 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

**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 bench mark).

**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, 3,660 ft<sup>3</sup>/s Oct. 24; minimum daily, 331 ft<sup>3</sup>/s Jan. 17, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	552	474	429	515	488	1060	466	455	495	848	764	842
2	537	448	423	570	479	582	468	451	478	733	594	874
3	533	543	425	555	461	548	467	442	469	441	542	900
4	577	556	477	541	473	521	464	439	479	424	652	896
5	1300	541	460	476	472	513	458	438	465	409	664	887
6	962	518	463	417	473	517	468	440	452	401	1140	887
7	914	500	478	366	473	659	473	620	442	392	682	905
8	1880	494	521	346	468	1650	474	673	435	853	508	724
9	1600	491	549	340	494	1830	472	485	459	1770	745	712
10	2900	487	527	340	512	753	481	472	447	1950	824	712
11	2220	416	518	338	494	583	481	461	447	905	1520	779
12	2390	354	515	341	482	551	482	451	435	568	1370	1370
13	2930	463	500	339	479	542	487	443	422	430	936	1260
14	1460	527	485	338	474	542	1280	429	410	463	1050	1620
15	2240	498	488	337	471	545	2170	417	405	437	987	1460
16	1510	479	475	334	468	552	914	418	400	512	725	1070
17	1760	470	480	331	467	558	520	416	414	429	1380	879
18	1310	463	469	331	481	568	511	410	454	419	1240	760
19	951	459	477	338	516	573	509	404	441	412	1210	605
20	824	455	471	335	554	572	503	770	429	406	991	610
21	925	451	475	334	541	567	496	1080	419	407	829	579
22	1890	452	466	341	536	598	492	1180	410	412	680	561
23	3100	448	472	388	536	607	501	876	404	484	527	1470
24	3660	441	478	423	525	628	516	888	400	730	511	1150
25	3210	444	472	444	569	1080	501	685	411	1150	499	1140
26	819	442	479	456	2570	1420	492	539	416	637	491	1600
27	566	438	487	467	3320	708	478	1310	713	472	487	761
28	533	438	484	475	3560	692	475	1130	526	877	483	548
29	502	435	485	518	---	686	468	1020	443	518	563	531
30	487	433	483	505	---	852	458	519	434	486	703	523
31	479	---	491	497	---	1070	---	504	---	490	568	---
TOTAL	45521	14058	14902	12676	21836	23127	17425	19265	13454	19865	24865	27615
MEAN	1468	469	481	409	780	746	581	621	448	641	802	920
MAX	3660	556	549	570	3560	1830	2170	1310	713	1950	1520	1620
MIN	479	354	423	331	461	513	458	404	400	392	483	523
AC-FT	90290	27880	29560	25140	43310	45870	34560	38210	26690	39400	49320	54770
CAL YR 2000	TOTAL 253338		MEAN 692	MAX 3660	MIN 326	AC-FT 502500						
WTR YR 2001	TOTAL 254609		MEAN 698	MAX 3660	MIN 331	AC-FT 505000						

## 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 28 .....	1715	3,380	7.65
Nov. 6 .....	2400	*4,380	*8.09

Minimum daily discharge, 13 ft<sup>3</sup>/s Oct. 1--2 and Oct. 7--9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	531	223	139	122	196	305	183	42	24	114	146
2	13	421	214	138	115	306	304	179	43	22	101	131
3	14	342	208	135	111	356	297	178	42	21	113	118
4	14	1150	205	133	106	359	295	178	40	21	119	108
5	14	1880	202	133	109	342	291	179	37	19	126	96
6	14	1800	196	132	117	316	300	180	36	19	109	87
7	13	2860	187	128	118	298	323	175	35	18	100	80
8	13	1920	185	127	121	297	331	169	30	21	90	71
9	13	1380	172	134	123	310	311	154	27	24	101	66
10	15	1080	169	139	127	324	292	143	25	70	83	61
11	17	1070	169	139	131	337	285	148	22	80	83	57
12	250	1250	168	140	133	351	274	149	19	66	90	55
13	1230	1070	166	139	135	333	268	147	17	55	159	56
14	749	858	164	139	137	299	259	153	16	49	172	102
15	459	725	165	137	141	282	245	156	16	49	265	158
16	323	646	163	137	146	270	234	151	15	48	620	167
17	257	579	161	137	154	263	226	145	15	46	470	167
18	220	512	158	135	157	261	221	139	14	43	509	164
19	194	449	155	133	156	255	219	138	15	50	374	156
20	168	402	153	131	152	243	205	134	17	55	305	140
21	147	363	153	130	152	230	206	127	18	74	280	128
22	130	333	150	128	153	220	223	119	19	72	269	113
23	518	308	149	128	157	228	245	111	19	68	224	103
24	1500	283	149	128	165	246	238	100	19	60	192	93
25	1240	268	147	128	173	266	223	92	19	43	178	86
26	823	259	147	126	182	265	210	86	20	39	164	79
27	612	251	146	123	189	283	202	80	21	43	145	73
28	1870	244	145	128	197	313	198	72	23	38	124	67
29	1170	239	144	132	---	321	191	63	22	55	128	63
30	905	233	142	129	---	326	185	54	24	72	e132	60
31	686	---	141	130	---	313	---	45	---	125	202	---
TOTAL	13604	23706	5196	4115	3979	9009	7606	4127	727	1489	6141	3051
MEAN	439	790	168	133	142	291	254	133	24.2	48.0	198	102
MAX	1870	2860	223	140	197	359	331	183	43	125	620	167
MIN	13	233	141	123	106	196	185	45	14	18	83	55
AC-FT	26980	47020	10310	8160	7890	17870	15090	8190	1440	2950	12180	6050
CFSM	.14	.25	.05	.04	.04	.09	.08	.04	.01	.01	.06	.03
IN.	.16	.28	.06	.05	.05	.10	.09	.05	.01	.02	.07	.04

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2001, BY WATER YEAR (WY)

MEAN	163	139	248	308	355	427	270	150	50.7	75.4	204	201
MAX	1667	1040	2485	4158	1752	1464	1138	977	298	366	1164	1507
(WY)	1973	1995	1979	1993	1993	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 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1932 - 2001
ANNUAL TOTAL	56915.8	82750	
ANNUAL MEAN	156	227	211
HIGHEST ANNUAL MEAN			746
LOWEST ANNUAL MEAN			43.1
HIGHEST DAILY MEAN	2860	2860	33100
LOWEST DAILY MEAN	5.7	13	1.7
ANNUAL SEVEN-DAY MINIMUM	6.1	14	2.0
ANNUAL RUNOFF (AC-FT)	112900	164100	152700
ANNUAL RUNOFF (CFSM)	.049	.071	.066
ANNUAL RUNOFF (INCHES)	.66	.96	.89
10 PERCENT EXCEEDS	290	361	454
50 PERCENT EXCEEDS	70	147	93
90 PERCENT EXCEEDS	13	23	23

e Estimated

## GILA RIVER BASIN

## 09432000 GILA RIVER BELOW BLUE CREEK NEAR VIRDEN, NM--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Oct. 1997 to June 2001 (discontinued).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO JUNE 2001

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST.	TUR-BID-ITY	BARO-METRIC PRES-SURE	OXYGEN, DIS-SOLVED	OXYGEN, (PER-CENT SATUR-ATION)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	SPE-CIFIC CON-DUCT-ANCE	TEMPER-ATURE AIR	TEMPER-ATURE WATER	HARD-NESS TOTAL	CALCIUM DIS-SOLVED
			CUBIC FEET PER SECOND (00061)	(NTU) (00076)	(MM OF HG) (00025)	(MG/L) (00300)	(MG/L) (00301)	(MG/L) (00400)	(US/CM) (00095)	(DEG C) (00020)	(DEG C) (00010)	(MG/L AS CAC03) (00900)	(MG/L AS CA) (00915)
DEC 28...	1220	9	146	5.4	665	10.5	101	8.3	365	12.5	7.5	130	38.0
MAR 27...	1240	9	283	27	657	8.6	102	8.2	268	26.0	16.1	86	26.0
JUN 05...	1055	9	37	2.6	660	8.2	107	8.2	387	30.5	21.1	120	37.0
05...	1105	7	37	2.7	--	--	--	8.2	387	--	--	120	37.0
DATE	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CAC03)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3)	CAR-BONATE WATER DIS IT (MG/L AS CO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SULFATE DIS-SOLVED (MG/L AS SO4)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
	(00916)	(00925)	(00927)	(00935)		(00930)	(39086)	(00453)	(00452)	(00940)	(00950)	(00945)	
DEC 28...	38.0	7.60	7.30	1.80	1	29.0	133	157	2	12.0	1.8	33.0	10
MAR 27...	27.0	5.20	5.70	1.50	1	23.0	92	107	2	8.6	1.6	22.0	56
JUN 05...	37.0	7.30	7.40	2.20	1	32.0	142	171	1	11.0	1.8	32.0	8
05...	37.0	7.30	7.40	2.20	1	32.0	140	169	1	12.0	1.8	32.0	7
DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, AM-MONIA + ORGANIC (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS TOTAL (MG/L AS P)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	E COLI, MTEC MF WATER (COL/ 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
	(70303)	(70300)	(70301)	(00625)	(00610)	(71845)	(00630)	(00600)	(71887)	(00665)	(00340)	(31633)	(31625)
DEC 28...	.33	241	202	<.20	.02	.03	.4	--	--	.030	<5	<1	<1
MAR 27...	.24	173	143	.29	<.01	--	.2	.48	2.1	.130	13	37	E11k
JUN 05...	.35	257	208	<.20	<.01	--	<.02	--	--	.040	7	E2k	E19k
05...	.33	242	208	<.20	<.01	--	<.02	--	--	.040	12	E3k	E15k
DATE	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	ANTI-MONY, TOTAL (UG/L AS SB)	ARSENIC DIS-SOLVED (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)
	(01095)	(01097)	(01000)	(01002)	(01005)	(01007)	(01010)	(01012)	(01020)	(01022)	(01025)	(01027)	(01030)
DEC 28...	<1.00	<1.0	1.5	2	17.0	20.0	<1.00	<1.00	40	40	<.50	<.50	<1.0
MAR 27...	<1.00	<1.0	1.3	2	11.0	35.0	<1.00	<1.00	30	30	<.50	<.50	<1.0
JUN 05...	<1.00	<1.0	1.7	2	17.0	19.0	<1.00	<1.00	42	41	<.50	<.50	<1.0
05...	<1.00	<1.0	1.8	2	17.0	19.0	<1.00	<1.00	41	40	<.50	<.50	<1.0

## GILA RIVER BASIN

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## 09432000 GILA RIVER BELOW BLUE CREEK NEAR VIRDEN, NM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO JUNE 2001

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)
DEC 28...	<1	<2.0	<2.0	M	280	<2.00	<2	3.3	13	<.10	<.10	<1.00	<1
MAR 27...	2	<2.0	2.9	M	1400	<2.00	3	2.5	64	<.10	<.10	<1.00	2
JUN 05...	<1	<2.0	<2.0	<2	160	<2.00	<2	4.1	11	<.10	<.10	<1.00	<1
JUN 05...	<1	<2.0	<2.0	<2	160	<2.00	<2	4.0	11	<.10	<.10	<1.00	<1

DATE	SELENIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR) (01082)	THALLIUM, DIS- SOLVED (UG/L AS TL) (01057)	THALLIUM, TOTAL (UG/L AS TL) (01059)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	SEDIMENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDIMENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
DEC 28...	<1.0	<1.0	<1.0	<1.00	160	<2.00	<2.0	20	18	18	7.1
MAR 27...	<1.0	<1.0	<1.0	<1.00	120	<2.00	<2.0	14	34	722	552
JUN 05...	<1.0	<1.0	<1.0	<1.00	170	<2.00	<2.0	3	3	10	1.00
JUN 05...	<1.0	<1.0	<1.0	<1.00	170	<2.00	<2.0	3	5	9	.90

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range



## GILA RIVER BASIN

## 09432000 GILA RIVER BELOW BLUE CREEK NEAR VIRDEN, NM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO JUNE 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
MAR 27...	1235	2	5.7	1	20.0	<.02	<.030	<.1	<.20	<.01	<.02	<.020	<3

DATE	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
MAR 27...	<.5	<1.00	<.50	<1.0	<2.0	<2	<2.00	<1.0	<1.00	<2

Remark codes used in this report:  
< -- Less than

## 09442000 GILA RIVER NEAR CLIFTON, AZ

**LOCATION.**--Lat 32° 57' 57", long 109° 18' 35", in NE 1/4 SE 1/4 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, 3.7 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23 .....	1230	2,550	6.29
Nov. 7 .....	0815	*4,460	*7.89

Minimum daily discharge, 13 ft<sup>3</sup>/s Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	526	e240	140	131	120	241	131	41	30	44	106
2	17	e425	e235	136	127	125	237	127	40	30	69	105
3	18	e365	e230	132	118	203	232	124	39	37	65	89
4	19	1110	e225	130	112	266	225	121	39	33	58	81
5	19	1770	e220	132	105	273	228	122	38	32	65	77
6	21	1560	e215	134	98	268	235	123	38	33	67	75
7	21	3140	e210	135	101	261	234	122	37	32	64	73
8	22	2100	191	126	104	252	245	118	37	32	61	71
9	24	1440	183	134	100	250	252	e115	37	32	57	71
10	22	1130	173	138	97	260	244	e110	36	32	63	71
11	61	1010	166	131	100	265	232	e105	36	31	66	71
12	419	1110	167	139	101	276	228	e100	35	30	55	70
13	217	1140	169	142	102	285	224	e95	35	30	60	72
14	642	950	163	144	101	276	222	e90	35	29	107	69
15	346	797	159	147	102	253	213	e105	35	28	110	86
16	177	674	159	148	103	237	204	e100	34	28	167	e75
17	82	606	159	147	107	225	193	e95	35	30	254	e85
18	33	542	157	142	115	220	183	e90	35	31	236	e85
19	16	e480	153	138	118	214	177	e85	34	30	210	e85
20	13	e420	156	135	109	210	171	e80	35	28	153	e80
21	17	e375	153	133	102	201	160	e75	35	30	151	e75
22	14	e335	154	132	100	190	155	e75	35	29	e130	e75
23	958	e315	155	133	96	182	165	e70	33	27	e125	e70
24	598	e295	153	132	94	184	183	e70	e33	28	e120	e65
25	966	e280	153	130	91	192	186	e65	e32	30	e115	e65
26	744	e270	150	130	97	205	178	e60	e33	28	e110	e60
27	493	e260	147	134	105	206	171	e55	e32	29	e100	e60
28	942	e255	146	131	115	216	158	e50	e31	27	e90	e55
29	1240	e250	143	132	---	233	148	46	e31	27	e80	e55
30	810	e245	144	133	---	236	138	44	30	28	e75	e50
31	688	---	145	133	---	240	---	42	---	37	75	---
TOTAL	9676	24175	5373	4203	2951	7024	6062	2810	1056	938	3202	2227
MEAN	312	806	173	136	105	227	202	90.6	35.2	30.3	103	74.2
MAX	1240	3140	240	148	131	285	252	131	41	37	254	106
MIN	13	245	143	126	91	120	138	42	30	27	44	50
AC-FT	19190	47950	10660	8340	5850	13930	12020	5570	2090	1860	6350	4420

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2001, BY WATER YEAR (WY)

MEAN	185	121	223	242	301	384	235	113	40.4	123	228	200
MAX	1754	806	2389	1355	1666	1765	1688	874	171	934	898	1208
(WY)	1973	2001	1915	1916	1915	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1911 - 2001	
ANNUAL TOTAL	53487		69697			
ANNUAL MEAN	146		191		204	
HIGHEST ANNUAL MEAN					930	
LOWEST ANNUAL MEAN					42.5	
HIGHEST DAILY MEAN	3140		3140		27100	
LOWEST DAILY MEAN	13		13		3.7	
ANNUAL SEVEN-DAY MINIMUM	18		19		7.0	
ANNUAL RUNOFF (AC-FT)	106100		138200		147500	
10 PERCENT EXCEEDS	301		289		433	
50 PERCENT EXCEEDS	51		121		78	
90 PERCENT EXCEEDS	23		31		18	

e Estimated

## 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, 30,000 ft<sup>3</sup>/s Oct. 20, 1972, gage height, 22.56 ft, from rating curve extended above 960 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum daily, 1.4 ft<sup>3</sup>/s Oct. 18--20, 1978.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 800 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. 11 .....	2000	4,130	11.36	Apr. 6.....	0645	878	7.18
Oct. 23.....	unknown	e*14,500	*17.38	Jul. 29.....	1830	1,540	8.44
Nov. 6.....	1915	2,520	9.76				

Minimum daily discharge, 2.7 ft<sup>3</sup>/s Oct. 2--3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	e230	79	30	28	66	102	66	13	4.4	46	25
2	2.7	e200	72	30	28	69	100	65	11	4.3	11	18
3	2.7	e150	67	29	28	68	101	61	10	4.2	11	15
4	2.8	e200	62	29	27	65	98	57	9.7	3.9	9.2	12
5	3.0	e600	58	28	28	64	103	56	9.3	3.8	10	9.8
6	2.9	e1250	56	28	28	65	524	51	9.0	4.2	11	8.7
7	3.0	1060	55	29	29	71	335	48	8.4	4.5	8.7	7.6
8	3.5	709	54	29	34	81	306	44	8.2	10	9.0	6.9
9	3.8	568	52	31	40	83	305	44	7.9	6.0	11	6.8
10	4.4	482	51	36	38	91	248	41	7.4	5.5	9.1	6.7
11	1080	526	50	32	37	93	207	39	7.2	4.2	11	6.4
12	1180	417	49	32	37	88	179	37	7.2	14	28	6.5
13	104	352	51	34	37	84	154	36	6.8	16	29	10
14	37	310	47	33	40	85	141	36	6.7	12	58	13
15	23	273	46	31	43	86	130	39	6.6	10	34	12
16	16	246	44	31	41	86	125	35	6.3	7.5	21	15
17	12	224	42	30	41	85	121	31	6.0	6.4	19	12
18	8.8	209	40	28	41	84	117	28	5.9	5.9	16	9.4
19	7.7	198	38	27	40	83	119	54	5.6	5.3	11	9.3
20	8.2	181	39	27	40	84	118	47	5.8	5.1	17	9.1
21	8.3	171	36	26	41	87	114	37	6.1	5.0	97	9.7
22	51	161	34	26	44	90	106	31	5.8	4.6	48	11
23	e4170	152	35	27	49	93	99	27	5.5	4.6	36	11
24	637	142	35	26	53	94	92	24	5.4	4.3	31	10
25	179	133	34	26	52	96	87	22	5.3	4.4	20	5.8
26	86	121	34	25	54	98	84	21	5.2	4.4	8.6	5.5
27	32	112	34	28	56	99	80	20	4.9	5.6	7.3	5.3
28	e1100	102	34	33	60	103	76	18	4.8	60	6.9	5.2
29	e1100	94	33	31	---	103	73	17	4.5	182	28	5.0
30	e400	85	33	29	---	105	68	16	4.4	63	65	5.0
31	e300	---	32	29	---	104	---	14	---	79	38	---
TOTAL	10571.6	9658	1426	910	1114	2653	4512	1162	209.9	554.1	765.8	292.7
MEAN	341	322	46.0	29.4	39.8	85.6	150	37.5	7.00	17.9	24.7	9.76
MAX	4170	1250	79	36	60	105	524	66	13	182	97	25
MIN	2.7	85	32	25	27	64	68	14	4.4	3.8	6.9	5.0
AC-FT	20970	19160	2830	1800	2210	5260	8950	2300	416	1100	1520	581

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2001, BY WATER YEAR (WY)

	MEAN	95.2	55.1	77.3	76.4	119	159	121	58.0	15.7	28.0	48.4	46.1
MAX	1027	443	616	569	707	584	488	338	136	136	265	366	
(WY)	1973	1979	1979	1979	1980	1983	1983	1973	1994	1994	1999	1975	
MIN	2.58	3.94	3.69	5.35	8.04	8.94	6.69	3.85	2.84	2.42	8.73	2.94	
(WY)	1983	1974	1977	1977	1971	1971	1971	2000	2000	2000	1975	2000	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR				FOR 2001 WATER YEAR				WATER YEARS 1968 - 2001			
ANNUAL TOTAL	24211.0				33829.1							
ANNUAL MEAN	66.2				92.7				70.1			
HIGHEST ANNUAL MEAN									243			1979
LOWEST ANNUAL MEAN									10.1			1974
HIGHEST DAILY MEAN	4170			Oct 23	4170			Oct 23	12400			Oct 20 1972
LOWEST DAILY MEAN	1.6			Aug 4	2.7			Oct 2	.00			Jan 23 1992
ANNUAL SEVEN-DAY MINIMUM	1.9			Aug 2	2.8			Oct 1	.00			Aug 21 1992
ANNUAL RUNOFF (AC-FT)	48020				67100				50820			
10 PERCENT EXCEEDS	106				174				165			
50 PERCENT EXCEEDS	12				34				21			
90 PERCENT EXCEEDS	2.4				5.4				5.0			

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.**--No estimated daily discharges. Records good. 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 high-water 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 11 .....	2315	9,540	18.28	Oct. 28 .....	1600	7,600	17.66
Oct. 23 .....	1400	*23,400	*22.28	Nov. 6 .....	2330	5,640	16.68

Minimum daily discharge, 11 ft<sup>3</sup>/s Oct. 3-4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	981	210	140	117	232	297	246	64	33	138	79
2	13	765	205	135	117	320	293	226	62	31	109	72
3	11	656	206	132	112	308	290	211	59	34	78	68
4	11	2130	207	129	112	286	289	206	60	38	64	66
5	12	3550	199	130	109	272	283	190	55	32	54	59
6	13	2970	188	131	111	268	674	178	62	31	48	63
7	13	3760	185	131	111	275	751	167	66	38	46	58
8	14	2010	183	132	115	304	686	155	60	45	48	57
9	16	1340	186	136	130	328	657	147	57	111	51	56
10	18	1070	183	143	132	354	663	141	55	125	63	54
11	1960	1070	176	139	137	386	640	135	53	81	68	56
12	4970	1130	171	135	134	390	572	134	51	60	94	56
13	1960	903	174	136	135	359	511	130	50	58	89	60
14	682	749	173	132	138	337	473	126	47	56	206	69
15	374	650	168	127	139	322	434	128	46	53	406	77
16	244	591	161	127	146	315	415	127	45	52	254	81
17	176	546	159	126	149	312	395	119	46	50	197	77
18	126	481	156	121	144	304	380	114	47	51	182	70
19	105	427	154	120	140	297	375	117	45	46	165	80
20	100	384	157	120	139	287	382	144	42	43	142	80
21	92	360	155	117	137	280	384	123	40	37	272	72
22	152	309	153	114	141	277	371	110	43	44	195	67
23	8900	293	152	117	148	290	352	103	41	43	137	63
24	5970	274	153	115	168	315	327	93	41	40	114	59
25	2240	262	145	116	193	331	301	87	40	38	98	57
26	1360	245	144	114	195	333	280	83	43	38	87	56
27	996	235	141	117	191	334	268	78	43	44	78	54
28	4410	224	149	125	200	339	272	70	41	48	71	52
29	4350	215	142	123	---	338	263	75	43	102	65	51
30	2050	210	143	120	---	330	260	73	40	206	86	46
31	1290	---	144	118	---	315	---	73	---	86	96	---
TOTAL	42642	28790	5222	3918	3940	9738	12538	4109	1487	1794	3801	1915
MEAN	1376	960	168	126	141	314	418	133	49.6	57.9	123	63.8
MAX	8900	3760	210	143	200	390	751	246	66	206	406	81
MIN	11	210	141	114	109	232	260	70	40	31	46	46
AC-FT	84580	57100	10360	7770	7810	19320	24870	8150	2950	3560	7540	3800
CFSM	.50	.35	.06	.05	.05	.11	.15	.05	.02	.02	.04	.02
IN.	.57	.39	.07	.05	.05	.13	.17	.06	.02	.02	.05	.03

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2001, BY WATER YEAR (WY)

	MEAN	233	134	252	298	355	447	328	162	56.7	101	200	152
MAX	4285	1450	2445	4204	2429	2136	2252	1244	310	657	1360	816	
(WY)	1984	1979	1979	1993	1993	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	28.5	40.6	21.5	
(WY)	1954	1957	1954	1954	1954	1951	1955	1956	1956	1947	1960	1956	

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1914 - 2001

ANNUAL TOTAL	89934	119894	224	1915
ANNUAL MEAN	246	328	937	1951
HIGHEST ANNUAL MEAN			42.0	1951
LOWEST ANNUAL MEAN			52200	Oct 2 1983
HIGHEST DAILY MEAN	8900	Oct 23	6.1	Jun 21 1971
LOWEST DAILY MEAN	11	Oct 3	8.1	Jun 19 1956
ANNUAL SEVEN-DAY MINIMUM	12	Oct 1		
ANNUAL RUNOFF (AC-FT)	178400	237800	162400	
ANNUAL RUNOFF (CFSM)	.089	.12	.081	
ANNUAL RUNOFF (INCHES)	1.21	1.61	1.10	
10 PERCENT EXCEEDS	298	556	444	
50 PERCENT EXCEEDS	57	136	76	
90 PERCENT EXCEEDS	22	45	35	

## GILA RIVER BASIN

## 09445000 WILLOW CREEK DIVERSION FROM BLACK RIVER, NEAR MORENCI, AZ

**LOCATION.**--Lat 33°24'46", long 109°43'08", in SW1/4 sec. 23, T.1 N., R.25 E. (unsurveyed), Graham County, Hydrologic Unit 15040005, in San Carlos Indian Reservation, on left bank just downstream from end of diversion pipeline, 3.6 mi northeast of Point of Pines, 5.0 mi southeast of pumping plant on Black River, and 29 mi northwest of Morenci.

**PERIOD OF RECORD.**--Apr. 1945 to current year.

**GAGE.**--Water-stage recorder and steel-edged rectangular weir. Datum of gage is 5,957.16 ft above sea level. Prior to June 26, 1946, at end of pipeline at that time, 3.5 mi upstream at datum about 50 ft higher.

**REMARKS.**--No estimated daily discharges. Records good. The entire flow consists of Black River (head of Salt River) water, which is pumped into headwater of Willow Creek (tributary of Eagle Creek) for industrial and municipal supply in vicinity of Morenci.

**AVERAGE DISCHARGE.**--56 years, 11.4 ft<sup>3</sup>/s, 8,260 acre-ft/yr.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge, 28 ft<sup>3</sup>/s May 18, 19, 21--26, 1970; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	5.6	5.8	6.2	5.8	4.5	11	12	11	11	6.0	6.2
2	6.2	5.6	5.8	6.2	5.3	5.8	12	12	11	11	5.7	6.0
3	6.2	5.8	5.9	6.1	6.2	5.8	12	12	11	11	5.8	6.1
4	6.2	5.8	6.0	5.7	6.2	5.8	12	12	11	11	5.7	6.2
5	6.2	5.6	6.0	5.6	6.2	5.8	9.3	12	11	11	6.0	6.2
6	6.2	5.7	6.0	6.0	6.1	5.8	.12	12	11	11	6.0	6.2
7	6.0	2.7	6.0	6.0	6.2	4.8	6.4	12	10	7.6	6.0	6.2
8	6.1	1.5	6.0	6.0	6.2	5.8	11	12	11	5.2	6.0	6.2
9	6.1	5.6	5.9	6.0	6.1	5.8	11	12	11	5.0	6.0	6.2
10	6.2	5.9	5.8	6.0	6.2	5.8	11	12	11	5.4	6.0	6.1
11	6.2	5.8	5.8	5.9	6.2	5.8	12	12	11	5.5	6.1	6.0
12	6.2	5.6	5.8	5.9	6.2	5.8	12	11	11	5.5	6.1	6.0
13	5.9	5.9	6.0	5.8	6.2	5.8	12	12	11	5.5	5.0	6.0
14	6.0	5.7	6.0	5.7	6.2	5.8	12	12	11	5.5	4.3	6.0
15	6.0	5.7	5.9	6.0	6.0	5.8	11	12	11	5.5	6.2	6.1
16	6.0	5.7	6.0	6.0	5.9	5.8	11	12	11	5.5	5.9	6.1
17	5.8	6.0	5.8	5.6	5.8	5.8	12	12	11	5.5	6.0	6.0
18	6.2	6.0	5.4	6.1	5.8	5.8	12	12	11	5.1	6.0	6.0
19	6.2	6.0	5.4	6.2	5.7	5.9	12	12	11	5.1	6.1	6.0
20	6.2	6.0	6.0	6.2	5.8	5.8	12	12	11	5.1	6.2	6.0
21	6.2	6.0	6.0	6.2	5.8	5.8	12	12	11	5.1	6.2	6.0
22	6.1	6.0	5.9	6.2	5.8	5.8	12	12	11	5.2	6.1	6.0
23	5.7	5.9	5.8	6.2	5.8	5.8	12	12	11	5.3	6.0	5.8
24	5.7	5.8	5.8	6.2	5.8	5.8	11	12	11	2.8	6.0	5.8
25	5.8	5.8	5.9	6.1	5.8	5.7	11	12	12	5.1	6.0	5.8
26	5.9	5.8	6.0	6.0	5.8	5.8	11	11	11	4.8	6.0	6.0
27	6.1	5.8	6.0	6.0	5.8	5.7	12	11	11	5.3	6.0	6.0
28	5.7	5.8	5.2	6.0	5.8	5.6	12	11	11	5.3	6.0	6.0
29	6.0	5.8	5.4	6.0	---	5.7	12	11	11	5.0	6.0	6.0
30	5.8	5.8	5.9	6.0	---	9.6	12	11	11	5.3	6.1	6.0
31	5.8	---	6.0	6.0	---	11	---	11	---	5.7	6.2	---
TOTAL	187.1	166.7	181.2	186.1	166.7	186.1	330.82	365	330	197.9	183.7	181.2
MEAN	6.04	5.56	5.85	6.00	5.95	6.00	11.0	11.8	11.0	6.38	5.93	6.04
MAX	6.2	6.0	6.0	6.2	6.2	11	12	12	12	11	6.2	6.2
MIN	5.7	1.5	5.2	5.6	5.3	4.5	.12	11	10	2.8	4.3	5.8
AC-FT	371	331	359	369	331	369	656	724	655	393	364	359

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2001, BY WATER YEAR (WY)

	MEAN	12.8	10.2	7.72	6.00	5.26	9.19	14.5	14.8	14.8	14.1	14.0	13.6
MAX	23.7	21.6	20.1	21.6	21.5	23.3	25.7	24.9	24.8	23.6	25.3	24.0	
(WY)	1977	1984	1984	1984	1979	1979	1978	1970	1974	1983	1975	1976	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
(WY)	1960	1960	1953	1947	1946	1946	1946	1964	1963	1963	1963	1959	

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1945 - 2001

	ANNUAL TOTAL	2202.70	2662.52	
ANNUAL MEAN		6.02	7.29	11.4
HIGHEST ANNUAL MEAN				20.4
LOWEST ANNUAL MEAN				.57
HIGHEST DAILY MEAN	12	Mar 12	12	Apr 2
LOWEST DAILY MEAN	.00	May 18	.12	Apr 6
ANNUAL SEVEN-DAY MINIMUM	.66	Jun 14	4.7	Nov 2
ANNUAL RUNOFF (AC-FT)	4370		5280	8280
10 PERCENT EXCEEDS	12		12	21
50 PERCENT EXCEEDS	6.0		6.0	13
90 PERCENT EXCEEDS	1.9		5.6	.00



## 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, for the entire year and water was pumped from wells into Eagle Creek near Double Circle Ranch below Willow Creek for 7 months. The monthly quantities pumped are shown in 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; 98 percent of the pumpage was from Eagle Creek.

**AVERAGE DISCHARGE** (unadjusted).--57 years, 68.3 ft<sup>3</sup>/s, 49,480 acre-ft/yr; median of yearly mean discharges, 38 ft<sup>3</sup>/s, 27,500 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 11 .....	2100	1,130	5.02	Nov. 4 .....	1359	1,850	5.64
Oct. 23 .....	1314	*6,610	*8.60	Nov. 6 .....	2359	1910	5.70
Oct. 28 .....	1259	989	4.88				

Minimum daily discharge, 14 ft<sup>3</sup>/s Sept. 6-12; Sept. 19-23; Sept. 27-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	104	39	28	27	33	30	33	30	20	29	21
2	22	90	38	29	26	33	34	32	31	20	23	18
3	23	79	37	29	26	33	34	31	30	20	26	16
4	24	603	36	29	23	32	33	30	30	19	23	15
5	24	438	35	27	22	31	34	31	31	19	19	15
6	27	390	34	28	21	29	94	30	28	20	18	14
7	27	1040	33	29	19	29	157	29	26	30	17	14
8	29	518	33	29	22	34	126	28	26	27	20	14
9	30	275	32	32	23	36	110	28	25	35	34	14
10	32	217	31	32	24	41	98	27	23	38	24	14
11	224	225	28	29	23	57	91	27	24	30	21	14
12	374	251	28	28	20	64	85	29	24	22	24	14
13	139	190	30	31	22	59	80	33	23	20	e31	15
14	76	160	30	29	28	51	77	33	22	20	e30	18
15	44	142	29	28	29	44	72	35	27	23	e30	18
16	39	121	28	28	32	42	67	32	31	23	e29	18
17	36	105	27	30	33	42	62	30	30	24	e28	17
18	34	94	24	28	31	41	56	30	31	29	e27	16
19	34	86	22	26	28	40	48	36	29	30	e26	14
20	36	79	22	25	26	39	43	40	29	28	e25	14
21	34	74	25	26	24	39	42	37	30	32	22	14
22	45	69	28	26	23	39	42	32	31	31	20	14
23	2290	65	31	27	25	41	42	31	29	28	18	14
24	638	59	30	27	27	41	42	29	30	26	18	15
25	202	52	30	27	28	41	42	27	28	26	18	15
26	150	44	30	26	30	41	41	27	29	28	17	15
27	105	42	29	29	30	40	41	29	28	27	16	14
28	483	42	29	32	32	37	40	29	26	31	15	14
29	289	41	29	30	---	33	38	28	25	29	17	15
30	170	40	28	29	---	31	35	28	21	33	26	15
31	132	---	29	28	---	29	---	28	---	38	27	---
TOTAL	5835	5735	934	881	724	1222	1836	949	827	826	718	458
MEAN	188	191	30.1	28.4	25.9	39.4	61.2	30.6	27.6	26.6	23.2	15.3
MAX	2290	1040	39	32	33	64	157	40	31	38	34	21
MIN	22	40	22	25	19	29	30	27	21	19	15	14
AC-FT	11570	11380	1850	1750	1440	2420	3640	1880	1640	1640	1420	908
CFSM	.30	.31	.05	.05	.04	.06	.10	.05	.04	.04	.04	.02
IN.	.35	.34	.06	.05	.04	.07	.11	.06	.05	.05	.04	.03
(*)	749	21.4	141	272	30.9	194	471	635	1133	1025	587	629
(**)	1115	876	1190	1218	711	1021	1050	1174	1139	1043	759	731

CAL YR 2000 TOTAL 19611 MEAN 53.6 MAX 2290 MIN 14 AC-FT 38900 CFSM .09 IN. 1.17  
WTR YR 2001 TOTAL 20945 MEAN 57.4 MAX 2290 MIN 14 AC-FT 41540 CFSM .09 IN. 1.25

e Estimated

(\*) Pumpage, in acre-feet, into Eagle Creek from Eagle Creek wells.

(\*\*) Pumpage, in acre-feet, into Clifton and Morenci, from San Francisco R. and Eagle Creek.

## GILA RIVER BASIN

## 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 2.0 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.**--No estimated daily discharges. Records fair.

**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 PERIOD.**--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)
Oct. 11.....	2020	*2880	*9.68
Oct. 23.....	1200	406	6.60
Oct. 23.....	0745	601	6.96

Minimum daily discharge, 2.3 ft<sup>3</sup>/s June 25 to July 1, July 14, 18--22, and Aug. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	11	6.4	5.8	4.9	3.0	2.8	2.4	2.6	2.3	2.4	4.7
2	4.0	9.5	6.5	5.7	4.7	3.0	2.8	2.4	2.6	2.4	2.4	4.3
3	3.9	8.6	7.0	5.7	4.7	2.9	2.8	2.4	2.6	2.5	2.4	4.3
4	3.9	12	7.1	5.8	4.5	2.7	2.8	2.4	2.5	2.4	2.4	4.2
5	4.3	11	7.1	5.7	4.4	2.7	2.8	2.5	2.5	2.4	2.4	4.0
6	4.4	15	7.1	5.5	4.0	2.7	2.8	2.6	2.5	2.5	2.4	4.1
7	4.4	136	7.2	5.4	3.9	2.8	2.8	2.7	2.5	2.5	2.4	3.9
8	4.7	101	7.1	5.2	4.0	2.8	2.7	2.8	2.5	2.4	2.5	3.8
9	4.8	40	7.1	5.5	4.0	2.7	2.7	2.8	2.5	2.5	2.4	3.7
10	5.2	21	7.1	5.5	4.0	2.7	2.6	2.8	2.4	2.4	2.3	3.6
11	477	22	6.9	5.3	3.9	2.7	2.7	2.7	2.4	2.4	2.4	3.5
12	94	23	7.2	5.5	3.9	2.8	2.7	2.7	2.4	2.4	2.4	3.2
13	31	17	7.3	5.7	3.9	2.7	2.6	2.7	2.4	2.4	2.4	3.5
14	9.0	14	7.1	5.7	3.9	2.7	2.5	2.8	2.4	2.3	2.5	3.8
15	6.9	12	7.1	5.8	3.8	2.7	2.4	2.7	2.4	2.4	4.0	3.7
16	5.8	11	7.1	6.0	3.8	2.7	2.4	2.7	2.4	2.4	4.4	3.6
17	5.0	10	7.0	6.0	3.8	2.7	2.4	2.6	2.5	2.4	5.5	3.4
18	4.6	9.6	6.9	5.9	3.8	2.7	2.4	2.6	2.4	2.3	4.7	3.1
19	4.6	8.9	6.9	5.9	3.6	2.7	2.4	2.8	2.5	2.3	4.6	3.1
20	4.5	8.3	6.8	5.7	3.6	2.7	2.4	2.7	2.4	2.3	4.6	3.0
21	4.3	8.1	6.7	5.6	3.5	2.7	2.4	2.7	2.4	2.3	4.5	2.9
22	4.9	7.8	6.7	5.5	3.5	2.7	2.4	2.7	2.4	2.3	4.4	2.8
23	156	7.6	6.7	5.4	3.4	2.7	2.4	2.6	2.4	2.4	4.3	2.7
24	34	7.8	6.5	5.2	3.4	2.7	2.4	2.6	2.4	2.4	4.2	2.9
25	11	7.7	6.4	5.1	3.3	2.7	2.4	2.6	2.3	2.4	4.1	2.9
26	8.0	7.4	6.4	5.2	3.1	2.6	2.4	2.5	2.3	2.8	4.2	2.9
27	10	7.1	6.5	5.2	3.0	2.7	2.4	2.5	2.3	2.5	4.2	2.9
28	179	7.0	6.5	5.4	3.0	2.7	2.4	2.5	2.3	2.6	4.0	2.9
29	46	6.5	6.1	5.1	---	2.8	2.4	2.5	2.3	2.6	8.5	2.9
30	17	6.4	6.0	5.1	---	2.8	2.4	2.5	2.3	2.5	5.5	3.0
31	12	---	5.9	5.0	---	2.8	---	2.5	---	2.5	4.9	---
TOTAL	1168.3	574.3	210.4	171.1	107.3	85.0	76.5	81.0	72.8	75.2	114.3	103.3
MEAN	37.7	19.1	6.79	5.52	3.83	2.74	2.55	2.61	2.43	2.43	3.69	3.44
MAX	477	136	7.3	6.0	4.9	3.0	2.8	2.8	2.6	2.8	8.5	4.7
MIN	3.9	6.4	5.9	5.0	3.0	2.6	2.4	2.4	2.3	2.3	2.3	2.7
AC-FT	2320	1140	417	339	213	169	152	161	144	149	227	205
CFSM	.12	.06	.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
IN.	.14	.07	.03	.02	.01	.01	.01	.01	.01	.01	.01	.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2001, BY WATER YEAR (WY)

MEAN	15.0	6.91	10.0	54.7	28.1	14.2	5.17	3.97	3.26	7.34	8.19	8.07
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	4.96	5.25	3.83	2.74	2.00	2.10	1.32	2.25	3.69	2.47
(WY)	1992	1992	1989	1987	2001	2001	1991	1991	1982	1989	2001	1987

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1982 - 2001

ANNUAL TOTAL	3463.8	2839.5	
ANNUAL MEAN	9.46	7.78	13.7
HIGHEST ANNUAL MEAN			83.7
LOWEST ANNUAL MEAN			4.14
HIGHEST DAILY MEAN	477	Oct 11	10200
LOWEST DAILY MEAN	2.6	Jun 15	.66
ANNUAL SEVEN-DAY MINIMUM	2.6	Jul 20	.76
ANNUAL RUNOFF (AC-FT)	6870	5630	9950
ANNUAL RUNOFF (CFSM)	.031	.026	.045
ANNUAL RUNOFF (INCHES)	.43	.35	.62
10 PERCENT EXCEEDS	10	7.8	9.6
50 PERCENT EXCEEDS	4.9	3.1	4.7
90 PERCENT EXCEEDS	2.9	2.4	2.5

## GILA RIVER BASIN

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## 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>.

**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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 12.....	0500	9,770	12.37	Nov. 4.....	2115	7,910	11.92
Oct. 23.....	1745	*24,600	*15.16	Nov. 7.....	0715	11,500	12.73
Oct. 28.....	2145	10,400	12.77				

Minimum daily discharge, 57 ft<sup>3</sup>/s Oct. 4 and Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	1880	493	286	273	469	588	403	111	74	e247	e258
2	58	1540	498	281	274	529	585	389	109	74	e210	e234
3	59	1280	478	278	272	586	568	376	106	79	e191	e190
4	57	2920	464	275	272	603	561	358	102	83	e181	e181
5	58	6250	452	274	269	600	569	348	100	81	e170	168
6	60	4960	441	271	270	594	755	337	96	78	e158	155
7	58	8790	442	269	280	587	1180	326	95	79	e151	148
8	57	5680	434	266	287	605	1120	314	94	84	147	143
9	61	3830	423	268	293	619	1060	301	93	94	151	136
10	66	2860	411	278	305	652	1050	284	90	152	149	132
11	740	2520	405	278	311	675	1020	270	87	149	177	129
12	6470	2680	392	273	311	709	918	255	85	115	168	127
13	3130	2440	388	274	313	699	822	246	82	99	190	131
14	1240	2040	378	275	326	674	753	235	80	95	253	138
15	610	1760	359	273	336	662	696	230	78	94	663	148
16	396	1560	354	271	342	636	657	236	78	90	527	184
17	333	1400	347	271	350	623	631	219	75	91	499	179
18	254	1270	341	269	356	606	610	211	77	96	464	176
19	204	1140	332	265	358	592	590	214	77	96	430	170
20	184	1030	327	262	364	577	580	216	77	92	381	172
21	177	932	320	260	364	560	570	207	78	93	398	159
22	174	857	323	258	366	546	553	196	76	89	444	145
23	6860	798	320	261	375	534	537	184	78	95	356	135
24	10500	731	318	261	389	547	522	171	76	95	310	125
25	4230	685	315	257	406	568	505	159	74	90	273	124
26	2730	648	310	259	426	583	482	151	76	97	244	117
27	1850	613	308	261	438	584	462	144	76	100	216	111
28	4180	553	307	271	449	590	448	129	75	102	196	108
29	7340	526	305	273	---	599	426	117	75	109	193	103
30	3490	506	296	274	---	607	413	119	75	e270	189	97
31	2330	---	293	275	---	605	---	116	---	e200	e230	---
TOTAL	58015	64679	11574	8367	9375	18620	20231	7461	2551	3235	8556	4523
MEAN	1871	2156	373	270	335	601	674	241	85.0	104	276	151
MAX	10500	8790	498	286	449	709	1180	403	111	270	663	258
MIN	57	506	293	257	269	469	413	116	74	74	147	97
MED	333	1470	354	271	331	599	586	230	78	94	216	144
AC-FT	115100	128300	22960	16600	18600	36930	40130	14800	5060	6420	16970	8970
CFSM	.24	.27	.05	.03	.04	.08	.09	.03	.01	.01	.03	.02

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2001, BY WATER YEAR (WY)

	MEAN	391	281	523	710	755	866	585	305	109	207	505	392
MAX	7447	2230	5798	13990	5509	3629	2775	2038	716	736	2499	2081	
(WY)	1984	1979	1979	1993	1993	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	44.4	66.0	35.9	
(WY)	1957	1957	1957	1954	1954	1971	1971	1956	1956	1947	1960	1956	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR				FOR 2001 WATER YEAR				WATER YEARS 1921 - 2001			
ANNUAL TOTAL	165988				217187							
ANNUAL MEAN	454				595							
HIGHEST ANNUAL MEAN									469			
LOWEST ANNUAL MEAN									2229			
HIGHEST DAILY MEAN	10500				10500				90000			
LOWEST DAILY MEAN	39				57				13			
ANNUAL SEVEN-DAY MINIMUM	42				58				15			
ANNUAL RUNOFF (AC-FT)	329200				430800				339600			
ANNUAL RUNOFF (CFSM)	.057				.075				.059			
10 PERCENT EXCEEDS	734				1020				988			
50 PERCENT EXCEEDS	144				278				179			
90 PERCENT EXCEEDS	57				85				65			

e Estimated

## GILA RIVER BASIN

## 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 2000 TO SEPTEMBER 2001

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-AIRE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS (MG/L) (00904)	HARD-NESS TOTAL (MG/L CAC03) AS (00900)
OCT 13...	1040	9	3220	3500	681	8.4	96	7.9	261	23.0	16.2	8	84
MAR 28...	1245	9	578	32	678	8.9	101	8.4	532	23.0	15.6	--	140
JUN 06...	1010	9	94	2.8	681	8.1	108	8.4	1070	31.0	23.9	59	200
06...	1020	7	94	2.9	--	--	--	8.4	1070	--	--	57	200
SEP 06...	1010	9	149	110	680	7.4	99	8.3	985	34.5	24.1	45	200
DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3 CO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT 13...	24.0	72.0	5.90	29.0	2.80	.9	19.0	77	93	.0	21.0	.3	15.0
MAR 28...	40.0	42.0	9.00	9.50	3.40	2	56.0	142	166	4	59.0	1.0	33.0
JUN 06...	59.0	60.0	13.0	14.0	7.50	4	130	142	161	6	200	1.2	66.0
06...	59.0	60.0	13.0	14.0	7.40	4	130	144	161	7	200	1.2	66.0
SEP 06...	59.0	64.0	13.0	15.0	7.00	4	120	157	176	7	160	1.4	71.0
DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, TOTAL (MG/L AS NO3) (71887)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)
OCT 13...	2600	.25	185	134	3.7	.06	.08	.7	3.6	4.4	19.5	3.30	62
MAR 28...	65	.44	327	287	.28	.01	.01	.2	.27	.48	2.1	.150	9
JUN 06...	6	.85	622	562	.24	<.01	--	<.02	--	--	--	.040	8
06...	4	.88	644	563	.22	<.01	--	<.02	--	--	--	.040	--
SEP 06...	203	.79	581	525	.50	.02	.03	.3	.48	.81	3.6	.210	8
DATE	E COLI, MTEC MF WATER (COL./100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	BORON, DIS-SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
OCT 13...	2100	5800	<1.00	<4.0	2.2	6	16.0	400	<1.00	2.80	26	37	<.50
MAR 28...	E18k	E18k	<1.00	<1.0	2.6	2	23.0	46.0	<1.00	<1.00	50	50	<.50
JUN 06...	E3k	25	<1.00	<1.0	3.2	3	44.0	46.0	<1.00	<1.00	99	100	<.50
06...	E4k	E15k	<1.00	<1.0	3.3	3	44.0	46.0	<1.00	<1.00	100	99	<.50
SEP 06...	150k	270	<1.00	<1.0	3.9	4	51.0	100	<1.00	<1.00	109	113	<.50

## GILA RIVER BASIN

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## 09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY NEAR SOLOMON, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CADMIUM WATER UNFLTRD (UG/L AS CD) (01027)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
OCT 13...	<.50	<1.0	19	9.1	183	20	26400	<2.00	46	1.6	2100	<.10	.40
MAR 28...	<.50	<1.0	2	<2.0	5.1	M	1400	<2.00	<2	2.0	68	<.10	<.10
JUN 06...	<.50	<1.0	<1	<2.0	2.2	<2	120	<2.00	<2	3.9	11	<.10	<.10
06...	<.50	<1.0	<1	<2.0	2.1	<2	120	<2.00	<2	3.9	11	<.10	<.10
SEP 06...	<.50	<1.0	4	<2.0	21.0	<2	4490	<2.00	5	3.2	178	<.10	<.10

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL RECOV- ERABLE (UG/L AS TL) (01059)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE MENT, (MG/L) (80154)
OCT 13...	2.30	70	<1.0	<4.0	<1.0	<1.00	500	<2.00	<4.0	9	150	100	3060
MAR 28...	<1.00	2	<1.0	<1.0	<1.0	<1.00	340	<2.00	<2.0	13	23	--	88
JUN 06...	<1.00	<1	<1.0	<1.0	<1.0	<1.00	660	<2.00	<2.0	16	17	--	8
06...	<1.00	<1	<1.0	<1.0	<1.0	<1.00	660	<2.00	<2.0	25	13	--	5
SEP 06...	1.00	6	<1.0	<1.0	<1.0	<1.00	640	<2.00	<2.0	<2	22	--	197

DATE	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 13...	26600
MAR 28...	137
JUN 06...	2.0
06...	1.3
SEP 06...	79

Remark codes used in this report:

< -- Less than  
E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified  
Value qualifier codes used in this report:  
k -- Counts outside acceptable range



## GILA RIVER BASIN

## 09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY NEAR SOLOMON, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	PH	SPE-	TEMPER-	CALCIUM	MAGNE-	SODIUM,	NITRO-	NITRO-	NITRO-	PHOS-	ALUM-
			WATER	CIFIC		DIS-	SIMUM,	DIS-	GEN, AM-	GEN,	GEN,	PHOS-	INUM,
			WHOLE	CON-		DIS-	DIS-	MONIA +	AMMONIA	NO2+NO3	PHORUS	DIS-	
			FIELD	DUCT-	ATURE	DIS-	SOLVED	SOLVED	ORGANIC	TOTAL	TOTAL	TOTAL	SOLVED
			(STAND-	ANCE	WATER	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(UG/L
			ARD			(AS CA)	(AS MG)	(AS NA)	(AS N)	(AS N)	(AS N)	(AS P)	(AS AL)
			UNITS)	(US/CM)	(DEG C)	(00915)	(00925)	(00930)	(00625)	(00610)	(00630)	(00665)	(01106)
MAR													
28...	1240	2	5.8	2	17.0	<.02	<.030	<.1	<.20	<.01	<.02	<.020	<3

Remark codes used in this report:

< -- Less than

## 09460150 FRYE CREEK NEAR THATCHER, AZ

**LOCATION.**--Lat 32°44'38", long 109°50'15", in NE 1/4 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, 577 ft<sup>3</sup>/s, Jan. 5, 1995, gage height, 2.90 ft, from floodmark and from rating curve extended above 45 ft<sup>3</sup>/s; no flow at times in most years.

**EXTREMES FOR CURRENT RECORD.**--Peak discharge greater than base discharge of 8.0 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. 11.....	1915	*171	*2.07	Apr. 6.....	0315	21	1.21
Oct. 23.....	0030	69	1.63	Apr. 19.....	2000	19	1.19

Minimum daily discharge, .02 ft<sup>3</sup>/s Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	e5.5	2.0	.61	.64	1.1	3.0	11	2.0	e.25	e.74	.79
2	.07	e4.5	e1.9	.56	.66	1.1	3.3	13	1.7	e.25	e.78	.83
3	.08	e4.1	e1.8	.53	.64	1.1	3.4	12	1.6	e.25	e.78	.78
4	.07	e3.6	e1.7	.57	.67	.98	3.4	11	1.5	e.25	e.78	.72
5	.07	e3.4	e1.6	.58	.67	.95	4.5	9.1	1.3	e.25	e.77	.66
6	.04	e3.2	e1.5	.57	.77	1.0	12	7.9	1.1	e.25	e.77	.60
7	.02	e3.0	e1.5	.59	1.0	1.1	8.3	7.5	.99	e.25	e.77	.56
8	.03	e4.0	e1.4	.59	1.2	1.3	7.7	8.0	.86	e.25	e.76	.53
9	.03	e5.0	e1.4	.61	1.1	1.6	6.8	10	.66	e.25	e.76	.49
10	.05	e3.9	1.4	.61	1.1	1.7	6.2	11	.62	e.25	e.76	.46
11	42	e3.2	1.4	.60	1.1	1.7	4.7	10	.84	e.25	e.75	.44
12	64	e2.5	1.3	.60	1.1	1.6	4.2	11	.74	e.25	e1.2	.43
13	25	e5.0	1.3	.61	1.1	1.6	4.2	12	.74	e.25	e.85	.44
14	14	e4.6	1.2	.54	1.1	1.6	4.6	11	.72	e.25	e.60	.44
15	8.8	e4.3	1.2	.54	1.1	1.6	5.1	10	.65	e.25	e.50	.42
16	6.4	e4.0	1.2	.76	.98	1.6	5.6	8.7	.64	e.25	e.50	.45
17	5.2	e3.6	1.1	.80	1.0	1.5	6.3	7.6	.63	e.25	e.50	.50
18	4.1	3.1	1.1	.76	1.1	1.6	9.5	6.7	.58	e.25	e.50	.55
19	3.7	3.0	1.1	.66	1.1	1.5	16	10	.49	e.25	e.50	.59
20	3.7	3.4	1.0	.65	1.1	1.6	15	7.3	.45	e.25	e.50	.65
21	3.3	3.1	1.0	.64	1.2	1.8	12	6.1	.43	e.25	e.50	.62
22	13	3.5	.97	.66	1.2	2.0	8.4	5.2	.31	e.25	e.50	.57
23	39	3.2	.85	.67	1.2	2.4	7.0	4.6	.22	e.25	e.50	.53
24	15	3.0	.86	.70	1.2	2.5	6.3	4.1	.19	e.25	e.50	.52
25	9.3	3.0	.83	.75	1.1	2.5	6.2	3.8	.31	e.25	e.50	.52
26	7.0	2.5	.80	.69	1.2	2.7	9.1	3.4	e.34	e.25	e.50	.51
27	e6.3	2.4	.77	.73	1.1	2.7	15	3.2	e.30	e.25	e.50	.52
28	e8.2	2.2	.73	.61	1.2	2.6	17	2.7	e.28	e.25	e.50	.48
29	e9.5	2.1	.75	.63	---	2.7	15	2.4	e.25	e.24	.58	.23
30	e7.5	2.1	.73	.69	---	2.7	12	2.2	e.25	e.31	.50	.14
31	e6.5	---	.71	.65	---	2.9	---	2.1	---	e.37	.67	---
TOTAL	302.05	104.0	37.10	19.76	28.63	55.33	241.8	234.6	21.69	7.92	19.82	15.97
MEAN	9.74	3.47	1.20	.64	1.02	1.78	8.06	7.57	.72	.26	.64	.53
MAX	64	5.5	2.0	.80	1.2	2.9	17	13	2.0	.37	1.2	.83
MIN	.02	2.1	.71	.53	.64	.95	3.0	2.1	.19	.24	.50	.14
AC-FT	599	206	74	39	57	110	480	465	43	16	39	32
CFSM	2.42	.86	.30	.16	.25	.44	2.00	1.88	.18	.06	.16	.13
IN.	2.80	.96	.34	.18	.26	.51	2.24	2.17	.20	.07	.18	.15

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2001, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	1.33	1.56	1.02	2.02	1.92	2.44	3.07	5.22	2.30	1.44	.84	1.25
MAX	9.74	9.26	4.43	13.7	11.3	10.9	9.37	17.0	7.37	6.81	1.91	6.85
(WY)	2001	1995	1995	1995	1995	1995	1992	1992	1991	1999	1999	1990
MIN	.13	.11	.17	.13	.17	.13	.22	.083	.000	.000	.021	.21
(WY)	1992	1990	1996	1996	2000	1999	2000	2000	1996	1996	2000	1997

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1990 - 2001

	2000	2001	1990-2001
ANNUAL TOTAL	480.95	1088.67	
ANNUAL MEAN	1.31	2.98	2.03
HIGHEST ANNUAL MEAN			5.02
LOWEST ANNUAL MEAN			.18
HIGHEST DAILY MEAN	64	64	150
LOWEST DAILY MEAN	.00	.02	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.04	.00
ANNUAL RUNOFF (AC-FT)	954	2160	1470
ANNUAL RUNOFF (CFSM)	.33	.74	.51
ANNUAL RUNOFF (INCHES)	4.45	10.07	6.88
10 PERCENT EXCEEDS	3.2	8.2	4.7
50 PERCENT EXCEEDS	.19	1.1	.53
90 PERCENT EXCEEDS	.01	.25	.10

e Estimated

## GILA RIVER BASIN

## 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, 2.0 mi west of Calva.

**DRAINAGE AREA.**--11,470 mi<sup>2</sup>.

**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 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 13.....	e1800	4940	10.27	Nov. 6 .....	1830	e5790	e11.43
Oct. 24.....	e2330	e14,800	e16.94	Nov. 8 .....	1215	e8370	e13.76
Oct. 30.....	0645	9210	14.41				

Minimum daily discharge, 0.19 ft<sup>3</sup>/s, Oct. 1.  
e Estimated.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	3140	668	293	265	175	330	279	66	9.0	28	30
2	2.0	2530	642	293	254	182	325	260	63	7.6	37	19
3	5.4	2100	624	287	249	209	320	250	60	5.7	29	19
4	4.9	1810	599	285	245	253	310	240	57	5.0	37	16
5	2.8	2100	576	285	241	292	309	229	53	4.2	29	13
6	2.1	e5400	559	289	226	310	340	220	53	4.7	21	10
7	1.0	e5200	545	292	215	310	452	219	51	6.3	17	8.2
8	1.0	e7100	532	284	213	311	749	208	46	9.2	15	8.0
9	3.8	e5700	513	294	208	315	854	193	42	9.8	16	7.1
10	8.1	4400	497	297	210	322	874	180	38	9.8	24	6.7
11	167	3590	479	292	212	344	854	174	36	10	17	6.0
12	627	3190	464	295	213	377	839	165	35	10	14	5.9
13	e2900	3230	447	291	214	410	714	157	33	12	22	7.9
14	e3500	3110	435	289	214	422	661	161	31	12	21	9.5
15	1600	2800	430	295	222	401	596	156	30	14	22	11
16	818	2440	413	306	220	383	553	145	28	12	60	8.0
17	410	2130	403	307	226	372	512	144	26	11	131	5.6
18	278	1830	392	305	235	355	471	136	23	9.1	125	5.9
19	235	1620	380	298	235	344	441	142	20	7.6	114	9.3
20	179	1440	377	294	221	334	422	151	18	7.4	103	15
21	156	1290	365	287	210	323	408	154	18	12	82	14
22	162	1130	356	283	206	307	400	149	19	13	58	10
23	207	1050	346	283	199	300	394	141	16	11	77	7.9
24	e2100	970	343	280	192	291	374	130	15	9.1	74	6.1
25	e10000	902	342	280	189	290	364	123	16	11	47	4.6
26	e4500	842	332	277	199	302	345	113	14	18	33	6.1
27	3040	803	319	280	187	308	334	101	14	8.7	25	4.5
28	2560	761	311	277	180	311	318	92	13	6.2	19	2.8
29	2830	725	300	280	---	313	302	83	12	17	16	2.7
30	e7800	695	291	286	---	320	287	78	11	8.9	14	3.1
31	4480	---	291	278	---	323	---	71	---	8.6	17	---
TOTAL	48580.29	74028	13571	8962	6100	9809	14452	5044	957	299.9	1344	282.9
MEAN	1567	2468	438	289	218	316	482	163	31.9	9.67	43.4	9.43
MAX	10000	7100	668	307	265	422	874	279	66	18	131	30
MIN	.19	695	291	277	180	175	287	71	11	4.2	14	2.7
AC-FT	96360	146800	26920	17780	12100	19460	28670	10000	1900	595	2670	561
CFSM	.14	.22	.04	.03	.02	.03	.04	.01	.00	.00	.00	.00
IN.	.16	.24	.04	.03	.02	.03	.05	.02	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2001, BY WATER YEAR (WY)

	MEAN	353	235	455	760	729	733	410	224	53.1	80.0	303	243
MAX	8486	2468	5652	16310	6225	3757	2623	3079	1272	838	1661	1681	
(WY)	1984	2001	1975	1993	1993	1991	1992	1992	1992	1955	1967	1975	
MIN	.000	.000	.000	21.6	28.5	10.3	1.35	1.25	.000	.000	.000	.000	.000
(WY)	1954	1954	1954	1956	1957	1957	1957	1956	1946	1989	1989	1956	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 19
ANNUAL TOTAL	148149.02	183430.09	
ANNUAL MEAN	405	503	381
HIGHEST ANNUAL MEAN			2451
LOWEST ANNUAL MEAN			28.7
HIGHEST DAILY MEAN	10000	10000	90000
LOWEST DAILY MEAN	.00	.19	.00
ANNUAL SEVEN-DAY MINIMUM	.00	2.6	.00
ANNUAL RUNOFF (AC-FT)	293900	363800	275700
ANNUAL RUNOFF (CFSM)	.035	.044	.033
ANNUAL RUNOFF (INCHES)	.48	.59	.45
10 PERCENT EXCEEDS	860	885	800
50 PERCENT EXCEEDS	40	220	71
90 PERCENT EXCEEDS	.00	8.2	2.7

e Estimated

## GILA RIVER BASIN

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## 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 2000 TO SEPTEMBER 2001

DATE	TIME	SAMPLE TYPE	DIS-		BARO-		OXYGEN,	PH				HARD-			
			CHARGE,		METRIC		DIS-	WATER	SPE-			NESS	HARD-		
			INST.		PRES-		SOLVED	WHOLE	CIFIC			NONCARB	NESS		
			CUBIC	TUR-	SURE	OXYGEN,	(PER-	FIELD	CON-	TEMPER-	TEMPER-	DISSOLV	TOTAL		
			FEET	BID-	(MM	DIS-	CENT	(STAND-	DUCT-	ATURE	ATURE	FLD. AS	(MG/L		
			PER	ITY	OF	SOLVED	SATUR-	ARD	ANCE	AIR	WATER	CACO3	AS		
			SECOND	(NTU)	HG)	(MG/L)	ATION)	UNITS)	(US/CM)	(DEG C)	(DEG C)	(MG/L)	CACO3)		
			(00061)	(00076)	(00025)	(00300)	(00301)	(00400)	(00095)	(00020)	(00010)	(00904)	(00900)		
OCT															
12...	1730	9	800	8000	694	6.6	77	8.2	444	20.5	18.1	--	33		
MAR															
29...	1140	9	312	58	689	8.6	97	8.2	1500	24.0	16.1	10	220		
29...	1150	7	312	60	689	9.1	--	8.3	1500	--	--	10	230		
JUN															
07...	1050	9	52	23	693	9.9	132	8.2	3910	31.5	24.2	84	390		
SEP															
07...	1015	9	9.1	42	692	7.7	102	8.3	3880	30.0	23.6	110	350		
DATE			CALCIUM	MAGNE-				ALKA-	BICAR-	CAR-					
			TOTAL	SIUM,	POTAS-	SODIUM		LINITY	BONATE	BONATE	CHLO-	FLUO-			
			DIS-	RECOV-	DIS-	RECOV-	DIS-	SORP-	DIS-	TOT IT	DIS IT	DIS IT	DIS-	DIS-	DIS-
			SOLVED	ERABLE	SOLVED	ERABLE	SOLVED	TION	SOLVED	FIELD	FIELD	FIELD	SOLVED	SOLVED	SOLVED
			(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	RATIO	(MG/L	MG/L AS	MG/L AS	MG/L AS	(MG/L	(MG/L	(MG/L
			AS CA)	AS CA)	AS MG)	AS MG)	AS K)	AS NA)	CACO3	HCO3	CO3	AS CL)	AS F)	AS SO4)	
			(00915)	(00916)	(00925)	(00927)	(00935)	(00931)	(00930)	(39086)	(00453)	(00452)	(00940)	(00950)	(00945)
OCT															
12...	9.80	510	2.10	119	3.60	5	66.0	86	98	3	42.0	.6	33.0		
MAR															
29...	63.0	65.0	16.0	18.0	4.90	6	220	213	260	.0	250	1.4	130		
29...	63.0	64.0	17.0	17.0	5.00	6	220	218	265	.0	250	1.4	130		
JUN															
07...	100	100	35.0	35.0	9.40	15	680	310	378	.0	810	1.9	380		
SEP															
07...	80.0	80.0	37.0	38.0	9.80	16	710	239	279	6	850	1.9	390		
DATE			RESIDUE	SOLIDS,	SOLIDS,	NITRO-							OXYGEN		
			TOTAL	SOLIDS,	RESIDUE	SUM OF	GEN,AM-	NITRO-	NITRO-	NITRO-	NITRO-	NITRO-	PHOS-	DEMAND,	
			AT 105	DIS-	AT 180	CONSTI-	MONIA +	GEN,	GEN,	GEN,	GEN,	GEN,	PHORUS	CHEM-	
			DEG. C,	SOLVED	DEG. C	TUENTS,	ORGANIC	AMMONIA	AMMONIA	NO2+NO3	ORGANIC	GEN,	GEN,	ICAL	
			SUS-	(TONS	DIS-	DIS-	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	(HIGH	
			PENDED	PER	SOLVED	SOLVED	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	LEVEL)		
			(MG/L)	AC-PT)	(MG/L)	(MG/L)	AS N)	AS N)	AS NH4)	AS N)	AS N)	AS NO3)	AS P)	(MG/L)	
			(00530)	(70303)	(70300)	(70301)	(00625)	(00610)	(71845)	(00630)	(00605)	(00600)	(71887)	(00665)	(00340)
OCT															
12...	10970	.31	225	208	13	.14	.18	1.1	13	14	62.4	8.40	25		
MAR															
29...	110	1.20	881	813	.44	.01	.01	1.0	.43	1.4	6.4	.170	10		
29...	100	1.20	882	817	.40	.01	.01	1.0	.39	1.4	6.2	.180	14		
JUN															
07...	56	3.16	2320	2200	.89	<.01	--	.9	--	1.8	8.0	.060	22		
SEP															
07...	65	3.14	2310	2220	.90	.05	.06	.2	.85	1.1	5.1	.060	19		

## GILA RIVER BASIN

## 09466500 GILA RIVER AT CALVA, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	COLI-FORM, ANTI-MONY, ARSENIC, BARIUM, BERYLLIUM, BORON, CADMIUM												
	E COLI, MTEC MF	FECAL, 0.7 UM-MF	MONY, DIS-SOLVED	ANTI-MONY, TOTAL	ARSENIC, DIS-SOLVED	ARSENIC, TOTAL	BARIUM, DIS-SOLVED	BARIUM, TOTAL RECOV-ERABLE	BERYL-LIUM, DIS-SOLVED	BERYL-LIUM, TOTAL RECOV-ERABLE	BORON, DIS-SOLVED	BORON, TOTAL RECOV-ERABLE	CADMIUM, DIS-SOLVED
	(COL/100 ML)	(COLS./100 ML)	(UG/L AS SB)	(UG/L AS SB)	(UG/L AS AS)	(UG/L AS AS)	(UG/L AS BA)	(UG/L AS BA)	(UG/L AS BE)	(UG/L AS BE)	(UG/L AS B)	(UG/L AS B)	(UG/L AS CD)
	(31633)	(31625)	(01095)	(01097)	(01000)	(01002)	(01005)	(01007)	(01010)	(01012)	(01020)	(01022)	(01025)
OCT 12...	E18000k	27000	<1.00	<4.0	10.0	35	17.0	1600	<1.00	11.0	92	180	<.50
MAR 29...	E6k	E15k	<1.00	<1.0	5.2	5	42.0	69.0	<1.00	<1.00	230	230	<.50
29...	E15k	26	<1.00	<1.0	5.5	5	42.0	66.0	<1.00	<1.00	230	230	<.50
JUN 07...	E7k	E11k	<1.00	<1.0	7.5	8	88.0	92.0	<1.00	<1.00	710	710	<.50
SEP 07...	E15k	E16k	<1.00	<1.0	7.8	8	98.0	110	<1.00	<1.00	772	777	<.50
DATE	CHROMIUM, COPPER, IRON, LEAD, MANGANESE, MERCURY												
	CADMIUM WATER UNFLTRD	CHROMIUM, DIS-SOLVED	CHROMIUM, TOTAL RECOV-ERABLE	COPPER, DIS-SOLVED	COPPER, TOTAL RECOV-ERABLE	IRON, DIS-SOLVED	IRON, TOTAL RECOV-ERABLE	LEAD, DIS-SOLVED	LEAD, TOTAL RECOV-ERABLE	MANGANESE, DIS-SOLVED	MANGANESE, TOTAL RECOV-ERABLE	MERCURY, DIS-SOLVED	MERCURY, TOTAL RECOV-ERABLE
	(UG/L AS CD)	(UG/L AS CR)	(UG/L AS CR)	(UG/L AS CU)	(UG/L AS CU)	(UG/L AS FE)	(UG/L AS FE)	(UG/L AS PB)	(UG/L AS PB)	(UG/L AS MN)	(UG/L AS MN)	(UG/L AS HG)	(UG/L AS HG)
	(01027)	(01030)	(01034)	(01040)	(01042)	(01046)	(01045)	(01049)	(01051)	(01056)	(01055)	(71890)	(71900)
OCT 12...	2.90	<1.0	83	2.9	325	20	70200	2.20	160	1.1	7900	<.10	.30
MAR 29...	<.50	<1.0	2	<2.0	12.0	<2	2300	<2.00	2	14.0	160	<.10	<.10
29...	<.50	<1.0	3	<2.0	13.0	<2	2300	<2.00	2	14.0	160	<.10	<.10
JUN 07...	<.50	<1.0	<1	<2.0	5.2	<2	860	<2.00	<2	59.0	160	<.10	<.10
SEP 07...	<.50	<1.0	1	<2.0	7.5	<2	1620	<2.00	<2	51.0	136	<.10	<.10
DATE	NICKEL, SELENIUM, SILVER, STRONTIUM, THALLIUM, ZINC, SEDI-MENT, DIS-CHARGE												
	NICKEL, DIS-SOLVED	NICKEL, TOTAL RECOV-ERABLE	SELENIUM, DIS-SOLVED	SELENIUM, TOTAL	SILVER, DIS-SOLVED	SILVER, TOTAL RECOV-ERABLE	STRONTIUM, TOTAL RECOV-ERABLE	THALLIUM, DIS-SOLVED	THALLIUM, TOTAL	ZINC, DIS-SOLVED	ZINC, TOTAL RECOV-ERABLE	SEDI-MENT, SUS-PENDED	SEDI-MENT, SUS-PENDED
	(UG/L AS NI)	(UG/L AS NI)	(UG/L AS SE)	(UG/L AS SE)	(UG/L AS AG)	(UG/L AS AG)	(UG/L AS SR)	(UG/L AS TL)	(UG/L AS TL)	(UG/L AS ZN)	(UG/L AS ZN)	(MG/L)	(T/DAY)
	(01065)	(01067)	(01145)	(01147)	(01075)	(01077)	(01082)	(01057)	(01059)	(01090)	(01092)	(80154)	(80155)
OCT 12...	1.40	214	<1.0	<4.0	<1.0	<1.00	2500	<2.00	<4.0	13	410	51700	112000
MAR 29...	<1.00	5	1.3	1.2	<1.0	<1.00	630	<2.00	<2.0	7	21	125	105
29...	<1.00	4	1.2	1.2	<1.0	<1.00	610	<2.00	<2.0	10	41	122	103
JUN 07...	<1.00	2	<1.0	1.0	<1.0	<1.00	1300	<2.00	<2.0	<2	5	66	9.3
SEP 07...	<1.00	3	<1.0	<1.0	<1.0	<1.00	1200	<2.00	<2.0	2	10	56	1.4

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Value qualifier codes used in this report:

k -- Counts outside acceptable range



## GILA RIVER BASIN

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## 09466500 GILA RIVER AT CALVA, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	PH	SPE- DUCT- ANCE (US/CM)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)
			WATER										
			WHOLE										
			FIELD (STAND- ARD UNITS)										
JUN													
07...	1055	2	5.7	1	<.02	<.030	<.1	<.20	<.01	<.02	<.020	<3	<.5
DATE			BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)		
			(01010)	(01025)	(01030)	(01040)	(01046)	(01049)	(01056)	(01065)	(01090)		
JUN													
07...			<1.00	<.50	<1.0	<2.0	<2	<2.00	<1.0	<1.00	<2		

Remark codes used in this report:

< -- Less than

## GILA RIVER BASIN

## 09468500 SAN CARLOS RIVER NEAR PERIDOT, AZ

**LOCATION**--Lat 33° 17' 47", long 110° 27' 03", in SE 1/4 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 bench mark). 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 7 .....	1015	*2,320	*7.05

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	273	19	20	31	17	7.9	3.2	1.3	.00	5.7	.00
2	3.1	119	19	20	30	16	7.6	2.4	.76	.00	9.8	.00
3	2.7	60	24	20	28	17	7.3	1.9	.32	.00	2.5	.00
4	2.2	37	24	20	25	17	7.3	1.6	.00	.00	.24	.00
5	2.6	31	23	20	23	17	6.9	1.4	.00	.00	24	.00
6	1.8	122	23	20	23	15	8.7	1.3	.00	.00	.47	.00
7	1.7	1180	24	20	27	15	15	1.0	.00	.00	.00	.00
8	3.3	390	23	21	30	16	20	.94	.00	.00	.00	.00
9	1.8	195	24	25	30	167	19	.67	.00	.00	.00	.00
10	349	107	23	27	31	161	16	.53	.00	.00	.00	.00
11	275	96	23	25	32	121	15	.27	.00	.00	.00	.00
12	62	410	22	23	35	142	13	.05	.00	.00	.00	.00
13	29	272	17	22	36	103	11	.09	.00	.00	.00	.00
14	27	174	15	21	34	76	9.4	.00	.00	.00	.65	.00
15	23	121	16	21	32	63	8.1	.00	.00	.00	1.9	.00
16	15	87	16	22	42	45	7.8	.00	.00	.00	3.1	.00
17	12	67	16	23	44	35	7.5	.00	.00	.00	3.8	.00
18	10	52	17	22	35	28	7.4	.00	.00	.00	1.9	.00
19	8.9	41	17	21	33	24	6.8	.00	.00	.00	.74	.00
20	7.9	35	17	21	34	21	6.0	.00	.00	.00	.00	.00
21	7.4	32	17	21	27	18	5.4	.26	.00	.00	.00	.00
22	11	26	18	22	26	16	5.5	1.2	.00	.00	.00	.00
23	77	23	18	22	23	14	5.9	.61	.00	.00	.00	.00
24	20	22	19	21	20	13	5.7	.01	.00	.00	.00	.00
25	38	21	20	22	19	12	5.3	.00	.00	.00	.00	.00
26	21	20	20	22	19	11	4.4	.00	.00	.00	.00	.00
27	14	20	20	23	18	10	3.9	.00	.00	.00	.00	.00
28	185	20	20	25	17	9.8	3.8	.00	.00	.00	.00	.00
29	382	19	20	25	---	9.6	3.4	.00	.00	6.7	.00	.00
30	133	19	20	23	---	9.3	3.6	1.7	.00	7.6	.00	.00
31	98	---	20	26	---	8.6	---	2.1	---	.00	.00	---
TOTAL	1828.5	4091	614	686	804	1247.3	254.6	21.23	2.38	14.30	54.80	0.00
MEAN	59.0	136	19.8	22.1	28.7	40.2	8.49	.68	.079	.46	1.77	.000
MAX	382	1180	24	27	44	167	20	3.2	1.3	7.6	24	.00
MIN	1.7	19	15	20	17	8.6	3.4	.00	.00	.00	.00	.00
AC-FT	3630	8110	1220	1360	1590	2470	505	42	4.7	28	109	.00
CFSM	.06	.13	.02	.02	.03	.04	.01	.00	.00	.00	.00	.00
IN.	.07	.15	.02	.02	.03	.05	.01	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2001, BY WATER YEAR (WY)

	MEAN	29.1	20.2	104	142	165	143	24.1	7.83	3.65	18.4	52.2	23.6
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	.20	2.68	5.07	5.80	7.03	4.83	2.17	.029	.000	.000	1.61	.000	
(WY)	1957	1957	1951	1958	1953	1959	1959	1959	1948	1947	1962	1956	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1930 - 2001
ANNUAL TOTAL	9766.75	9618.11	
ANNUAL MEAN	26.7	26.4	60.8
HIGHEST ANNUAL MEAN			426
LOWEST ANNUAL MEAN			8.16
HIGHEST DAILY MEAN	1180	Nov 7	20000
LOWEST DAILY MEAN	.00	May 30	.00
ANNUAL SEVEN-DAY MINIMUM	.00	May 30	.00
ANNUAL RUNOFF (AC-FT)	19370	19080	44060
ANNUAL RUNOFF (CFSM)	.026	.026	.059
ANNUAL RUNOFF (INCHES)	.35	.35	.81
10 PERCENT EXCEEDS	37	37	66
50 PERCENT EXCEEDS	8.2	8.1	9.8
90 PERCENT EXCEEDS	.00	.00	1.0

## GILA RIVER BASIN

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## 09469000 SAN CARLOS RESERVOIR AT COOLIDGE DAM, AZ

**LOCATION.**--Lat 33°10'32", long 110°31'38", in NW1/4 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 U.S. 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, 269,100 acre-ft Mar. 16, elevation, 2,461.13 ft; minimum, 2,777 acre-ft Aug. 27, elevation, 2,399.56 ft.

Capacity table used Oct. 1, 1999, to Dec. 31, 2001 (elevation, in feet, and usable contents, in acre-feet).

2,410	17,720	2,435	99,580
2,415	28,800	2,440	125,500
2,420	42,570	2,445	154,700
2,425	59,080	2,450	186,300
2,430	77,770	2,455	221,100

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26180	99010	228000	239300	256800	264000	260000	260800	231500	188500	141600	111900
2	26140	103500	228600	239800	257000	264000	259300	260300	229900	187200	140800	111100
3	26110	106700	229100	240000	257300	264100	258600	259500	228400	185400	139900	110400
4	26070	109600	229900	240300	257400	264100	258300	259000	227200	183700	139500	109600
5	26070	112000	230600	240700	257800	264200	257300	258400	226200	181800	138600	108700
6	25970	120300	231400	241100	258300	264800	257400	257600	e225000	180300	137600	107700
7	26090	132000	232000	241600	258300	265000	257300	257000	e224000	178800	136700	106900
8	25810	144400	232700	242000	258400	265300	257500	256000	e223000	177100	135500	106100
9	25810	158800	232700	242800	258400	265600	258600	255200	e222000	175600	134500	105400
10	26230	168000	232200	243300	258600	266600	259100	254300	e220000	174300	134000	104800
11	26390	174800	233600	244000	258800	267000	259900	253100	e218000	172800	132900	104100
12	26530	180300	234000	244800	258900	267300	260800	252300	e216000	171400	131800	103500
13	26840	185800	234100	245300	259500	268200	261600	251600	214600	169900	130800	103200
14	30050	191300	234200	245700	259700	268600	262400	250700	213500	168500	129800	102800
15	34530	195600	234600	246800	260300	268700	262600	250000	212100	167000	128800	102200
16	36550	199300	234700	247500	260500	269100	263000	249000	210700	165500	127600	101700
17	37690	202800	235100	248100	260800	269100	263100	247800	209300	164000	126600	101100
18	38440	205600	235200	248800	261300	269000	263100	246900	207900	162300	125600	100500
19	38820	208200	235200	249400	261700	268800	263000	246200	206400	160600	124600	99970
20	39230	210700	235800	249900	262300	268500	262700	245100	204700	158900	123700	99440
21	39580	212700	236200	250700	262400	268100	262500	244300	203300	157000	122700	98970
22	40020	214600	236600	251500	262800	267500	262400	243200	201900	155300	e121700	98400
23	40410	216400	237000	251900	263000	266800	262400	242500	200400	153800	e120600	97780
24	40980	218000	237300	252600	263100	266500	262400	241200	198900	151900	e119600	97170
25	47720	219700	237600	253200	263400	265300	262200	240100	197300	150300	e118600	96700
26	59190	221200	237700	253700	263500	264600	262000	239200	196100	148700	e117600	96240
27	65270	222800	237900	254700	263600	263800	261900	238000	194500	147100	e116500	95630
28	69390	224100	237900	255200	263900	263000	261700	236900	193000	145400	115600	94990
29	72970	225300	238200	255700	---	262200	261400	235800	191500	144300	114600	94390
30	81600	227400	238900	256500	---	261300	261300	234600	190000	143800	113800	93790
31	92660	---	239000	256900	---	260700	---	232600	---	143800	112900	---
MAX	92660	227400	239000	256900	263900	269100	263100	260800	231500	188500	141600	111900
MIN	25810	99010	228000	239300	256800	260700	257300	232600	190000	143800	112900	93790
(*)	2433.49	2455.79	2457.29	2459.56	2460.49	2460.09	2460.19	2456.53	2450.61	2443.29	2437.66	2433.76
(**)	+66520	+134740	+11600	+17900	+7000	-3200	-600	-28700	-42600	-46200	-30900	-19110

CAL YR 2000 MAX 239000 MIN 25650 (\*\*) + 168100

WTR YR 2001 MAX 269100 MIN 25810 (\*\*) + 67610

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

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

e Estimated

## GILA RIVER BASIN

## 09469500 GILA RIVER BELOW COOLIDGE DAM, AZ

**LOCATION**--Lat 33° 10' 10", long 110° 31' 50", in SW 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)--89 years (water years 1901, 1904, 1915--2001) 405 ft<sup>3</sup>/s, 293,400 acre-ft/yr; median of yearly mean discharges, 230 ft<sup>3</sup>/s, 167,000 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, 803 ft<sup>3</sup>/s July 20; minimum daily, 0.18 ft<sup>3</sup>/s Oct. 5--9 and 19--21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	.42	265	144	109	152	669	414	551	708	380	391
2	.59	.36	301	146	145	165	630	456	550	699	380	371
3	.47	.32	192	121	149	169	601	458	576	716	380	358
4	.33	.49	138	106	161	170	599	455	586	740	381	358
5	.18	.31	138	106	164	171	600	512	584	738	415	357
6	.18	.63	138	106	164	198	498	550	583	752	436	357
7	.18	.41	138	99	224	183	477	553	582	739	463	330
8	.18	.28	238	95	216	156	490	578	581	723	494	313
9	.18	.28	303	97	173	156	424	594	594	673	494	298
10	.56	.28	303	62	173	191	359	592	601	655	494	287
11	.36	.28	303	42	172	213	354	582	601	660	494	276
12	.28	.28	315	22	136	211	341	571	600	660	494	251
13	.28	.28	322	1.1	100	259	341	570	599	659	468	237
14	.28	.28	322	1.1	69	310	386	568	605	659	451	236
15	.28	1.7	322	1.0	51	326	416	567	611	659	470	236
16	.28	.47	311	1.1	51	372	420	567	636	661	514	236
17	.28	.42	303	1.0	51	429	437	530	648	696	519	241
18	.27	.34	286	.99	52	480	467	487	647	713	518	245
19	.18	.28	215	1.1	53	515	496	550	664	767	517	222
20	.18	.31	148	1.1	53	557	511	585	677	803	513	213
21	.18	.33	130	1.1	74	579	539	584	677	802	483	217
22	.23	.38	130	1.1	89	601	543	584	677	754	469	216
23	.28	.28	159	1.1	93	617	467	556	677	754	469	216
24	.33	.32	198	1.1	116	617	408	539	676	757	471	216
25	.31	.35	200	1.1	142	660	408	546	675	757	491	214
26	.28	.28	199	1.1	150	686	408	552	676	727	505	209
27	.47	.28	278	1.2	150	683	408	552	676	709	506	235
28	.60	.28	280	1.3	152	683	405	551	675	753	470	252
29	.59	.32	222	23	---	674	405	551	675	782	410	250
30	.54	95	160	32	---	668	376	551	674	579	391	250
31	.62	---	144	61	---	668	---	551	---	398	391	---
TOTAL	10,71	106.24	7101	1279.59	3432	12519	13883	16856	18834	21852	14331	8088
MEAN	.35	3.54	229	41.3	123	404	463	544	628	705	462	270
MAX	.76	95	322	146	224	686	669	594	677	803	519	391
MIN	.18	.28	130	.99	51	152	341	414	550	398	380	209
AC-FT	21	211	14080	2540	6810	24830	27540	33430	37360	43340	28430	16040

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 2001, BY WATER YEAR (WY)

	1899	1906	275	437	393	507	471	388	449	538	565	346
MEAN	189	106	275	437	393	507	471	388	449	538	565	346
MAX	3240	841	8421	12630	5735	4510	3218	1312	1629	1812	2960	1831
(WY)	1917	1915	1915	1916	1993	1993	1993	1992	1992	1919	1921	1925
MIN	.35	.57	.000	.000	.000	9.87	2.08	1.68	.000	.000	1.08	.76
(WY)	2001	1992	1929	1929	1929	1941	1957	1961	1904	1929	1990	1956

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1899 - 2001
ANNUAL TOTAL	37828.19	118292.54	
ANNUAL MEAN	103	324	378
HIGHEST ANNUAL MEAN			2306
LOWEST ANNUAL MEAN			23.1
HIGHEST DAILY MEAN	421	803	100000
LOWEST DAILY MEAN	.18	.18	.00
ANNUAL SEVEN-DAY MINIMUM	.23	.23	.00
ANNUAL RUNOFF (AC-FT)	75040	234600	274000
10 PERCENT EXCEEDS	350	673	857
50 PERCENT EXCEEDS	31	311	193
90 PERCENT EXCEEDS	.33	.33	1.6

## 09470500 SAN PEDRO RIVER AT PALOMINAS, AZ

**LOCATION.**--Lat 31°22'48", long 110°06'38", in SW1/4, SE1/4, 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 bench mark). See WSP 1733 for history of changes prior to Nov. 24, 1955.

**REMARKS.**--Records good except for estimated daily discharges, which are fair. 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.**--Maximum discharge (\*) and peak discharges above base of 2,400 ft<sup>3</sup>/s

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 11 .....	2215	5,200	11.74	Aug. 12 .....	0430	3,860	9.81
Oct. 23 .....	0945	*15,900	*18.88	Aug. 14 .....	0545	6910	12.90

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	25	22	13	15	10	4.2	2.7	e.24	.14	49	5.7
2	.15	19	21	13	15	8.9	4.1	2.7	e.20	.13	19	5.4
3	.22	15	20	13	14	8.8	3.9	2.6	e.18	.13	83	5.2
4	.17	77	20	12	14	8.4	3.7	2.6	e.20	.13	16	4.9
5	.08	631	20	13	13	8.1	3.8	2.8	e.20	.15	25	4.5
6	.05	369	20	14	13	7.9	7.3	3.4	e.18	74	17	4.2
7	.04	1020	20	15	13	8.6	9.9	2.7	e.15	58	17	3.7
8	.08	595	20	15	13	9.0	7.2	2.4	.13	8.0	20	3.3
9	.11	235	19	18	12	8.8	6.0	2.4	.14	3.0	36	2.9
10	.75	130	19	20	12	8.4	5.6	2.2	.13	9.1	21	2.5
11	1340	97	19	18	11	8.0	5.6	2.0	.13	7.0	146	2.2
12	2680	84	19	19	11	7.6	5.7	1.9	.14	1.3	1460	2.1
13	438	75	19	20	11	7.2	5.5	2.2	.17	6.8	204	3.1
14	175	e65	18	19	11	6.1	5.1	1.8	.25	17	2210	5.0
15	99	e60	18	19	11	5.8	5.8	1.4	.23	25	e170	2.6
16	63	e56	18	18	11	6.4	6.6	1.2	.24	18	e152	2.0
17	44	e52	18	18	11	6.1	4.4	.90	.24	404	43	1.6
18	32	e47	17	17	11	6.0	3.5	.74	.28	32	19	1.4
19	160	e39	17	17	11	5.8	3.4	.95	.37	172	13	1.2
20	118	e35	17	16	11	5.9	3.3	1.2	.53	147	14	1.1
21	72	e33	16	16	11	5.6	3.4	.89	34	33	195	.95
22	1620	e30	16	16	11	5.5	3.4	.52	2.3	102	18	1.1
23	9330	e28	16	16	11	5.4	3.4	.37	.18	352	8.2	1.0
24	913	e27	15	16	11	5.4	3.3	e.42	.17	37	6.3	.77
25	382	e26	15	15	11	5.3	3.4	e.42	.22	56	5.6	.57
26	187	e26	14	15	11	5.0	3.5	e.44	.23	80	5.1	.28
27	123	e24	14	15	11	4.8	3.3	e.41	.23	32	4.9	.25
28	149	e24	14	16	11	4.6	3.1	e.40	.19	9.8	4.9	.26
29	147	e24	14	16	---	4.6	2.9	e.36	13	370	5.4	.26
30	63	e24	13	16	---	4.6	2.6	e.36	.26	88	6.3	.28
31	37	---	13	16	---	4.6	---	e.34	---	33	6.2	---
TOTAL	18173.79	3992	541	500	332	207.2	136.9	45.72	55.11	2175.68	4999.9	70.32
MEAN	586	133	17.5	16.1	11.9	6.68	4.56	1.47	1.84	70.2	161	2.34
MAX	9330	1020	22	20	15	10	9.9	3.4	34	404	2210	5.7
MIN	.04	15	13	12	11	4.6	2.6	.34	.13	.13	4.9	.25
AC-FT	36050	7920	1070	992	659	411	272	91	109	4320	9920	139

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2001, BY WATER YEAR (WY)

	MEAN	41.8	6.74	20.9	20.3	8.89	7.45	1.99	.66	4.06	87.7	131	24.3
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	.000	.000	.097	.035	.071	.22	.000	.000	.000	.26	2.68	.027	
(WY)	1966	1966	1954	1954	1954	1972	1969	1965	1962	1997	1962	2000	

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1950 - 2001

ANNUAL TOTAL	33074.67	31229.62	
ANNUAL MEAN	90.4	85.6	30.3
HIGHEST ANNUAL MEAN			93.3
LOWEST ANNUAL MEAN			4.16
HIGHEST DAILY MEAN	9330	9330	10300
LOWEST DAILY MEAN	.00	.04	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.11	.00
ANNUAL RUNOFF (AC-FT)	65600	61940	21970
10 PERCENT EXCEEDS	95	86	30
50 PERCENT EXCEEDS	1.6	11	1.2
90 PERCENT EXCEEDS	.00	.25	.00

e Estimated



## GILA RIVER BASIN

## 09470520 GREENBUSH DRAW NEAR PALOMINAS, AZ

**LOCATION.**--Lat 31°22'49", long 110°04'18", in NW1/4NE1/4NE1/4, sec. 2, T.24 S., R.22 E., Cochise County, Hydrologic Unit 15050202, on left bank on downstream side of State Highway 92 bridge, approximately 2.7 mi east of Palominas, and approximately 3.4 mi upstream from the confluence of the San Pedro River.

**DRAINAGE AREA.**--Undetermined.

**PERIOD OF RECORD.**--June to Sept. 2000.

**GAGE.**--Water-stage recorder. Elevation of gage is 4,280 ft above sea level, from topographic map.

**REMARKS.**--Records good, except for estimated record, which is poor.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 516 ft<sup>3</sup>/s, Oct. 23, 2000, gage height, 6.82 ft.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 516 ft<sup>3</sup>/s, Oct. 23, 2000, gage height, 6.82 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	2.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	2.4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	38	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	9.3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	77	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	63	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	5.9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	45	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	253	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	8.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	487.60	62.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	15.7	2.09	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	253	38	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MED	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	967	125	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

	MEAN	15.7	2.09	.000	.000	.000	.000	.000	.000	2.43	.000	3.80	.000
MAX	15.7	2.09	.000	.000	.000	.000	.000	.000	.000	4.87	.000	7.59	.000
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000	2000	2000
MIN	15.7	2.09	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000	2001	2000	2000

SUMMARY STATISTICS

FOR 2001 WATER YEAR

WATER YEARS 2000 - 2001

ANNUAL TOTAL	550.40												
ANNUAL MEAN	1.51									1.51			
HIGHEST ANNUAL MEAN										1.51		2001	
LOWEST ANNUAL MEAN										1.51		2001	
HIGHEST DAILY MEAN	253	Oct 23								253	Oct 23	2000	
LOWEST DAILY MEAN	.00	Oct 1								.00	Jun 1	2000	
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1								.00	Jun 1	2000	
ANNUAL RUNOFF (AC-FT)	1090									1090			
10 PERCENT EXCEEDS	.00									.00			
50 PERCENT EXCEEDS	.00									.00			
90 PERCENT EXCEEDS	.00									.00			

e Estimated



## GILA RIVER BASIN

## 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.

**GAGE.**--Water-stage recorder. Elevation of gage is 5,525 ft above sea level from topographic map.

**REMARKS.**--Records fair.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 117 ft<sup>3</sup>/s Oct. 22, 2000, gage height 3.44; no flow at times.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge during period 117 ft<sup>3</sup>/s, Oct. 22, gage height 3.44 ft; minimum daily, 0.05 ft<sup>3</sup>/s, Oct. 1--3 and July 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	7.8	2.5	.84	.49	.52	.76	.87	.29	.07	1.3	.86
2	.05	7.7	2.4	.75	.51	.53	.75	.83	.27	.07	1.2	.78
3	.05	7.1	2.4	.75	.53	.51	.73	.79	.27	.07	1.1	.73
4	.06	8.0	2.3	.67	.56	.51	.72	.76	.26	.07	.97	.70
5	.07	9.9	2.2	.72	.58	.51	.82	.73	.24	.08	1.0	.66
6	.08	9.6	2.1	.78	.60	.48	2.1	.70	.22	.15	.96	.63
7	.10	13	2.1	.71	.52	.58	1.4	.67	.20	.17	.84	.61
8	.13	12	2.0	.74	.42	.51	1.2	.64	.19	.13	.87	.59
9	.17	10	1.9	.86	.41	.49	1.2	.63	.19	.10	.91	.55
10	.41	8.6	1.8	.84	.42	.49	1.2	.61	.18	.10	.94	.53
11	17	8.3	1.7	.73	.39	.51	1.2	.58	.17	.08	.94	.53
12	36	7.8	1.7	.65	.38	.52	1.2	.57	.17	.07	1.0	.55
13	9.1	6.6	1.7	.65	.39	.55	1.2	.58	.16	.06	e1.1	.71
14	5.2	6.1	1.6	.67	.39	.61	1.2	.56	.17	.06	e1.8	.75
15	4.3	5.5	1.6	.62	.41	.58	1.2	.53	.16	.06	e2.1	.78
16	4.0	5.2	1.5	.60	.40	.62	1.2	.52	.15	.05	e2.2	.76
17	3.7	4.8	1.4	.60	.42	.64	1.2	.49	.14	.06	e2.3	.63
18	3.8	4.4	1.4	.58	.44	.66	1.2	.49	.13	.12	e2.3	.63
19	4.8	4.1	1.3	.56	.44	.69	1.2	.47	.14	.12	e2.3	.62
20	6.8	3.7	1.3	.57	.45	.73	1.4	.46	.14	.12	e2.4	.64
21	7.8	3.6	1.2	.55	.45	.76	1.4	.44	.14	.11	e2.2	.64
22	35	3.4	1.2	.54	.46	.75	1.2	.41	.13	.11	e1.9	.64
23	48	3.1	1.1	.53	.47	.75	1.2	.39	.13	.11	e1.7	.65
24	24	3.0	1.1	.50	.47	.74	1.1	.37	.12	.08	1.6	.70
25	18	2.7	1.0	.50	.46	.73	1.1	.35	.18	.19	1.4	e.74
26	13	2.7	.99	.49	.47	.74	1.1	.34	e.19	.47	1.3	e.60
27	11	2.6	.91	.50	.47	.74	1.1	.32	.12	.30	1.1	e.48
28	11	2.6	.85	.49	.52	.74	1.0	.30	.09	.27	1.0	e.38
29	9.3	2.6	.88	.48	---	.74	.98	.30	.08	e1.3	1.0	e.29
30	6.9	2.6	.88	.46	---	.76	.93	.28	.07	.59	.99	e.28
31	6.5	---	.87	.48	---	.76	---	.30	---	1.0	.92	---
TOTAL	286.37	179.1	47.88	19.41	12.92	19.45	34.19	16.28	5.09	6.34	43.64	18.64
MEAN	9.24	5.97	1.54	.63	.46	.63	1.14	.53	.17	.20	1.41	.62
MAX	48	13	2.5	.86	.60	.76	2.1	.87	.29	1.3	2.4	.86
MIN	.05	2.6	.85	.46	.38	.48	.72	.28	.07	.05	.84	.28
MED	5.2	5.3	1.5	.60	.45	.62	1.2	.52	.16	.11	1.1	.63
AC-FT	568	355	95	38	26	39	68	32	10	13	87	37

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

	MEAN	9.24	5.97	1.54	.63	.46	.63	1.14	.27	.12	.15	.91	.40
	MAX	9.24	5.97	1.54	.63	.46	.63	1.14	.53	.17	.20	1.41	.62
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
	MIN	9.24	5.97	1.54	.63	.46	.63	1.14	.013	.063	.091	.41	.18
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000	2000	2000	2000

## SUMMARY STATISTICS

## FOR 2001 WATER YEAR

## WATER YEARS 2000 - 2001

ANNUAL TOTAL	689.31												
ANNUAL MEAN	1.89									1.89			
HIGHEST ANNUAL MEAN										1.89		2001	
LOWEST ANNUAL MEAN										1.89		2001	
HIGHEST DAILY MEAN	48	Oct 23								48	Oct 23	2000	
LOWEST DAILY MEAN	.05	Oct 1								.00	Jun 4	2000	
ANNUAL SEVEN-DAY MINIMUM	.06	Jul 11								.00	Jun 8	2000	
ANNUAL RUNOFF (AC-FT)	1370									1370			
10 PERCENT EXCEEDS	4.2									2.6			
50 PERCENT EXCEEDS	.70									.49			
90 PERCENT EXCEEDS	.13									.02			

e Estimated

## GILA RIVER BASIN

187

## 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 fair.

**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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 12 .....	0700	119	3.05	Nov. 8 .....	0330	24	2.46
Oct. 23 .....	0115	*382	3.69	July 24 .....	1600	21	2.42
Oct. 29 .....	0330	26	2.48	Aug. 13 .....	1945	358	3.45

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	15	5.0	2.3	1.7	1.5	1.4	1.5	e. 60	.28	3.2	3.3
2	.20	13	4.9	2.3	1.7	1.5	1.5	1.5	e. 55	.28	2.4	3.2
3	.21	12	4.7	2.2	1.7	1.4	1.5	1.4	e. 50	.27	1.9	3.1
4	.21	12	4.6	2.2	1.6	1.4	1.4	1.4	e. 46	.25	2.2	3.0
5	.19	13	4.4	2.1	1.6	1.4	1.5	1.4	.45	.30	3.1	2.9
6	.17	15	4.1	2.1	1.6	1.3	2.9	1.3	.43	e. 42	2.6	2.8
7	.16	20	4.0	2.1	1.6	1.6	2.1	1.3	.40	e. 40	2.0	2.7
8	.18	23	3.9	2.1	1.7	1.7	2.0	1.2	.38	e. 40	1.8	2.6
9	.23	21	3.7	2.2	1.7	1.6	2.0	1.2	.35	e. 39	1.7	2.6
10	.52	18	3.7	2.2	1.8	1.7	2.2	1.2	.33	.38	1.5	2.0
11	13	17	3.6	2.1	1.8	1.8	2.3	1.1	.30	.38	3.1	1.2
12	99	16	3.5	2.1	1.8	1.9	2.3	1.1	.30	.36	5.3	1.2
13	46	15	3.5	2.1	1.7	1.9	2.3	1.1	.30	.36	22	1.5
14	21	14	3.4	2.1	1.7	1.9	2.3	1.1	.28	.34	24	1.3
15	14	13	3.3	2.0	1.7	1.9	2.3	1.0	.27	.34	18	1.2
16	11	12	3.1	2.0	1.7	1.9	2.4	.96	.26	.32	13	1.2
17	9.0	12	3.0	2.0	1.6	1.8	2.4	.92	.26	.38	11	1.1
18	7.2	11	2.9	2.0	1.6	1.8	2.4	.90	.24	.48	8.9	1.1
19	6.6	10	2.8	1.9	1.6	1.8	2.3	1.0	.25	.68	7.7	1.0
20	10	9.4	2.8	1.9	1.6	1.8	2.2	.97	.29	.67	6.5	.99
21	14	8.8	2.7	1.9	1.6	1.7	2.2	.88	.38	.66	6.0	.95
22	75	7.7	2.6	1.8	1.5	1.8	2.1	.83	.65	.74	5.3	.89
23	260	7.5	2.6	1.8	1.5	1.8	2.0	.79	.53	.71	4.8	.85
24	98	6.6	2.5	1.8	1.5	1.8	1.9	.73	.43	1.5	4.5	.81
25	46	6.4	2.5	1.8	1.5	1.8	1.8	.70	.47	.94	4.1	.78
26	31	6.1	2.4	1.8	1.5	1.7	1.8	.67	.42	.93	3.9	.75
27	22	5.7	2.4	1.8	1.5	1.7	1.7	.63	.36	.85	3.7	.73
28	22	5.5	2.4	1.8	1.5	1.7	1.7	.58	.33	.99	3.6	.69
29	25	5.2	2.4	1.8	---	1.6	1.6	.55	.31	1.6	3.6	.65
30	22	5.1	2.3	1.8	---	1.6	1.5	.56	.29	1.5	3.5	.72
31	18	---	2.3	1.8	---	1.5	---	e. 62	---	1.4	3.4	---
TOTAL	872.10	356.0	102.0	61.9	45.6	52.3	60.0	31.09	11.37	19.50	188.3	47.81
MEAN	28.1	11.9	3.29	2.00	1.63	1.69	2.00	1.00	.38	.63	6.07	1.59
MAX	260	23	5.0	2.3	1.8	1.9	2.9	1.5	.65	1.6	24	3.3
MIN	.16	5.1	2.3	1.8	1.5	1.3	1.4	.55	.24	.25	1.5	.65
AC-FT	1730	706	202	123	90	104	119	62	23	39	373	95
CFSM	3.36	1.42	.39	.24	.19	.20	.24	.12	.05	.08	.72	.19

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2001, BY WATER YEAR (WY)

	MEAN	2.66	1.53	1.28	2.15	2.09	1.64	1.18	.50	.20	.63	2.72	2.28
MAX	28.1	11.9	7.03	11.5	12.1	6.15	5.18	1.94	.74	2.23	11.4	14.5	
(WY)	2001	2001	1995	1960	1995	1998	1998	1998	1995	1998	1963	1963	
MIN	.000	.000	.10	.091	.021	.039	.001	.000	.000	.000	.001	.038	
(WY)	1998	1998	1997	2000	2000	2000	2000	2000	1961	1994	1997	1997	

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1960 - 2001

	ANNUAL TOTAL	1421.72	1847.97	
ANNUAL MEAN	3.88	5.06	1.67	
HIGHEST ANNUAL MEAN			5.06	2001
LOWEST ANNUAL MEAN			.099	1997
HIGHEST DAILY MEAN	260	Oct 23	260	Oct 23 2000
LOWEST DAILY MEAN	.00	Mar 4	.16	Oct 7
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 3	.19	Oct 2
ANNUAL RUNOFF (AC-FT)	2820		3670	1210
ANNUAL RUNOFF (CFSM)	.46		.60	.20
10 PERCENT EXCEEDS	10		12	3.6
50 PERCENT EXCEEDS	.13		1.8	.30
90 PERCENT EXCEEDS	.00		.38	.00

e Estimated

## GILA RIVER BASIN

## 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.

**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 fair, except for high-flow records 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)
Oct. 12.....	2000	4,160
Oct. 23.....	1630	*17,500
Aug. 14.....	1700	4,140

Minimum daily discharge, 2.9 ft<sup>3</sup>/s June 16--19, 23--24, 27--28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	139	50	31	31	31	23	11	4.3	3.0	42	45
2	6.3	127	49	31	30	31	22	11	4.2	3.1	35	24
3	6.2	117	48	31	29	31	21	11	4.0	3.2	25	18
4	6.1	109	46	31	29	31	21	11	3.8	3.4	44	15
5	5.8	235	45	31	29	30	20	11	3.7	4.0	92	13
6	5.7	250	45	33	28	30	22	11	3.7	5.0	42	11
7	5.5	477	43	32	28	30	23	11	3.6	25	17	10
8	5.7	414	43	32	28	30	23	11	3.5	14	14	9.6
9	6.0	237	43	41	28	30	23	11	3.5	7.5	13	9.0
10	6.9	178	40	35	28	30	21	11	3.3	6.3	16	8.5
11	407	150	40	34	28	29	21	10	3.1	5.9	17	7.9
12	2800	130	40	34	28	29	20	10	3.1	5.9	371	7.5
13	1020	120	38	34	28	29	20	10	3.0	5.8	219	7.9
14	171	111	39	35	28	29	19	10	3.0	5.6	1290	17
15	96	103	38	34	28	29	18	9.5	3.0	5.5	274	16
16	66	97	37	34	29	28	17	9.0	2.9	23	290	8.4
17	49	91	36	34	28	28	16	8.4	2.9	99	132	7.1
18	39	87	36	34	29	28	15	8.0	2.9	62	98	6.6
19	128	83	35	33	29	27	14	8.8	2.9	64	70	6.2
20	232	78	34	33	29	27	13	8.1	3.1	65	62	5.8
21	80	75	34	32	28	28	13	7.5	3.2	40	113	5.4
22	313	70	34	32	30	28	13	7.0	3.0	52	73	5.0
23	8550	67	33	32	30	27	13	6.6	2.9	97	44	4.7
24	3050	65	33	32	30	27	12	6.1	2.9	104	36	4.8
25	464	63	33	32	30	26	12	5.7	3.1	46	30	4.5
26	296	60	33	31	31	25	12	5.5	3.4	63	26	4.3
27	226	57	32	31	31	24	12	5.3	2.9	47	23	4.3
28	229	55	32	32	31	24	12	5.0	2.9	43	20	4.2
29	217	53	32	32	---	24	11	4.9	3.1	101	18	4.1
30	177	52	32	31	---	23	11	4.6	3.0	159	17	4.2
31	155	---	32	31	---	23	---	4.5	---	47	74	---
TOTAL	18825.8	3950	1185	1015	813	866	513	264.5	97.9	1215.2	3637	299.0
MEAN	607	132	38.2	32.7	29.0	27.9	17.1	8.53	3.26	39.2	117	9.97
MAX	8550	477	50	41	31	31	23	11	4.3	159	1290	45
MIN	5.5	52	32	31	28	23	11	4.5	2.9	3.0	13	4.1
MED	128	100	37	32	29	28	18	9.0	3.1	25	42	7.7
AC-FT	37340	7830	2350	2010	1610	1720	1020	525	194	2410	7210	593
CFSM	.49	.11	.03	.03	.02	.02	.01	.01	.00	.03	.10	.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2001, BY WATER YEAR (WY)

	MEAN	18.5	46.8	40.1	28.0	24.1	13.3	8.38	11.9	140	211	80.8
MAX	1087	132	1230	507	217	160	66.5	37.2	167	876	968	1887
(WY)	1978	2001	1915	1979	1915	1905	1917	1925	1921	1954	1926	
MIN	2.87	4.71	5.52	5.81	7.18	8.04	3.03	2.42	1.19	.55	9.97	4.15
(WY)	1996	1999	1999	1999	1923	1999	1913	1918	1990	1997	1962	1980

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1904 - 2001

ANNUAL TOTAL	36685.3	32681.4	
ANNUAL MEAN	100	89.5	55.3
HIGHEST ANNUAL MEAN			206
LOWEST ANNUAL MEAN			11.0
HIGHEST DAILY MEAN	8550	Oct 23	28800
LOWEST DAILY MEAN	1.7	Jun 15	.05
ANNUAL SEVEN-DAY MINIMUM	2.1	Jun 10	.06
ANNUAL RUNOFF (AC-FT)	72770	64820	40090
ANNUAL RUNOFF (CFSM)	.081	.073	.045
10 PERCENT EXCEEDS	156	112	70
50 PERCENT EXCEEDS	10	28	13
90 PERCENT EXCEEDS	3.6	4.2	3.6



## GILA RIVER BASIN

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09471000 SAN PEDRO RIVER AT CHARLESTON, AZ--Continued  
(National Water-Quality Assessment Station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1963 to Sept. 1975, Dec. 1986 to Sept. 1993, Feb. 1996 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1964 to Sept. 1975, Oct. 1996 to Sept. 1998.

WATER TEMPERATURES: July 1963 to Sept. 1975, Oct. 1996 to Sept. 1998.

SUSPENDED-SEDIMENT DISCHARGE: July 1963 to Sept. 1975.

INSTRUMENTATION.--Specific conductance and water temperature recorder Oct. 1996 to Sept. 1998.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

		DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	
DATE	TIME													
OCT 20...	1320	5.6	664	8.1	100	8.3	526	24.5	18.8	200	57.0	14.0	2.60	
NOV 17...	1355	8.7	657	7.8	93	8.3	528	27.0	16.5	190	54.0	13.7	2.09	
DEC 14...	1255	9.3	662	10.1	101	8.3	517	13.0	9.0	200	56.2	13.4	1.97	
JAN 12...	1300	9.7	662	10.3	106	8.4	514	22.5	10.1	190	55.8	13.2	1.94	
FEB 24...	1310	11	655	9.4	106	8.3	508	18.0	14.1	180	50.3	12.5	2.06	
MAR 22...	1420	10	658	9.0	103	8.4	500	13.0	14.5	180	49.9	12.9	2.06	
APR 20...	1450	5.8	659	8.1	109	8.4	486	31.0	22.8	170	45.1	13.0	2.02	
MAY 24...	1250	3.0	657	7.9	120	8.4	452	34.5	28.4	150	39.8	12.5	2.24	
JUN 19...	1330	10	659	5.2	71	8.0	283	29.5	23.3	93	30.3	4.29	5.15	
JUL 12...	1305	8.3	662	6.1	91	8.2	450	32.0	28.9	150	46.6	9.23	3.48	
AUG 16...	1250	19	662	6.4	92	8.2	540	32.5	26.3	190	59.1	9.87	3.89	
SEP 12...	1245	24	660	7.1	98	8.2	652	32.0	24.2	240	74.9	12.2	3.84	
DATE		SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITTY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 20...	1	38.9	247	282	10	9.3	.7	27.1	26.6	.44	320	325	<.020	
NOV 17...	1	38.5	245	292	4	8.6	.7	25.8	25.5	.43	318	317	<.020	
DEC 14...	1	41.2	246	285	7	9.8	.6	25.4	28.0	.44	325	325	<.020	
JAN 12...	1	40.6	232	266	8	9.6	.7	24.2	29.4	.43	314	314	<.020	
FEB 24...	1	38.7	233	272	6	8.5	.6	23.0	30.1	.43	317	306	<.020	
MAR 22...	1	40.4	234	279	3	9.3	.7	23.2	28.2	.42	312	307	<.020	
APR 20...	1	39.1	224	258	8	8.0	.8	22.2	24.6	.40	292	290	<.020	
MAY 24...	1	38.3	211	235	11	7.2	.8	23.8	20.8	.37	275	272	<.020	
JUN 19...	.7	14.9	117	143	.0	3.9	.3	10.4	14.9	.25	183	156	<.020	
JUL 12...	1	30.8	190	232	.0	6.6	.6	20.6	27.8	.37	274	262	<.020	
AUG 16...	1	34.1	221	253	8	8.6	.4	20.9	45.6	.45	334	316	<.020	
SEP 12...	1	46.9	254	298	6	11.3	.4	23.2	71.1	.55	402	397	<.020	

## GILA RIVER BASIN

09471000 SAN PEDRO RIVER AT CHARLESTON, AZ--Continued  
(National Water-Quality Assessment Station)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
OCT 20...	<.10	.12	--	--	--	<.050	.017	--	.089	.032	.029	.040	1.8
NOV 17...	E.05	E.07	--	--	--	<.050	<.010	--	.061	.026	.020	.036	1.9
DEC 14...	E.06	E.08	--	--	--	<.050	<.010	--	.052	.016	.017	.019	1.4
JAN 12...	E.07	E.05	--	--	--	<.050	<.010	--	--	.009	<.010	.010	1.2
FEB 24...	E.07	.14	--	--	--	<.050	<.010	--	.046	.016	.015	.019	1.3
MAR 22...	<.10	.14	--	--	--	<.050	<.010	--	.049	.016	.016	.028	1.5
APR 20...	.11	.17	--	--	--	<.050	<.010	--	.049	.022	.016	.029	E.27
MAY 24...	E.09	.20	--	--	--	<.050	<.010	--	.055	.028	.018	.045	1.5
JUN 19...	.71	3.0	.97	.240	1.06	.260	.020	3.3	.316	.148	.103	1.43	11
JUL 12...	.18	.41	.57	--	--	.391	<.010	.81	.190	.075	.062	.218	2.4
AUG 16...	.15	.28	.35	--	--	.200	<.010	.48	.159	.068	.052	.126	2.6
SEP 12...	.14	.20	.25	--	--	.114	<.010	.32	.123	.049	.040	.069	1.9

DATE	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SEDI- MENT, DIS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 20...	.4	<10	92.9	13	.20
NOV 17...	.6	<10	72.5	10	.23
DEC 14...	.2	M	58.5	5	.13
JAN 12...	.2	M	38.2	1	.03
FEB 24...	.5	10	29.4	10	.30
MAR 22...	.4	M	40.7	16	.43
APR 20...	.3	M	37.1	15	.23
MAY 24...	.2	<10	44.8	10	.08
JUN 19...	11	M	4.4	1250	34
JUL 12...	2.0	<10	19.7	147	3.3
AUG 16...	1.0	<10	31.5	72	3.7
SEP 12...	.4	<10	21.1	16	1.0

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

## GILA RIVER BASIN

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09471000 SAN PEDRO RIVER AT CHARLESTON, AZ--Continued  
(National Water-Quality Assessment Station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1963 to Sept. 1975, Dec. 1986 to Sept. 1993, Feb. 1996 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct. 1964 to Sept. 1975, Oct. 1996 to Sept. 1998.

WATER TEMPERATURES: July 1963 to Sept. 1975, Oct. 1996 to Sept. 1998.

SUSPENDED-SEDIMENT DISCHARGE: July 1963 to Sept. 1975.

INSTRUMENTATION.--Specific conductance and water temperature recorder Oct. 1996 to Sept. 1998.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	BARO-METRIC PRES-SURE (MM HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	
		(00061)	(00025)	(00300)	(00301)	(00400)	(00095)	(00020)	(00010)	(00900)	(00915)	(00925)	(00935)	
OCT 26...	1405	283	657	7.9	93	8.1	389	21.5	15.9	140	46.5	6.97	3.53	
NOV 21...	1055	76	663	8.9	90	8.3	601	13.5	9.8	220	70.3	11.9	3.10	
JAN 09...	1020	34	655	8.2	88	8.3	641	8.5	11.5	230	70.5	13.3	2.97	
31...	1040	31	660	10.7	103	8.5	621	8.5	7.3	230	70.3	13.2	2.56	
MAR 08...	1335	31	661	12.5	143	8.6	574	15.5	15.0	200	58.4	13.5	2.02	
APR 04...	1300	20	657	9.9	125	8.5	585	26.0	19.3	200	55.7	13.9	2.29	
25...	1240	12	660	9.0	118	8.4	595	29.0	21.5	200	55.6	14.0	2.87	
MAY 23...	1255	6.4	659	8.0	114	8.4	571	33.5	25.4	180	51.3	13.8	2.67	
JUN 27...	1315	2.8	662	7.9	119	8.3	527	32.0	28.7	170	45.9	13.3	2.43	
JUL 12...	1355	5.8	660	6.9	105	8.3	502	30.5	29.2	170	48.0	12.3	2.91	
AUG 30...	1510	17	658	6.9	98	8.1	592	27.5	25.1	210	65.0	12.4	3.27	
SEP 18...	1255	6.4	659	6.7	98	8.3	560	30.0	26.5	190	57.0	12.3	2.97	
DATE		SODIUM AD-SORP-TION RATIO	SODIUM, DIS-SOLVED (MG/L AS NA)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
		(00931)	(00930)	(39086)	(00453)	(00452)	(00940)	(00950)	(00955)	(00945)	(70303)	(70300)	(70301)	(00608)
OCT 26...	.8	21.3	151	184	.0	6.5	.2	17.4	40.6	.33	246	235	<.041	
NOV 21...	1	40.6	246	288	6	10.6	.5	22.5	67.0	.54	395	375	<.041	
JAN 09...	1	48.3	255	304	4	12.4	.4	19.3	74.1	.56	410	397	.073	
31...	1	46.5	257	292	11	12.2	.5	21.2	72.3	.55	408	395	<.041	
MAR 08...	1	48.8	222	244	13	12.1	.5	18.8	69.8	.50	370	357	<.041	
APR 04...	2	50.9	223	260	6	12.3	.5	17.4	65.6	.47	347	353	<.041	
25...	2	49.8	229	260	10	12.5	.5	20.1	61.8	.53	388	355	<.041	
MAY 23...	1	45.9	227	260	8	12.2	.7	24.1	52.6	.49	359	339	<.040	
JUN 27...	2	46.4	211	245	6	10.3	.7	26.0	41.2	.44	325	313	.091	
JUL 12...	1	40.8	198	227	7	8.4	.6	24.6	44.2	.43	314	301	<.040	
AUG 30...	1	41.9	234	273	6	10.4	.5	23.4	59.2	.50	365	356	<.040	
SEP 18...	1	40.9	225	260	7	9.5	.5	23.1	50.5	.47	346	332	.049	

## GILA RIVER BASIN

09471000 SAN PEDRO RIVER AT CHARLESTON, AZ--Continued  
(National Water-Quality Assessment Station)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC ORGANIC (MG/L AS N) (00625)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT 26...	.22	.83	.52	--	--	.297	E.004	--	--	1.1	.279	.113	.091
NOV 21...	.12	.20	.36	--	--	.248	E.004	--	--	.45	.120	.047	.039
JAN 09...	.27	.46	.76	.472	2.09	.488	.016	.20	.39	.95	--	.014	E.012
31...	.12	.19	.59	--	--	.472	E.005	--	--	.67	.077	.029	.025
MAR 08...	E.06	.09	--	--	--	<.047	<.006	--	--	--	--	.007	<.018
APR 04...	.10	.14	--	--	--	<.047	<.006	--	--	--	--	.009	<.018
25...	E.08	.14	--	--	--	<.047	<.006	--	--	--	--	.014	<.018
MAY 23...	E.10	.13	--	--	--	<.050	<.006	--	--	--	--	.028	E.014
JUN 27...	E.06	.19	--	.047	.208	.056	.009	--	.10	.25	.074	.023	.024
JUL 12...	.10	.35	.17	.066	.292	.072	.006	--	--	.42	--	.032	E.013
AUG 30...	.11	.21	--	--	--	E.061	E.003	--	--	--	--	.046	E.031
SEP 18...	E.09	.27	--	--	--	<.050	.006	--	.22	--	.098	.029	.032
DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)
OCT 26...	.445	4.3	3.5	<10	7.5	--	--	--	--	--	--	--	--
NOV 21...	.069	2.7	.5	<10	73.7	--	--	--	--	--	--	--	--
JAN 09...	.036	--	--	M	64.6	--	--	--	--	--	--	--	--
31...	.041	--	--	<10	54.9	--	--	--	--	--	--	--	--
MAR 08...	.011	--	--	10	9.8	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041
APR 04...	.011	--	--	<10	3.6	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041
25...	.015	--	--	<10	4.4	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041
MAY 23...	.038	--	--	<10	29.7	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041
JUN 27...	.051	--	--	<10	20.2	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041
JUL 12...	.101	--	--	<10	30.1	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041
AUG 30...	.075	--	--	<10	42.5	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041
SEP 18...	.077	--	--	<10	44.8	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041

## GILA RIVER BASIN

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09471000 SAN PEDRO RIVER AT CHARLESTON, AZ--Continued  
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WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FOFOS WATER DISS REC (UG/L) (04095)
OCT 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 09...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	<.020	<.005	<.018	<.003	E.002	81	<.005	<.005	<.021	<.002	<.009	<.005	<.003
APR 04...	<.020	<.005	<.018	<.003	<.006	100	<.005	<.005	<.021	<.002	<.009	<.005	<.003
25...	<.020	<.005	<.018	<.003	<.006	98	<.005	<.005	<.021	<.002	<.009	<.005	<.003
MAY 23...	<.020	<.005	<.018	<.003	<.006	117	<.005	<.005	<.021	<.002	<.009	<.005	<.003
JUN 27...	<.020	<.005	<.018	<.003	<.006	88	<.005	<.005	<.021	<.002	<.009	<.005	<.003
JUL 12...	<.020	<.005	<.018	<.003	<.006	116	<.005	<.005	<.021	<.002	<.009	<.005	<.003
AUG 30...	<.020	<.005	<.018	<.003	<.006	114	<.005	<.005	<.021	<.002	<.009	<.005	<.003
SEP 18...	<.020	<.005	<.018	<.003	<.006	106	<.005	<.005	<.021	<.002	<.009	<.005	<.003
DATE	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)
OCT 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 09...	--	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	80	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
APR 04...	99	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
25...	88	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
MAY 23...	86	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
JUN 27...	85	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
JUL 12...	101	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
AUG 30...	99	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
SEP 18...	74	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002



## GILA RIVER BASIN

09471000 SAN PEDRO RIVER AT CHARLESTON, AZ--Continued  
(National Water-Quality Assessment Station)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)
OCT 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 09...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 31...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.017	<.005
APR 04...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.017	<.005
APR 25...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.017	<.005
MAY 23...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.017	<.005
JUN 27...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.017	<.005
JUL 12...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.017	<.005
AUG 30...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.017	<.005
SEP 18...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.017	<.005
DATE	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)									
OCT 26...	--	--	430	329									
NOV 21...	--	--	55	11									
JAN 09...	--	--	19	1.7									
JAN 31...	--	--	8	.67									
MAR 08...	<.002	<.009	8	.67									
APR 04...	<.002	<.009	3	.16									
APR 25...	<.002	<.009	4	.13									
MAY 23...	<.002	<.009	9	.16									
JUN 27...	<.002	<.009	22	.17									
JUL 12...	<.002	<.009	53	.83									
AUG 30...	<.002	<.009	22	1.0									
SEP 18...	<.002	<.009	48	.83									

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

## GILA RIVER BASIN

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## 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.

**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 CURRENT YEAR**--Maximum discharge, 98 ft<sup>3</sup>/s, Oct. 23, 2001, gage height 3.96 ft. Minimum daily discharge 0.08 ft<sup>3</sup>/s Aug. 7-8, 2001.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	2.5	1.2	1.2	.34	.36	.33	.38	.15	.13	.29	.34
2	.19	2.3	1.2	1.2	.30	.35	.33	.40	.15	.12	.24	.35
3	.19	2.2	1.5	1.2	.29	.34	.33	.41	.15	.11	.10	.36
4	.19	3.9	1.6	1.1	e.27	.33	.33	.41	.21	.11	.12	.37
5	.17	5.9	1.2	1.1	e.30	.32	.38	.40	.23	.11	.16	.36
6	.16	4.7	1.9	1.2	e.33	.32	.45	.40	.22	.15	.16	.36
7	.15	9.6	2.1	1.1	e.37	.37	.38	.40	.22	.22	.08	.31
8	.16	11	1.3	.73	.35	.36	.37	.39	.21	.18	.08	.30
9	e.18	6.8	1.2	.77	.35	.35	.38	.39	.20	.15	.15	.29
10	e.16	3.1	1.2	.93	.35	.32	.39	.42	.17	.15	.13	.29
11	e3.3	5.0	1.2	.74	.35	.30	.38	.42	.16	.16	.14	.28
12	e4.5	5.5	1.3	.54	.34	.30	.37	.43	.15	.14	.23	.27
13	e3.3	3.7	1.3	.59	.33	.30	.38	.43	.15	.13	.18	.30
14	e2.8	4.3	1.3	.61	.33	.29	.38	.42	.15	.13	.24	.36
15	e2.0	2.7	1.3	.52	.33	.29	.39	.40	.13	.13	.30	.45
16	e1.5	2.8	1.3	.43	.32	.30	.43	.38	.14	.17	.14	.54
17	e1.2	2.8	1.3	.42	.32	.30	.43	.38	.14	.19	.15	.29
18	e1.4	2.6	1.3	.42	.31	.31	.43	.38	.14	.23	.10	.23
19	e2.6	2.3	1.4	.35	.32	.30	.42	.39	.16	.32	.17	.22
20	e14	2.2	1.4	.33	.32	.29	.41	.36	.16	.23	.32	.20
21	e11	2.1	1.4	.30	.32	.32	.41	.32	e.16	.20	.18	.19
22	e20	2.1	1.4	.31	.33	.33	.41	.32	e.16	.18	.28	.18
23	e50	1.8	1.4	.32	.32	.33	.41	.30	e.15	.17	.56	.18
24	e17	1.5	1.4	.27	.32	.33	.42	.27	e.15	.13	.47	.18
25	e7.2	1.4	1.3	.26	.32	.33	.43	.26	.14	.24	.49	.16
26	e3.7	1.4	1.3	.26	.33	.33	.40	.26	.14	.32	.37	.16
27	e3.5	1.3	1.3	.24	.34	.33	.38	.25	.12	.21	.27	.15
28	5.1	1.7	1.2	.25	.36	.33	.37	.25	.12	.24	.31	.14
29	5.5	1.8	1.1	.34	---	.33	.36	.22	.13	.54	.37	.14
30	3.0	1.5	1.1	.35	---	.33	.36	.20	.14	.68	.41	.15
31	3.0	---	1.1	.37	---	.33	---	.16	---	.30	.36	---
TOTAL	167.35	102.5	41.5	18.75	9.16	10.02	11.64	10.80	4.80	6.47	7.55	8.10
MEAN	5.40	3.42	1.34	.60	.33	.32	.39	.35	.16	.21	.24	.36
MAX	50	11	2.1	1.2	.37	.37	.45	.43	.23	.68	.56	.54
MIN	.15	1.3	1.1	.24	.27	.29	.33	.16	.12	.11	.08	.14
MED	2.8	2.5	1.3	.43	.33	.33	.38	.38	.15	.17	.23	.28
AC-FT	332	203	82	37	18	20	23	21	9.5	13	15	16

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

	2000	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
MEAN	5.40	3.42	1.34	.60	.33	.32	.39	.35	.16	.21	.24	.36
MAX	5.40	3.42	1.34	.60	.33	.32	.39	.35	.16	.21	.24	.44
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000
MIN	5.40	3.42	1.34	.60	.33	.32	.39	.35	.16	.21	.24	.27
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001

## SUMMARY STATISTICS

## FOR 2001 WATER YEAR

## WATER YEARS 2000 - 2001

ANNUAL TOTAL	398.64											
ANNUAL MEAN	1.09								1.09			
HIGHEST ANNUAL MEAN									1.09			2001
LOWEST ANNUAL MEAN									1.09			2001
HIGHEST DAILY MEAN	50	Oct 23							50	Oct 23	2000	
LOWEST DAILY MEAN	.08	Aug 7							.01	May 30	2000	
ANNUAL SEVEN-DAY MINIMUM	.12	Jun 29							.01	Jun 5	2000	
ANNUAL RUNOFF (AC-FT)	791								791			
10 PERCENT EXCEEDS	2.2								1.7			
50 PERCENT EXCEEDS	.34								.32			
90 PERCENT EXCEEDS	.15								.03			

e Estimated

## GILA RIVER BASIN

## 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, 2,870 ft<sup>3</sup>/s Oct. 23, 2000, gage height, 8.22 ft.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23 .....	0845	*2,870	*8.22

Minimum daily discharge. .12 ft<sup>3</sup>/s Oct. 1--2, 2000, Sep. 20, 2001.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	14	9.2	9.7	5.5	10	6.3	5.7	2.4	1.7	2.1	6.9
2	.12	10	9.7	8.5	5.5	11	6.7	4.5	1.4	10	.53	7.5
3	.14	9.1	9.1	8.1	6.4	9.7	6.5	4.4	.66	e6.9	1.8	6.6
4	.21	12	9.1	8.2	6.8	8.9	6.2	4.8	.64	e27	9.0	5.9
5	.45	13	9.7	8.8	6.6	9.0	6.7	4.5	2.0	e5.4	.95	5.5
6	.49	14	9.9	11	6.9	9.6	20	3.4	1.2	8.0	.85	4.6
7	.56	81	9.3	14	6.2	12	8.1	2.7	1.9	5.0	.69	3.7
8	.56	127	9.8	11	6.5	13	5.0	2.3	1.8	5.1	.71	3.3
9	.59	72	9.5	14	6.5	11	6.2	3.5	2.3	3.1	1.1	3.3
10	1.6	33	9.7	14	6.6	12	7.4	3.5	1.6	3.8	.92	3.2
11	16	23	8.8	10	6.6	16	7.8	1.6	2.0	4.1	.76	3.1
12	40	30	9.4	12	6.5	12	9.0	1.8	5.5	5.2	2.0	3.5
13	2.2	33	13	14	6.7	7.5	9.9	3.2	7.6	8.8	2.3	11
14	.90	20	9.5	11	7.5	8.9	11	5.5	4.6	1.8	14	35
15	1.3	15	9.1	8.6	8.0	13	12	4.3	.79	1.6	5.0	11
16	2.4	9.7	8.5	10	7.3	13	10	3.8	.61	1.0	4.6	6.8
17	4.4	8.0	8.7	10	7.4	12	9.3	3.1	1.0	5.9	6.9	2.1
18	4.8	8.1	8.2	11	7.8	13	9.4	3.8	1.0	1.6	6.1	.34
19	9.1	7.0	8.4	9.7	8.5	12	9.4	4.8	1.0	1.3	5.2	.14
20	110	8.1	9.6	8.8	9.2	18	8.7	5.5	4.3	1.2	6.4	.12
21	52	10	9.8	7.7	8.5	17	8.3	4.4	7.8	1.4	5.1	.13
22	12	9.9	11	7.8	9.2	12	8.4	3.6	2.0	1.2	4.5	.18
23	1160	10	10	7.6	10	7.5	9.0	4.7	15	1.0	4.2	.19
24	240	9.2	9.9	6.1	10	7.2	8.3	4.7	e6.4	.65	4.3	.37
25	74	8.7	10	7.5	10	7.6	9.0	3.7	e5.4	.67	4.3	1.0
26	32	8.2	9.6	11	10	8.5	9.2	5.8	e8.7	2.8	4.2	1.1
27	18	7.9	9.8	9.7	10	9.2	9.1	6.0	4.3	.90	4.0	1.1
28	19	8.9	9.7	9.7	11	8.9	9.8	6.5	3.8	4.4	3.3	.70
29	52	8.6	10	8.0	---	8.4	7.3	e5.3	2.6	11	4.7	.76
30	32	8.8	10	6.4	---	6.8	6.2	e3.5	1.9	2.0	8.4	1.2
31	19	---	10	6.0	---	5.9	---	e3.9	---	2.8	7.6	---
TOTAL	1905.94	637.2	298.0	299.9	217.7	330.6	260.2	128.8	102.20	137.32	126.51	130.33
MEAN	61.5	21.2	9.61	9.67	7.78	10.7	8.67	4.15	3.41	4.43	4.08	4.34
MAX	1160	127	13	14	11	18	20	6.5	15	27	14	35
MIN	.12	7.0	8.2	6.0	5.5	5.9	5.0	1.6	.61	.65	.53	.12
MED	4.8	10	9.7	9.7	7.4	10	8.5	4.3	2.0	2.8	4.2	3.2
AC-FT	3780	1260	591	595	432	656	516	255	203	272	251	259

e Estimated

## GILA RIVER BASIN

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## 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 Fairbanks, 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.

**REMARKS.**--Records good.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge 862 ft<sup>3</sup>/s, Oct. 23, 2000, gage height 5.28 ft; minimum daily, 0.01 ft<sup>3</sup>/s June 17, 2000.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge 862 ft<sup>3</sup>/s, Oct. 23, 2000, gage height, 5.28 ft; minimum daily, 0.05 ft<sup>3</sup>/s July 1, 2001.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	2.9	3.7	3.3	4.3	4.8	1.7	1.5	.29	.05	.33	.23
2	.23	1.8	3.6	3.0	4.3	4.6	1.6	1.1	.26	.06	.27	.22
3	.25	1.1	3.6	2.9	4.3	4.3	1.5	1.1	.30	.05	.37	.22
4	.26	1.0	3.5	3.0	4.2	4.2	1.4	1.1	.32	.06	.24	.22
5	.25	.98	3.5	2.9	4.2	4.1	1.3	1.1	.30	7.6	.20	.21
6	.21	5.3	3.4	3.2	4.1	4.2	3.1	.84	.32	.76	.20	.23
7	.21	18	3.4	3.6	4.0	4.6	3.5	.78	.30	2.0	.17	.23
8	.24	34	3.5	3.5	3.9	5.2	2.8	.79	.32	1.7	.19	.21
9	.33	28	3.4	3.8	4.3	4.8	2.4	.76	.33	.68	.23	.23
10	.45	18	3.5	4.2	4.3	4.6	2.2	.76	.37	.64	.22	.18
11	5.3	13	3.5	3.7	4.3	4.5	2.5	.76	.36	.51	.65	.18
12	16	12	3.5	3.7	4.2	4.4	2.4	.64	.40	.47	.30	.80
13	1.2	16	4.2	4.1	4.1	4.2	2.1	.60	.28	.26	.25	.70
14	.83	13	4.4	4.1	4.0	4.3	1.9	.56	.33	.26	.89	9.9
15	.73	9.9	3.9	4.0	4.0	4.3	1.7	.55	.24	.24	.73	1.2
16	.67	7.8	3.8	4.0	4.0	4.3	1.6	.52	.23	.28	.43	.99
17	.65	6.3	3.8	4.4	4.2	4.2	1.5	.51	.25	.24	4.3	.64
18	.61	5.2	3.6	4.2	4.3	4.1	.99	.54	.24	.24	1.6	.55
19	.64	4.6	3.4	4.2	4.1	4.0	.91	.54	.23	.23	.67	.50
20	2.5	4.3	3.5	4.2	3.9	4.0	.72	.54	.30	.21	1.7	.46
21	7.0	4.0	3.5	4.2	3.8	3.8	.73	.56	.40	.21	.52	.43
22	15	3.7	3.3	4.1	3.9	3.4	.77	.72	.39	.19	.25	.40
23	291	3.4	3.2	4.0	4.0	3.4	.83	.86	.41	.28	.20	.38
24	138	3.8	3.1	4.0	4.0	3.4	.71	1.5	1.1	.28	.17	.34
25	29	4.2	3.1	4.0	4.1	3.0	.63	2.5	.31	1.9	.13	.33
26	10	4.1	3.0	4.0	4.3	2.9	.57	4.9	.29	.30	.11	.31
27	4.9	4.2	2.9	4.3	4.4	2.3	1.2	6.2	.25	.32	.10	.28
28	3.5	4.1	3.2	4.8	4.7	2.0	1.2	4.7	.22	1.2	.09	.19
29	6.9	4.1	3.2	4.9	---	1.9	1.2	3.9	.21	.41	2.1	.09
30	11	3.8	3.3	4.7	---	1.8	1.3	2.2	.18	.57	.50	.10
31	5.1	---	3.3	4.5	---	1.7	---	.43	---	.40	.26	---
TOTAL	553.21	242.58	107.8	121.5	116.2	117.3	46.96	44.06	9.73	22.60	18.37	20.95
MEAN	17.8	8.09	3.48	3.92	4.15	3.78	1.57	1.42	.32	.73	.59	.70
MAX	291	34	4.4	4.9	4.7	5.2	3.5	6.2	1.1	7.6	4.3	9.9
MIN	.21	.98	2.9	2.9	3.8	1.7	.57	.43	.18	.05	.09	.09
MED	.83	4.2	3.5	4.0	4.1	4.2	1.5	.78	.30	.28	.26	.30
AC-FT	1100	481	214	241	230	233	93	87	19	45	36	42

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

MEAN	17.8	8.09	3.48	3.92	4.15	3.78	1.28	.92	.36	.56	3.47	.54
MAX	17.8	8.09	3.48	3.92	4.15	3.78	1.57	1.42	.39	.73	6.35	.70
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2000	2001	2000	2001
MIN	17.8	8.09	3.48	3.92	4.15	3.78	.99	.42	.32	.40	.59	.39
(WY)	2001	2001	2001	2001	2001	2001	2000	2000	2001	2000	2001	2000

## SUMMARY STATISTICS

## FOR 2001 WATER YEAR

## WATER YEARS 2000 - 2001

ANNUAL TOTAL	1421.26		
ANNUAL MEAN	3.89		
HIGHEST ANNUAL MEAN		3.89	2001
LOWEST ANNUAL MEAN		3.89	2001
HIGHEST DAILY MEAN	291	Oct 23	
LOWEST DAILY MEAN	.05	Jul 1	
ANNUAL SEVEN-DAY MINIMUM	.12	Jun 28	
ANNUAL RUNOFF (AC-FT)	2820		
10 PERCENT EXCEEDS	4.7		4.4
50 PERCENT EXCEEDS	1.7		.75
90 PERCENT EXCEEDS	.23		.19

## GILA RIVER BASIN

## 09471550 SAN PEDRO RIVER NEAR TOMBSTONE, AZ

**LOCATION.**--Lat 31°45'03", long 110°12'02", in SE 1/4 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 good except for 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.

**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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 13.....	0100	3,770	7.92	Aug. 14.....	2100	3,360	7.66
Oct. 23.....	2200	*20,500	*13.53				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	144	56	32	33	28	16	12	e2.6	.00	43	78
2	1.8	125	53	31	32	29	16	12	e2.3	.00	42	33
3	1.6	108	51	31	31	29	16	11	e1.5	.00	24	24
4	1.5	96	50	30	31	27	15	10	e.34	.00	46	18
5	1.2	209	49	30	31	27	14	10	.07	.00	20	15
6	.77	395	46	35	31	26	18	11	.05	.06	145	11
7	.07	668	45	33	30	28	20	10	.03	62	27	9.6
8	.04	805	44	32	29	28	19	9.6	.02	46	25	8.1
9	.16	438	43	44	28	27	19	9.3	.02	11	24	6.8
10	1.1	298	42	43	29	27	18	8.9	.01	4.5	23	5.8
11	525	235	42	38	29	26	17	8.6	.01	1.7	24	4.9
12	2490	195	42	37	28	25	18	9.4	.00	.66	397	4.3
13	1880	183	41	36	28	25	18	9.0	.00	.60	540	7.9
14	433	163	40	37	27	24	17	8.6	.00	.56	1290	87
15	168	140	38	37	26	23	16	8.0	.00	.52	e560	15
16	77	127	38	36	26	23	17	7.4	.00	18	e420	22
17	45	116	37	35	26	21	17	7.0	.00	84	164	9.9
18	32	111	36	35	27	21	16	6.8	.00	65	106	8.3
19	65	105	35	34	27	20	16	7.7	.00	60	57	7.0
20	645	101	35	34	27	19	14	9.1	.00	62	50	6.2
21	114	98	35	35	26	19	14	7.6	.00	56	110	5.4
22	295	91	35	35	27	20	13	6.7	.00	40	96	4.7
23	7420	87	34	35	27	19	14	6.5	.00	42	47	4.1
24	4180	83	33	34	27	19	14	5.8	.00	190	37	3.5
25	679	80	32	34	28	19	14	e4.5	.00	44	31	2.6
26	352	76	32	33	28	18	14	e3.6	.00	70	27	e.00
27	212	71	31	34	28	17	14	e2.9	.00	60	22	e.00
28	231	67	32	34	28	17	13	e2.6	.00	49	18	.00
29	222	63	32	35	---	17	12	e2.7	.00	64	17	.00
30	191	59	32	34	---	17	12	e2.7	.00	262	18	.00
31	166	---	32	33	---	17	---	e2.6	---	75	63	---
TOTAL	20432.44	5537	1223	1076	795	702	471	233.6	6.95	1368.60	4513	402.10
MEAN	659	185	39.5	34.7	28.4	22.6	15.7	7.54	.23	44.1	146	13.4
MAX	7420	805	56	44	33	29	20	12	2.6	262	1290	87
MIN	.04	59	31	30	26	17	12	2.6	.00	.00	17	.00
AC-FT	40530	10980	2430	2130	1580	1390	934	463	14	2710	8950	798

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2001, BY WATER YEAR (WY)

	MEAN	105	20.5	53.5	47.4	38.2	32.2	13.6	6.82	4.81	102	155	51.2
MAX	998	185	375	450	214	179	43.7	20.8	45.2	369	820	177	
(WY)	1978	2001	1979	1979	1983	1983	1985	1985	2000	1974	1984	1982	
MIN	.000	.000	1.87	2.35	4.80	6.17	4.16	.35	.000	.000	6.86	.085	
(WY)	1974	1999	1999	1999	1999	1999	1982	1999	1974	1997	1997	1973	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1967 - 2001
ANNUAL TOTAL	43206.56	36760.69	
ANNUAL MEAN	118	101	53.0
HIGHEST ANNUAL MEAN			157
LOWEST ANNUAL MEAN			10.1
HIGHEST DAILY MEAN	7420	7420	17100
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	85700	72910	38400
10 PERCENT EXCEEDS	215	142	77
50 PERCENT EXCEEDS	9.2	27	11
90 PERCENT EXCEEDS	.01	.06	.00

e Estimated



## 09472050 SAN PEDRO RIVER AT REDINGTON BRIDGE NEAR REDINGTON, AZ

**LOCATION.**--Lat 32°26'46", long 110°29'16", in SW1/4NE1/4SE1/4 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.**--No estimated daily discharges. Records fair except for discharges below 100 ft<sup>3</sup>/s, which are 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, 4,900 ft<sup>3</sup>/s, Oct. 24, 2000, gage height, 14.18 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 12 .....	0600	2,300	12.00	Oct. 19 .....	1545	2,880	12.56
Oct. 24 .....	1845	*4,900	*14.18	Aug. 10 .....	1815	2,520	12.22
Aug. 15 .....	1330	1,510	11.20				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	162	.00	.00	4.1	.00	.00	.00	.00	.00	121	.00
2	.00	103	.00	.00	4.3	.00	.00	.00	.00	.00	32	.00
3	.00	62	.00	.00	2.4	.00	.00	.00	.00	.00	7.4	.00
4	.00	47	.00	e.33	1.2	.00	.00	.00	.00	.00	.65	.00
5	.00	26	.00	e.41	.13	.00	.00	.00	.00	.00	13	.00
6	.00	113	.00	e.52	.44	.00	.00	.00	.00	38	141	.00
7	.00	721	.00	e.64	e.08	.00	.00	.00	.00	36	63	.00
8	.00	450	.00	e.73	.29	.00	.00	.00	.00	1.8	55	.00
9	.00	417	.00	e11	1.1	.00	.00	.00	.00	e.10	14	.00
10	.00	339	.00	e10	e.00	.00	.00	.00	.00	27	130	.00
11	325	399	.00	e10	.00	.00	.00	.00	.00	97	e.00	.00
12	1290	239	.00	e9.9	.00	.00	.00	.00	.00	7.6	e.00	.00
13	1540	95	.00	e10	.00	.00	.00	.00	.00	e.16	60	.00
14	650	74	.00	e10	.00	.00	.00	.00	.00	e.00	246	.00
15	285	57	.00	e9.9	.00	.00	.00	.00	.00	.00	576	.00
16	70	47	.00	e11	.00	.00	.00	.00	.00	.00	166	.00
17	2.6	39	.00	e12	.00	.00	.00	.00	.00	e.13	178	.00
18	.05	32	.00	e11	.00	.00	.00	.00	.00	e.00	24	.00
19	144	27	.00	e10	.00	.00	.00	.00	.00	e.28	4.8	.00
20	278	22	.00	e9.8	.00	.00	.00	.00	.00	.30	1.2	.00
21	298	15	.00	e9.6	.00	.00	.00	.00	.00	.40	e.21	.00
22	163	8.9	.00	e9.3	.00	.00	.00	.00	.00	.67	e.00	.00
23	1520	5.1	.00	e9.2	.00	.00	.00	.00	.00	.66	e.60	.00
24	2600	e.84	.00	e8.1	.00	.00	.00	.00	.00	.17	e.27	.00
25	1650	e.00	.00	e6.6	.00	.00	.00	.00	.00	67	.00	.00
26	678	.00	.00	8.1	.00	.00	.00	.00	.00	84	.00	.00
27	551	.00	.00	23	.00	.00	.00	.00	.00	8.6	.00	.00
28	616	.00	.00	24	.00	.00	.00	.00	.00	1.8	.00	.00
29	429	.00	.00	9.2	---	.00	.00	.00	.00	2.3	58	.00
30	282	.00	.00	6.2	---	.00	.00	.00	.00	12	84	.00
31	249	---	.00	4.2	---	.00	---	.00	---	162	3.1	---
TOTAL	13620.65	3500.84	0.00	244.73	14.04	0.00	0.00	0.00	0.00	547.97	1979.23	0.00
MEAN	439	117	.000	7.89	.50	.000	.000	.000	.000	17.7	63.8	.000
MAX	2600	721	.00	24	4.3	.00	.00	.00	.00	162	576	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MED	249	43	.00	9.3	.00	.00	.00	.00	.00	.40	13	.00
AC-FT	27020	6940	.00	485	28	.00	.00	.00	.00	1090	3930	.00
CFSM	.14	.04	.00	.00	.00	.00	.00	.00	.00	.01	.02	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

	MEAN	146	38.9	.000	2.63	.17	.000	.000	.000	.083	49.0	129	17.4
	MAX	439	117	.000	7.89	.50	.000	.000	.000	.25	129	230	49.4
	(WY)	2001	2001	1999	2001	2001	1999	1999	1999	2000	1999	2000	1999
	MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.64	50.9	.000
	(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	2000	1998	2001

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1998 - 2001

ANNUAL TOTAL	24637.32	19907.46	
ANNUAL MEAN	67.3	54.5	34.8
HIGHEST ANNUAL MEAN			54.5
LOWEST ANNUAL MEAN			20.5
HIGHEST DAILY MEAN	2600	Oct 24	2600
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
ANNUAL RUNOFF (AC-FT)	48870	39490	25230
ANNUAL RUNOFF (CFSM)	.022	.018	.011
10 PERCENT EXCEEDS	122	96	56
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

## GILA RIVER BASIN

## 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 good 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 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)
Oct 23 .....	1014	*1,100	4.41

Minimum daily discharge, 4.0 ft<sup>3</sup>/s, June 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	36	23	17	23	20	16	11	5.9	6.7	9.7	8.6
2	9.4	30	23	17	23	20	16	11	5.8	6.1	9.2	8.4
3	9.4	27	22	17	23	20	16	11	5.5	6.6	8.9	7.9
4	9.5	42	22	17	22	19	15	12	6.1	6.7	9.9	7.8
5	9.7	52	22	17	22	19	16	11	6.2	7.3	14	7.7
6	9.5	43	21	18	22	19	21	11	6.1	9.0	11	7.6
7	9.4	64	21	18	22	21	19	11	5.5	9.3	10	7.4
8	9.8	52	21	18	24	25	17	10	4.6	9.6	11	7.6
9	10	e49	21	23	23	22	16	10	4.3	8.5	11	7.5
10	12	e48	21	20	23	21	16	10	4.0	8.1	10	7.4
11	15	e40	20	19	23	20	17	9.8	4.2	7.6	39	7.2
12	29	e42	21	20	23	21	16	10	e4.2	7.3	17	7.2
13	31	e62	20	22	23	20	15	11	e4.2	7.6	15	9.3
14	31	e47	20	22	24	19	15	11	e4.5	20	13	10
15	24	e39	20	21	36	19	14	11	e4.4	13	11	10
16	20	e35	19	25	36	19	14	10	e4.4	10	10	11
17	17	33	19	28	27	19	14	9.7	e4.5	10	10	10
18	16	31	19	27	25	19	14	9.8	e4.6	9.5	13	9.7
19	18	30	19	24	24	18	13	11	4.8	8.7	21	9.6
20	17	29	19	24	22	18	13	11	4.4	8.3	16	9.2
21	31	29	18	24	22	18	13	9.9	5.5	8.4	13	9.0
22	92	28	18	24	21	18	15	9.0	6.4	7.9	12	8.8
23	252	27	18	24	20	17	14	8.9	14	8.0	11	8.6
24	51	27	18	24	20	17	14	8.6	7.9	7.5	10	8.6
25	30	26	18	24	20	17	13	8.4	7.7	7.6	10	8.6
26	26	26	18	24	20	17	13	8.1	7.5	8.5	9.8	8.2
27	25	25	18	24	20	16	12	8.2	7.7	7.6	9.3	8.6
28	154	25	18	24	20	16	12	8.4	7.1	7.0	8.3	8.3
29	66	24	18	23	---	16	12	8.4	6.7	8.0	8.3	8.1
30	37	24	17	23	---	16	12	7.4	6.7	9.0	8.6	8.7
31	61	---	17	23	---	16	---	6.2	---	9.7	8.8	---
TOTAL	1141.5	1092	609	675	653	582	443	303.8	175.4	269.1	378.8	256.6
MEAN	36.8	36.4	19.6	21.8	23.3	18.8	14.8	9.80	5.85	8.68	12.2	8.55
MAX	252	64	23	28	36	25	21	12	14	20	39	11
MIN	9.4	24	17	17	20	16	12	6.2	4.0	6.1	8.3	7.2
AC-FT	2260	2170	1210	1340	1300	1150	879	603	348	534	751	509
CFSM	.07	.07	.04	.04	.04	.03	.03	.02	.01	.02	.02	.02
IN.	.08	.08	.04	.05	.05	.04	.03	.02	.01	.02	.03	.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2001, BY WATER YEAR (WY)

	MEAN	46.7	24.1	48.0	53.8	65.7	59.2	21.3	15.0	12.2	24.4	31.9	24.1
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	6.19	8.70	9.69	10.1	11.1	9.49	7.17	4.33	1.90	4.71	7.81	5.35	
(WY)	1939	1940	1971	1940	1977	1976	1976	1972	1939	1997	1975	1973	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1932 - 2001
ANNUAL TOTAL	6630.6	6579.2	
ANNUAL MEAN	18.1	18.0	34.6
HIGHEST ANNUAL MEAN			140
LOWEST ANNUAL MEAN			9.62
HIGHEST DAILY MEAN	252	252	16000
LOWEST DAILY MEAN	4.5	4.0	.40
ANNUAL SEVEN-DAY MINIMUM	5.3	4.3	.63
ANNUAL RUNOFF (AC-FT)	13150	13050	25090
ANNUAL RUNOFF (CFSM)	.034	.034	.064
ANNUAL RUNOFF (INCHES)	.46	.46	.88
10 PERCENT EXCEEDS	29	28	46
50 PERCENT EXCEEDS	15	16	16
90 PERCENT EXCEEDS	7.1	7.4	6.2

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.

**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.**--No estimated daily discharges. Records fair. 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)--89 years, 529 ft<sup>3</sup>/s, 383,100 acre-ft/yr; median of yearly mean discharges, 340 ft<sup>3</sup>/s, 246,000 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, 0.0 ft<sup>3</sup>/s Aug. 4, 2000.

**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)
Oct. 25 .....	2230	*7,710	*12.92

Minimum daily discharge, 0.31 ft<sup>3</sup>/s, Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	133	27	139	51	176	812	380	555	696	460	371
2	2.5	196	165	136	77	175	786	420	553	738	485	359
3	2.2	368	220	131	133	186	741	443	552	707	487	331
4	1.9	44	152	119	144	194	667	446	583	749	524	317
5	1.6	128	123	106	158	195	655	446	594	770	530	316
6	1.3	75	151	106	169	194	740	513	595	855	471	309
7	.41	787	125	106	175	209	819	538	595	807	467	306
8	.31	629	127	101	242	208	754	545	598	778	505	281
9	.41	447	206	115	227	176	544	575	598	763	531	256
10	160	586	246	118	208	180	468	585	608	691	532	246
11	304	267	249	97	211	215	426	583	611	688	539	238
12	575	216	314	71	190	224	407	578	610	689	548	234
13	831	135	346	68	183	220	392	577	605	686	533	218
14	908	72	344	54	169	260	389	577	610	690	493	213
15	374	53	324	41	178	301	424	586	624	688	515	204
16	37	47	276	42	e480	317	430	577	634	683	648	185
17	23	44	239	38	e450	380	429	577	659	685	613	179
18	20	42	237	40	e250	437	442	529	672	726	587	166
19	22	42	230	38	e180	478	470	504	669	737	548	166
20	303	40	207	35	e160	506	487	562	693	803	540	191
21	98	37	173	33	e140	557	510	582	703	821	526	169
22	367	38	141	32	e130	595	540	582	706	816	482	158
23	363	35	133	32	e120	642	533	581	702	770	458	157
24	1360	36	160	32	e130	685	453	547	699	783	446	161
25	3010	39	196	32	e140	687	417	533	708	787	440	149
26	1770	45	206	32	e150	734	409	540	714	788	460	151
27	265	34	194	34	e160	754	409	543	710	748	470	129
28	268	32	261	36	175	769	405	546	706	735	474	145
29	412	32	255	36	---	773	405	545	704	791	432	171
30	124	30	156	36	---	779	408	548	703	880	383	177
31	156	---	111	37	---	781	---	556	---	572	371	---
TOTAL	11763.23	4709	6294	2073	5180	12987	15771	16644	19273	23120	15498	6653
MEAN	379	157	203	66.9	185	419	526	537	642	746	500	222
MAX	3010	787	346	139	480	781	819	586	714	880	648	371
MIN	.31	30	27	32	51	175	389	380	552	572	371	129
AC-FT	23330	9340	12480	4110	10270	25760	31280	33010	38230	45860	30740	13200

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2001, BY WATER YEAR (WY)

	MEAN	273	147	456	670	558	744	557	406	454	699	868	461
MAX	4372	810	12350	17080	7211	5824	3930	1271	1608	3459	4590	1968	
(WY)	1984	1915	1915	1993	1993	1993	1915	1992	1992	1919	1921	1926	
MIN	1.02	3.12	7.06	9.25	22.1	38.2	9.19	2.47	.46	2.73	43.1	2.06	
(WY)	1957	1954	1957	1954	1957	1929	1957	1957	1961	1947	1956	1956	

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1911 - 2001

ANNUAL TOTAL	57019.70	139965.23	
ANNUAL MEAN	156	383	526
HIGHEST ANNUAL MEAN			3281
LOWEST ANNUAL MEAN			77.9
HIGHEST DAILY MEAN	3010	3010	105000
LOWEST DAILY MEAN	.00	.31	.00
ANNUAL SEVEN-DAY MINIMUM	.31	1.2	.00
ANNUAL RUNOFF (AC-FT)	113100	277600	380700
10 PERCENT EXCEEDS	348	734	1040
50 PERCENT EXCEEDS	111	371	265
90 PERCENT EXCEEDS	1.4	39	25

e Estimated

## GILA RIVER BASIN

## DIVERSION FROM GILA RIVER

## 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 2000 TO SEPTEMBER 2001

Month	Discharge, in cubic feet per second			Diversions in acre-feet	Water sluiced above flume, in acre-feet
	Maximum	Minimum	Mean		
October .....	708	0	97.1	5970	0
November .....	4.5	0	0.41	24	0
December .....	337	0	229	14,090	0
CAL YR 2000	708	0	120	87,090	0
January .....	167	33	83.1	5,110	0
February .....	462	36	161	8,940	0
March .....	696	168	390	24,000	0
April .....	827	363	505	30,040	0
May .....	558	373	509	31,280	0
June .....	646	515	580	34,510	0
July .....	932	629	719	44,200	0
August .....	656	369	487	29,920	0
September .....	379	172	244	14,540	0
WTR YR 2001	932	0	335	242,600	0

## 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, one 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 nr Superior" 1948-59.

**GAGE.**--Water-stage recorder. Elevation of gage is 2040 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 2048.96 and 2045.70 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, 620 ft<sup>3</sup>/s Aug. 14, 2001, estimated. Minimum daily discharge, 2.3 ft<sup>3</sup>/s July 24, 31--Aug. 1, 6--7, 2001.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 620 ft<sup>3</sup>/s Aug. 14, 2001, estimated. Minimum daily discharge, 2.3 ft<sup>3</sup>/s July 24, 31--Aug. 1, 6--7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	4.1	3.2	2.7	2.3	3.3
2	---	---	---	---	---	---	---	4.1	3.3	2.7	2.4	3.3
3	---	---	---	---	---	---	---	4.0	3.2	2.7	2.4	3.2
4	---	---	---	---	---	---	---	3.9	3.3	2.7	2.4	3.0
5	---	---	---	---	---	---	---	3.9	3.3	2.7	e20	3.0
6	---	---	---	---	---	---	---	4.1	3.3	2.7	2.3	3.1
7	---	---	---	---	---	---	---	4.4	3.4	2.8	2.3	3.1
8	---	---	---	---	---	---	---	4.2	3.4	2.8	2.4	3.0
9	---	---	---	---	---	---	---	4.1	3.3	2.8	2.5	2.9
10	---	---	---	---	---	---	---	3.8	3.1	2.8	e2.6	2.9
11	---	---	---	---	---	---	---	3.6	3.1	2.8	2.8	2.9
12	---	---	---	---	---	---	---	3.4	3.1	2.8	2.8	2.9
13	---	---	---	---	---	---	---	3.4	3.1	2.8	e80	2.9
14	---	---	---	---	---	---	---	3.4	3.1	2.8	e550	2.8
15	---	---	---	---	---	---	---	3.4	3.1	2.8	e70	2.8
16	---	---	---	---	---	---	---	3.2	3.1	2.9	3.7	2.8
17	---	---	---	---	---	---	---	3.2	3.2	2.8	3.6	2.8
18	---	---	---	---	---	---	---	3.2	3.1	2.5	3.7	2.9
19	---	---	---	---	---	---	---	3.2	3.2	2.6	3.5	2.9
20	---	---	---	---	---	---	---	3.2	3.2	2.6	3.8	2.9
21	---	---	---	---	---	---	3.5	3.2	3.2	2.6	4.0	3.0
22	---	---	---	---	---	---	3.5	3.2	3.3	2.5	4.0	3.0
23	---	---	---	---	---	---	3.5	3.2	3.2	2.4	3.9	2.9
24	---	---	---	---	---	---	3.5	3.2	3.1	2.3	3.8	3.0
25	---	---	---	---	---	---	3.6	3.2	3.1	2.4	3.8	3.1
26	---	---	---	---	---	---	3.7	3.2	3.1	2.4	3.4	3.1
27	---	---	---	---	---	---	4.0	3.2	3.0	2.4	3.5	3.1
28	---	---	---	---	---	---	4.1	3.1	2.9	2.4	3.5	3.1
29	---	---	---	---	---	---	4.1	3.1	2.9	2.4	3.5	3.1
30	---	---	---	---	---	---	4.0	3.1	2.8	e10	3.6	3.1
31	---	---	---	---	---	---	---	3.2	---	2.3	3.4	---
TOTAL	---	---	---	---	---	---	---	108.7	94.7	88.9	805.9	89.9
MEAN	---	---	---	---	---	---	---	3.51	3.16	2.87	26.0	3.00
MAX	---	---	---	---	---	---	---	4.4	3.4	10	550	3.3
MIN	---	---	---	---	---	---	---	3.1	2.8	2.3	2.3	2.8
MED	---	---	---	---	---	---	---	3.2	3.2	2.7	3.5	3.0
AC-FT	---	---	---	---	---	---	---	216	188	176	1600	178
CFSM	---	---	---	---	---	---	---	.02	.02	.02	.18	.02

e Estimated



## GILA RIVER BASIN

## 09479350 GILA RIVER NEAR MARICOPA, AZ

**LOCATION.**--Lat 33° 10'07", long 112° 00'24", in NW1/4NE1/4SW1/4, 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 and maximum flow measurements 1993-94 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, except for estimated daily discharges, which are poor. 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, 79 ft<sup>3</sup>/s Oct. 27, gage height, 2.06 ft. No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00
27	12	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00
28	.33	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	e.00	e.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	e.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	12.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.40	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2001, BY WATER YEAR (WY)

	MEAN	.066	.000	.000	.000	.000	.000	.000	.000	.000	.012	.22
MAX	.40	.000	.000	.000	.000	.000	.000	.000	.000	.000	.065	1.56
(WY)	2001	1996	1996	1996	1996	1996	1996	1996	1995	1995	1997	1996
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1995	1995	1996	1995

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1995 - 2001
ANNUAL TOTAL	12.33	12.33	
ANNUAL MEAN	.034	.034	.028
HIGHEST ANNUAL MEAN			.13
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	12 Oct 27	12 Oct 27	38 Sep 2 1996
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 May 19 1995
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 May 19 1995
ANNUAL RUNOFF (AC-FT)	24	24	20
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

GILA RIVER BASIN

205

09480000 SANTA CRUZ RIVER NEAR LOCHIEL, AZ

**LOCATION**--Lat 31°21'19", long 110°35'20", in SW 1/4 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**--No estimated daily discharges. Records 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 22 .....	2345	*1,080	6.31

Minimum daily discharge, 0.04 ft<sup>3</sup>/s Sept. 12

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	20	13	7.8	4.3	2.8	1.6	1.3	.90	.87	.65	.59
2	3.1	20	13	8.1	4.2	2.8	1.6	1.3	.92	.78	.63	.57
3	3.0	20	12	7.0	4.2	2.8	1.6	1.3	1.1	.73	.50	.51
4	3.0	21	12	6.7	4.2	2.6	1.6	1.3	1.2	.81	.72	.38
5	2.9	19	12	6.8	4.1	2.6	1.9	1.3	.98	.99	.71	.29
6	3.0	20	13	7.4	4.1	2.5	5.0	1.3	1.0	1.1	.58	.29
7	2.9	34	13	7.2	4.1	2.9	3.0	1.3	.70	1.1	.49	.23
8	2.8	20	12	6.5	4.0	2.8	2.3	1.3	1.1	1.1	.42	.16
9	3.0	19	12	7.2	3.6	2.5	2.1	1.4	1.1	1.1	.38	.20
10	3.3	17	12	6.9	3.5	2.4	2.1	1.5	.98	1.2	.60	.18
11	16	17	11	6.4	3.5	2.3	2.1	1.3	1.1	1.4	.66	.05
12	42	16	11	6.4	3.5	2.3	1.7	1.2	1.2	1.6	.64	.04
13	7.5	15	11	6.3	3.3	2.2	1.7	1.2	.98	1.2	.45	.40
14	4.3	14	10	6.1	3.3	2.3	1.6	1.2	.96	1.1	.80	.51
15	3.5	14	10	5.9	3.2	2.2	1.5	1.1	.72	1.1	.53	.44
16	3.2	13	10	5.8	3.2	2.1	1.6	.94	.80	.99	.56	.38
17	2.9	15	10	5.7	3.1	2.1	1.8	.85	1.0	.97	1.1	.36
18	3.0	14	9.5	5.7	3.2	2.1	1.5	.92	1.0	.71	.88	.34
19	12	14	9.5	5.5	3.1	2.1	1.5	.93	.93	.67	.60	.31
20	79	14	9.6	5.4	3.0	2.0	1.5	.93	1.1	.64	.53	.18
21	72	13	9.4	5.2	2.8	1.9	1.4	1.0	1.0	.80	.41	.14
22	140	13	9.4	5.0	3.0	1.6	1.4	.83	.98	1.0	.36	.12
23	399	12	9.3	4.9	3.0	1.6	1.4	1.0	.80	.92	.45	.15
24	45	12	9.3	4.8	3.0	1.6	1.3	1.2	.76	.66	.42	.16
25	27	12	8.9	4.6	2.8	1.5	1.4	1.0	.96	.82	.29	.25
26	23	13	8.6	4.7	2.9	1.4	1.4	1.1	.78	.77	.27	.25
27	24	13	8.4	5.2	3.0	1.5	1.4	1.1	.68	.64	.28	.26
28	34	13	8.1	5.0	3.1	1.5	1.4	1.1	.64	.79	.39	.32
29	24	14	7.6	4.6	---	1.4	1.4	1.0	.66	.93	.41	.37
30	22	14	6.7	4.8	---	1.4	1.2	.94	.69	.79	.47	.50
31	22	---	7.7	4.3	---	1.6	---	.92	---	.86	.54	---
TOTAL	1035.6	485	319.0	183.9	96.3	65.4	53.0	35.06	27.72	29.14	16.72	8.93
MEAN	33.4	16.2	10.3	5.93	3.44	2.11	1.77	1.13	.92	.94	.54	.30
MAX	399	34	13	8.1	4.3	2.9	5.0	1.5	1.2	1.6	1.1	.59
MIN	2.8	12	6.7	4.3	2.8	1.4	1.2	.83	.64	.64	.27	.04
MED	7.5	14	10	5.8	3.2	2.1	1.6	1.1	.97	.92	.53	.29
AC-FT	2050	962	633	365	191	130	105	70	55	58	33	18
CFSM	.41	.20	.13	.07	.04	.03	.02	.01	.01	.01	.01	.00

## GILA RIVER BASIN

## 09480500 SANTA CRUZ RIVER NEAR NOGALES, AZ

**LOCATION**--Lat 31°20'40", long 110°51'03", in NW 1/4 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 1930-2000**--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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 12 .....	0030	*4,700	*6.73
Oct. 23 .....	0400	3,790	6.24

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	201	55	25	24	10	10	e5.6	.89	.15	2.9	.79
2	.00	173	51	23	23	10	11	e5.0	.85	.17	2.8	.81
3	.00	139	49	19	23	8.9	12	e4.6	.84	.10	2.5	.77
4	.00	219	43	25	22	9.4	12	e4.1	.79	.45	2.5	e.78
5	.00	381	42	33	20	9.2	15	e3.8	.82	.87	2.4	e.80
6	.00	281	42	32	19	8.5	221	e3.4	.78	.67	2.2	e.70
7	.00	471	42	34	19	9.9	189	e3.0	.78	8.7	1.9	.59
8	.00	328	40	36	17	12	114	e2.9	.78	.66	2.1	.55
9	.00	289	39	34	22	12	93	e2.5	.77	.49	1.9	.46
10	.00	248	41	34	25	11	86	1.9	.65	.44	2.5	.46
11	924	228	40	30	23	11	75	1.8	.61	.51	2.0	.44
12	2330	215	44	29	22	12	60	1.7	.55	.56	2.0	.46
13	442	186	47	28	21	12	51	1.6	.44	.54	1.7	.64
14	220	165	43	28	19	12	41	1.6	.41	.58	2.2	.60
15	148	150	41	29	20	11	35	1.5	.36	.63	2.3	.52
16	112	137	37	28	17	9.7	29	1.4	.27	.66	1.9	.48
17	81	124	33	29	17	10.7	27	1.4	.19	.84	1.7	.39
18	63	111	29	27	17	9.9	20	1.3	.21	.81	1.1	.36
19	54	99	31	24	16	9.5	16	1.3	.14	.85	8.2	.31
20	362	91	30	24	15	9.1	13	1.3	1.7	.88	4.8	.30
21	200	84	32	24	12	8.3	12	1.2	1.3	.91	1.8	.35
22	664	81	34	24	13	8.4	e9.2	1.2	1.1	.93	1.7	.37
23	2020	74	35	25	12	7.2	e8.7	1.1	.95	.83	1.5	.36
24	439	69	38	24	11	6.4	e8.5	1.1	.79	.54	1.4	.33
25	299	66	36	22	11	6.0	e8.0	1.1	.94	.27	1.3	.30
26	243	61	e35	22	11	6.6	e7.3	1.0	.75	4.5	1.2	.26
27	204	61	e33	24	11	6.8	e6.8	1.0	.55	3.4	1.0	.10
28	588	61	31	16	11	6.2	e6.5	.97	.43	2.5	23	.01
29	391	60	34	18	---	7.4	e6.4	.97	.31	2.3	37	.02
30	278	55	26	20	---	10	e6.1	.94	.22	2.2	.84	.25
31	218	---	26	25	---	11	---	.90	---	5.6	.78	---
TOTAL	10280.00	4908	1179	815	493	291.4	1209.5	63.18	20.17	43.54	133.02	13.56
MEAN	332	164	38.0	26.3	17.6	9.40	40.3	2.04	.67	1.40	4.29	.45
MAX	2330	471	55	36	25	12	221	5.6	1.7	8.7	37	.81
MIN	.00	55	26	16	11	6.0	6.1	.90	.14	.10	.78	.01
AC-FT	20390	9740	2340	1620	978	578	2400	125	40	86	264	.27
CFSM	.62	.31	.07	.05	.03	.02	.08	.00	.00	.00	.01	.00
IN.	.72	.34	.08	.06	.03	.02	.08	.00	.00	.00	.01	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2001, BY WATER YEAR (WY)

	MEAN	27.5	10.5	34.3	40.6	33.1	23.9	8.06	1.83	1.32	39.9	85.4	25.6
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	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.15	.000	
(WY)	1914	1919	1919	1974	1974	1914	1914	1914	1914	1918	1991	1918	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1914 - 2001
ANNUAL TOTAL	17328.41	19449.37	
ANNUAL MEAN	47.3	53.3	27.1
HIGHEST ANNUAL MEAN			123
LOWEST ANNUAL MEAN			1.84
HIGHEST DAILY MEAN	2330	Oct 12	13200
LOWEST DAILY MEAN	.00	Apr 30	.00
ANNUAL SEVEN-DAY MINIMUM	.00	May 8	.00
ANNUAL RUNOFF (AC-FT)	34370	38580	19610
ANNUAL RUNOFF (CFSM)	.089	.10	.051
ANNUAL RUNOFF (INCHES)	1.21	1.36	.69
10 PERCENT EXCEEDS	119	118	44
50 PERCENT EXCEEDS	1.0	9.4	2.7
90 PERCENT EXCEEDS	.00	.42	.00

e Estimated

## 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., Tubac quadrangle, 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 fair, except for estimated daily discharges which are 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, 0.15 ft<sup>3</sup>/s, June 26, 1997.

**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)
Oct. 23 .....	0230	*10,600	*26.56

Minimum daily discharge, 3.1 ft<sup>3</sup>/s June 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	315	116	73	65	48	29	39	6.6	4.0	20	17
2	16	283	113	70	60	46	28	38	5.4	4.7	30	16
3	16	162	109	68	57	43	27	37	6.2	6.5	15	13
4	15	344	108	70	57	42	26	36	8.1	8.2	80	13
5	16	1110	107	72	55	44	27	36	6.5	21	22	12
6	17	550	106	94	53	41	287	37	4.8	56	22	11
7	19	1310	102	116	52	79	413	35	4.3	14	18	12
8	21	683	101	76	55	61	152	34	4.1	17	16	11
9	51	399	97	76	54	48	83	33	3.4	12	17	11
10	63	202	98	73	54	49	62	32	3.1	15	18	11
11	225	396	95	69	53	48	52	32	3.4	12	31	10
12	1890	547	94	74	53	45	49	31	3.4	25	27	9.1
13	504	297	87	95	54	43	47	34	3.3	14	22	13
14	19	204	83	72	52	42	47	34	e5.4	9.9	33	18
15	4.2	136	84	73	51	41	46	31	e5.8	10	93	14
16	5.9	104	88	77	50	43	47	34	e6.4	9.6	20	12
17	10	92	90	85	49	42	48	37	e7.0	14	36	12
18	17	80	84	80	49	41	47	35	e7.3	15	74	12
19	27	78	87	74	48	41	47	36	e9.8	16	90	14
20	1390	83	88	75	44	42	49	33	e12	50	116	16
21	757	81	84	71	45	40	49	30	e30	37	19	15
22	2820	77	82	71	47	40	48	29	e5.1	25	17	14
23	7510	79	78	69	47	38	49	28	e3.9	16	14	15
24	1740	76	81	62	49	38	46	23	e6.8	13	14	15
25	896	78	87	59	45	38	46	21	e5.5	13	13	14
26	641	79	84	59	46	36	44	20	6.0	15	11	14
27	564	106	82	85	46	35	44	17	7.6	15	10	14
28	1590	128	80	123	54	34	42	14	6.4	22	9.9	13
29	1540	130	76	86	---	33	40	12	5.1	19	48	13
30	1200	129	75	79	---	31	39	11	3.8	18	15	14
31	1150	---	77	75	---	30	---	7.3	---	17	40	---
TOTAL	24751.1	8338	2823	2401	1444	1322	2060	906.3	196.5	543.9	1010.9	398.1
MEAN	798	278	91.1	77.5	51.6	42.6	68.7	29.2	6.55	17.5	32.6	13.3
MAX	7510	1310	116	123	65	79	413	39	30	56	116	18
MIN	4.2	76	75	59	44	30	26	7.3	3.1	4.0	9.9	9.1
AC-FT	49090	16540	5600	4760	2860	2620	4090	1800	390	1080	2010	790

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2001, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001
MEAN	147	62.3	32.7	33.6	36.7	28.7
MAX	798	278	91.1	77.5	67.8	45.4
(WY)	2001	2001	2001	2001	1998	2001
MIN	8.99	8.57	17.1	23.6	23.5	16.9
(WY)	1997	1998	1997	2000	1999	1997

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1996 - 2001

ANNUAL TOTAL	41921.4	46194.8	
ANNUAL MEAN	115	127	40.5
HIGHEST ANNUAL MEAN			127
LOWEST ANNUAL MEAN			15.6
HIGHEST DAILY MEAN	7510	7510	7510
LOWEST DAILY MEAN	4.2	3.1	.15
ANNUAL SEVEN-DAY MINIMUM	5.8	3.6	.23
ANNUAL RUNOFF (AC-FT)	83150	91630	29340
10 PERCENT EXCEEDS	114	125	54
50 PERCENT EXCEEDS	22	42	19
90 PERCENT EXCEEDS	9.6	9.7	5.1

e Estimated

## GILA RIVER BASIN

## 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.**--May 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, due to undetermined amount of underflow between sites.

**REVISED RECORDS.**--WSP 1283: Drainage area. WDR AZ--81--1: Drainage area.

**GAGE.**--Water-stage recorder and crest-stage gages. 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.**--No estimated daily discharges. Records fair. Irrigation above station of about 12,500 acres including about 2,300 acres in Mexico, mostly by pumping from 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23 .....	1700	*5,290	*8.19

No flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	67	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	8.7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
5	.00	150	.00	.00	.00	.00	.03	.00	.00	21	.00	.00
6	.00	231	.00	.00	.00	.00	.03	.00	.00	.42	.00	.00
7	.00	1140	.00	.00	.00	.00	16	.00	.00	.02	.00	.00
8	.00	695	.00	.00	.00	.00	9.0	.00	.00	.01	.00	.00
9	.48	346	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00
10	8.5	244	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
11	46	231	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
12	412	280	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
13	459	195	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	2.9	134	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.29	83	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.25	45	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.19	20	.00	.00	.00	.00	.00	.00	.00	.00	.4	.00
18	.16	6.1	.00	.00	.00	.00	.00	.00	.00	.39	.00	.00
19	.30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	104	.00	.00	.00	.00	.00	.00	.00	.59	.06	.00	.00
21	204	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00
22	345	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	3560	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	1130	.00	.00	.00	.00	.00	.00	.00	.00	20	.00	.00
25	534	.00	.00	.00	.00	.00	.00	.00	.00	.37	.00	.00
26	242	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
27	24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	341	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
29	536	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
30	238	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.5
31	82	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
TOTAL	8270.07	3875.80	0.00	0.00	0.00	0.00	25.20	0.00	0.61	42.30	5.40	1.50
MEAN	267	129	.000	.000	.000	.000	.84	.000	.020	1.36	.17	.050
MAX	3560	1140	.00	.00	.00	.00	16	.00	.59	21	5.0	1.5
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	16400	7690	.00	.00	.00	.00	50	.00	1.2	84	11	3.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

	MEAN	53.9	5.64	35.9	46.7	12.4	10.6	.74	.028	.42	29.9	80.3	18.8
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	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
(WY)	1943	1941	1942	1942	1942	1941	1941	1941	1941	1993	1956	1953	

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1941 - 2001

ANNUAL TOTAL	12968.40	12220.88	
ANNUAL MEAN	35.4	33.5	
HIGHEST ANNUAL MEAN			24.9
LOWEST ANNUAL MEAN			.26
HIGHEST DAILY MEAN	3560	Oct 23	17800
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
ANNUAL RUNOFF (AC-FT)	25720	24240	18030
10 PERCENT EXCEEDS	27	5.4	1.9
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.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 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 23 .....	1130	*10,900	*7.81
Nov 7.....	0130	3,730	5.08
Aug 12.....	1730	1,830	4.07

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.60	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.94	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.50	.59	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	10	.00	.00	.00	.00	.00	.00	.00	53	.00	.00
6	.00	368	.00	.00	.00	.00	e42	.00	.00	2.6	.00	.00
7	.00	1170	.00	.00	.00	83	e2.0	.00	.00	.75	.00	.00
8	.00	445	.00	.00	.00	1.6	e.01	.00	.00	.01	.00	.00
9	.00	176	.00	42	.00	.00	e.00	.00	.00	.00	.00	.00
10	.28	72	.00	40	.00	.00	e.00	.00	.00	.00	.00	.00
11	236	9.4	.00	39	.00	.00	e.00	.00	.00	.00	.00	.00
12	137	179	.00	110	.00	.00	e.00	.00	.00	.00	74	.00
13	352	108	.00	15	.00	.00	e.00	.00	.00	.00	15	.00
14	3.6	13	.00	.00	.00	.00	e.00	.00	.00	1.7	.30	.04
15	.00	.00	.00	14	.00	.00	e.00	.00	.00	.66	.00	.00
16	.00	.00	.00	26	.00	.00	e.00	.00	.00	.42	.94	.00
17	.00	.00	.00	.00	.00	.00	e.00	.00	.00	3.0	17	.00
18	.00	.00	.00	.00	.00	.00	e.00	.00	.00	25	3.4	.00
19	40	.00	.00	.00	.00	.00	e.00	.00	.00	1.9	.00	.00
20	12	.00	.00	.00	.00	.00	e.00	.00	1.7	7.4	.00	.00
21	240	.00	.00	.00	.00	.00	e.00	.00	.46	.00	.00	.00
22	511	.00	.00	.00	.00	.00	e.00	.00	2.3	.00	.00	.00
23	7360	.00	.00	.00	.00	.00	e.00	.00	.30	.00	.00	.00
24	1680	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
25	14	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	e.91	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	37	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	328	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	58	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
31	26	.00	.00	.00	.00	.00	.00	.00	.00	20	.00	.00
TOTAL	11034.88	2550.40	0.00	286.00	0.00	84.60	44.92	0.00	4.76	116.94	112.78	0.04
MEAN	356	85.0	.000	9.23	.000	2.73	1.50	.000	.16	3.77	3.64	.001
MAX	7360	1170	.00	110	.00	83	42	.00	2.3	53	74	.04
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MED	.28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	21890	5060	.00	567	.00	168	89	.00	9.4	232	224	.08
CFSM	.16	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2001, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001
MEAN	119	28.4	.023	3.08	.41
MAX	356	85.0	.069	9.23	.79
(WY)	2001	2001	1999	2001	2000
MIN	.000	.000	.000	.000	.16
(WY)	1999	2000	2000	1999	2000

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1997 - 2001

	2000 CALENDAR YEAR	2001 WATER YEAR	1997 - 2001
ANNUAL TOTAL	15777.26	14235.32	
ANNUAL MEAN	43.1	39.0	19.1
HIGHEST ANNUAL MEAN			39.0
LOWEST ANNUAL MEAN			5.99
HIGHEST DAILY MEAN	7360	7360	7360
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	31290	28240	13810
ANNUAL RUNOFF (CFSM)	.019	.018	.009
10 PERCENT EXCEEDS	18	12	5.4
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

## GILA RIVER BASIN

## 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.**--No estimated daily discharges. 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 12 .....	0130	1,220	2.97	Nov. 6 .....	2300	248	1.72
Oct. 22 .....	1200	*1,370	*3.11				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	32	7.0	1.7	34	15	9.8	6.3	.01	.00	.64	.24
2	.00	24	8.0	1.9	38	16	9.4	5.0	.00	.00	.44	.34
3	.00	19	7.3	3.5	48	14	8.8	4.3	.00	.00	.67	.22
4	.00	35	7.2	3.1	76	11	8.2	3.9	.00	.00	.80	.16
5	.00	90	8.1	1.7	89	11	8.3	3.4	.00	.00	.66	.01
6	.00	82	7.4	2.6	81	12	123	3.1	.00	.00	.54	.00
7	.00	153	6.7	2.6	69	24	124	2.8	.00	.00	.50	.00
8	.00	84	6.7	2.9	65	47	99	2.3	.00	.00	.25	.00
9	.00	61	6.0	27	48	73	77	1.9	.00	.00	.20	.00
10	.00	49	4.7	29	45	74	68	1.7	.00	.00	.11	.00
11	171	48	4.4	22	38	59	52	1.6	.00	.00	.42	.00
12	395	43	4.3	13	34	47	54	1.5	.00	.00	.34	.00
13	58	36	6.1	13	30	44	47	1.6	.00	.00	7.5	.00
14	25	30	6.7	14	30	42	50	1.6	.00	.00	3.2	.00
15	14	25	6.3	12	28	39	51	1.3	.00	3.8	20	.00
16	9.3	22	5.3	11	24	34	47	1.2	.00	2.4	8.1	.00
17	7.0	18	4.7	11	22	30	44	.99	.00	9.3	4.3	.00
18	5.4	15	4.2	10	21	27	39	.91	.00	6.3	9.6	.00
19	12	13	5.3	9.7	24	24	34	1.1	.00	2.8	4.1	.00
20	54	11	5.5	9.7	23	23	28	1.2	.00	16	1.9	.00
21	33	10	4.6	11	23	25	22	1.1	.00	24	1.3	.00
22	521	9.7	2.8	13	23	28	21	.81	.00	4.8	.93	.00
23	444	9.7	2.6	14	21	27	22	.66	.00	1.9	.69	.00
24	118	9.7	2.6	15	19	23	16	.52	.00	1.2	.49	.00
25	63	9.5	2.6	14	16	20	13	.39	.00	.89	.27	.00
26	42	8.2	2.6	12	15	18	11	.29	.00	5.3	.10	.00
27	32	8.1	2.6	15	13	16	11	.21	.00	3.5	.05	.00
28	101	7.7	2.2	19	15	14	11	.14	.00	1.8	.03	.00
29	69	6.8	1.9	24	---	13	8.9	.07	.00	1.1	.02	.00
30	46	6.7	1.8	27	---	12	7.5	.04	.00	.85	.02	.00
31	38	---	1.5	33	---	11	---	.02	---	.67	.00	---
TOTAL	2257.70	976.1	149.7	398.4	1012	873	1124.9	51.95	0.01	86.61	143.41	0.97
MEAN	72.8	32.5	4.83	12.9	36.1	28.2	37.5	1.68	.000	2.79	4.63	.032
MAX	521	153	8.1	33	89	74	124	6.3	.01	24	42	.34
MIN	.00	6.7	1.5	1.7	13	11	7.5	.02	.00	.00	.00	.00
MED	25	20	4.7	12	29	24	25	1.2	.00	.85	.66	.00
AC-FT	4480	1940	297	790	2010	1730	2230	103	.02	172	284	1.9
CFSM	2.05	.92	.14	.36	1.02	.79	1.06	.05	.00	.08	.13	.00
IN.	2.37	1.02	.16	.42	1.06	.91	1.18	.05	.00	.09	.15	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2001, BY WATER YEAR (WY)

	MEAN	7.24	11.5	22.0	53.1	52.7	61.2	26.7	2.98	.57	13.8	20.3	9.53
MAX	72.8	39.7	114	441	211	311	97.1	11.3	6.37	85.1	84.4	60.8	
(WY)	2001	1995	1993	1993	1995	1991	1991	1991	1992	1999	1995	1995	
MIN	.000	.000	.000	.000	.000	.12	.17	.000	.000	.000	1.13	.009	
(WY)	1992	1990	1990	1989	2000	1999	2000	1989	1989	1988	1991	1989	

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1988 - 2001

	ANNUAL TOTAL	3632.16	7074.75	24.4	1993
ANNUAL MEAN		9.92	19.4	64.6	2000
HIGHEST ANNUAL MEAN				.86	
LOWEST ANNUAL MEAN					
HIGHEST DAILY MEAN	521	Oct 22	521	Oct 22	3180
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 8	.00	Oct 1	.00
ANNUAL RUNOFF (AC-FT)	7200		14030		17690
ANNUAL RUNOFF (CFSM)	.28		.55		.69
ANNUAL RUNOFF (INCHES)	3.81		7.41		9.34
10 PERCENT EXCEEDS	18		47		56
50 PERCENT EXCEEDS	.00		6.3		1.1
90 PERCENT EXCEEDS	.00		.00		.00

## GILA RIVER BASIN

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## 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 12.....	0715	1,110	7.47	Oct. 28.....	0745	618	7.04
Oct. 23.....	0045	*3,120	*8.42	Nov. 7.....	0115	1,300	7.59

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	86	.00	.02	4.5	4.8	7.9	.00	.00	.00	.00	.00
2	.00	68	.00	.04	4.9	4.4	12	.00	.00	.00	.00	.00
3	.00	58	.00	.04	5.2	3.5	18	.00	.00	.00	.00	.00
4	.00	88	.00	.05	36	2.4	25	.00	.00	.00	.00	.00
5	.00	159	.00	.05	61	1.9	33	.00	.00	.00	.00	.00
6	.00	165	.00	.05	54	1.3	131	.00	.00	.00	.00	.00
7	.00	631	.00	.05	44	8.4	156	.00	.00	.00	.00	.00
8	.00	276	.00	.05	31	28	128	.00	.00	.00	.00	.00
9	.00	175	.00	.07	31	50	114	.00	.00	.00	.00	.00
10	e.00	110	.00	.10	29	56	88	.00	.00	.00	.00	.00
11	e.00	283	.00	.09	21	52	69	.00	.00	.00	.00	.00
12	e659	181	.00	.07	14	41	50	.00	.00	.00	.00	.00
13	93	127	.00	.08	13	31	54	.00	.00	.00	.00	.00
14	14	95	.00	.08	14	35	49	.00	.00	.00	.00	.00
15	15	70	.00	.09	15	33	46	.00	.00	.00	.00	.00
16	15	57	.00	.10	15	23	35	.00	.00	.00	.00	.00
17	15	50	.00	.10	13	23	23	.00	.00	.00	.00	.00
18	15	43	.00	.10	8.6	16	19	.00	.00	.00	.00	.00
19	16	35	.00	.10	7.8	14	16	.00	.00	.00	.00	.00
20	106	24	.00	.10	8.4	10	12	.00	.00	.00	.00	.00
21	76	4.8	.00	.11	8.8	9.3	9.6	.00	.00	.00	.00	.00
22	626	.00	.00	.12	8.8	9.7	7.2	.00	.00	.00	.00	.00
23	1330	.00	.00	.12	9.4	10	6.7	.00	.00	.00	.00	.00
24	240	.00	.00	.12	7.8	8.4	4.4	.00	.00	.00	.00	.00
25	163	.00	.00	.12	5.5	6.3	2.5	.00	.00	.00	.00	.00
26	120	.00	.00	.12	4.6	4.9	1.0	.00	.00	.00	.00	.00
27	105	.00	.02	.12	3.9	3.9	.45	.00	.00	.00	.00	.00
28	421	.00	.02	.15	4.8	3.5	.11	.00	.00	.00	.00	.00
29	206	.00	.02	.15	---	4.7	.00	.00	.00	.00	.00	.00
30	132	.00	.02	.14	---	5.0	.00	.00	.00	.00	.00	.00
31	109	---	.02	.14	---	5.3	---	.00	---	.00	.00	---
TOTAL	4476.00	2785.80	0.10	2.84	484.0	509.7	1117.86	0.00	0.00	0.00	0.00	0.00
MEAN	144	92.9	.003	.092	17.3	16.4	37.3	.000	.000	.000	.000	.000
MAX	1330	631	.02	.15	61	56	156	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.02	3.9	1.3	.00	.00	.00	.00	.00	.00
AC-FT	8880	5530	.2	5.6	960	1010	2220	.00	.00	.00	.00	.00
CFSM	.66	.42	.00	.00	.08	.08	.17	.00	.00	.00	.00	.00
IN.	.76	.47	.00	.00	.08	.09	.19	.00	.00	.00	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

	MEAN	8.58	8.46	36.1	109	63.9	64.6	20.3	.89	.000	8.69	2.00	.87
MAX	144	92.9	248	1295	329	277	125	3.90	.000	.000	119	13.3	9.17
(WY)	2001	2001	1941	1993	1998	1991	1998	1941	1941	1999	1993	1998	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1941	1943	1943	1943	1943	1996	1943	1944	1941	1942	1991	1943	

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1941 - 2001

ANNUAL TOTAL	7266.63	9376.30	28.2	
ANNUAL MEAN	19.9	25.7	147	1993
HIGHEST ANNUAL MEAN			.013	2000
LOWEST ANNUAL MEAN			9840	Jan 8 1993
HIGHEST DAILY MEAN	1330	Oct 23	.00	Oct 1 1940
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1 1940
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1 1940
ANNUAL RUNOFF (AC-FT)	14410	18600	20450	
ANNUAL RUNOFF (CFSM)	.091	.12	.13	
ANNUAL RUNOFF (INCHES)	1.23	1.59	1.75	
10 PERCENT EXCEEDS	15	57	26	
50 PERCENT EXCEEDS	.00	.00	.00	
90 PERCENT EXCEEDS	.00	.00	.00	

e Estimated

## GILA RIVER BASIN

## 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 high-water 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, and May 28 to June 12, July 12, 13, 17, 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 29.....	2200	*3,830	*10.25

Minimum daily discharge, 0.36 ft<sup>3</sup>/s, Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	15	1.2	2.5	2.1	2.5	1.7	1.3	1.3	3.6	e2.4	e2.2
2	.36	15	1.2	2.0	2.0	2.3	1.7	1.2	1.2	3.8	e1.3	e1.6
3	6.4	14	1.6	1.9	2.1	1.7	1.7	1.3	1.0	4.6	e1.4	e1.2
4	.93	30	1.8	2.3	1.8	1.8	1.9	1.3	1.1	5.8	e31	e.98
5	.64	20	2.0	2.3	1.7	1.8	2.0	1.3	.99	11	e11	e.97
6	.49	178	2.5	2.6	1.8	1.7	2.4	1.3	.81	11	e1.5	e.97
7	.47	195	3.0	3.1	1.8	3.8	2.2	1.3	.80	9.7	e1.4	e.97
8	.47	88	3.3	3.4	1.8	3.0	2.2	1.3	.79	11	e1.4	.87
9	.47	e53	3.0	3.9	1.8	1.9	2.2	1.3	.79	11	e1.4	.84
10	5.2	e35	2.9	3.3	1.9	1.7	2.3	1.2	.73	12	e1.5	.93
11	114	e269	2.8	3.4	1.9	1.7	2.2	1.1	.72	14	e26	.90
12	111	e86	2.9	4.2	2.0	1.7	2.1	.86	.70	16	e3.2	.92
13	27	e52	2.8	4.6	2.0	1.8	1.9	.93	.69	18	e1.6	.98
14	19	e35	2.8	4.6	2.0	1.9	2.0	.91	.68	20	e1.4	1.2
15	15	e23	2.9	4.3	2.4	3.5	2.0	.87	.68	22	e1.1	1.1
16	15	19	2.9	4.4	2.2	4.7	2.0	.95	.68	e25	e1.2	.97
17	14	9.5	2.9	2.9	2.5	4.3	2.0	.98	.68	e74	e11	.93
18	14	6.9	2.6	2.5	2.6	3.7	1.9	1.1	.61	e1.4	e9.0	.90
19	27	6.5	3.0	2.5	2.5	3.2	1.4	1.5	.61	e1.2	e1.9	.87
20	e81	2.8	3.0	2.3	2.4	3.4	1.2	1.3	.56	e1.2	e1.2	.87
21	e115	1.1	3.0	2.2	2.4	3.4	1.2	1.2	.60	e1.2	e1.1	.84
22	e209	1.1	2.8	2.3	2.5	3.2	1.2	1.3	.76	e1.2	e1.1	.79
23	e420	.93	2.7	2.2	e2.4	3.3	1.2	1.2	.72	e1.3	e1.2	.77
24	e78	.89	2.6	2.2	e2.4	3.1	1.1	1.3	.84	e1.3	e1.2	.76
25	26	.94	2.6	2.2	e2.5	1.8	1.2	1.4	1.2	e1.4	e1.2	.76
26	16	.88	2.6	2.4	2.5	1.5	1.1	1.4	1.2	e1.4	e1.2	.74
27	14	.85	2.6	2.7	2.4	1.6	1.1	1.4	1.5	e1.4	e1.2	.74
28	28	.82	2.7	2.5	2.4	1.7	1.0	1.3	1.7	e1.3	e1.4	.74
29	23	1.0	2.6	2.3	---	1.7	1.1	1.3	2.3	e1.3	e348	.73
30	16	1.1	2.7	2.2	---	1.7	1.2	1.3	2.9	e1.4	e86	.74
31	16	---	2.9	2.2	---	1.7	---	1.2	---	e12	e3.4	---
TOTAL	1413.80	1162.31	80.9	88.4	60.8	76.8	50.4	37.60	29.84	301.5	558.9	28.78
MEAN	45.6	38.7	2.61	2.85	2.17	2.48	1.68	1.21	.99	9.73	18.0	.96
MAX	420	269	3.3	4.6	2.6	4.7	2.4	1.5	2.9	74	348	2.2
MIN	.36	.82	1.2	1.9	1.7	1.5	1.0	.86	.56	1.2	1.1	.73
AC-FT	2800	2310	160	175	121	152	100	75	59	598	1110	57
CFSM	.10	.08	.01	.01	.00	.01	.00	.00	.00	.02	.04	.00
IN.	.12	.09	.01	.01	.00	.01	.00	.00	.00	.02	.05	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2001, BY WATER YEAR (WY)

	MEAN	3.31	2.55	5.63	7.08	6.75	3.72	2.30	1.18	1.85	13.4	19.3	10.0
MAX	45.6	38.7	50.3	111	75.1	21.2	12.0	1.95	20.8	49.6	92.6	105	
(WY)	2001	2001	1966	1993	1998	1998	1998	1965	2000	1967	1971	1964	
MIN	.10	.10	.10	.10	.10	.12	.32	.19	.070	.22	.52	.16	
(WY)	1974	1974	1974	1974	1974	1974	1974	1974	1974	1997	1973	1973	

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1960 - 2001

	ANNUAL TOTAL	4169.62	3890.03	
ANNUAL MEAN		11.4	10.7	6.45
HIGHEST ANNUAL MEAN				15.7
LOWEST ANNUAL MEAN				1.44
HIGHEST DAILY MEAN	420	Oct 23	420	Oct 23
LOWEST DAILY MEAN	.16	May 16	.36	Oct 2
ANNUAL SEVEN-DAY MINIMUM	.18	May 20	.63	Jun 15
ANNUAL RUNOFF (AC-FT)	8270		7720	4670
ANNUAL RUNOFF (CFSM)	.025		.023	.014
ANNUAL RUNOFF (INCHES)	.34		.32	.19
10 PERCENT EXCEEDS	18		16	4.7
50 PERCENT EXCEEDS	.62		1.9	1.2
90 PERCENT EXCEEDS	.26		.84	.40

e Estimated

## 09485000 RINCON CREEK NEAR TUCSON, AZ

**LOCATION.**--Lat 32°07'46", long 110°37'32", 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 except for estimated daily discharges, which are fair.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 9,660 ft<sup>3</sup>/s Aug. 19, 1971, gage height, 10.5 ft, from inside high-water 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 11 .....	2045	379	4.23	Nov. 6 .....	2130	813	4.95
Oct. 23 .....	0145	*894	*5.07				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	34	3.2	.71	9.7	9.6	1.3	.73	.00	.00	1.3	.35
2	.00	21	3.0	.64	9.8	7.8	1.1	.65	.00	.00	.25	.27
3	.85	14	2.8	.60	12	6.8	.97	.62	.00	.00	.13	.23
4	.03	37	2.7	.65	20	5.7	.88	.60	.00	.00	.15	.21
5	.00	76	2.5	.62	26	4.9	.83	.58	.00	.00	11	.17
6	.00	133	2.4	.60	24	4.7	24	.51	.00	.00	27	.14
7	.00	182	2.2	.60	20	32	31	.47	.00	.00	3.9	.13
8	.00	87	2.0	.59	19	62	29	.42	.00	.00	e1.4	.10
9	.00	65	1.8	.66	18	53	24	.39	.00	.00	e.72	.09
10	.00	48	1.7	.75	23	46	27	.36	.00	.00	e.59	.07
11	104	165	1.6	1.0	21	38	25	.28	.00	.00	.60	.05
12	195	113	1.5	1.2	20	29	30	.26	.00	.00	1.2	.05
13	47	71	1.4	2.1	21	24	25	.27	.00	.00	1.0	.06
14	16	56	1.4	2.8	29	37	24	.25	.00	.00	4.7	.10
15	6.4	47	1.4	2.4	28	29	21	.23	.00	.00	4.5	.07
16	2.8	37	1.3	2.4	21	21	16	.22	.00	.00	8.0	.06
17	1.3	27	1.2	3.1	18	15	13	.20	.00	.00	4.4	.04
18	.61	20	1.2	3.1	16	12	9.4	.19	.00	.00	1.6	.02
19	.44	16	1.1	2.7	17	9.7	6.6	.20	.00	.00	.88	.01
20	17	12	1.1	2.5	16	8.6	4.7	.18	.00	6.3	.57	.00
21	28	9.9	1.0	2.4	14	8.2	3.5	.16	.00	.53	.42	.00
22	176	9.6	1.0	2.7	12	8.7	3.5	.14	.00	.01	.35	.00
23	310	11	1.0	3.6	11	7.5	3.2	.11	.00	.00	.30	.00
24	67	9.8	.96	4.3	9.3	5.8	2.6	.09	.00	.00	.25	.00
25	33	7.6	.92	4.3	7.6	4.5	2.0	.07	.00	5.9	.21	.00
26	17	6.3	.84	3.9	6.5	3.6	1.4	.05	.00	.48	.17	.00
27	16	5.2	.79	4.4	5.5	3.1	1.3	.05	.00	.02	.14	.00
28	145	4.5	.79	6.4	10	2.6	1.2	.03	.00	.04	.12	.00
29	63	3.8	.79	7.7	---	2.1	.98	.02	.00	.03	12	.00
30	33	3.4	.78	8.6	---	1.7	.82	.01	.00	.41	13	.00
31	50	---	.72	9.3	---	1.5	---	.00	---	.48	.76	---
TOTAL	1329.43	1332.1	47.09	87.32	464.4	505.1	335.28	8.34	0.00	14.20	101.61	2.22
MEAN	42.9	44.4	1.52	2.82	16.6	16.3	11.2	.27	.000	.46	3.28	.074
MAX	310	182	3.2	9.3	29	62	31	.73	.00	6.3	27	.35
MIN	.00	3.4	.72	.59	5.5	1.5	.82	.00	.00	.00	.12	.00
AC-FT	2640	2640	.93	173	921	1000	665	.17	.00	.28	202	4.4
CFSM	.96	.99	.03	.06	.37	.36	.25	.01	.00	.01	.07	.00
IN.	1.10	1.11	.04	.07	.39	.42	.28	.01	.00	.01	.08	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2001, BY WATER YEAR (WY)

MEAN	2.48	2.12	8.98	16.7	15.4	13.3	4.03	.19	.057	1.22	9.98	2.84
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	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1953	1953	1953	1953	1953	1955	1955	1953	1953	1960	1956	1953

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1953 - 2001

ANNUAL TOTAL	3096.23	4227.09	6.56
ANNUAL MEAN	8.46	11.6	33.4
HIGHEST ANNUAL MEAN			.072
LOWEST ANNUAL MEAN			1993
HIGHEST DAILY MEAN	310	310	1400
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	6140	8380	4750
ANNUAL RUNOFF (CFSM)	.19	.26	.15
ANNUAL RUNOFF (INCHES)	2.57	3.51	1.99
10 PERCENT EXCEEDS	16	29	11
50 PERCENT EXCEEDS	.00	1.2	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated



## GILA RIVER BASIN

## 09485450 PANTANO WASH AT BROADWAY BOULEVARD, AT TUCSON, AZ

**LOCATION.**--Lat 32°13'14", long 110°49'44", in NW1/4NE1/4 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, except for estimated daily discharges, which are poor.

**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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 7.....	0315	*1,760	*3.63

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	e20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	498	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	e54	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	e.00	.00	.66	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	e13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	e110	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	e74	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	e73	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	e74	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	e73	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	e73	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	e74	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	e85	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	e77	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	e80	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	228	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	526	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	e76	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	e.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	e.00	.00	.00	.00	---	.00	.00	.00	.00	.00	e.81	.00
31	e.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	1636.00	572.00	0.00	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00
MEAN	52.8	19.1	.000	.021	.000	.000	.000	.000	.000	.000	.026	.000
MAX	526	498	.00	.66	.00	.00	.00	.00	.00	.00	.81	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MED	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	3250	1130	.00	1.3	.00	.00	.00	.00	.00	.00	1.6	.00
CFSM	.09	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

	MEAN	17.6	6.39	.000	.007	.000	.005	.002	.000	6.54	10.3	15.5	1.89
MAX	52.8	19.1	.000	.021	.000	.016	.005	.000	19.6	30.4	34.8	6.48	
(WY)	2001	2001	1999	2001	1999	2000	1999	1999	2000	1999	1999	1999	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.026	.000	
(WY)	1999	2000	1999	1999	1999	1999	2000	1999	1999	2001	2001	2001	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1998 - 2001
ANNUAL TOTAL	3588.42	2209.47	
ANNUAL MEAN	9.80	6.05	5.30
HIGHEST ANNUAL MEAN			6.08
LOWEST ANNUAL MEAN			3.77
HIGHEST DAILY MEAN	526 Oct 23	526 Oct 23	1050 Jul 20 1998
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Jul 24 1998
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Jul 24 1998
ANNUAL RUNOFF (AC-FT)	7120	4380	3840
ANNUAL RUNOFF (CFSM)	.016	.010	.009
10 PERCENT EXCEEDS	.16	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

## 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 12.....	1200	1,600	5.78	Jan. 9.....	1630	587	5.00
Oct. 22.....	2145	*6,440	7.81	Aug. 30 .....	0315	3,650	6.67
Nov. 7 .....	0345	2,610	6.24				

No flow for many days.  
a From high-water mark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.24	.00	.00	1.3	.00	.00
2	.00	.00	.00	.00	.00	.00	.26	.00	.00	.00	1.9	.00
3	36	.08	.00	.00	.00	.00	.28	.00	.00	.00	2.9	.00
4	1	.27	.00	.00	.00	.00	.28	.00	.00	.00	.00	.00
5	.00	6.0	.00	.00	.00	e.00	.25	.00	.00	.00	.00	.00
6	.00	e51	.00	.00	.00	e.13	84	.00	.00	.00	.00	.00
7	.00	e965	.00	.00	.00	e109	86	.00	.00	.00	.00	.00
8	.00	.159	.00	.00	.00	e1.2	70	.00	.00	.00	.00	.00
9	.00	35	.00	e47	.00	e1.1	47	.00	.00	.00	.00	.00
10	2	9.2	.00	e.08	.00	e2.0	36	.00	.00	.00	.00	.00
11	29	127	.00	e.08	.00	e15	20	.00	.00	.00	.00	.00
12	321	34	.00	e8.2	.00	e7.8	16	.00	.00	.00	.00	.00
13	4	4.9	.00	e.08	.00	2.5	11	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	1.1	8.9	.00	.00	3.1	.00	.00
15	.00	.00	.00	.00	.00	.25	8.6	.00	.00	4.9	.00	.00
16	.00	.00	.00	e.20	.00	.16	4.0	.00	.00	.00	.00	.00
17	.00	.00	.00	e.01	.00	.16	.00	.00	.00	.00	11	.00
18	e.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00
19	e55	.00	.00	.00	.00	.19	.00	.00	.00	.00	.00	.00
20	e59	.00	.00	.00	.00	.20	.00	.00	12	.00	.00	.00
21	e.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
22	e2350	.00	.00	.00	.00	.20	.00	.00	3.1	.00	.00	.00
23	e2560	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
24	e134	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
25	e11	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
26	e2.6	.00	.00	e.10	.00	.22	.00	.00	.00	.00	.00	.00
27	e.21	.00	.00	e5.9	.00	.23	.00	.00	.00	.00	.00	.00
28	e85	.00	.00	e.44	.00	.23	.00	.00	.00	.00	.00	.00
29	e1.6	.00	.00	e.11	---	.24	.00	.00	.00	.00	1.3	.00
30	e.04	.00	.00	e.00	---	.24	.00	.00	.00	.00	e341	.00
31	e.00	---	.00	.00	---	.23	---	.00	---	.00	.00	---
TOTAL	5651.45	1391.45	0.00	62.29	0.00	143.34	392.81	0.00	15.10	9.30	358.10	0.00
MEAN	182	46.4	.000	2.01	.000	4.62	13.1	.000	.50	.30	11.6	.000
MAX	2560	965	.00	47	.00	109	86	.00	12	4.9	341	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	11210	2760	.00	124	.00	284	779	.00	30	18	710	.00
CFSM	.21	.05	.00	.00	.00	.01	.02	.00	.00	.00	.01	.00
IN.	.24	.06	.00	.00	.00	.01	.02	.00	.00	.00	.02	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2001, BY WATER YEAR (WY)

MEAN	16.6	8.88	41.2	158	66.8	52.1	14.8	.000	1.43	12.1	10.5	8.06
MAX	182	48.7	278	1443	214	263	78.8	.000	15.3	109	26.5	64.5
(WY)	2001	1995	1993	1993	1998	1991	1998	1991	2000	1999	2000	1996
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1991	1991	1994	1994	1994	1996	1993	1991	1991	1991	1991	1991

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1991 - 2001

	2000	2001	1991-2001
ANNUAL TOTAL	8483.30	8023.84	
ANNUAL MEAN	23.2	22.0	35.8
HIGHEST ANNUAL MEAN			164
LOWEST ANNUAL MEAN			.12
HIGHEST DAILY MEAN	2560	2560	11300
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	16830	15920	25930
ANNUAL RUNOFF (CFSM)	.027	.025	.041
ANNUAL RUNOFF (INCHES)	.36	.34	.56
10 PERCENT EXCEEDS	6.7	5.9	9.3
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

## 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 poor. 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 12 .....	1015	2,670	4.17	Oct. 28 .....	1315	643	3.77
Oct. 23 .....	0245	*7,730	*5.48	Nov. 7 .....	0345	5,290	5.68

No flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	e.05	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	e73	.00	.00	.00	.00	e12	.00	.00	.00	.00	.00
7	.00	1580	.00	.00	.00	e.35	e.15	.00	.00	.00	.00	.00
8	.00	174	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	e.33	e.44	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	e.86	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	48	e96	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	1060	e25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	e5.9	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	e.46	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	e2180	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	5290	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	e433	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	e222	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	e19	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	e.00	.00	.00	.00	---	.00	.00	.00	.00	.00	e30	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	e.00	---
TOTAL	9259.55	1948.49	0.00	0.00	0.00	0.35	12.15	0.00	0.00	0.00	30.00	0.00
MEAN	299	64.9	.000	.000	.000	.011	.41	.000	.000	.000	.97	.000
MAX	5290	1580	.00	.00	.00	.35	12	.00	.00	.00	30	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2001, BY WATER YEAR (WY)

	MEAN	49.8	10.8	.000	.000	24.4	1.67	5.29	.000	2.07	24.9	6.80	10.1
	MAX	299	64.9	.000	.000	148	10.0	31.3	.000	12.4	140	20.0	53.7
	(WY)	2001	2001	1996	1996	1998	1998	1998	1996	2000	1999	1999	1996
	MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1997	1997

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR				FOR 2001 WATER YEAR				WATER YEARS 1996 - 2001			
ANNUAL TOTAL	11971.48				11250.54				11.3			
ANNUAL MEAN	32.7				30.8				30.8			
HIGHEST ANNUAL MEAN									.000			
LOWEST ANNUAL MEAN									2001			
HIGHEST DAILY MEAN	5290	Oct 23			5290	Oct 23			5290	Oct 23	2000	
LOWEST DAILY MEAN	.00	Jan 1			.00	Oct 1			.00	Oct 1	1995	
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1			.00	Oct 1			.00	Oct 1	1995	
10 PERCENT EXCEEDS	.03				.00				.00			
50 PERCENT EXCEEDS	.00				.00				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

e Estimated

## 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 15050301, on left bank, 1/8 mi downstream from Ina Road, 1/4 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, as gates were opened by court order; however, peak flows are regulated while passing through the lake.

**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. 10.....	1045	3,250	*11.73
Aug. 19.....	2245	543	10.17

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e3.0	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	e.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	1020	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	e14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	e3.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	e7.7	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e1.0	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	e13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	e1	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	1050.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.70	0.00
MEAN	33.9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.41	.000
MAX	1020	.00	.00	.00	.00	.00	.00	.00	.00	.00	7.7	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2001, BY WATER YEAR (WY)

MEAN	6.01	.036	.006	.19	1.20	.025	.020	.097	.086	2.11	2.51	.81
MAX	33.9	.22	.035	1.13	4.72	.15	.070	.58	.43	9.97	6.09	4.01
(WY)	2001	1997	1999	1997	1998	2000	1998	1997	1997	1998	1996	1996
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.081	.000
(WY)	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1998	1999

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1996 - 2001

ANNUAL TOTAL	1223.59	1062.80	
ANNUAL MEAN	3.34	2.91	1.10
HIGHEST ANNUAL MEAN			2.91
LOWEST ANNUAL MEAN			.30
HIGHEST DAILY MEAN	1020	Oct 10	1020
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 3	.00
10 PERCENT EXCEEDS	.00		.00
50 PERCENT EXCEEDS	.00		.00
90 PERCENT EXCEEDS	.00		.00

e Estimated

**LOCATION.**--Lat 32°21'04", long 111°05'38", in NW1/4NW1/4 sec.35, T.12 S., R.12 E., Pima County, Hydrologic Unit 15050302, at center column of bridge pier on left bank, 0.5 mi southwest of Cortaro. 1.0 mi downstream from Ina Road treatment plant, 2.6 mi downstream from Canada del Oro, and 3.7 mi downstream from Rillito Creek.

**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 600 ft 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 fair, 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23 .....	1315	9,070	10.64
Nov. 7.....	0530	*10,000	9.84

No natural flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

[illegible]



## GILA RIVER BASIN

219

## 09486520 SANTA CRUZ RIVER AT TRICO ROAD, NEAR MARANA, AZ

LOCATION.--Lat 32°28'17", long 111°18'25", in NE1/4SE1/4, sec.15, 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.--No estimated daily discharges. Records fair. Most of base flow is effluent from municipal sewage treatment plant at Ina Road, 17.6 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 each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23 .....	1715	*8,270	*11.10
Nov. 7.....	0300	4,580	9.06

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	.00	.00	e13	18	25	14	4.2	6.0	6.5	50	28
2	25	.00	.00	e10	20	24	14	9.1	4.8	4.6	22	24
3	20	.00	.00	e9.9	20	24	15	9.7	6.8	3.9	42	20
4	17	.00	.00	e13	19	23	14	11	6.1	6.5	23	25
5	18	.00	.00	e7.8	19	19	15	8.2	5.4	7.2	24	34
6	18	e61	.00	e6.2	19	19	73	9.4	6.8	20	21	13
7	19	e1720	.00	e13	15	31	60	8.6	8.8	13	18	23
8	19	e290	.00	e18	17	63	36	10	10	15	19	19
9	20	e82	.00	e21	13	20	25	9.8	8.4	13	31	21
10	34	e21	.00	e40	12	9.5	23	10	7.7	11	39	26
11	40	e.02	.00	e14	13	11	19	6.3	7.9	13	36	27
12	908	e13	.00	e11	19	12	20	7.1	9.2	15	29	22
13	364	e3.0	.00	e44	24	9.6	3.2	6.2	11	13	59	20
14	184	e.25	.00	e13	14	7.6	.00	8.7	9.8	13	45	e24
15	36	.00	.00	e7.9	16	8.2	.06	11	6.3	23	50	e20
16	29	.00	e.00	e8.6	24	10	9.6	14	4.6	14	19	e19
17	24	.00	e4.7	e9.6	24	5.1	9.6	13	4.0	20	28	e18
18	20	.00	e3.8	e6.2	25	6.4	10	11	5.0	16	38	10
19	21	.00	e8.2	e9.3	22	8.4	8.4	14	5.3	30	31	9.8
20	137	.00	e5.5	e3.2	16	10	8.1	18	9.2	35	40	25
21	93	.00	e4.9	e13	16	6.3	18	16	7.0	19	26	22
22	597	.00	e10	e14	11	5.5	16	14	8.8	20	22	e22
23	4350	.00	e6.2	e10	13	5.9	18	16	13	22	17	e22
24	3020	.00	e8.6	e8.7	17	9.0	16	18	5.8	16	19	e22
25	370	.00	e9.0	9.5	23	10	14	16	4.2	19	13	e22
26	20	.00	e5.7	11	29	11	11	13	6.7	20	14	26
27	.00	.00	e9.5	8.7	20	10	16	12	3.3	17	17	19
28	.00	.00	e11	15	19	9.2	14	16	4.0	14	16	16
29	.18	.00	e9.7	11	---	8.3	12	16	4.5	12	.01	12
30	4.4	.00	e11	19	---	12	15	15	7.3	16	26	18
31	.00	---	e11	19	---	14	---	1.3	---	14	51	---
TOTAL	10433.58	2190.27	118.80	417.6	517	447.0	526.96	352.6	207.7	481.7	885.01	628.8
MEAN	337	73.0	3.83	13.5	18.5	14.4	17.6	11.4	6.92	15.5	28.5	21.0
MAX	4350	1720	11	44	29	63	73	18	13	35	59	34
MIN	.00	.00	.00	3.2	11	5.1	.00	1.3	3.3	3.9	.01	9.8
AC-FT	20700	4340	236	828	1030	887	1050	699	412	955	1760	1250

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2001, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	40.6	23.4	35.7	168	65.7	25.3	14.0	7.60	6.89	46.4	22.8	30.2
MAX	337	73.0	157	1509	294	82.1	41.1	18.3	22.8	318	49.1	207
(WY)	2001	2001	1995	1993	1998	1991	1998	2000	2000	1990	2000	1996
MIN	.000	1.76	3.83	9.60	.000	.000	.000	.000	.000	.000	2.00	.000
(WY)	1996	1996	2001	1992	1993	1993	1991	1991	1991	1991	1991	1995

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1990 - 2001

	2000 CALENDAR YEAR	2001 WATER YEAR	WATER YEARS 1990 - 2001
ANNUAL TOTAL	20660.37	17207.02	
ANNUAL MEAN	56.4	47.1	40.6
HIGHEST ANNUAL MEAN			135
LOWEST ANNUAL MEAN			9.71
HIGHEST DAILY MEAN	4350 Oct 23	4350 Oct 23	15000 Jan 19 1993
LOWEST DAILY MEAN	.00 Jul 26	.00 Oct 27	.00 Jul 28 1990
ANNUAL SEVEN-DAY MINIMUM	.00 Nov 15	.00 Nov 15	.00 Jul 28 1990
ANNUAL RUNOFF (AC-FT)	40980	34130	29380
10 PERCENT EXCEEDS	39	31	37
50 PERCENT EXCEEDS	21	13	10
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

## GILA RIVER BASIN

## 09486580 ARIVACA CREEK AT ARIVACA, AZ

**LOCATION.**--Lat 31°34'24", long 111°19'56", in SW1/4SW1/4SE1/4, sec. 28, T.21 S., R.10 E., Pima County, Hydrologic Unit 15050301, on the right bank, in the Arivaca quad.

**DRAINAGE AREA.**--56.8 mi<sup>2</sup>, from topographic map.

**PERIOD OF RECORD.**--June 1996 to current year.

**GAGE.**--Water-stage recorder and data collection platform. Datum of gage is 3,600 ft above sea level. U.S. Fish and Wildlife Service has taken measurements since 1991. U.S. Geological Survey operated a gage 4 mi downstream (09486600) from 1967 to 1972.

**REMARKS.**--Records fair, except for estimated daily discharges, which are poor. No known regulation except for a few small stock ponds.

**EXTREMES FOR PERIOD OF RECORD.**--At site 4 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23 .....	0345	*871	*12.29
Oct. 28.....	0730	123	10.11

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.1	.97	1.1	1.3	1.6	1.0	.91	.03	e.67	e.42	e.33
2	.00	1.0	.99	1.1	1.3	1.6	1.0	.86	.03	e.74	e.40	e.32
3	.00	1.0	.98	1.1	1.3	1.6	.99	.81	.00	e.83	e.42	e.31
4	.00	1.0	.98	1.1	1.3	1.5	1.0	.89	.00	e.95	e.41	e.31
5	.00	.91	.95	1.1	1.3	1.5	1.2	.92	.00	e1.1	e.43	e.24
6	.00	1.4	1.0	1.1	1.3	1.5	2.9	.98	.01	e1.1	e.43	e.24
7	.00	20	1.1	1.1	1.3	2.9	1.4	.96	.02	e1.2	e.38	e.22
8	.00	13	1.1	1.1	1.6	2.2	1.1	.89	.03	e1.2	e.38	e.15
9	.00	3.4	1.0	1.2	1.7	1.8	1.1	.83	.00	e1.3	e.38	e.15
10	.00	1.7	1.1	1.2	1.7	1.6	1.2	.74	.00	e1.2	e.38	e.16
11	.00	1.9	1.1	1.2	1.5	1.6	1.1	.66	.00	e1.2	e.38	e.16
12	.00	7.3	1.1	1.4	1.4	1.6	1.0	.61	.00	e1.1	e.37	e.18
13	.00	4.9	1.2	1.3	1.4	1.6	1.0	.64	.00	e1.1	e.36	e.19
14	.00	2.9	1.2	1.2	1.4	1.7	.84	.51	.00	e1.1	e.35	e.18
15	.00	1.9	1.1	1.2	1.4	1.6	.80	.53	.03	e1.0	e.32	e.17
16	.00	1.3	1.1	1.2	1.4	1.6	.78	.46	.00	e.94	e.31	e.17
17	.00	1.0	1.1	1.2	1.4	1.6	.76	.35	.01	e.82	e.31	e.18
18	.00	.82	1.1	1.2	1.4	1.5	.70	.29	e.03	e.76	e.29	e.17
19	.00	.75	1.1	1.2	1.4	1.4	.69	.45	e.02	e.71	e.26	e.18
20	.00	.66	1.2	1.2	1.4	1.3	.66	.42	e.06	e.64	e.28	e.18
21	.00	.63	1.2	1.2	1.4	1.2	.64	.35	e.12	e.59	e.31	e.20
22	179	.61	1.1	1.2	1.5	1.2	.67	.25	e.17	e.54	e.33	e.18
23	342	.60	1.1	1.2	1.5	1.2	.69	.15	e.23	e.44	e.31	e.18
24	11	.71	1.1	1.2	1.5	1.2	.74	.09	e.30	e.42	e.31	e.23
25	1.8	.73	1.0	1.2	1.5	1.2	.77	.06	e.33	e.41	e.30	e.20
26	1.2	.74	1.1	1.2	1.5	1.1	.77	.08	e.41	e.42	e.30	e.18
27	1.9	.79	1.1	1.8	1.5	1.1	.84	.08	e.47	e.43	e.30	e.21
28	56	.80	1.1	1.7	1.8	1.1	.80	.03	e.53	e.43	e.31	e.24
29	16	.78	1.1	1.5	---	1.1	.86	.03	e.60	e.44	e.31	e.20
30	2.6	.91	1.1	1.4	---	1.1	.90	.07	e.58	e.41	e.31	e.22
31	1.5	---	1.1	1.3	---	1.0	---	.06	---	e.43	e.31	---
TOTAL	613.00	75.24	33.57	38.4	40.4	45.8	28.90	14.96	4.01	24.62	10.66	6.23
MEAN	19.8	2.51	1.08	1.24	1.44	1.48	.96	.48	.13	.79	.34	.21
MAX	342	20	1.2	1.8	1.8	2.9	.98	.60	1.3	.43	.33	.33
MIN	.00	.60	.95	1.1	1.3	1.0	.64	.03	.00	.41	.26	.15
AC-FT	1220	149	67	76	80	91	57	30	8.0	49	21	12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2001, BY WATER YEAR (WY)

MEAN	3.53	.79	.66	.83	.81	.77	.49	.20	.032	1.32	.50	.46
MAX	19.8	2.51	1.08	1.24	1.44	1.48	.96	.48	.13	7.05	1.50	1.37
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	1998	1996	1996
MIN	.003	.10	.32	.33	.35	.47	.12	.014	.000	.000	.000	.000
(WY)	1998	1998	2000	1998	2000	2000	2000	2000	1997	1997	1997	2000

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1996 - 2001
ANNUAL TOTAL	770.23	935.79	
ANNUAL MEAN	2.10	2.56	.87
HIGHEST ANNUAL MEAN			2.56
LOWEST ANNUAL MEAN			.19
HIGHEST DAILY MEAN	342	342	342
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	1530	1860	630
10 PERCENT EXCEEDS	1.1	1.6	1.1
50 PERCENT EXCEEDS	.08	.86	.35
90 PERCENT EXCEEDS	.00	.03	.00

e Estimated

## GILA RIVER BASIN

221

## 09486800 ALTAR WASH NEAR THREE POINTS, AZ

**LOCATION.**--Lat 31° 50' 20", long 111° 24' 13", in SE 1/4 NE 1/4 NE 1/4 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 maximum (\*):

Date	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 5 .....	1860	4.18

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e447	.00
6	.00	e8.2	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
7	.00	e1.3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	e.75	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e14	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e17	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	e3.9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	e.13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	e.38	.00	.00	.00	.00	.00	.00	.00	.00	e.20	.00	.00
22	e26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	e4.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	e.64	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	35.96	9.50	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.20	478.00	0.00
MEAN	1.16	.32	.000	.021	.000	.000	.000	.000	.000	.006	15.4	.000
MAX	26	8.2	.00	.64	.00	.00	.00	.00	.00	.20	447	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	71	19	.00	1.3	.00	.00	.00	.00	.00	.4	948	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2001, BY WATER YEAR (WY)

	MEAN	.91	.23	2.29	.001	.21	.97	.000	.003	3.30	16.6	22.6	21.9
MAX	6.74	3.22	38.6	.021	3.62	15.3	.003	.045	58.9	102	73.5	210	
(WY)	1973	1997	1968	2001	1998	1973	1995	1967	2000	1999	1974	1970	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.68	.000	
(WY)	1967	1967	1967	1967	1967	1967	1967	1968	1968	1993	1992	1968	

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1967 - 2001

ANNUAL TOTAL	2591.25	524.30	
ANNUAL MEAN	7.08	1.44	6.09
HIGHEST ANNUAL MEAN			20.0
LOWEST ANNUAL MEAN			.53
HIGHEST DAILY MEAN	541	Jun 30	447 Aug 5
LOWEST DAILY MEAN	.00	Jan 1	.00 Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00 Oct 1
ANNUAL RUNOFF (AC-FT)	5140	1040	4410
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

## GILA RIVER BASIN

## 09487000 BRAWLEY WASH NEAR THREE POINTS, AZ

**LOCATION.**--Lat 32° 04' 32", long 111° 20' 17", in SE1/4NE1/4SW1/4 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.

**GAGE.**--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 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 22 .....	1500	*4,320	10.37
Oct. 23 .....	0915	693	8.49

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e13	.00
6	.00	e26	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00
7	.00	e85	.00	.00	.00	e.50	.00	.00	.00	.00	.00	.00
8	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	e.99	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e2.7	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.98	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e4.8	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	e3.0	e2.5	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e34	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.14	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	e4.9	.00	19
16	.00	e1.5	.00	.00	.00	.00	.00	.00	.00	e.00	.00	17
17	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	729	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	e102	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	831.00	112.50	0.00	0.00	0.00	0.50	0.00	0.00	0.00	7.90	59.11	36.00
MEAN	26.8	3.75	.000	.000	.000	.016	.000	.000	.000	.25	1.91	1.20
MAX	729	85	.00	.00	.00	.50	.00	.00	.00	4.9	34	19
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1650	223	.00	.00	.00	1.0	.00	.00	.00	16	117	71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2001, BY WATER YEAR (WY)

	MEAN	4.16	1.09	1.08	1.49	.001	.002	.000	.013	1.70	17.0	23.5	20.8
MAX	26.8	4.83	9.73	10.6	.011	.016	.000	.12	15.2	110	63.9	87.6	
(WY)	2001	1997	1995	1995	1993	2001	1993	1993	2000	1999	1999	1999	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
(WY)	1993	1993	1993	1994	1994	1993	1993	1994	1993	1993	1994	1993	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1993 - 2001	
ANNUAL TOTAL	1852.45		1047.01			
ANNUAL MEAN	5.06		2.87		5.94	
HIGHEST ANNUAL MEAN					18.8	
LOWEST ANNUAL MEAN					.028	
HIGHEST DAILY MEAN	729	Oct 22	729	Oct 22	1610	Aug 27 1993
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1992
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 3	.00	Oct 1	.00	Oct 1 1992
ANNUAL RUNOFF (AC-FT)	3670		2080		4310	
10 PERCENT EXCEEDS	.00		.00		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated

## 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.**--No estimated daily discharge. Records good. 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 27 .....	0545	*1010	*12.58
Nov. 10 .....	0800	542	11.63

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2.6	.00	.00	.77	.34	.00	.00	.00	.00	.00	.00
2	.00	.99	.00	.00	.59	.34	.00	.00	.00	.00	.00	.00
3	.00	.56	.00	.00	.49	.28	.00	.00	.00	.00	.00	.00
4	.00	.38	.00	.00	.44	.28	.00	.00	.00	.00	.00	.00
5	.00	.26	.00	.00	.44	.26	.00	.00	.00	.00	.00	.00
6	.00	22	.00	.00	.44	.24	70	.00	.00	.00	.00	.00
7	.00	38	.00	.00	.49	17	26	.00	.00	.00	.00	.00
8	.00	6.8	.00	.00	.50	84	3.0	.00	.00	.00	.00	.00
9	.00	94	.00	.00	.50	7.4	1.4	.00	.00	.00	.00	.00
10	3.6	509	.00	.00	.50	3.2	.87	.00	.00	.00	.00	.00
11	9.7	285	.00	.00	.50	2.0	.67	.00	.00	.00	.00	.00
12	1.8	81	.00	5.1	.48	1.4	.52	.00	.00	.00	.00	.00
13	.00	17	.00	9.9	.43	1.1	.54	.00	.00	.00	.00	.00
14	.00	4.2	.00	3.6	.41	.88	.64	.00	.00	.00	.00	.00
15	.00	1.5	.00	3.3	.36	.75	.58	.00	.00	.00	.00	.00
16	.00	.78	.00	23	.28	.66	.51	.00	.00	.00	.00	.00
17	.00	.50	.00	38	.24	.55	.43	.00	.00	.00	.00	.00
18	.00	.34	.00	3.8	.19	.50	.33	.00	.00	.00	.00	.00
19	.00	.26	.00	1.3	.12	.44	.24	.00	.00	.00	.00	.00
20	.00	.23	.00	.70	.07	.43	.11	.00	.00	.00	.00	.00
21	.00	.19	.00	.46	.00	.35	.02	.00	.00	.00	.00	.00
22	49	.15	.00	.34	.00	.32	.05	.00	.00	.00	.00	.00
23	98	.12	.00	.26	.00	.28	.00	.00	.00	.00	.00	.00
24	7.9	.12	.00	.48	.00	.24	.00	.00	.00	.00	.00	.00
25	.85	.10	.00	.72	.00	.19	.00	.00	.00	.00	.00	.00
26	574	.08	.00	.63	.00	.15	.00	.00	.00	.00	.00	.00
27	780	.07	.00	72	.00	.07	.00	.00	.00	.00	.00	.00
28	518	.00	.00	95	.01	.00	.00	.00	.00	.00	.00	.00
29	113	.00	.00	22	---	.00	.00	.00	.00	.00	.00	.00
30	46	.00	.00	2.7	---	.00	.00	.00	.00	.00	.00	.00
31	31	---	.00	1.2	---	.00	---	.00	---	.00	.00	---
TOTAL	2232.85	1066.23	0.00	284.49	8.25	123.65	105.91	0.00	0.00	0.00	0.00	0.00
MEAN	72.0	35.5	.000	9.18	.29	3.99	3.53	.000	.000	.000	.000	.000
MAX	780	509	.00	95	.77	84	70	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	4430	2110	.00	564	16	245	210	.00	.00	.00	.00	.00
CFSM	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2001, BY WATER YEAR (WY)

MEAN	38.8	7.42	22.6	35.0	14.0	12.4	3.66	1.68	1.24	13.4	51.8	28.9
MAX	1812	200	435	1182	186	229	75.6	13.8	10.8	193	597	570
(WY)	1984	1958	1968	1993	1983	1941	1941	1941	1967	1990	1955	1946
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1959	1957	1959	1959	1961	1964	1963	1961	1961	1963	1973	1968

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1940 - 2001

ANNUAL TOTAL	3733.29	3821.38	
ANNUAL MEAN	10.2	10.5	19.6
HIGHEST ANNUAL MEAN			170
LOWEST ANNUAL MEAN			.47
HIGHEST DAILY MEAN	780	780	18000
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	7400	7580	14240
ANNUAL RUNOFF (CFSM)	.001	.001	.002
10 PERCENT EXCEEDS	1.4	3.1	8.0
50 PERCENT EXCEEDS	.00	.00	.03
90 PERCENT EXCEEDS	.00	.00	.00



## GILA RIVER BASIN

## 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 except for estimated daily discharges, which are poor. 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 24.....	0400	912	4.67	Nov. 5 .....	0730	1140	4.96
Oct. 28.....	1745	*1250	5.10	Apr. 8 .....	0730	1060	4.75

Minimum daily discharge, 23 ft<sup>3</sup>/s July 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	437	114	56	e48	179	672	328	55	25	44	85
2	25	353	116	51	e48	177	671	301	50	25	43	66
3	24	294	120	50	e51	179	647	277	45	25	46	54
4	23	476	116	47	46	175	620	251	43	24	51	46
5	23	1030	111	45	55	170	591	230	42	23	50	41
6	23	961	112	45	64	179	721	215	40	25	43	37
7	23	814	114	61	84	209	760	192	38	31	55	35
8	24	595	120	60	116	237	905	172	36	39	51	33
9	26	511	127	64	102	326	893	158	34	56	47	32
10	28	461	128	e55	87	363	913	148	33	45	51	31
11	51	440	131	e48	90	351	781	143	32	36	61	30
12	208	390	123	e45	98	309	812	137	30	34	69	29
13	281	341	123	e43	95	334	714	134	29	34	75	30
14	143	308	123	e43	113	330	722	148	29	35	122	33
15	97	293	111	e44	115	352	758	166	28	33	205	36
16	78	259	115	e45	94	352	743	151	27	32	151	38
17	64	219	102	e46	95	349	714	132	26	30	110	36
18	52	191	94	e50	99	343	704	122	25	30	90	35
19	47	168	e90	e56	118	354	715	124	25	30	76	32
20	44	156	e76	e65	157	405	754	180	25	32	68	30
21	47	150	e79	e72	171	496	734	164	26	33	57	29
22	55	144	e84	e74	187	622	636	127	26	33	88	28
23	335	145	e77	e58	206	699	608	112	27	32	80	28
24	720	140	75	e58	200	743	506	99	28	35	64	28
25	501	129	76	54	173	754	443	91	29	33	51	28
26	429	121	e80	51	171	788	413	83	28	32	44	27
27	357	109	e77	50	178	736	409	79	27	32	40	26
28	906	111	e75	e50	175	691	436	74	27	35	37	26
29	1000	112	e61	50	---	668	405	70	25	35	42	25
30	642	112	114	47	---	671	362	65	25	46	51	25
31	486	---	56	47	---	690	---	61	---	44	91	---
TOTAL	6790	9970	3120	1630	3236	13231	19762	4734	960	1034	2153	1059
MEAN	219	332	101	52.6	116	427	659	153	32.0	33.4	69.5	35.3
MAX	1000	1030	131	74	206	788	913	328	55	56	205	85
MIN	23	109	56	43	46	170	362	61	25	23	37	25
AC-FT	13470	19780	6190	3230	6420	26240	39200	9390	1900	2050	4270	2100
CFSM	.39	.59	.18	.09	.21	.76	1.18	.27	.06	.06	.12	.06
IN.	.45	.66	.21	.11	.21	.88	1.31	.31	.06	.07	.14	.07

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2001, BY WATER YEAR (WY)

	MEAN	110	93.4	119	144	234	550	718	285	61.8	43.3	107	86.8
MAX	1211	505	915	1571	1036	1863	2253	1933	244	122	509	385	
(WY)	1973	1995	1979	1993	1980	1985	1979	1973	1973	1965	1999	1963	
MIN	13.6	22.7	20.0	23.0	34.7	30.1	32.0	22.5	9.84	14.1	18.2	9.36	
(WY)	1954	1954	1954	1996	1974	1996	1996	1996	1974	1989	1962	1956	

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1954 - 2001

	ANNUAL TOTAL	30116	67679	
ANNUAL MEAN	82.3	185	212	
HIGHEST ANNUAL MEAN			617	1993
LOWEST ANNUAL MEAN			38.0	1996
HIGHEST DAILY MEAN	1030	Nov 5	11000	Oct 20 1972
LOWEST DAILY MEAN	23	Sep 23	2.6	Jul 5 1974
ANNUAL SEVEN-DAY MINIMUM	23	Sep 22	5.4	Sep 16 1956
ANNUAL RUNOFF (AC-FT)	59740		134200	153700
ANNUAL RUNOFF (CFSM)	.15		.33	.38
ANNUAL RUNOFF (INCHES)	2.00		4.50	5.15
10 PERCENT EXCEEDS	134		628	566
50 PERCENT EXCEEDS	37		80	58
90 PERCENT EXCEEDS	29		28	24

e Estimated

## 09490500 BLACK RIVER NEAR FORT APACHE, AZ

**LOCATION.**--Lat 33° 42' 46", long 110° 12' 40", in NW 1/4 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 7.....	0400	2720	*6.59

Minimum daily discharge, 33 ft<sup>3</sup>/s, Oct. 8 and 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	768	170	87	79	286	884	495	92	35	83	87
2	38	584	172	85	72	290	869	456	86	36	76	117
3	37	452	174	85	73	282	869	425	79	36	123	94
4	37	404	176	79	82	281	839	393	74	34	107	80
5	35	1870	173	76	92	269	803	357	70	34	92	70
6	34	1850	168	81	99	260	936	323	67	35	87	63
7	34	2370	166	85	133	276	1240	294	64	36	86	56
8	33	1630	163	84	181	451	1190	270	61	37	85	51
9	33	1100	164	95	254	707	1220	250	58	43	97	48
10	39	903	164	96	247	729	1210	234	52	91	129	45
11	58	1770	164	96	231	843	1230	225	50	76	105	43
12	96	1250	160	94	240	705	1080	218	46	65	152	42
13	316	786	153	93	236	629	1050	216	44	58	161	48
14	281	594	147	89	245	633	963	216	42	53	129	70
15	178	525	139	77	312	596	996	229	41	50	136	95
16	135	481	128	69	280	598	1030	236	40	49	241	80
17	110	402	125	83	226	566	1010	217	39	46	199	71
18	95	332	126	73	210	540	993	192	37	47	155	68
19	85	287	117	62	217	508	999	186	35	49	130	59
20	78	250	97	54	245	522	1030	216	34	47	111	54
21	78	232	102	78	278	603	1090	241	35	45	98	48
22	84	222	111	83	289	744	977	226	34	44	88	44
23	95	213	114	90	304	915	876	181	40	48	81	42
24	796	213	104	92	326	1010	794	160	39	47	106	40
25	699	207	101	79	307	1020	663	143	40	44	89	40
26	526	194	100	84	283	1050	594	133	44	48	76	39
27	445	183	99	82	275	1060	575	125	43	47	68	37
28	1610	172	89	90	285	952	575	119	41	45	61	36
29	1710	173	84	85	---	878	595	111	38	46	81	35
30	1120	171	86	87	---	851	544	102	36	67	66	34
31	1050	---	89	83	---	876	---	97	---	90	73	---
TOTAL	9999	20588	4125	2576	6101	19930	27724	7286	1501	1528	3371	1736
MEAN	323	686	133	83.1	218	643	924	235	50.0	49.3	109	57.9
MAX	1710	2370	176	96	326	1060	1240	495	92	91	241	117
MIN	33	171	84	54	72	260	544	97	34	34	61	34
AC-FT	19830	40840	8180	5110	12100	39530	54990	14450	2980	3030	6690	3440
CFSM	.26	.56	.11	.07	.18	.52	.75	.19	.04	.04	.09	.05
IN.	.30	.62	.12	.08	.18	.60	.84	.22	.05	.05	.10	.05

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2001, BY WATER YEAR (WY)

MEAN	213	160	360	416	592	1051	1137	487	107	86.1	186	142
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	54.7	50.2	47.6	29.0	16.9	23.3	34.9	30.5
(WY)	1974	1976	1977	1976	2000	1999	1996	1996	1974	1994	1975	1960

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1915 - 2001
ANNUAL TOTAL	48886	106465	
ANNUAL MEAN	134	292	414
HIGHEST ANNUAL MEAN			1200
LOWEST ANNUAL MEAN			52.6
HIGHEST DAILY MEAN	2370	Nov 7	32600
LOWEST DAILY MEAN	26	Jun 16	11
ANNUAL SEVEN-DAY MINIMUM	27	Jun 13	12
ANNUAL RUNOFF (AC-FT)	96970	211200	299700
ANNUAL RUNOFF (CFSM)	.11	.24	.34
ANNUAL RUNOFF (INCHES)	1.48	3.21	4.56
10 PERCENT EXCEEDS	213	880	1120
50 PERCENT EXCEEDS	55	117	100
90 PERCENT EXCEEDS	32	40	39

## GILA RIVER BASIN

## 09492400 EAST FORK WHITE RIVER NEAR FORT APACHE, AZ

**LOCATION.**--Lat 33° 49'20", long 109° 48'50", in SE¼ 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 for 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, 4.0 ft<sup>3</sup>/s Nov. 29, 1975.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 12 .....	0445	136	1.86
May 2 .....	2315	*180	*2.06
May 19 .....	1300	134	1.85

Minimum daily discharge, 6.3 ft<sup>3</sup>/s Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	30	18	13	e11	16	70	156	34	9.9	12	15
2	6.6	28	18	13	e11	15	81	164	32	10	12	13
3	6.5	27	18	13	12	16	89	155	30	10	19	13
4	6.6	40	17	13	13	15	96	125	27	9.3	16	12
5	6.7	42	17	12	15	15	89	99	25	9.0	17	11
6	6.5	36	16	11	17	16	85	84	23	9.6	24	11
7	6.3	30	16	12	18	17	71	80	22	12	17	10
8	6.7	26	16	11	18	18	66	86	20	19	16	10
9	6.8	24	16	11	17	21	63	95	19	13	16	9.7
10	13	24	16	11	18	23	65	104	17	11	20	9.3
11	30	23	15	11	16	22	58	111	17	11	25	9.3
12	100	23	15	11	16	22	52	113	16	11	29	9.1
13	44	19	14	11	16	23	49	124	15	9.4	23	10
14	29	22	13	8.5	16	25	54	134	15	9.9	32	13
15	23	21	16	14	16	26	60	131	14	9.3	33	12
16	19	17	15	12	16	27	69	122	13	9.2	26	11
17	17	18	15	e10	16	27	87	114	13	9.0	22	9.9
18	16	20	13	e10	15	26	114	104	12	8.7	19	9.2
19	15	21	16	e11	16	27	136	113	12	9.4	18	8.9
20	14	19	16	e12	17	33	151	100	12	9.0	16	8.6
21	13	18	15	e13	18	44	145	91	12	9.1	17	8.3
22	20	18	14	e13	19	55	121	86	12	11	15	8.2
23	42	18	13	e15	21	61	98	78	13	9.9	14	8.1
24	30	18	13	e14	20	63	90	71	14	8.8	13	8.0
25	25	17	12	e13	18	69	97	66	12	9.7	13	7.9
26	27	17	12	e12	18	74	119	61	12	9.8	12	7.8
27	29	17	12	e12	16	67	125	58	11	13	12	7.7
28	46	17	15	e13	16	61	139	54	10	9.8	11	7.5
29	35	17	14	e12	---	55	151	49	10	11	16	7.4
30	37	18	13	e12	---	57	154	43	9.6	15	22	7.3
31	37	---	13	e12	---	61	---	37	---	13	23	---
TOTAL	720.5	685	462	371.5	456	1097	2844	3008	503.6	328.8	580	293.2
MEAN	23.2	22.8	14.9	12.0	16.3	35.4	94.8	97.0	16.8	10.6	18.7	9.77
MAX	100	42	18	15	21	74	154	164	34	19	33	15
MIN	6.3	17	12	8.5	11	15	49	37	9.6	8.7	11	7.3
AC-FT	1430	1360	916	737	904	2180	5640	5970	999	652	1150	582
CFSM	.60	.59	.38	.31	.42	.91	2.44	2.50	.43	.27	.48	.25
IN.	.69	.66	.44	.36	.44	1.05	2.73	2.88	.48	.32	.56	.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2001, BY WATER YEAR (WY)

	MEAN	22.0	16.8	16.4	16.4	20.7	39.5	81.1	102	45.3	18.4	28.5	23.2
MAX	128	43.6	57.1	84.8	66.2	103	192	284	172	45.7	90.5	65.9	
(WY)	1984	1987	1979	1993	1980	1978	1993	1973	1973	1973	1992	1983	
MIN	8.70	7.66	7.81	7.09	7.45	9.93	14.6	8.22	4.97	7.17	10.9	6.91	
(WY)	1962	1990	1977	1994	2000	1959	1996	2000	1996	2000	1960	1989	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1957 - 2001
ANNUAL TOTAL	4458.6	11349.6	
ANNUAL MEAN	12.2	31.1	35.9
HIGHEST ANNUAL MEAN			75.1
LOWEST ANNUAL MEAN			9.31
HIGHEST DAILY MEAN	100	Oct 12	1120
LOWEST DAILY MEAN	4.9	Jun 16	3.9
ANNUAL SEVEN-DAY MINIMUM	5.2	Jun 11	4.3
ANNUAL RUNOFF (AC-FT)	8840	22510	25980
ANNUAL RUNOFF (CFSM)	.31	.80	.92
ANNUAL RUNOFF (INCHES)	4.27	10.88	12.56
10 PERCENT EXCEEDS	19	86	88
50 PERCENT EXCEEDS	9.1	16	18
90 PERCENT EXCEEDS	6.5	9.4	8.8

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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
July 29 .....	1815	*2060	*5.89
Aug. 11 .....	1500	1050	4.24
Aug. 29 .....	1815	1200	4.52

Minimum daily discharge, 9.7 ft<sup>3</sup>/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	171	100	59	55	136	576	623	136	24	64	e43
2	10	156	99	58	53	128	632	622	125	30	94	e40
3	10	148	100	56	58	128	654	609	116	30	75	e39
4	10	183	99	53	66	124	661	542	105	30	91	e37
5	9.8	313	95	57	71	119	607	472	93	25	81	33
6	9.8	360	93	61	80	122	703	420	89	24	89	31
7	9.8	279	91	66	96	149	645	386	80	31	90	29
8	9.8	217	91	66	120	177	654	365	72	37	79	26
9	9.7	190	90	66	109	216	625	360	68	91	109	25
10	16	178	89	68	102	246	590	362	63	94	167	25
11	110	234	88	63	114	254	520	371	63	46	178	24
12	234	183	84	60	107	223	516	378	57	40	175	24
13	178	149	85	64	105	248	471	412	58	44	145	24
14	102	143	77	59	119	252	465	449	54	63	134	44
15	80	152	72	42	108	266	464	459	52	62	161	57
16	69	134	76	58	98	272	466	428	49	45	136	50
17	60	115	71	57	103	272	492	394	45	41	107	48
18	55	109	70	40	104	269	539	368	43	43	91	37
19	53	98	53	49	113	284	611	399	40	39	82	32
20	58	113	58	56	123	326	716	446	34	38	75	29
21	53	107	69	58	132	403	742	364	34	36	75	27
22	57	105	69	59	144	476	668	331	49	37	92	26
23	113	106	65	65	166	519	594	308	49	40	70	26
24	135	106	62	62	167	544	560	284	38	33	64	25
25	109	103	64	61	148	590	516	266	45	27	e56	22
26	98	96	66	60	140	631	530	251	38	32	e54	23
27	103	98	58	63	135	594	574	231	37	33	e50	23
28	277	98	54	64	139	565	652	210	32	34	e48	21
29	207	99	60	62	---	521	666	192	28	93	e110	20
30	174	99	61	62	---	523	643	174	26	132	e73	20
31	210	---	60	59	---	541	---	153	---	64	e52	---
TOTAL	2639.9	4642	2369	1833	3075	10118	17752	11629	1818	1438	2967	930
MEAN	85.2	155	76.4	59.1	110	326	592	375	60.6	46.4	95.7	31.0
MAX	277	360	100	68	167	631	742	623	136	132	178	57
MIN	9.7	96	53	40	53	119	464	153	26	24	48	20
AC-FT	5240	9210	4700	3640	6100	20070	35210	23070	3610	2850	5890	1840
CFSM	.13	.24	.12	.09	.17	.52	.94	.59	.10	.07	.15	.05
IN.	.16	.27	.14	.11	.18	.60	1.04	.68	.11	.08	.17	.05

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2001, BY WATER YEAR (WY)

	MEAN	104	85.7	116	128	173	364	583	446	153	70.0	120	99.9
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	31.3	34.7	31.7	32.0	33.3	44.4	51.1	17.2	6.93	3.90	26.5	19.0	
(WY)	1962	1961	2000	1964	1964	1999	2000	2000	1996	1963	1962	1989	

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1957 - 2001

ANNUAL TOTAL	18047.7	61210.9	
ANNUAL MEAN	49.3	168	
HIGHEST ANNUAL MEAN			203
LOWEST ANNUAL MEAN			487
HIGHEST DAILY MEAN			32.5
LOWEST DAILY MEAN	360	742	7180
ANNUAL SEVEN-DAY MINIMUM	3.1	9.7	.00
ANNUAL RUNOFF (AC-FT)	35800	121400	147400
ANNUAL RUNOFF (CFSM)			.32
ANNUAL RUNOFF (INCHES)	1.06	3.60	4.37
10 PERCENT EXCEEDS	103	517	532
50 PERCENT EXCEEDS	36	92	84
90 PERCENT EXCEEDS	5.6	30	34

e Estimated

## GILA RIVER BASIN

## 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 current year.

**GAGE**--Water-stage recorders and V-notch sharp-crested weir. Datum of gage is 6,621.57 ft above sea level (Bureau of Reclamation bench mark).

**REMARKS**--No estimated daily discharges. Records good. 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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.73	13	13	9.1	.00	.00
2	.00	.00	.00	.00	.00	.00	13	13	13	12	.00	.00
3	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
4	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
5	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
6	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
7	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
8	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
9	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
10	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
11	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
12	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
13	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
14	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
15	.00	.00	.00	.00	.00	.00	14	13	12	12	.00	.00
16	.00	.00	.00	.00	.00	.00	14	13	12	12	.00	.00
17	.00	.00	.00	.00	.00	.00	14	13	12	12	.00	.00
18	.00	.00	.00	.00	.00	.00	14	13	12	12	.00	.00
19	.00	.00	.00	.00	.00	.00	14	13	12	11	.00	.00
20	.00	.00	.00	.00	.00	.00	14	13	12	.81	.00	.00
21	.00	.00	.00	.00	.00	.00	14	13	12	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	14	13	12	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	14	13	12	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	13	13	12	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	14	13	12	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	14	13	12	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	14	13	12	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	14	13	12	.00	.00	.00
29	.00	.00	.00	.00	---	.00	14	13	12	.00	.00	.00
30	.00	.00	.00	.00	---	.00	14	13	12	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	13	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	404.73	403	374	224.91	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	13.5	13.0	12.5	7.26	.000	.000
MAX	.00	.00	.00	.00	.00	.00	14	13	13	12	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.73	13	12	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	803	799	742	446	.00	.00

CAL YR 2000 TOTAL 348.83 MEAN .95 MAX 13 MIN .00 AC-FT 692  
WTR YR 2001 TOTAL 1406.64 MEAN 3.85 MAX 14 MIN .00 AC-FT 2790



## 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 trans basin 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 high-water mark; minimum daily discharge, 0.2 ft<sup>3</sup>/s July 12, 1951, Sept. 21, 1959, at site then in use.

**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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 26.....	0100	*774	*4.00

Minimum daily discharge, 0.84 ft<sup>3</sup>/s Sept. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.2	e13	e9.3	5.1	e7.2	40	6.8	15	10	8.9	18	1.3
2	e1.0	e12	e9.0	5.1	e7.5	38	6.4	15	10	9.0	3.6	1.1
3	e1.0	e16	e8.5	5.2	e8.0	32	6.2	15	10	9.9	4.2	1.1
4	e1.0	e22	e8.0	5.1	e9.0	28	16	15	9.9	9.5	7.8	1.0
5	e1.0	e85	e7.9	5.1	e11	22	18	15	9.9	10	7.5	.94
6	e1.0	e56	e7.7	5.7	e13	21	60	15	9.9	9.8	2.1	.89
7	e1.0	e46	e7.5	5.7	e15	20	101	15	9.8	10	.94	.88
8	e1.0	e40	e7.1	5.5	e16	27	97	14	9.6	10	1.2	.89
9	e1.0	e39	e6.8	8.9	e15	47	61	15	9.4	13	7.9	.84
10	e10	e36	e6.4	8.5	e15	50	44	14	9.4	12	4.4	.87
11	e8.0	e42	e6.2	7.7	e16	64	37	14	9.3	14	4.5	.90
12	e5.0	e41	e6.0	e7.0	e16	49	31	14	9.4	11	21	.93
13	e3.0	e31	e5.8	e6.3	e15	56	27	16	9.4	11	7.7	22
14	e2.9	e28	e5.7	e5.7	e14	47	25	17	9.3	13	23	5.3
15	e2.8	e24	5.6	5.1	e16	36	22	15	9.3	11	7.3	11
16	e2.7	e20	5.4	e4.8	e18	28	21	14	9.3	11	5.1	8.4
17	2.7	e17	5.4	e5.1	e22	22	20	14	9.1	12	3.6	3.7
18	2.6	e16	5.1	e5.4	e25	18	19	14	8.9	12	2.5	3.5
19	2.7	e15	5.2	e6.0	e30	16	18	18	8.9	11	2.0	3.3
20	3.1	e14	5.5	e6.5	e32	14	18	19	8.9	11	1.7	2.2
21	3.6	e14	5.3	6.6	32	12	17	16	9.4	10	1.5	2.3
22	8.1	e13	5.2	7.0	29	11	20	15	9.6	4.4	1.4	2.2
23	35	e13	5.2	7.2	28	10	19	14	9.4	2.5	1.2	1.9
24	10	e12	5.2	6.9	26	9.7	17	14	9.0	1.2	1.1	1.9
25	7.8	e12	5.3	7.0	20	8.9	16	13	8.9	3.3	.96	1.7
26	6.4	e12	5.6	7.2	20	8.8	17	12	9.3	2.5	.91	1.8
27	8.0	e11	5.5	8.2	19	9.0	20	12	9.1	2.5	.89	1.5
28	30	e11	5.2	9.1	27	8.3	20	11	8.8	1.6	.99	1.5
29	11	e10	5.2	8.4	---	7.9	17	11	8.9	18	1.1	1.4
30	8.5	e9.7	5.2	e7.6	---	7.8	16	11	8.9	14	2.0	1.5
31	e37	---	5.2	e7.5	---	7.2	---	11	---	6.3	1.4	---
TOTAL	220.1	730.7	192.2	202.2	521.7	775.6	833.4	443	281.0	285.4	149.49	88.74
MEAN	7.10	24.4	6.20	6.52	18.6	25.0	27.8	14.3	9.37	9.21	4.82	2.96
MAX	37	85	9.3	9.1	32	64	101	19	10	18	23	22
MIN	1.0	9.7	5.1	4.8	7.2	7.2	6.2	11	8.8	1.2	.89	.84
AC-FT	437	1450	381	401	1030	1540	1650	879	557	566	297	176
CFSM	.02	.06	.01	.01	.04	.06	.06	.03	.02	.02	.01	.01
IN.	.02	.06	.02	.02	.04	.07	.07	.04	.02	.02	.01	.01

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2001, BY WATER YEAR (WY)

	MEAN	27.0	21.2	67.2	89.6	115	139	46.1	19.8	11.8	12.8	17.3	9.77
MAX	397	147	762	1031	965	698	350	154	41.3	47.8	55.3	30.4	
(WY)	1973	1960	1979	1993	1980	1978	1973	1973	1973	1976	1951	1988	
MIN	1.63	2.53	3.86	5.40	5.95	6.06	5.16	2.36	.43	1.35	2.96	.91	
(WY)	1957	1957	1957	1971	2000	1971	2000	1972	1951	1971	1997	1956	

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1951 - 2001

	ANNUAL TOTAL	2626.15	4723.53	
ANNUAL MEAN	7.18	12.9	47.4	
HIGHEST ANNUAL MEAN			201	1979
LOWEST ANNUAL MEAN			5.22	2000
HIGHEST DAILY MEAN	85	Nov 5	101	Apr 7
LOWEST DAILY MEAN	.67	Jul 20	.84	Sep 9
ANNUAL SEVEN-DAY MINIMUM	.81	Jul 16	.89	Sep 6
ANNUAL RUNOFF (AC-FT)	5210		9370	
ANNUAL RUNOFF (CFSM)	.016		.029	
ANNUAL RUNOFF (INCHES)	.22		.40	
10 PERCENT EXCEEDS	13		28	
50 PERCENT EXCEEDS	5.6		9.4	
90 PERCENT EXCEEDS	1.1		1.5	

e Estimated

## GILA RIVER BASIN

## 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 7.....	1115	*3,010	*4.70

Minimum daily discharge, 111 ft<sup>3</sup>/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	1190	342	222	219	568	1430	1140	319	e138	216	196
2	119	895	342	220	212	570	1460	1090	303	e134	353	203
3	119	743	344	218	209	555	1490	1050	287	e134	314	210
4	119	659	344	214	215	551	1480	989	274	e131	291	186
5	121	1520	342	211	230	532	1420	892	258	e131	268	170
6	119	2360	338	213	241	514	1720	805	247	132	234	156
7	119	2640	334	219	271	531	2040	736	237	137	242	148
8	119	2070	332	222	355	647	1830	686	220	139	234	139
9	119	1370	329	239	450	932	1900	652	209	175	222	132
10	120	1140	329	246	458	1080	1800	639	202	231	388	129
11	185	1680	329	238	443	1210	1780	629	195	237	577	126
12	289	1720	325	238	478	1130	1580	631	189	197	422	125
13	547	1100	319	238	467	989	1570	653	180	173	428	133
14	542	837	312	231	476	1010	1430	687	176	178	349	419
15	406	743	292	221	534	964	1420	720	172	181	341	223
16	321	692	287	210	524	960	1460	723	171	172	392	217
17	275	612	272	216	468	931	1460	674	165	157	404	193
18	243	533	270	216	434	895	1480	627	160	159	334	178
19	225	477	263	204	430	866	1540	610	156	157	285	161
20	214	444	239	200	459	878	1630	706	151	154	257	146
21	213	414	237	201	503	991	1770	660	144	153	234	139
22	232	403	247	216	541	1180	1690	643	147	147	232	132
23	293	392	251	224	567	1390	1490	569	168	144	217	127
24	665	387	247	233	606	1520	1380	517	165	148	205	125
25	1060	381	241	224	601	1590	1220	475	151	138	210	122
26	766	367	241	218	561	1640	1130	445	162	142	187	118
27	661	351	239	223	539	1660	1140	417	152	146	172	117
28	1400	345	229	232	545	1550	1200	396	151	139	160	117
29	2020	340	220	234	---	1440	1250	376	143	138	155	114
30	1570	341	221	226	---	1370	1220	361	e141	268	251	111
31	1320	---	222	226	---	1390	---	341	---	223	180	---
TOTAL	14641	27146	8879	6893	12036	32034	45410	20539	5795	5033	8754	4812
MEAN	472	905	286	222	430	1033	1514	663	193	162	282	160
MAX	2020	2640	344	246	606	1660	2040	1140	319	268	577	419
MIN	119	340	220	200	209	514	1130	341	141	131	155	111
AC-FT	29040	53840	17610	13670	23870	63540	90070	40740	11490	9980	17360	9540
CFSM	.17	.32	.10	.08	.15	.36	.53	.23	.07	.06	.10	.06
IN.	.19	.35	.12	.09	.16	.42	.59	.27	.08	.07	.11	.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2001, BY WATER YEAR (WY)

MEAN	336	281	489	633	884	1471	1697	905	310	221	402	335
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	174	170	106	73.8	91.0	135	68.5
(WY)	1957	1957	1957	1954	1964	1999	1996	1959	1959	1963	1962	1956

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1924 - 2001
ANNUAL TOTAL	93849	191972	
ANNUAL MEAN	256	526	662
HIGHEST ANNUAL MEAN			2091
LOWEST ANNUAL MEAN			160
HIGHEST DAILY MEAN	2640	Nov 7	47400
LOWEST DAILY MEAN	86	Jun 17	55
ANNUAL SEVEN-DAY MINIMUM	91	Jun 15	56
ANNUAL RUNOFF (AC-FT)	186100	380800	479700
ANNUAL RUNOFF (CFSM)	.090	.18	.23
ANNUAL RUNOFF (INCHES)	1.23	2.51	3.16
10 PERCENT EXCEEDS	404	1420	1560
50 PERCENT EXCEEDS	158	303	260
90 PERCENT EXCEEDS	104	139	131

e Estimated

## GILA RIVER BASIN

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## 09497800 CIBECUE CREEK NEAR CHRYSOTILE, AZ

**LOCATION.**--Lat 33° 50'35", long 110° 33'25", in E 1/2 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.**--No estimated daily discharges. Records good. 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 19 .....	2115	*383	*3.04

Minimum daily discharge, 9.3 ft<sup>3</sup>/s June 24, 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	25	20	17	17	28	29	21	11	9.4	16	13
2	12	22	20	17	17	28	28	20	11	9.4	26	13
3	12	22	20	16	17	30	27	20	11	9.7	113	13
4	12	26	20	16	17	33	26	20	11	12	26	13
5	13	27	20	17	17	36	26	20	11	11	18	13
6	13	75	19	17	17	36	54	20	11	11	34	13
7	13	60	19	17	19	41	31	19	11	11	35	12
8	12	47	19	16	26	46	27	19	10	11	17	12
9	12	39	18	19	33	51	32	17	10	13	17	12
10	14	37	18	19	34	63	43	16	10	12	21	12
11	24	40	18	17	31	68	47	16	10	16	19	12
12	18	30	18	18	29	65	46	16	9.9	12	22	12
13	14	27	19	18	28	56	44	16	9.5	11	52	12
14	13	25	18	17	29	55	45	18	9.4	10	18	29
15	13	25	18	17	26	63	44	17	9.4	10	20	30
16	13	25	18	19	24	71	41	16	9.4	10	19	20
17	13	25	18	18	23	70	38	16	9.4	10	18	15
18	13	24	17	16	22	62	34	15	9.4	10	16	14
19	45	23	17	17	21	55	32	17	9.4	10	16	14
20	41	23	18	18	21	50	28	17	9.4	41	15	14
21	15	22	17	17	22	47	28	15	9.4	14	28	14
22	128	22	17	17	24	46	29	14	9.4	12	16	13
23	107	21	17	17	26	45	26	13	9.4	12	15	13
24	41	21	17	17	28	45	25	14	9.3	11	14	13
25	22	20	17	16	29	43	24	14	9.4	12	14	13
26	18	20	17	16	30	39	23	14	9.4	13	14	13
27	19	20	17	18	27	37	23	13	9.4	13	13	13
28	96	20	17	19	29	36	22	13	9.3	12	13	13
29	24	20	17	17	---	33	21	12	9.3	13	14	13
30	20	20	17	17	---	32	21	13	9.4	54	14	13
31	101	---	17	17	---	30	---	12	---	21	14	---
TOTAL	923	853	559	534	683	1440	964	503	295.9	436.5	707	429
MEAN	29.8	28.4	18.0	17.2	24.4	46.5	32.1	16.2	9.86	14.1	22.8	14.3
MAX	128	75	20	19	34	71	54	21	11	54	113	30
MIN	12	20	17	16	17	28	21	12	9.3	9.4	13	12
AC-FT	1830	1690	1110	1060	1350	2860	1910	998	587	866	1400	851
CFSM	.10	.10	.06	.06	.08	.16	.11	.06	.03	.05	.08	.05
IN.	.12	.11	.07	.07	.09	.18	.12	.06	.04	.06	.09	.05

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2001, BY WATER YEAR (WY)

	34.1	28.5	53.4	63.0	82.9	104	56.3	24.3	15.0	25.7	37.9	31.0
MEAN	34.1	28.5	53.4	63.0	82.9	104	56.3	24.3	15.0	25.7	37.9	31.0
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	11.0	9.14	10.6	11.3	11.0	12.3	10.7	5.64	4.98	6.55	12.8	8.71
(WY)	1978	1978	1978	1964	1964	1971	1972	1972	1961	1963	1962	1959

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1959 - 2001

ANNUAL TOTAL	7667.1	8327.4	
ANNUAL MEAN	20.9	22.8	46.1
HIGHEST ANNUAL MEAN			182
LOWEST ANNUAL MEAN			16.2
HIGHEST DAILY MEAN	253	Aug 9	4930
LOWEST DAILY MEAN	6.8	Jun 21	4.1
ANNUAL SEVEN-DAY MINIMUM	7.9	Jun 10	4.6
ANNUAL RUNOFF (AC-FT)	15210		33390
ANNUAL RUNOFF (CFSM)	.071	.077	.16
ANNUAL RUNOFF (INCHES)	.97	1.05	2.12
10 PERCENT EXCEEDS	29	42	85
50 PERCENT EXCEEDS	15	18	20
90 PERCENT EXCEEDS	8.5	11	10

## GILA RIVER BASIN

## 09497980 CHERRY CREEK NEAR GLOBE, AZ

**LOCATION.**--Lat 33° 49' 40", long 110° 51' 20", in SW 1/4 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, except for estimated daily discharges, which are poor.

**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, 29, 1978.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 750 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 28 .....	0315	*747	*4.90

Minimum daily discharge, 3.0 ft<sup>3</sup>/s July 21--22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	93	9.5	6.4	7.1	37	11	8.3	4.7	3.4	69	3.8
2	3.6	62	9.4	6.4	7.0	44	11	7.9	4.7	3.4	27	3.8
3	3.6	44	9.0	6.4	7.0	41	10	7.7	4.6	3.4	32	7.1
4	3.7	191	8.8	6.4	7.0	40	10	7.6	4.6	3.4	14	4.5
5	3.9	156	8.6	6.4	9.1	36	11	7.6	4.6	3.4	39	3.9
6	3.8	214	8.4	6.7	12	32	58	7.4	4.6	5.0	29	3.8
7	3.7	209	8.3	6.7	16	33	45	7.1	4.5	4.0	9.6	3.8
8	3.8	93	8.1	6.4	16	39	37	6.9	4.3	3.7	7.5	3.8
9	3.9	61	8.0	12	16	39	26	6.8	4.3	4.4	11	3.8
10	5.2	48	7.9	8.6	15	40	22	6.6	4.3	5.2	7.7	3.8
11	4.8	60	7.8	7.0	13	e170	20	6.5	4.2	4.0	8.2	3.8
12	4.2	57	7.7	7.4	12	e130	20	6.7	4.2	3.6	14	3.9
13	4.1	48	7.6	7.8	12	e105	20	7.5	4.2	3.5	8.0	4.0
14	4.0	40	7.2	6.7	16	e90	22	7.2	4.1	3.4	9.3	4.5
15	4.0	34	7.2	6.4	16	e75	18	6.9	4.1	3.3	9.4	5.5
16	4.0	30	7.0	7.1	14	e60	16	6.4	4.1	3.2	6.3	5.6
17	4.0	26	7.0	7.0	13	51	14	6.2	4.0	3.2	5.3	4.7
18	3.9	22	6.8	6.6	13	39	13	6.2	4.0	3.3	6.1	4.1
19	4.3	19	6.7	6.4	13	31	12	7.0	3.9	3.2	4.9	4.0
20	9.6	17	6.8	6.4	13	26	12	7.0	4.0	3.1	9.4	3.9
21	5.1	e15	6.6	6.4	14	23	12	6.1	4.5	3.0	6.3	3.9
22	31	e14	6.6	6.4	14	20	14	5.8	4.1	3.0	5.1	3.9
23	67	e13	6.6	6.4	14	19	12	5.7	4.1	3.1	4.7	3.8
24	63	e13	6.6	6.4	13	17	11	5.6	3.9	3.1	4.5	3.8
25	39	e12	6.6	6.4	12	16	11	5.4	3.8	3.8	4.2	3.8
26	20	e12	6.4	6.4	14	15	10	5.2	3.8	4.0	4.1	3.8
27	32	e11	6.4	7.5	13	14	10	5.2	3.7	4.0	4.0	3.8
28	361	e11	6.4	8.7	16	14	9.7	5.1	3.6	3.2	3.9	3.7
29	97	e10	6.4	7.6	---	13	9.2	5.1	3.6	3.2	3.9	3.7
30	51	e10	6.4	7.4	---	12	8.7	5.1	3.5	5.2	3.9	3.7
31	200	---	6.4	7.2	---	12	---	5.0	---	3.8	3.9	---
TOTAL	1051.9	1645	229.2	218.0	357.2	1333	515.6	200.8	124.6	112.5	375.2	124.0
MEAN	33.9	54.8	7.39	7.03	12.8	43.0	17.2	6.48	4.15	3.63	12.1	4.13
MAX	361	214	9.5	12	16	170	58	8.3	4.7	5.2	69	7.1
MIN	3.6	10	6.4	6.4	7.0	12	8.7	5.0	3.5	3.0	3.9	3.7
AC-FT	2090	3260	455	432	709	2640	1020	398	247	223	744	246
CFSM	.17	.27	.04	.04	.06	.22	.09	.03	.02	.02	.06	.02
IN.	.20	.31	.04	.04	.07	.25	.10	.04	.02	.02	.07	.02

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2001, BY WATER YEAR (WY)

	MEAN	21.8	20.0	59.9	72.6	88.0	91.2	29.5	11.6	7.16	9.52	16.4	14.3
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	4.57	4.52	4.80	5.70	5.73	6.10	5.12	3.85	3.28	2.99	4.99	3.64	
(WY)	1968	1978	1978	2000	2000	1972	2000	2000	2000	2000	1997	1978	

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1965 - 2001

ANNUAL TOTAL	4326.2	6287.0	
ANNUAL MEAN	11.8	17.2	36.4
HIGHEST ANNUAL MEAN			258
LOWEST ANNUAL MEAN			5.15
HIGHEST DAILY MEAN	361	Oct 28	13000
LOWEST DAILY MEAN	2.7	Jul 26	2.4
ANNUAL SEVEN-DAY MINIMUM	2.8	Jul 24	2.8
ANNUAL RUNOFF (AC-FT)	8580	12470	26390
ANNUAL RUNOFF (CFSM)	.059	.086	.18
ANNUAL RUNOFF (INCHES)	.80	1.17	2.48
10 PERCENT EXCEEDS	15	39	59
50 PERCENT EXCEEDS	5.5	7.0	8.3
90 PERCENT EXCEEDS	3.1	3.8	5.0

e Estimated

## 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 10 .....	1615	*1160	*3.67
Nov. 6 .....	2115	985	3.51

Minimum daily discharge, 2.6 ft<sup>3</sup>/s July 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	5.7	6.9	8.4	6.9	7.5	6.5	5.6	4.0	3.6	4.7	4.3
2	6.4	5.5	7.0	8.4	7.1	8.2	6.3	5.4	4.0	3.4	4.7	4.2
3	6.0	5.5	6.8	8.2	7.1	8.1	6.3	5.4	4.0	3.2	4.8	4.1
4	6.1	19	6.6	8.6	7.1	8.0	5.3	5.4	4.1	3.1	4.6	4.0
5	6.2	6.5	6.6	8.5	6.8	7.8	6.3	5.3	4.1	2.6	4.8	4.0
6	6.0	127	7.3	8.6	6.8	7.6	12	5.2	3.9	3.6	4.6	4.0
7	5.8	71	7.2	8.2	6.7	8.0	7.3	5.1	3.7	3.9	4.8	4.0
8	5.8	6.0	5.0	8.2	6.7	7.7	6.9	5.0	3.8	4.0	4.6	4.1
9	6.2	6.3	7.5	9.4	6.8	7.4	6.7	5.0	3.8	3.9	4.8	4.0
10	132	6.2	7.6	8.5	7.1	7.3	6.4	4.9	3.8	4.0	4.8	3.9
11	6.9	6.3	7.3	8.6	7.0	7.2	5.7	4.6	3.8	4.0	5.5	4.2
12	5.5	5.9	7.3	8.7	7.0	7.2	6.3	4.4	3.7	4.0	5.4	4.2
13	5.3	5.2	5.9	8.5	6.9	7.1	6.4	4.7	3.5	4.0	5.2	4.4
14	5.1	6.5	6.5	8.0	6.9	7.7	6.4	4.5	3.4	4.1	5.0	4.7
15	4.8	7.5	7.0	7.7	7.1	8.0	6.3	4.5	3.5	4.0	4.7	4.5
16	4.9	6.6	7.1	8.0	7.0	8.1	6.2	4.6	3.8	3.9	4.4	4.5
17	5.1	6.3	7.1	7.6	7.1	8.0	6.2	4.2	3.8	3.9	4.4	4.4
18	5.0	6.3	7.1	7.4	7.1	8.0	6.1	4.4	3.6	3.9	4.3	3.7
19	5.1	6.5	7.0	7.2	7.1	7.8	6.1	4.9	3.5	3.8	4.4	4.2
20	5.0	7.0	7.2	7.5	7.0	7.4	5.8	5.1	3.4	3.9	4.5	4.3
21	7.1	7.0	7.4	7.6	7.4	7.1	6.1	4.8	3.3	3.8	4.2	4.3
22	14	7.1	8.1	7.4	7.1	7.9	6.5	4.6	3.6	4.2	4.1	4.3
23	6.3	6.8	8.2	7.2	7.7	6.8	6.2	4.4	3.5	4.2	4.1	4.3
24	5.9	6.7	8.1	6.9	7.9	6.6	5.8	4.2	3.5	3.9	3.9	4.3
25	5.8	6.6	8.1	5.4	7.9	6.5	5.5	4.3	3.6	4.3	3.8	4.4
26	5.9	6.6	8.1	7.0	8.0	6.5	5.6	4.3	3.7	4.5	3.8	4.4
27	7.5	6.7	7.8	6.8	7.9	6.0	5.4	4.4	3.4	4.6	3.9	4.7
28	11	6.6	7.7	6.9	6.7	5.7	5.5	4.4	3.1	4.6	3.6	4.8
29	6.3	5.3	7.5	6.8	---	5.4	5.5	4.4	3.2	4.3	4.2	4.6
30	6.0	7.6	8.1	6.8	---	6.0	5.6	4.3	3.3	5.6	4.6	4.7
31	6.0	---	8.2	6.9	---	6.6	---	4.2	---	5.0	4.8	---
TOTAL	321.3	389.8	225.3	239.9	199.9	225.2	189.2	146.5	109.4	123.8	140.0	128.5
MEAN	10.4	13.0	7.27	7.74	7.14	7.26	6.31	4.73	3.65	3.99	4.52	4.28
MAX	132	127	8.2	9.4	8.0	8.2	12	5.6	4.1	5.6	5.5	4.8
MIN	4.8	5.2	5.0	5.4	6.7	5.4	5.3	4.2	3.1	2.6	3.6	3.7
AC-FT	637	773	447	476	397	447	375	291	217	246	278	255
CFSM	.05	.07	.04	.04	.04	.04	.03	.02	.02	.02	.02	.02
IN.	.06	.07	.04	.05	.04	.04	.04	.03	.02	.02	.03	.02

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2001, BY WATER YEAR (WY)

	9.68	7.86	11.1	31.6	29.7	16.2	10.0	8.24	6.50	8.05	8.85	7.38
MEAN	9.68	7.86	11.1	31.6	29.7	16.2	10.0	8.24	6.50	8.05	8.85	7.38
MAX	38.8	13.0	58.4	440	406	67.3	30.1	19.6	16.2	17.1	28.4	16.4
(WY)	1984	2001	1985	1993	1993	1993	1993	1993	1993	1981	1990	1983
MIN	2.56	3.72	3.37	3.20	3.44	3.55	3.46	2.38	1.07	3.95	4.52	2.81
(WY)	2000	1999	1999	1999	1999	1999	1999	1999	1999	1998	2001	1989

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1980 - 2001

	2949.3	2438.8	
ANNUAL TOTAL	2949.3	2438.8	
ANNUAL MEAN	8.06	6.68	12.8
HIGHEST ANNUAL MEAN			84.2
LOWEST ANNUAL MEAN			3.76
HIGHEST DAILY MEAN	132	132	3300
LOWEST DAILY MEAN	4.4	2.6	.64
ANNUAL SEVEN-DAY MINIMUM	4.7	3.2	.72
ANNUAL RUNOFF (AC-FT)	5850	4840	9280
ANNUAL RUNOFF (CFSM)	.041	.034	.066
ANNUAL RUNOFF (INCHES)	.56	.47	.89
10 PERCENT EXCEEDS	8.7	8.0	12
50 PERCENT EXCEEDS	6.5	5.8	7.4
90 PERCENT EXCEEDS	5.0	3.9	4.1



## GILA RIVER BASIN

## 09498400 PINAL CREEK AT INSPIRATION DAM, NEAR GLOBE, AZ--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Nov. 1979 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	HARD-NESS TOTAL (MG/L CAC03) (00900)
DEC 14...	1110	9	7.4	.8	694	10.1	96	7.8	2170	9.0	8.9	1200	1200
FEB 07...	1100	9	6.7	.6	682	9.5	101	7.4	2060	19.0	12.8	1100	1200
07...	1110	7	6.7	.5	--	--	--	7.5	2060	--	--	1100	1100
APR 19...	0945	9	5.9	.7	686	8.2	96	7.7	2110	25.0	17.5	1100	1200
SEP 04...	1500	9	4.0	.6	685	6.5	93	7.6	2120	36.5	27.1	1200	1200
DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE SOLVED (MG/L AS SO4) (00945)
DEC 14...	380	380	68.0	68.0	4.60	.8	62.0	37	45	.0	53.0	1.2	1200
FEB 07...	370	370	59.0	60.0	4.20	.8	61.0	36	44	.0	52.0	1.1	1100
07...	360	370	58.0	60.0	4.50	.9	70.0	36	44	.0	50.0	1.1	1100
APR 19...	370	370	64.0	65.0	3.80	.8	61.0	45	55	.0	51.0	1.1	1200
SEP 04...	380	380	64.0	64.0	4.50	.7	58.0	40	49	.0	57.0	1.2	1200
DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF SOLVED (COLS./ 100 ML) (31625)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)
DEC 14...	6	2.68	1970	1790	<.20	.03	.04	<.02	<.020	<5	<1	E2k	<1.00
FEB 07...	<1	2.52	1850	1670	<.20	<.01	--	<.02	<.020	--	E2k	E6k	<1.00
07...	2	2.45	1800	1670	<.20	<.01	--	<.02	<.020	--	E5k	E5k	<1.00
APR 19...	4	2.62	1930	1780	<.20	<.01	--	<.02	<.020	<5	E18k	24	<1.00
SEP 04...	2	2.64	E1940	1790	<.20	.02	.03	<.02	<.020	18	E22k	40	<1.00
DATE	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	BORON, DIS-SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)
DEC 14...	<1.0	<1.0	<1	10.0	10.0	<1.00	<1.00	50	60	<.50	<.50	<1.0	<1
FEB 07...	<1.0	<1.0	<1	8.0	8.0	<1.00	<1.00	60	50	<.50	<.50	<1.0	<1
07...	<1.0	<1.0	<1	7.0	8.0	<1.00	<1.00	50	50	<.50	<.50	<1.0	<1
APR 19...	<1.0	<1.0	<1	9.0	9.0	<1.00	<1.00	60	60	<.50	<.50	<1.0	<1
SEP 04...	<1.0	<1.0	<1	11.0	10.0	<1.00	<1.00	56	55	<.50	<.50	<1.0	<1

## GILA RIVER BASIN

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## 09498400 PINAL CREEK AT INSPIRATION DAM, NEAR GLOBE, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
DEC 14...	<2.0	<2.0	M	120	<2.00	<2	760	790	<.10	<.10	29.0	34	<1.0
FEB 07...	<2.0	<2.0	M	50	<2.00	<2	220	240	<.10	<.10	5.40	6	1.0
07...	<2.0	<2.0	M	40	<2.00	<2	220	230	<.10	<.10	5.50	6	1.1
APR 19...	<2.0	<2.0	<2	20	<2.00	<2	210	230	<.10	<.10	5.00	5	1.1
SEP 04...	<2.0	2.2	<2	20	<2.00	<2	194	197	<.10	<.10	4.00	4	<1.0

DATE	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL (UG/L AS TL) (01059)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- SUS- PENDED (T/DAY) (80155)
DEC 14...	<1.0	<1.0	<1.00	1300	<2.00	<2.0	30	30	11	.22
FEB 07...	1.0	<1.0	<1.00	1200	<2.00	<2.0	3	3	2	.04
07...	<1.0	<1.0	<1.00	1200	<2.00	<2.0	5	6	2	.04
APR 19...	<1.0	<1.0	<1.00	1100	<2.00	<2.0	9	4	2	.03
SEP 04...	<1.0	<1.0	<1.00	1190	<2.00	<2.0	12	<2	2	.02

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range

## GILA RIVER BASIN

## 09498400 PINAL CREEK AT INSPIRATION DAM, NEAR GLOBE, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
DEC 14...	1115	2	6.2	2	6.6	<.02	<.030	<.1	<.20	.02	<.02	<.020	<3
DATE		BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)		
DEC 14...	<.5	<1.00	<.50	<1.0	<2.0	<2	<2.00	<1.0	<1.00	<2			

Remark codes used in this report:

< -- Less than

**09498500 SALT RIVER NEAR ROOSEVELT, AZ**  
**(National stream-quality accounting network station)**

**LOCATION.**--Lat 33°37'10", long 110°55'15", in SE 1/4 NE 1/4 sec. 9, T. 3 N., R. 14 E. (unsurveyed), Gila County, Hydrologic Unit 15060103, in Tonto National Forest on left bank 100 ft downstream from bridge on State Highway 288, 0.3 mi downstream from Pinal Creek, 1 mi upstream from diversion dam for power canal, 14 mi east of village of Roosevelt, and 17 mi upstream from Roosevelt Dam.

**DRAINAGE AREA.**--4,306 mi<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

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

**REVISED RECORDS.**--WSP 1049: 1914, 1916, 1918--19, 1926. WSP 1343: Drainage area.

**GAGE.**--Water-stage recorder. Datum of gage is 2,177.14 ft above sea level. Prior to 1925, nonrecording gage at diversion dam about 1 mi downstream at different datum. Nonrecording gage at present site and datum 1925 to Jan. 17, 1935. May 20, 1955, to July 30, 1959, supplementary water-stage recorder at diversion dam.

**REMARKS.**--No estimated daily discharges. Records good. Several small diversions for irrigation of about 4,000 acres above station and two trans basin diversions above station, one into basin from Show Low Creek and one out of basin to Willow Creek. Records show inflow to Roosevelt Lake. Tonto Creek also contributes to Roosevelt Lake; see records elsewhere in this report.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 143,000 ft<sup>3</sup>/s Jan. 8, 1993, gage height, 30.09 ft, from rating curve extended above 108,000 ft<sup>3</sup>/s; minimum discharge, 59 ft<sup>3</sup>/s all or part of each day, July 1--4, 7--12, 1955.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--A discharge of about 42 ft<sup>3</sup>/s was reported Aug. 5, 1911.

**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)
Nov. 7.....	0730	*4070	*11.54

Minimum daily discharge, 117 ft<sup>3</sup>/s Oct. 2.

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**  
**DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	1860	389	250	262	671	1640	1340	363	124	286	201
2	117	1320	390	249	254	711	1670	1260	326	120	353	214
3	120	1060	390	243	248	695	1720	1200	302	119	440	220
4	120	973	395	238	246	668	1730	1150	286	129	483	229
5	124	1250	396	235	259	653	1690	1050	264	163	390	204
6	129	2880	390	230	289	613	1810	934	251	147	351	185
7	124	3440	385	236	317	609	2480	843	241	134	316	170
8	120	2910	377	245	370	690	2270	768	231	137	296	159
9	121	2090	378	272	486	926	2200	714	216	138	290	152
10	174	1620	377	293	583	1320	2160	674	203	167	314	143
11	138	1490	375	285	563	1520	2120	662	195	277	534	140
12	178	2400	376	277	544	1620	2000	659	191	271	694	139
13	303	1700	372	287	574	1450	1890	660	187	216	501	139
14	573	1200	367	275	578	1420	1780	693	177	185	506	241
15	529	972	357	262	606	1390	1680	720	175	178	413	387
16	392	886	338	266	661	1310	1700	742	168	181	419	279
17	320	821	333	253	603	1250	1720	728	164	177	464	255
18	272	718	310	247	523	1160	1720	678	155	161	440	223
19	244	624	303	239	488	1090	1740	650	150	156	371	203
20	258	561	297	216	488	1040	1810	677	145	159	327	184
21	232	520	269	209	526	1100	1950	761	142	183	295	168
22	281	490	268	212	582	1290	2030	689	136	157	274	158
23	448	471	281	238	617	1520	1820	661	132	153	259	148
24	540	456	285	249	644	1730	1640	586	148	148	246	141
25	1130	449	280	260	680	1830	1500	533	150	152	229	140
26	1070	442	271	248	666	1880	1350	496	141	150	233	134
27	874	426	268	245	604	1940	1310	466	146	142	209	129
28	1320	410	268	264	607	1880	1330	444	141	147	191	127
29	2490	396	253	270	---	1750	1400	423	137	141	178	126
30	2220	390	243	268	---	1620	1410	408	132	189	170	125
31	1860	---	248	257	---	1590	---	392	---	334	270	---
TOTAL	16940	35225	10229	7818	13868	38936	53270	22661	5795	5235	10742	5463
MEAN	546	1174	330	252	495	1256	1776	731	193	169	347	182
MAX	2490	3440	396	293	680	1940	2480	1340	363	334	694	387
MIN	117	390	243	209	246	609	1310	392	132	119	170	125
MED	272	929	338	249	554	1310	1720	678	172	156	316	164
AC-FT	33600	69870	20290	15510	27510	77230	105700	44950	11490	10380	21310	10840
CFSM	.13	.27	.08	.06	.12	.29	.41	.17	.04	.04	.08	.04

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2001, BY WATER YEAR (WY)**

	MEAN	433	386	759	1087	1387	2011	2000	1031	364	328	581	447
MAX	4832	2150	6327	15990	9072	10390	6281	5933	1365	3276	3607	1852	
(WY)	1984	1920	1966	1916	1980	1978	1979	1973	1941	1919	1921	1923	
MIN	85.5	122	127	161	168	192	198	127	78.7	78.3	151	77.9	
(WY)	1957	1957	1957	1964	1964	1999	1996	1959	1959	1963	1962	1956	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1914 - 2001
ANNUAL TOTAL	114869	226182	
ANNUAL MEAN	314	620	899
HIGHEST ANNUAL MEAN			3252
LOWEST ANNUAL MEAN			191
HIGHEST DAILY MEAN	3440	Nov 7	91000
LOWEST DAILY MEAN	89	Jul 30	59
ANNUAL SEVEN-DAY MINIMUM	99	Jul 26	122
ANNUAL RUNOFF (AC-FT)	227800	448600	651100
ANNUAL RUNOFF (CFSM)	.073	.14	.21
10 PERCENT EXCEEDS	487	1680	2030
50 PERCENT EXCEEDS	198	363	333
90 PERCENT EXCEEDS	113	143	160

**GILA RIVER BASIN**  
**09498500 SALT RIVER NEAR ROOSEVELT, AZ--Continued**  
**WATER-QUALITY RECORDS**

**PERIOD OF RECORD.**--Apr. 1958 to Sept. 1965, Jan. 1976 to current year.

**PERIOD OF DAILY RECORDS.**--

**SPECIFIC CONDUCTANCE:** Dec. 1996 to Jan. 1998.

**WATER TEMPERATURE:** Apr. 1958 to Sept. 1965, Dec. 1996 to Jan. 1998.

**WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	HARD-NESS TOTAL (MG/L) AS CAC03 (00900)
DEC 13...	1240	9	380	8.7	705	10.9	99	8.5	2200	11.0	7.6	86	250
DEC 13...	1250	7	380	8.2	--	--	--	8.4	2200	--	--	87	250
FEB 06...	1305	9	296	4.6	701	10.4	102	8.6	3000	18.5	10.3	120	320
APR 18...	1415	9	1700	72	703	8.6	99	8.2	632	32.5	18.3	25	99
SEP 05...	0950	9	206	150	701	7.3	96	8.3	3400	35.0	24.1	130	320
DATE	CALCIUM DIS-SOLVED (MG/L) AS CA) (00915)	CALCIUM RECOV-ERABLE (MG/L) AS CA) (00916)	MAGNE-SIUM, DIS-SOLVED (MG/L) AS MG) (00925)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L) AS MG) (00927)	POTAS-SIUM, DIS-SOLVED (MG/L) AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L) AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03 HCO3) (39086)	BICAR-BONATE DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L) AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L) AS F) (00950)	SULFATE DIS-SOLVED (MG/L) AS S04) (00945)
DEC 13...	69.0	69.0	20.0	20.0	7.10	9	330	168	199	3	530	.2	86.0
DEC 13...	69.0	69.0	20.0	20.0	7.20	9	330	168	201	2	530	.2	85.0
FEB 06...	86.0	85.0	26.0	26.0	9.50	11	460	202	229	8	720	.2	120
APR 18...	28.0	40.0	7.10	9.40	2.40	4	84.0	74	86	2	130	<.1	23.0
SEP 05...	82.0	92.0	28.0	31.0	12.0	13	550	193	217	9	880	.2	100
DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L) AS N) (00610)	NITRO-GEN, AMMONIA TOTAL (MG/L) AS N) (71845)	NITRO-GEN, NO2+NO3 TOTAL (MG/L) AS N) (00630)	NITRO-GEN, ORGANIC TOTAL (MG/L) AS N) (00605)	NITRO-GEN, TOTAL (MG/L) AS N) (00600)	NITRO-GEN, TOTAL (MG/L) AS N) (71887)	PHOS-PHORUS TOTAL (MG/L) AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)
DEC 13...	13	1.66	1220	1140	<.20	.03	.04	<.02	--	--	--	.020	17
DEC 13...	14	1.66	1220	1140	.32	.03	.04	<.02	.29	--	--	.020	27
FEB 06...	4	2.27	1670	1540	.22	<.01	--	<.02	--	--	--	<.020	--
APR 18...	140	.49	358	319	.64	<.01	--	<.02	--	--	--	.170	7
SEP 05...	190	2.57	1890	1770	.60	.02	.03	M	.58	.63	2.8	.100	8
DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ANTI-MONY, DIS-SOLVED (UG/L) AS SB) (01095)	ANTI-MONY, TOTAL (UG/L) AS SB) (01097)	ARSENIC DIS-SOLVED (UG/L) AS AS) (01000)	ARSENIC TOTAL (UG/L) AS AS) (01002)	BARIUM, DIS-SOLVED (UG/L) AS BA) (01005)	BARIUM, TOTAL RECOV-ERABLE (UG/L) AS BA) (01007)	BERYL-LIUM, DIS-SOLVED (UG/L) AS BE) (01010)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L) AS BE) (01012)	BORON, DIS-SOLVED (UG/L) AS B) (01020)	BORON, TOTAL RECOV-ERABLE (UG/L) AS B) (01022)	CADMIUM DIS-SOLVED (UG/L) AS CD) (01025)
DEC 13...	E2k	<1	<1.00	<1.0	4.9	5	41.0	41.0	<1.00	<1.00	180	190	<.50
DEC 13...	E1k	E2k	<1.00	<1.0	5.0	5	41.0	41.0	<1.00	<1.00	180	190	<.50
FEB 06...	E10k	E3k	<1.00	<1.0	<1.0	<1	47.0	49.0	<1.00	<1.00	250	250	<.50
APR 18...	<1	E23k	<1.00	<1.0	2.7	3	21.0	42.0	<1.00	<1.00	50	50	<.50
SEP 05...	E100k	E65k	<1.00	<1.0	9.5	10	97.0	120	<1.00	<1.00	297	301	<.50



## GILA RIVER BASIN

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## 09498500 SALT RIVER NEAR ROOSEVELT, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
DEC													
13...	<.50	<1.0	<1	<2.0	<2.0	M	250	<2.00	<2	29.0	43	<.10	<.10
13...	<.50	<1.0	<1	<2.0	<2.0	M	250	<2.00	<2	29.0	38	<.10	<.10
FEB													
06...	<.50	<1.0	<1	<2.0	<2.0	M	160	<2.00	<2	18.0	24	<.10	<.10
APR													
18...	<.50	<1.0	3	<2.0	<2.0	M	2200	<2.00	<2	4.4	100	<.10	<.10
SEP													
05...	<.50	<1.0	4	<2.0	5.4	<2	2750	<2.00	<2	2.7	135	<.10	<.10

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL (UG/L AS TL) (01059)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
DEC													
13...	1.00	1	<1.0	<1.0	<1.0	<1.00	660	<2.00	<2.0	10	6	12	12
13...	1.10	1	<1.0	<1.0	<1.0	<1.00	660	<2.00	<2.0	22	7	--	--
FEB													
06...	<1.00	<1	<1.0	<1.0	<1.0	<1.00	890	<2.00	<2.0	7	5	10	8.0
APR													
18...	<1.00	4	<1.0	<1.0	<1.0	<1.00	240	<2.00	<2.0	3	16	176	808
SEP													
05...	<1.00	7	<1.0	<1.0	<1.0	<1.00	940	<2.00	<2.0	2	16	307	171

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range

## GILA RIVER BASIN

## 09498500 SALT RIVER NEAR ROOSEVELT, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	PH	SPE-	TEMPER-	CALCIUM	MAGNE-	SODIUM,	NITRO-	NITRO-	NITRO-	PHOS-	ALUM-
			WATER	CIFIC		DIS-	SIUM,	DIS-	GEN, AM-	GEN,	GEN,		
			WHOLE	CON-		DIS-	DIS-	DIS-	MONIA +	AMMONIA	NO2+NO3		
			FIELD	DUCT-	ATURE	SOLVED	SOLVED	SOLVED	ORGANIC	TOTAL	TOTAL	TOTAL	DIS-
			(STAND-	ANCE	WATER	(MG/L	(MG/L	(MG/L	AS NA	(MG/L	(MG/L	(MG/L	(UG/L
			UNITS)	(US/CM)	(DEG C)	AS CA	AS MG	AS NA	AS N)	AS N)	AS N)	AS P)	AS AL)
			(00400)	(00095)	(00010)	(00915)	(00925)	(00930)	(00625)	(00610)	(00630)	(00665)	(01106)
MAR 28...	1240	2	5.8	2	17.0	<.02	<.030	<.1	<.20	<.01	<.02	<.020	<3
DATE		BARIUM, DIS- SOLVED (UG/L AS BA (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE (01010)	CADMIUM DIS- SOLVED (UG/L AS CD (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR (01030)	COPPER, DIS- SOLVED (UG/L AS CU (01040)	IRON, DIS- SOLVED (UG/L AS FE (01046)	LEAD, DIS- SOLVED (UG/L AS PB (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN (01056)	NICKEL, DIS- SOLVED (UG/L AS NI (01065)	ZINC, DIS- SOLVED (UG/L AS ZN (01090)		
MAR 28...	<.5	<1.00	<.50	<1.0	<2.0	<2	<2.00	<1.0	<1.00	<2			

Remark codes used in this report:

< -- Less than

## GILA RIVER BASIN

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## 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.**--No estimated daily discharges. Records good. Some flows affected by pumpage from upstream wells.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 822 ft<sup>3</sup>/s, Feb. 28, 1997 at gage height 8.01 ft, recorded at the gage. Minimum daily discharge, 0.01 ft<sup>3</sup>/s, June 7-10, June 16, July 4-6, 1996, and July 19-Aug. 3, Aug. 6, Aug. 9-13, 2000.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 492 ft<sup>3</sup>/s, Nov. 6, at gage height 6.91 ft. Minimum daily discharge, 0.04 ft<sup>3</sup>/s, Oct. 6, 7.

Peak discharges greater than base discharge of 100 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. 27 .....	1830	206	3.67	Mar. 10 .....	1145	137	4.59
Nov. 6 .....	1855	*492	*4.83	Apr. 6 .....	0635	126	4.77

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	9.0	1.5	.66	13	31	2.1	1.9	.33	.08	.22	.24
2	.06	5.2	1.3	.67	10	20	2.1	1.8	.33	.09	.16	.24
3	.05	3.6	1.3	.66	8.8	14	2.0	1.6	.34	.10	.16	.23
4	.05	22	1.2	.67	8.3	11	1.9	1.5	.31	.10	1.3	.23
5	.05	29	1.2	.68	8.2	9.1	2.6	1.4	.29	.11	16	.22
6	.04	137	1.1	.70	6.8	7.8	85	1.3	.26	.12	2.4	.21
7	.04	91	1.1	.72	5.4	28	42	1.1	.25	.11	.90	.21
8	.05	29	1.0	.69	7.0	37	20	1.0	.24	.11	.54	.20
9	.07	16	1.0	6.0	7.6	24	14	.89	.22	.10	1.1	.20
10	5.6	16	1.0	4.3	10	67	15	.80	.21	.10	.61	.19
11	.63	41	1.1	2.5	12	53	15	.74	.19	.10	3.2	.18
12	.10	25	1.0	3.0	9.7	35	11	.67	.18	.10	4.4	.18
13	.09	16	.96	5.2	9.1	25	9.3	.71	.19	.09	1.6	.22
14	.09	12	.82	5.0	25	19	7.6	.75	.17	.09	.98	2.6
15	.09	9.5	.74	4.0	26	15	6.3	.68	.17	.08	.57	.28
16	.09	7.3	.67	4.8	20	12	5.3	.59	.17	.08	.41	.24
17	.08	6.0	.65	5.6	15	10	4.5	.53	.15	.08	.34	.22
18	.08	4.7	.61	5.0	12	8.6	4.0	.48	.14	.08	.32	.21
19	.11	3.6	.57	3.9	9.8	7.3	3.7	.57	.13	.07	1.2	.20
20	.11	3.2	.58	3.6	8.0	6.3	3.3	.69	.11	.07	.85	.19
21	.24	2.8	.57	3.1	6.7	5.4	3.8	.52	.11	.07	.38	.18
22	9.2	2.6	.56	2.8	5.8	4.7	7.1	.43	.10	.07	.33	.18
23	1.7	2.3	.56	2.6	5.1	4.2	5.0	.39	.10	.07	.31	.17
24	5.1	2.2	.56	2.4	4.1	3.7	3.8	.36	.09	.07	.31	.16
25	1.9	2.1	.56	2.2	3.6	3.4	3.1	.36	.09	2.7	.29	.17
26	.66	2.0	.54	2.1	6.6	3.1	2.9	.36	.10	.21	.28	.16
27	41	1.9	.53	5.5	4.9	2.9	2.8	.36	.10	.12	.27	.15
28	54	1.8	.54	11	37	2.7	2.4	.36	.09	.11	.27	.15
29	11	1.7	.54	14	---	2.5	2.2	.35	.09	.12	.26	.15
30	6.4	1.6	.61	17	---	2.3	2.1	.34	.08	14	.26	.14
31	30	---	.66	17	---	2.2	---	.33	---	1.7	.25	---
TOTAL	168.74	507.1	25.63	138.05	305.5	477.2	291.9	23.86	5.33	21.10	40.47	8.30
MEAN	5.44	16.9	.83	4.45	10.9	15.4	9.73	.77	.18	.68	1.31	.28
MAX	54	137	1.5	17	37	67	85	1.9	.34	14	16	2.6
MIN	.04	1.6	.53	.66	3.6	2.2	1.9	.33	.08	.07	.16	.14
AC-FT	335	1010	51	274	606	947	579	47	11	42	80	16
CFSM	.15	.45	.02	.12	.29	.41	.26	.02	.00	.02	.03	.01

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2001, BY WATER YEAR (WY)

	MEAN	1.00	2.99	1.06	3.01	10.8	6.68	3.78	.42	.12	.42	.63	.23
MAX	5.44	16.9	3.66	11.3	38.3	15.4	9.73	.84	.28	.99	1.35	.65	
(WY)	2001	2001	1998	1997	1998	2001	2001	1998	1998	1999	1999	1999	
MIN	.058	.11	.23	.30	.41	.49	.39	.17	.026	.018	.045	.045	
(WY)	1998	1998	1997	1996	2000	1999	2000	2000	1996	2000	1997	1997	

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1996 - 2001

ANNUAL TOTAL	863.03	2013.18		
ANNUAL MEAN	2.36	5.52	2.55	
HIGHEST ANNUAL MEAN			5.52	2001
LOWEST ANNUAL MEAN			.38	1996
HIGHEST DAILY MEAN	137	Nov 6	355	Feb 28 1997
LOWEST DAILY MEAN	.01	Jul 19	.01	Jun 7 1996
ANNUAL SEVEN-DAY MINIMUM	.01	Jul 19	.01	Jul 19 2000
ANNUAL RUNOFF (AC-FT)	1710	3990	1840	
ANNUAL RUNOFF (CFSM)	.063	.15	.068	
10 PERCENT EXCEEDS	2.8	15	3.6	
50 PERCENT EXCEEDS	.38	1.0	.28	
90 PERCENT EXCEEDS	.02	.10	.05	

## 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, 1/2 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, 5,010 ft<sup>3</sup>/s, Jan. 5, 1995, at gage height 9.10 ft.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 956 ft<sup>3</sup>/s, Nov. 6, gage height, 5.21 ft, recorded at the gage; minimum daily discharge, 1.6 ft<sup>3</sup>/s Oct. 1 and 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	16	3.4	2.7	11	43	6.4	6.1	4.0	3.2	2.7	2.5
2	1.6	10	3.3	2.7	9.7	31	6.2	6.0	4.0	3.2	2.7	2.5
3	1.7	7.1	3.3	2.7	8.8	25	6.1	5.9	3.9	3.1	2.6	2.5
4	1.7	15	3.3	2.7	8.2	20	6.0	5.8	3.9	3.2	3.2	2.6
5	1.7	58	3.4	2.7	9.1	17	6.1	5.7	3.8	3.5	14	2.6
6	1.7	214	3.4	2.7	9.2	14	285	5.7	3.9	3.8	3.9	2.6
7	1.7	183	3.4	2.7	8.5	33	120	5.5	3.7	3.9	2.7	2.6
8	1.7	e40	3.4	2.7	9.1	67	38	5.5	3.7	4.0	2.6	2.6
9	1.7	e25	3.3	2.8	9.8	40	27	5.4	3.6	3.9	2.8	2.6
10	28	e15	3.3	2.8	11	120	25	5.3	3.5	4.2	3.1	2.7
11	e4.0	e50	3.3	2.8	13	93	27	5.2	3.4	27	3.1	2.7
12	e2.5	e30	3.3	2.8	13	51	24	5.1	3.4	3.3	4.1	2.6
13	e2.5	e20	e3.2	2.9	13	36	20	5.2	3.4	2.7	2.8	3.5
14	e2.5	e15	e3.2	2.9	25	28	16	5.1	3.3	2.8	2.8	37
15	e2.5	e12	e3.2	2.9	32	24	13	5.1	3.3	2.8	2.8	2.4
16	e2.5	e10	e3.2	3.0	28	21	12	4.9	3.3	2.8	2.7	2.2
17	e2.5	e8.0	e3.2	3.1	25	18	10	4.8	3.2	2.7	2.6	2.2
18	e2.5	e6.0	e3.0	3.1	21	15	9.0	4.7	3.2	2.7	2.7	2.3
19	e2.5	e5.0	e3.0	3.2	17	13	8.5	4.7	3.2	2.8	2.7	2.3
20	e2.5	e4.5	e3.0	3.3	14	12	7.9	4.6	3.2	2.9	2.8	2.3
21	5.6	e4.5	e3.0	3.4	12	11	7.8	4.5	3.1	2.9	2.7	2.1
22	32	e4.5	e3.0	3.5	12	9.7	13	4.4	3.2	3.0	2.6	2.1
23	8.0	e4.5	e3.0	3.6	11	8.9	11	4.3	3.1	3.0	2.5	2.1
24	7.2	e4.0	e2.8	3.7	9.6	8.2	9.0	4.3	3.1	3.1	2.5	2.1
25	6.1	e4.5	e2.8	3.7	9.1	7.6	7.6	4.2	3.1	5.3	2.4	2.2
26	3.8	e4.0	e2.8	3.8	11	7.3	6.9	4.2	3.2	3.3	2.4	2.2
27	55	e3.5	e2.8	3.9	10	7.0	7.0	4.1	3.1	2.7	2.4	2.2
28	144	e3.5	e2.7	3.9	33	6.8	6.6	4.1	3.0	2.8	2.4	2.2
29	21	3.5	2.7	4.0	---	6.6	6.4	4.1	3.0	2.5	2.5	2.1
30	9.6	3.4	2.7	4.2	---	6.5	6.2	4.0	3.0	11	2.5	2.2
31	40	---	2.7	11	---	6.4	---	4.1	---	4.0	2.5	---
TOTAL	401.9	783.5	96.1	105.9	403.1	807.0	754.7	152.6	101.8	132.1	96.8	106.8
MEAN	13.0	26.1	3.10	3.42	14.4	26.0	25.2	4.92	3.39	4.26	3.12	3.56
MAX	144	214	3.4	11	33	120	285	6.1	4.0	27	14	37
MIN	1.6	3.4	2.7	2.7	8.2	6.4	6.0	4.0	3.0	2.5	2.4	2.1
AC-FT	797	1550	191	210	800	1600	1500	303	202	262	192	212
CFSM	.13	.26	.03	.03	.14	.26	.25	.05	.03	.04	.03	.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2001, BY WATER YEAR (WY)

	MEAN	2.86	4.72	2.72	19.8	26.0	27.4	10.2	3.61	2.59	2.33	4.10	1.99
MAX	13.0	26.1	8.37	117	82.3	99.8	27.1	7.54	5.41	4.26	16.6	3.56	
(WY)	2001	2001	1995	1995	1998	1995	1998	1995	1995	2001	2000	2001	
MIN	.025	.005	.014	.26	.76	.99	.98	.69	.38	.20	.18	.24	
(WY)	1998	1998	1997	1998	1999	1999	1996	1996	1996	1996	1996	1997	

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1995 - 2001

ANNUAL TOTAL	2328.5	3942.3	8.94	
ANNUAL MEAN	6.36	10.8	27.3	1995
HIGHEST ANNUAL MEAN			1.21	1996
LOWEST ANNUAL MEAN				
HIGHEST DAILY MEAN	214	285	2040	Jan 5 1995
LOWEST DAILY MEAN	1.3	1.6	.00	Dec 17 1996
ANNUAL SEVEN-DAY MINIMUM	1.3	1.7	.00	Dec 17 1996
ANNUAL RUNOFF (AC-FT)	4620	7820	6480	
ANNUAL RUNOFF (CFSM)	.062	.11	.088	
10 PERCENT EXCEEDS	8.4	24	13	
50 PERCENT EXCEEDS	2.1	3.8	2.0	
90 PERCENT EXCEEDS	1.6	2.5	.19	

e Estimated

## GILA RIVER BASIN

243

## 09498503 SOUTH FORK PARKER CREEK NEAR ROOSEVELT, AZ

**LOCATION.**--Lat 33°47'50", long 110°57'35", in NE 1/4 NW 1/4 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 U.S. 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.**--No estimated daily discharges. Records good.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 87 ft<sup>3</sup>/s, Mar. 6, 1995, gage height, 4.10 ft; 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 U.S. Forest Service.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 9.6 ft<sup>3</sup>/s, Oct. 30, 2330 hours; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.3	.18	.04	.47	1.6	.31	.28	.04	.00	.02	.00
2	.00	.79	.17	.04	.47	2.0	.29	.25	.04	.00	.01	.00
3	.00	.58	.15	.04	.55	2.2	.28	.24	.03	.00	.01	.00
4	.00	3.0	.15	.04	1.6	1.7	.26	.22	.03	.00	.01	.00
5	.00	3.3	.14	.04	2.3	1.9	.27	.21	.03	.00	.00	.00
6	.00	2.6	.13	.04	2.2	2.8	1.4	.20	.03	.00	.00	.00
7	.00	2.2	.13	.04	2.0	3.3	3.0	.19	.02	.00	.01	.00
8	.00	1.5	.12	.04	1.4	4.1	3.2	.17	.02	.00	.01	.00
9	.00	1.2	.11	.19	1.0	3.7	2.4	.16	.02	.00	.04	.00
10	.00	1.0	.11	.13	.85	3.1	1.9	.15	.02	.00	.03	.00
11	.00	1.2	.11	.10	.77	2.4	1.5	.14	.02	.00	.07	.00
12	.00	1.1	.11	.12	.71	2.3	1.8	.14	.01	.00	.09	.00
13	.00	.96	.10	.13	.70	2.8	1.7	.13	.01	.00	.21	.00
14	.00	.83	.09	.15	.79	2.9	1.3	.13	.01	.00	.19	.00
15	.00	.77	.09	.15	.72	2.5	.96	.12	.01	.00	.15	.00
16	.00	.69	.08	.18	.68	2.0	.79	.11	.01	.00	.10	.00
17	.00	.60	.07	.18	.65	1.6	.66	.11	.01	.00	.08	.00
18	.00	.54	.07	.19	.80	1.4	.59	.11	.01	.00	.06	.00
19	.00	.46	.07	.20	1.3	1.2	.54	.13	.01	.00	.05	.00
20	.00	.41	.07	.22	1.3	1.1	.49	.13	.00	.00	.04	.00
21	.01	.37	.06	.25	1.1	1.0	.47	.12	.00	.00	.03	.00
22	.11	.34	.06	.35	1.0	.92	.50	.11	.01	.00	.02	.00
23	.18	.31	.06	.42	.94	.82	.62	.11	.00	.00	.02	.00
24	.95	.30	.06	.44	.74	.71	.77	.10	.00	.00	.01	.00
25	.51	.28	.06	.55	.63	.62	.58	.09	.00	.00	.01	.00
26	.34	.26	.06	.56	.68	.57	.49	.07	.00	.00	.00	.00
27	1.1	.24	.05	.52	.74	.52	.42	.06	.00	.00	.00	.00
28	2.8	.21	.05	.51	1.6	.47	.36	.06	.00	.00	.00	.00
29	1.2	.21	.04	.47	---	.43	.33	.05	.00	.00	.00	.00
30	1.2	.20	.04	.45	---	.37	.30	.05	.00	.04	.00	.00
31	3.2	---	.04	.47	---	.34	---	.05	---	.02	.00	---
TOTAL	11.60	27.75	2.83	7.25	28.69	53.37	28.48	4.19	0.39	0.06	1.27	0.00
MEAN	.37	.93	.091	.23	1.02	1.72	.95	.14	.013	.002	.041	.000
MAX	3.2	3.3	.18	.56	2.3	4.1	3.2	.28	.04	.04	.21	.00
MIN	.00	.20	.04	.04	.47	.34	.26	.05	.00	.00	.00	.00
AC-FT	23	55	5.6	14	57	106	56	8.3	.8	.1	2.5	.00
CFSM	.34	.85	.08	.21	.94	1.58	.87	.12	.01	.00	.04	.00
IN.	.40	.95	.10	.25	.98	1.82	.97	.14	.01	.00	.04	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2001, BY WATER YEAR (WY)

	MEAN	.044	.23	.38	.82	1.25	1.65	.68	.095	.015	.007	.078	.042
MAX	.37	2.90	1.52	5.33	6.61	5.11	2.77	.22	.076	.034	.29	.19	
(WY)	2001	1986	1992	1995	1995	1995	1991	1986	1992	1998	1986	1986	
MIN	.000	.000	.002	.008	.013	.011	.041	.002	.000	.000	.000	.000	
(WY)	1990	1990	1990	1990	2000	1999	1996	1996	1989	1986	1996	1987	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1986 - 2001
ANNUAL TOTAL	55.32	165.88	
ANNUAL MEAN	.15	.45	.43
HIGHEST ANNUAL MEAN			1.50
LOWEST ANNUAL MEAN			.001
HIGHEST DAILY MEAN	3.3 Nov 5	4.1 Mar 8	51 Mar 6 1995
LOWEST DAILY MEAN	.00 May 13	.00 Oct 1	.00 Jun 7 1986
ANNUAL SEVEN-DAY MINIMUM	.00 May 20	.00 Oct 1	.00 Jun 7 1986
ANNUAL RUNOFF (AC-FT)	110	329	310
ANNUAL RUNOFF (CFSM)	.14	.42	.39
ANNUAL RUNOFF (INCHES)	1.89	5.66	5.33
10 PERCENT EXCEEDS	.42	1.4	.98
50 PERCENT EXCEEDS	.01	.11	.02
90 PERCENT EXCEEDS	.00	.00	.00



## GILA RIVER BASIN

## 09499000 TONTO CREEK ABOVE GUN CREEK, NEAR ROOSEVELT, AZ

**LOCATION.**--Lat 33°58'48", long 111°18'10", in SW1/4NE1/4 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.**--No estimated daily discharges. Records good. 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 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.....	0600	4,380	7.01	Nov. 4.....	1715	4,010	6.85
Oct. 31.....	1050	1,720	5.68	Aug. 10.....	1500	*4,770	*7.19

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.82	548	38	21	48	316	71	41	6.8	.00	45	.93
2	.52	357	35	20	46	346	67	39	6.2	.00	37	1.0
3	.28	261	35	20	44	283	61	36	5.5	.00	30	1.4
4	.67	1280	35	20	42	240	59	34	5.3	.00	21	.83
5	1.8	1200	34	20	41	197	57	32	5.4	.00	14	.01
6	1.6	680	26	20	51	183	156	32	5.3	.00	11	.00
7	1.3	935	24	20	59	226	315	31	4.9	.00	8.6	.00
8	1.3	415	25	20	66	530	194	29	4.5	.00	7.1	.00
9	1.3	271	26	25	67	456	146	29	4.3	.00	9.1	.00
10	59	200	25	26	58	523	132	28	3.9	13	216	.00
11	24	237	26	28	51	831	152	25	3.1	15	243	.00
12	5.0	263	25	28	47	735	148	25	3.5	9.5	120	.00
13	3.7	210	24	29	44	643	154	27	3.4	8.2	102	.00
14	3.9	172	24	31	52	516	140	28	3.1	4.9	61	.00
15	4.0	147	24	30	65	400	144	27	3.3	4.3	88	16
16	3.7	127	24	30	72	316	140	26	3.2	3.3	53	2.2
17	3.5	109	24	30	74	254	124	24	3.1	2.6	31	1.4
18	3.5	95	23	31	70	216	108	23	3.0	.75	22	1.4
19	3.3	83	22	29	72	189	87	26	2.7	.00	17	.93
20	3.5	74	22	28	79	175	75	31	2.4	.00	21	.74
21	5.1	67	22	28	77	173	69	35	1.9	.00	26	.01
22	201	61	22	28	74	174	75	29	1.7	.00	18	.00
23	297	56	22	28	70	172	73	26	1.8	.00	10	.00
24	505	53	22	29	67	157	62	24	1.9	.00	6.1	.00
25	297	49	22	29	63	139	60	20	1.6	4.4	4.9	.00
26	155	47	22	29	64	128	62	19	1.9	2.8	3.7	.00
27	299	45	21	36	64	116	56	19	2.1	.62	3.2	.00
28	2090	43	21	50	87	106	51	16	1.7	.00	2.3	.00
29	516	41	21	53	---	95	49	11	.33	.00	1.6	.00
30	297	40	21	51	---	83	45	9.6	.00	.47	1.4	.00
31	958	---	21	49	---	78	---	7.8	---	69	1.3	---
TOTAL	5746.79	8166	778	916	1714	8996	3132	809.4	97.83	138.84	1235.3	26.85
MEAN	185	272	25.1	29.5	61.2	290	104	26.1	3.26	4.48	39.8	.90
MAX	2090	1280	38	53	87	831	315	41	6.8	69	243	16
MIN	.28	40	21	20	41	78	45	7.8	.00	.00	1.3	.00
AC-FT	11400	16200	1540	1820	3400	17840	6210	1610	194	275	2450	53
CFSM	.27	.40	.04	.04	.09	.43	.15	.04	.00	.01	.06	.00
IN.	.32	.45	.04	.05	.09	.50	.17	.04	.01	.01	.07	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

	MEAN	59.8	71.7	240	335	358	481	166	46.9	14.0	22.6	91.3	42.3
MAX	1053	438	2326	4272	4191	4159	1040	488	94.9	207	1091	626	
(WY)	1973	1973	1966	1993	1980	1978	1941	1941	1955	1955	1951	1970	
MIN	1.46	6.47	9.88	12.4	12.4	11.5	8.96	3.32	.000	.000	4.52	.78	
(WY)	1954	1955	1957	2000	2000	1972	1972	1996	1996	2000	1944	1956	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1941 - 2001
ANNUAL TOTAL	18001.32	31757.01	
ANNUAL MEAN	49.2	87.0	160
HIGHEST ANNUAL MEAN			652
LOWEST ANNUAL MEAN			11.9
HIGHEST DAILY MEAN	2090	2090	36700
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	35710	62990	116200
ANNUAL RUNOFF (CFSM)	.073	.13	.24
ANNUAL RUNOFF (INCHES)	.99	1.75	3.23
10 PERCENT EXCEEDS	69	220	263
50 PERCENT EXCEEDS	11	27	23
90 PERCENT EXCEEDS	.00	.01	4.4

## GILA RIVER BASIN

245

## 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.**--Apr. 1910 to current year. Prior to Oct. 1934, month end 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 year. 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, 1,764,000 acre-ft May 22, 1941; minimum, 20,680 acre-ft Sept. 16, 1940.

**EXTREMES FOR CURRENT YEAR.**--Maximum contents of system at 0800 hours, 1,009,000 acre-ft May 8--9; minimum, 622,600 acre-ft Oct. 9.

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	633000	661800	740800	758800	776100	808700	905300	1007000	984400	917200	858700	813700
2	631400	665900	740700	759100	776300	811100	908900	1005000	982400	915300	856200	810900
3	629500	668700	741400	759700	776900	812400	911700	1008000	980300	913100	853300	808600
4	627900	672200	742100	760000	779500	814800	914600	1007000	978300	910900	853400	806700
5	626200	675100	743000	760000	780000	816900	917800	1008000	976700	907500	853200	804000
6	624800	679000	743500	760900	780900	818500	919800	1008000	974600	904900	852200	801100
7	626400	687200	744400	761400	781100	820500	926200	1008000	972600	905000	850600	798500
8	624100	695000	745700	762000	781900	823800	931600	1009000	970300	903300	848700	795200
9	622600	701200	746300	762800	782800	826600	936600	1009000	968500	901100	847100	792700
10	622700	705800	746800	763900	784100	829300	940600	1008000	966100	897500	846500	790200
11	624300	708400	748000	764600	785300	834400	945300	1007000	964200	896100	845400	787900
12	623800	711100	747900	764500	786200	839300	949600	1006000	962100	894100	844300	785300
13	623500	714800	748400	765500	787400	844300	953600	1005000	959400	892900	844300	782100
14	624000	718100	749400	766200	788700	848900	957200	1005000	956800	890800	843600	779600
15	624500	720800	750300	767000	787600	853100	961000	1005000	953800	889200	843100	777600
16	624900	722700	750100	767700	791000	856700	964500	1004000	951000	887300	841900	776100
17	624800	724900	751100	768500	792200	860100	967700	1003000	948800	885600	839500	774200
18	625100	726100	752200	769100	793200	864200	971400	1002000	946400	884000	840000	772300
19	625000	727600	752600	769600	794800	865700	974500	1000000	944100	881400	838800	769900
20	624700	729400	752400	770000	796700	868200	977500	1000000	941800	879000	837400	767500
21	625600	731000	753500	770800	796900	870400	980500	999900	938900	876800	835900	765700
22	628000	731900	754600	771400	798500	873200	981800	999800	936900	874700	834600	763000
23	629700	732700	754700	772300	800100	875900	988800	998800	934100	872800	832400	760600
24	631600	733900	755200	772400	801000	879200	992400	997700	931800	870800	830000	758000
25	633200	734400	755600	772600	802500	882600	995600	996700	930000	868500	828300	755200
26	636000	735800	756000	773000	803400	885800	998300	994200	927700	867300	826600	753000
27	637700	736600	756600	773900	805700	889400	1001000	993100	925900	865100	824900	751700
28	643200	738600	756900	775400	806900	893200	1002000	991700	924000	862200	822700	749200
29	648000	738300	757500	774000	---	897000	1004000	989900	921400	860000	820300	746500
30	652700	739700	757900	776700	---	899800	1005000	988400	920100	857700	818500	743800
31	656500	---	758300	777000	---	902600	---	986000	---	859000	815800	---
MAX	656500	739700	758300	777000	806900	902600	1005000	1009000	984400	917200	858700	813700
MIN	622600	661800	740700	758800	776100	808700	905300	986000	920100	857700	815800	743800
(*)	+28800	+79000	+18000	+17300	+32600	+96600	+101700	-22600	-67200	-58500	-45000	-72100
CAL YR 2000	MAX	861400	MIN	622600								
WTR YR 2001	MAX	1009000	MIN	622600								

(\*) Change in contents, in acre-feet (from 0800 first of month).

NOTE.--Contents at 0800 Oct. 1, 2001, 741,600 acre-feet.

## 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.

**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.**--71 years, 1,009 ft<sup>3</sup>/s, 731,000 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, 1,830 ft<sup>3</sup>/s Sept. 14; minimum daily discharge, 22 ft<sup>3</sup>/s Apr. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	887	343	8.1	7.0	8.3	8.6	5.2	751	e1240	1140	838	1460
2	940	266	8.1	8.0	8.0	7.5	3.0	821	e1120	1160	887	1410
3	987	303	6.8	7.8	8.1	7.4	3.2	816	e1140	1380	979	1420
4	943	317	7.3	7.2	8.8	7.1	3.3	935	e1200	1530	943	1430
5	908	337	7.2	7.5	11	6.8	4.0	768	e1210	1490	1010	1520
6	742	346	7.3	7.0	11	6.5	11	674	e1210	1350	1010	1550
7	222	306	7.6	7.3	10	11	6.2	646	e1250	1150	1080	1600
8	132	301	7.6	7.7	11	9.4	5.1	870	1270	933	1110	e1660
9	119	304	8.0	14	11	8.2	4.8	1040	1240	917	1050	e1470
10	142	318	7.9	10	11	9.4	5.3	1110	1130	961	914	e1450
11	210	260	7.7	8.8	11	8.4	5.1	1240	1200	1010	789	1460
12	232	260	7.7	11	9.9	7.0	5.1	1100	1260	1070	759	1420
13	240	328	8.0	10	11	6.3	5.0	960	1250	1100	839	1480
14	188	281	8.1	9.2	13	6.1	4.9	1000	1270	1060	907	1470
15	239	183	8.1	8.5	12	5.9	4.9	978	1400	995	978	1320
16	245	67	8.1	12	12	5.6	5.0	1140	1230	1090	1010	1190
17	285	18	8.0	8.9	12	6.5	5.3	1220	1210	1100	1030	1230
18	280	13	7.9	7.8	11	7.1	5.4	1240	1270	1150	1010	1310
19	288	11	7.1	7.4	11	6.8	5.4	1120	1270	1200	950	1310
20	286	9.9	6.7	7.0	10	6.7	5.0	963	1430	1150	921	1270
21	154	8.9	7.0	7.0	9.8	6.9	7.1	875	1280	1240	939	1330
22	70	7.7	7.2	6.2	9.4	7.0	9.0	956	1330	1190	1090	1310
23	49	8.0	7.2	6.0	9.2	6.8	8.7	1080	1310	1080	1160	1260
24	94	8.1	7.1	6.6	8.7	6.4	11	1120	1150	1170	1190	1260
25	68	8.2	7.1	6.9	8.7	6.0	16	1370	1120	1280	1130	1330
26	179	7.9	7.3	7.3	9.1	6.1	87	1320	1160	1240	1110	1300
27	481	7.9	7.1	15	8.0	6.4	427	1230	1080	1190	1140	1290
28	328	8.4	7.1	13	9.3	6.4	370	1240	1130	1140	1180	1400
29	411	8.0	7.1	11	---	6.2	479	1240	1130	1090	1130	1380
30	290	8.0	6.6	9.9	---	6.3	538	1210	1090	1100	1170	1250
31	386	---	6.6	9.2	---	6.0	---	1280	---	1080	1350	---
TOTAL	11025	4653.0	230.7	272.2	283.3	218.8	2055.0	32313	36580	35736	31603	41540
MEAN	356	155	7.44	8.78	10.1	7.06	68.5	1042	1219	1153	1019	1385
MAX	987	346	8.1	15	13	11	538	1370	1430	1530	1350	1660
MIN	49	7.7	6.6	6.0	8.0	5.6	3.0	646	1080	917	759	1190
AC-FT	21870	9230	458	540	562	434	4080	64090	72560	70880	62680	82390

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

	MEAN	580	149	438	780	981	1214	1263	1353	1449	1476	1386	1207
MAX	7128	1082	7169	20210	18950	7143	6452	5716	2322	2590	2216	2283	
(WY)	1984	1946	1979	1993	1980	1993	1973	1941	1992	1980	1992	1980	
MIN	4.41	.11	.000	.000	.000	1.53	3.49	1.07	346	749	205	10.3	
(WY)	1952	1975	1958	1953	1977	1982	1952	1957	1952	1965	1969	1951	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1941 - 2001
ANNUAL TOTAL	150012.7	196510.0	
ANNUAL MEAN	410	538	1023
HIGHEST ANNUAL MEAN			4485
LOWEST ANNUAL MEAN			281
HIGHEST DAILY MEAN	1570	1660	64000
LOWEST DAILY MEAN	5.9	3.0	.00
ANNUAL SEVEN-DAY MINIMUM	6.6	4.4	.00
ANNUAL RUNOFF (AC-FT)	297600	389800	741300
10 PERCENT EXCEEDS	1120	1280	1880
50 PERCENT EXCEEDS	186	280	780
90 PERCENT EXCEEDS	7.0	6.6	3.3

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 TEMPERATURES: Dec. 1950 to Sept. 1982, Mar. 1983 to Sept. 1990.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARD-NESS TOTAL (MG/L) (00900)	CALCIUM DIS-SOLVED (MG/L) (00915)
NOV 17...	1125	18	2.3	727	8.6	87	8.1	1620	14.0	13.5	59	190	50.0
JAN 23...	1155	6.3	1.6	728	9.8	96	8.3	1610	17.5	12.5	84	210	55.0
MAR 23...	1045	7.2	.8	725	7.1	82	7.9	1640	23.5	20.1	78	200	52.0
MAY 11...	1200	1240	3.2	723	9.7	108	8.2	1640	38.5	17.8	66	190	50.0
JUL 25...	1120	1300	.9	721	5.5	69	8.1	1820	28.5	23.6	71	200	51.0
DATE	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
NOV 17...	50.0	17.0	18.0	6.10	7	240	136	166	.0	390	.3	65.0	6
JAN 23...	56.0	18.0	18.0	5.70	7	250	127	145	5	390	.3	65.0	1
MAR 23...	51.0	17.0	18.0	5.80	7	230	122	149	.0	390	.3	64.0	5
MAY 11...	49.0	17.0	17.0	5.90	7	240	129	157	.0	390	.4	64.0	10
JUL 25...	52.0	18.0	18.0	6.70	8	270	130	159	.0	440	.4	70.0	4
DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA + ORGANIC (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, TOTAL (MG/L AS NO3) (71887)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (00340)	E COLI, MTEC MP WATER (COL/100 ML) (31633)
NOV 17...	1.22	896	850	.24	.06	.08	M	.18	.27	1.2	<.020	14	E2k
JAN 23...	1.22	897	861	<.20	.03	.04	<.02	--	--	--	<.020	5	<1
MAR 23...	1.22	898	833	.37	.03	.04	<.02	.34	--	--	<.020	45	E1k
MAY 11...	1.21	888	845	.39	<.01	--	<.02	--	--	--	.040	9	E2k
JUL 25...	1.35	990	935	.30	.02	.03	<.02	.28	--	--	.020	18	E3k
DATE	COLI-FORM, FECAL, 0.7 UM-MP (COLS./100 ML) (31625)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BERYL-LIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	BORON, DIS-SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOVERABLE (UG/L AS B) (01022)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTDR TOTAL (UG/L AS CD) (01027)
NOV 17...	E2k	<1.00	<1.0	4.1	4	73.0	73.0	<1.00	<1.00	140	140	<.50	<.50
JAN 23...	<1	<1.00	<1.0	3.0	3	56.0	56.0	<1.00	<1.00	140	140	<.50	<.50
MAR 23...	E1k	<1.00	<1.0	3.4	3	66.0	67.0	<1.00	<1.00	130	130	<.50	<.50
MAY 11...	E11k	<1.00	<1.0	5.9	6	69.0	72.0	<1.00	<1.00	140	140	<.50	<.50
JUL 25...	24	<1.00	<1.0	4.2	4	71.0	74.0	<1.00	<1.00	158	158	<.50	<.50

## GILA RIVER BASIN

## 09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
NOV 17...	<1.0	<1	<2.0	<2.0	M	100	<2.00	<2	81.0	95	<.10	<.10	1.00
JAN 23...	<1.0	<1	<2.0	<2.0	M	60	<2.00	<2	21.0	28	<.10	<.10	<1.00
MAR 23...	<1.0	<1	<2.0	<2.0	M	80	<2.00	<2	55.0	85	<.10	<.10	<1.00
MAY 11...	<1.0	<1	<2.0	<2.0	<2	140	<2.00	<2	8.5	39	<.10	<.10	<1.00
JUL 25...	<1.0	<1	<2.0	<2.0	<2	40	<2.00	<2	17.0	87	<.10	<.10	<1.00

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL RECOV- ERABLE (UG/L AS TL) (01059)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 17...	<1	<1.0	<1.0	<1.0	<1.00	510	<2.00	<2.0	14	12	2	.10
JAN 23...	<1	<1.0	<1.0	<1.0	<1.00	520	<2.00	<2.0	19	17	2	.03
MAR 23...	<1	<1.0	<1.0	<1.0	<1.00	510	<2.00	<2.0	3	<2	3	.06
MAY 11...	<1	<1.0	<1.0	<1.0	<1.00	500	<2.00	<2.0	<2	<3	8	27
JUL 25...	<1	<1.0	<1.0	<1.0	<1.00	530	<2.00	<2.0	5	4	3	11

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range



## GILA RIVER BASIN

249

## 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 those above 15 ft<sup>3</sup>/s, 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 9.....	2045	*1010	*4.40
Sept. 16.....	0215	821	4.22

No flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	.00
2	---	---	---	---	---	---	---	---	---	---	---	.00
3	---	---	---	---	---	---	---	---	---	---	.00	.00
4	---	---	---	---	---	---	---	---	---	---	.00	.00
5	---	---	---	---	---	---	---	---	---	---	.00	.00
6	---	---	---	---	---	---	---	---	---	---	.00	.00
7	---	---	---	---	---	---	---	---	---	---	.00	.00
8	---	---	---	---	---	---	---	---	---	---	.00	.00
9	---	---	---	---	---	---	---	---	---	---	90	.00
10	---	---	---	---	---	---	---	---	---	---	27	.00
11	---	---	---	---	---	---	---	---	---	---	1.9	.00
12	---	---	---	---	---	---	---	---	---	---	.74	.00
13	---	---	---	---	---	---	---	---	---	---	.62	.00
14	---	---	---	---	---	---	---	---	---	---	.48	.00
15	---	---	---	---	---	---	---	---	---	---	.44	.00
16	---	---	---	---	---	---	---	---	---	---	.27	316
17	---	---	---	---	---	---	---	---	---	---	.19	5.7
18	---	---	---	---	---	---	---	---	---	---	.16	1.3
19	---	---	---	---	---	---	---	---	---	---	.16	.88
20	---	---	---	---	---	---	---	---	---	---	.22	.74
21	---	---	---	---	---	---	---	---	---	---	.24	.65
22	---	---	---	---	---	---	---	---	---	---	.15	.54
23	---	---	---	---	---	---	---	---	---	---	.09	.45
24	---	---	---	---	---	---	---	---	---	---	.06	.38
25	---	---	---	---	---	---	---	---	---	---	.09	.34
26	---	---	---	---	---	---	---	---	---	---	.01	.33
27	---	---	---	---	---	---	---	---	---	---	.00	.32
28	---	---	---	---	---	---	---	---	---	---	.00	.29
29	---	---	---	---	---	---	---	---	---	---	.00	.28
30	---	---	---	---	---	---	---	---	---	---	.00	.27
31	---	---	---	---	---	---	---	---	---	---	.00	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	328.47
MEAN	---	---	---	---	---	---	---	---	---	---	---	10.9
MAX	---	---	---	---	---	---	---	---	---	---	---	316
MIN	---	---	---	---	---	---	---	---	---	---	---	.00
MED	---	---	---	---	---	---	---	---	---	---	---	.14
AC-FT	---	---	---	---	---	---	---	---	---	---	---	652
CFSM	---	---	---	---	---	---	---	---	---	---	---	.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1985, 2001, BY WATER YEAR (WY)

MEAN	.36	.51	.87	7.80	19.0	20.7	7.13	1.04	.35	6.18	6.26	6.78
MAX	.64	1.77	2.39	27.5	85.5	74.1	31.6	3.92	1.15	24.4	18.4	14.0
(WY)	1999	1999	1998	1995	1995	1995	1998	1998	1999	1999	2000	1997
MIN	.085	.14	.20	.21	.60	.70	.25	.027	.002	.000	.29	.73
(WY)	1997	1996	2000	1996	1996	1999	1996	1996	1996	1997	1996	2000

## SUMMARY STATISTICS

## WATER YEARS 1965 - 1985, 2001

ANNUAL MEAN	15.7	
HIGHEST ANNUAL MEAN	62.5	1980
LOWEST ANNUAL MEAN	1.58	1972
HIGHEST DAILY MEAN	4200	Sep 23 1983
LOWEST DAILY MEAN	.00	Apr 30 1966
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 30 1966
ANNUAL RUNOFF (AC-FT)	11340	
ANNUAL RUNOFF (CFSM)	.061	
10 PERCENT EXCEEDS	7.3	
50 PERCENT EXCEEDS	1.7	
90 PERCENT EXCEEDS	.13	

e Estimated

## GILA RIVER BASIN

## 09502900 DEL RIO SPRINGS NEAR CHINO VALLEY, AZ

**LOCATION.**--Lat 34° 49'32", long 112° 26'38", in NE1/4NW1/4SW1/4, 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.**--Records good except for estimated daily discharges, which are fair.

**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 PERIOD OF RECORD.**--Maximum discharge, 13 ft<sup>3</sup>/s, Aug. 9, 2001, maximum gage height, 2.0 ft., Sept. 20, 1999; minimum daily discharge, 1.2 ft<sup>3</sup>/s June 17-21, 2000.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 13 ft<sup>3</sup>/s Aug. 9, gage height, 1.89 ft; minimum daily discharge, 1.2 ft<sup>3</sup>/s June 17-21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.9	2.1	2.1	2.0	2.1	2.0	1.6	1.3	1.4	1.5	1.4
2	1.5	1.9	2.1	2.1	2.0	2.1	1.9	1.6	1.3	1.4	1.5	1.4
3	1.5	1.9	2.1	2.1	2.1	2.1	1.9	1.6	1.3	1.3	1.5	1.4
4	1.5	2.0	2.1	2.1	2.0	2.1	1.9	e1.6	1.3	1.3	1.6	1.4
5	1.5	2.0	2.1	2.1	2.0	2.1	1.9	1.6	1.3	1.4	1.6	1.4
6	1.5	2.0	2.1	2.1	2.0	2.1	2.0	1.5	1.3	1.5	1.6	1.4
7	1.5	2.0	2.1	2.1	2.0	2.3	1.9	1.6	1.3	1.6	1.7	1.4
8	1.5	2.0	2.1	2.1	2.0	2.2	1.9	e1.6	1.3	1.6	1.7	1.4
9	1.5	2.0	2.1	2.1	2.0	2.1	1.9	e1.6	1.3	1.6	3.6	1.4
10	1.5	2.0	2.1	2.1	2.0	2.2	2.0	1.6	1.3	1.6	3.1	1.4
11	1.5	2.2	2.1	2.1	2.0	2.2	2.0	1.6	1.3	1.6	1.5	1.4
12	1.5	2.1	2.1	2.3	2.0	2.2	2.0	1.5	1.3	1.6	1.5	1.4
13	1.5	2.1	2.1	2.1	2.0	2.1	1.9	1.5	1.3	1.6	1.5	1.4
14	1.5	2.1	2.1	2.1	2.1	2.1	1.8	1.5	1.3	1.5	1.5	1.4
15	1.5	2.1	2.1	2.1	2.1	2.1	1.8	1.5	1.3	1.5	1.5	1.4
16	1.5	2.1	2.1	2.1	2.1	2.0	1.8	1.5	1.7	1.5	1.5	1.4
17	1.5	2.0	2.1	2.1	2.1	2.0	1.8	1.5	1.2	1.5	1.5	1.4
18	1.5	2.0	2.1	2.0	2.1	2.0	1.8	1.5	1.2	1.5	1.5	1.4
19	1.5	2.0	2.1	2.0	2.0	2.0	1.8	1.6	1.2	1.4	1.5	1.4
20	1.5	2.0	2.1	2.0	2.0	2.0	1.7	1.6	1.2	1.3	1.5	1.4
21	1.6	2.0	2.1	2.0	2.0	2.0	1.7	1.4	1.2	1.3	1.5	1.4
22	2.1	2.0	2.1	2.0	2.0	2.0	1.7	1.4	1.3	1.3	1.5	1.4
23	1.7	2.0	2.1	2.0	2.0	2.0	1.7	1.5	1.4	1.3	1.5	1.4
24	1.6	2.0	2.1	2.0	2.0	2.0	1.6	1.4	1.4	1.4	1.5	1.4
25	1.6	2.0	2.1	2.0	2.0	2.0	1.7	1.4	1.4	1.6	1.5	1.4
26	1.7	2.0	2.1	2.0	2.1	2.0	1.7	1.4	1.5	1.7	1.5	1.4
27	3.1	2.0	2.1	2.1	2.1	2.0	1.7	1.4	1.4	1.7	1.5	1.4
28	2.1	2.0	2.1	2.1	2.1	2.0	1.6	1.4	1.4	1.6	1.4	1.4
29	1.9	2.1	2.1	2.0	---	2.0	1.6	1.4	1.4	1.5	1.4	1.4
30	2.0	2.1	2.1	2.0	---	2.0	1.6	1.4	1.4	1.5	1.4	1.4
31	2.0	---	2.1	2.0	---	2.0	---	1.3	---	1.5	1.4	---
TOTAL	51.4	60.6	65.1	64.1	56.9	64.1	54.3	46.6	39.8	46.1	50.5	42.0
MEAN	1.66	2.02	2.10	2.07	2.03	2.07	1.81	1.50	1.33	1.49	1.63	1.40
MAX	3.1	2.2	2.1	2.3	2.1	2.3	2.0	1.6	1.7	1.7	3.6	1.4
MIN	1.5	1.9	2.1	2.0	2.0	2.0	1.6	1.3	1.2	1.3	1.4	1.4

CAL YR 2000 TOTAL 664.1 MEAN 1.81 MAX 3.1 MIN 1.3  
WTR YR 2001 TOTAL 641.5 MEAN 1.76 MAX 3.6 MIN 1.2

e Estimated

## 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**--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, 8.58 ft from slope-conveyance survey; maximum gage height, 8.91 ft, Aug. 26, 2000 (backwater from tributary). 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 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.....	0115	687	7.90	Aug. 15	1815	870	*8.56
Oct. 27.....	1600	*1,000	8.16				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	12	.68	.23	2.9	11	3.1	.34	.04	.00	.00	.04
2	.03	8.6	.52	.19	3.2	11	2.9	.28	.04	.00	.00	.30
3	.03	6.5	.54	.18	3.2	12	2.6	.27	.04	.00	.01	.04
4	.46	7.2	.52	.21	4.3	11	2.5	.30	.05	.00	6.0	.04
5	.03	5.6	.52	.33	6.1	10	2.7	.27	.04	.00	.04	.03
6	.02	5.8	.52	.51	7.7	10	3.1	.24	.05	.18	.03	.03
7	.02	4.4	.49	.34	8.0	34	2.3	.19	.04	.00	.02	.03
8	.02	3.4	.40	.34	6.6	28	2.1	.18	.03	.00	.02	.02
9	.03	2.8	.39	5.0	5.2	46	2.0	.18	.02	.00	3.5	.01
10	.03	3.1	.39	.42	4.6	129	4.1	.19	.02	.00	8.5	.00
11	1.5	5.0	.38	.33	4.1	56	e2.7	.15	.02	.00	.13	.00
12	.03	3.6	.70	10	3.4	39	e1.8	.13	.02	.00	17	.03
13	.03	2.9	.30	3.8	4.1	32	1.6	.11	.02	.00	5.4	.04
14	.03	2.6	.23	2.5	7.2	25	1.3	.08	.02	.00	3.2	4.5
15	.03	2.4	.20	2.1	7.0	19	.94	.07	.02	.00	46	1.8
16	.03	1.9	.22	3.2	5.8	14	.85	.06	.01	.00	6.2	.07
17	.03	1.7	.18	3.0	6.0	10	.82	.05	.00	.00	2.2	.06
18	.03	e1.6	.17	2.2	9.9	7.9	.74	.05	.00	.00	1.4	.06
19	.03	e1.4	.19	2.2	13	6.4	.62	2.8	.00	.00	17	.05
20	.03	e1.4	.23	2.7	14	5.6	.64	.43	.00	.00	7.1	.05
21	8.6	e1.3	.21	2.8	14	4.9	5.1	e.30	.00	.00	1.2	.05
22	75	e1.2	.18	3.7	12	4.4	2.6	e.25	.00	.00	e.10	.04
23	10	e1.1	.18	4.2	12	4.2	1.8	.23	.45	.00	.07	.04
24	.68	e1.1	.18	4.6	9.9	4.0	1.1	.16	.01	.00	.06	.03
25	.18	e1.0	.18	5.0	8.8	3.9	.87	.11	.00	.79	.05	.02
26	.11	e1.0	.16	4.6	9.3	3.7	.73	.07	.00	1.3	.05	.01
27	191	e1.0	.16	5.8	9.7	3.7	.65	.06	.00	.01	.04	.01
28	26	e.96	.17	4.5	14	3.6	.54	.06	.00	.00	.04	.00
29	9.2	e.96	.23	4.1	---	3.5	.42	.06	.00	.00	.04	.00
30	59	.82	.23	4.0	---	3.5	.33	.06	.00	.00	.05	.00
31	25	---	.23	3.4	---	3.2	---	.05	---	.00	.05	---
TOTAL	407.24	94.34	9.88	86.48	216.0	559.5	53.55	7.78	0.94	2.28	125.50	7.40
MEAN	13.1	3.14	.32	2.79	7.71	18.0	1.78	.25	.031	.074	4.05	.25
MAX	191	12	.70	10	14	129	5.1	2.8	.45	1.3	46	4.5
MIN	.02	.82	.16	.18	2.9	3.2	.33	.05	.00	.00	.00	.00
MED	.03	2.2	.23	2.8	7.1	10	1.7	.16	.02	.00	.07	.04
AC-FT	808	187	20	172	428	1110	106	15	1.9	4.5	249	15
CFSM	.44	.10	.01	.09	.26	.60	.06	.01	.00	.00	.13	.01

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2001, BY WATER YEAR (WY)

	MEAN	2.49	.91	.79	7.08	17.4	20.3	6.36	.92	.31	5.31	5.94	5.85
MAX	13.1	3.14	2.39	27.5	85.5	74.1	31.6	3.92	1.15	24.4	18.4	14.0	
(WY)	2001	2001	1998	1995	1995	1995	1998	1998	1999	1999	2000	1997	
MIN	.085	.14	.20	.21	.60	.70	.25	.027	.002	.000	.29	.25	
(WY)	1997	1996	2000	1996	1996	1999	1996	1996	1996	1997	1996	2001	

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1995 - 2001

ANNUAL TOTAL	1458.57	1570.89	
ANNUAL MEAN	3.99	4.30	6.16
HIGHEST ANNUAL MEAN			18.6
LOWEST ANNUAL MEAN			1.18
HIGHEST DAILY MEAN	191	Oct 27	940
LOWEST DAILY MEAN	.00	Jun 17	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 14	.00
ANNUAL RUNOFF (AC-FT)	2890	3120	4460
ANNUAL RUNOFF (CFSM)	.13	.14	.21
10 PERCENT EXCEEDS	6.0	9.8	12
50 PERCENT EXCEEDS	.27	.39	.30
90 PERCENT EXCEEDS	.02	.00	.01

e Estimated

**GILA RIVER BASIN**  
**09502960 GRANITE CREEK AT PRESCOTT, AZ--Continued**  
**WATER-QUALITY RECORDS**

PERIOD OF RECORD --Sept. 1994 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
APR 11...	1055	3.1	630	10.4	105	7.9	422	12.5	7.5	170	170	47.4	12.9
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS N) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
APR 11...	1.92	.7	21.7	160	3	0	27.3	.2	16.8	18.5	.20	149	<.041
DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/ 100 ML) (31673)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
APR 11...	.31	.082	<.006	.39	.084	<.060	.027	.077	300	450	620	E1.6	81.1
DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
APR 11...	<1.00	45	<8.00	<10.0	<13.0	<4.7	40	<.08	E3.9	98.5	<.01	<45.0	<53.0
DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	ALDRIN, TOTAL (UG/L) (39330)	ALPHA BHC TOTAL (UG/L) (39337)	ALPHA- HCH-D6 SUR SCD 1608 WATER UNFLTRD PERCENT (99778)	AROCLOR 1016/ 1242 PCB WATER UNFLTRD (81648)	AROCLOR 1221 PCB TOTAL (UG/L) (39488)	AROCLOR 1232 PCB TOTAL (UG/L) (39492)	AROCLOR 1248 PCB TOTAL (UG/L) (39500)
APR 11...	<2.4	<4.6	299	<8.0	<20	<1	<.040	<.03	59	<.10	<1	<.1	<.1
DATE	AROCLOR 1254 PCB TOTAL (UG/L) (39504)	AROCLOR 1260 PCB TOTAL (UG/L) (39508)	BETA BENZENE HEXA- CHLOR- IDE TOTAL (UG/L) (39338)	CHLOR- DANE CIS WATER WHOLE TOTAL (UG/L) (39062)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L) (39350)	CHLOR- DANE TRANS WATER WHOLE TOTAL (UG/L) (39065)	DELTA BENZENE HEXA- CHLOR- IDE TOTAL (UG/L) (34259)	DI- ELDRIN TOTAL (UG/L) (39380)	ENDO- SULFAN- I WATER WHOLE REC (34361)	ENDO- SULFAN II TOTAL (UG/L) (34356)	ENDO- SULFAN SULFATE TOTAL (UG/L) (34351)	ENDRIN ALDE- HYDE TOTAL (UG/L) (34366)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)
APR 11...	<.1	<.1	<.03	<.1	<.1	<.1	<.09	<.020	<.1	<.04	<.6	<.2	<.060

## GILA RIVER BASIN

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## 09502960 GRANITE CREEK AT PRESCOTT, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	HEPTA- CHLOR EPOXIDE TOTAL (UG/L) (39420)	HEPTA- CHLOR, TOTAL (UG/L) (39410)	HYDRO- CARBONS PET.WAT FREON CHR. IR. RECOV. (MG/L) (45501)	ISODRIN SUR SCD 1608 WTR, UNFLTRD PERCENT (90570)	LINDANE TOTAL (UG/L) (39340)	PCB 207 SUR SCD 1608 WATER UNFLTRD PERCENT (99781)	P,P' DDD, TOTAL (UG/L) (39310)	P,P' DDE, TOTAL (UG/L) (39320)	P,P' DDT, TOTAL (UG/L) (39300)	TOX- APHENE, TOTAL (UG/L) (39400)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)
APR 11...	<.800	<.030	3	52	<.030	66	<.1	<.04	<.1	<2	<.03	<.06	<.04
DATE	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1-DI- CHLORO- PRO- PENE, WAT, WH TOTAL (UG/L) (77168)	123-TRI- CHLORO- PROPANE WATER WHOLE TOTAL (UG/L) (77443)	1,2- DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	2,2-DI- CHLORO- PRO- PANE WAT, WH TOTAL (UG/L) (77170)	2BUTENE TRANS-1 4-DI- CHLORO UNFLTRD RECOVER (UG/L) (73547)	2-HEXA- NONE WATER WHOLE TOTAL (UG/L) (77103)	ACETONE WATER WHOLE TOTAL (UG/L) (81552)	ACRYLO- NITRILE TOTAL (UG/L) (34215)	1,2,3- TRI- CHLORO BENZENE WAT, WH REC TOTAL (UG/L) (77613)
APR 11...	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05	<.7	<.7	<7	<1	<.3
DATE	BENZENE 123-TRI- METHYL- WATER UNFLTRD RECOVER (UG/L) (77221)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (UG/L) (34551)	BENZENE 124-TRI- METHYL UNFLTRD RECOVER (UG/L) (77222)	BENZENE 135-TRI- METHYL WATER UNFLTRD REC (UG/L) (77226)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 14BRFL- SURROG UNFLTRD REC PERCENT (99834)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)	ISO- PROPYL- BENZENE WHOLE UNFLTRD REC (UG/L) (77223)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L) (77342)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L) (77224)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	BENZENE SEC BUTYL- WATER UNFLTRD REC (UG/L) (77350)	BENZENE TERT- BUTYL- WATER UNFLTRD REC (UG/L) (77353)
APR 11...	<.1	<.2	<.06	<.04	<.03	85	<.05	<.03	<.2	<.04	<.03	<.03	<.06
DATE	BENZENE TOTAL (UG/L) (34030)	BROMO- BENZENE WATER, WHOLE TOTAL (UG/L) (81555)	BROMO- ETHENE WATER UNFLTRD RECOVER (UG/L) (50002)	BROMO- FORM TOTAL (UG/L) (32104)	CARBON DI- SULFIDE WATER WHOLE TOTAL (UG/L) (77041)	CARBON TETRA- CHLOR- RIDE TOTAL (UG/L) (32102)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- ETHANE TOTAL (UG/L) (34311)	CHLORO- FORM TOTAL (UG/L) (32106)	CIS-1,2 -DI- CHLORO- ETHENE TOTAL (UG/L) (77093)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	DIBROMO CHLORO- PROPANE WATER WHOLE TOT.REC (UG/L) (82625)
APR 11...	E.02	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1	<.02	<.04	<.09	<.2
DATE	DI- BROMO- METHANE WATER WHOLE RECOVER (UG/L) (30217)	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	DI-ISO- PROPYL- ETHER, WATER, UNFLTRD RECOVER (UG/L) (81577)	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC (UG/L) (77562)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	ETHANE 12DICL SURROG UNFLTRD REC PERCENT (99832)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (UG/L) (34396)	ETHER ETHYL WATER UNFLTRD RECOVER (UG/L) (81576)	ETHER TERT- BUTYL ETHYL UNFLTRD RECOVER (UG/L) (50004)	ETHER TERT- PENTYL METHYL UNFLTRD RECOVER (UG/L) (50005)	ETHYL- BENZENE TOTAL (UG/L) (34371)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)
APR 11...	<.05	<.05	<.3	<.1	<.03	<.09	105	<.2	<.2	<.05	<.1	<.03	<.06
DATE	FURAN, TETRA- HYDRO- WATER UNFLTRD RECOVER (UG/L) (81607)	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L) (39702)	ISO- DURENE WATER UNFLTRD RECOVER (UG/L) (50000)	METHAC- RYLATE ETHYL- WATER UNFLTRD RECOVER (UG/L) (73570)	METHAC- RYLATE METHYL WATER UNFLTRD RECOVER (UG/L) (81597)	METH- ACRYLO- NITRILE WATER UNFLTRD RECOVER (UG/L) (81593)	METHANE BROMO CHLORO- WAT UNFLTRD REC (UG/L) (77297)	METHYL ACRY- LATE WATER UNFLTRD RECOVER (UG/L) (49991)	METHYL IODIDE WATER UNFLTRD RECOVER (UG/L) (77424)	METHYL TERT- BUTYL ETHER WAT UNF REC (UG/L) (78032)	METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLOR- RIDE TOTAL (UG/L) (34418)	METHYL ENE CHLOR- RIDE TOTAL (UG/L) (34423)
APR 11...	<2	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	.7	<.3	<.2	<.2



## GILA RIVER BASIN

## 09502960 GRANITE CREEK AT PRESCOTT, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	METHYL-ETHYL-KETONE WATER TOTAL (UG/L)	METHYL-ISO-BUTYL KETONE WAT. WH. TOTAL (UG/L)	META/PARA-XYLENE WATER UNFLTRD REC (UG/L)	NAPHTH-ALENE WATER TOTAL (UG/L)	O-CHLORO-TOLUENE WATER TOTAL (UG/L)	O-XYLENE WATER TOTAL (UG/L)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L)	1234-TETRA METHYL BENZENE UNFLTRD REC (UG/L)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L)	PROPENE 3-CHLORO-WATER UNFLTRD RECOVER (UG/L)	STYRENE TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TOLUENE D8 SURROG VOC UNFLTRD REC PERCENT
APR 11...	<2	<.4	<.06	<.2	<.03	<.04	<.07	<.2	<.1	<.1	<.04	M	100
DATE	TOLUENE O-ETHYL-WATER UNFLTRD RECOVER (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	TOLUENE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	VINYL CHLO- RIDE TOTAL (UG/L)	SEDI-MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI-MENT, DIS- CHARGE, SUS- PENDE (T/DAY)				
APR 11...	<.06	<.06	E.04	<.09	<.04	<.09	<.1	4	.03				

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

## 09503000 GRANITE CREEK NEAR PRESCOTT, AZ

**LOCATION.**--Lat 34°34', long 112°27', in SW1/4 sec.26, T.14 N., R.2 W., (unsurveyed), Yavapai County, Hydrologic Unit 15060202, at bridge on U.S. Highway 89, 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

**GAGE.**--Water-stage recorder. Datum of gage is 5,204.29 ft above sea level from surveyed bench-mark elevation and levels survey.

**REMARKS.**--No estimated daily discharges. Records fair. Flow is partly regulated by Goldwater Reservoirs on Bannock 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. 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 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.....	0145	712	6.15	Mar. 9.....	2315	581	5.90
Oct. 27.....	1600	902	6.47	Aug. 15.....	1900	*928	*6.51

No flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	16	1.5	.98	3.5	12	3.2	1.4	.09	.01	.01	.08
2	.12	11	1.5	.98	3.6	12	3.1	1.3	.09	.01	.01	2.0
3	.10	8.1	1.3	.98	3.6	13	2.8	1.2	.07	.01	1.1	.11
4	.49	8.5	1.3	.98	4.2	11	2.8	1.3	.05	.01	5.7	.09
5	.48	6.9	1.3	1.0	6.3	10	3.1	1.3	.05	.01	2.0	.06
6	.27	6.7	1.3	1.2	9.1	10	3.7	1.2	.05	.01	.36	.06
7	.19	5.4	1.3	1.2	9.9	36	2.7	1.1	.05	.02	.17	.05
8	.13	4.1	1.3	1.2	8.2	30	2.4	1.1	.04	.01	.14	.05
9	.13	3.7	1.3	6.8	6.1	53	2.4	.90	.02	.01	4.0	.04
10	.24	3.7	1.3	2.0	5.4	169	5.1	.83	.02	.01	11	.04
11	1.6	5.2	1.3	1.5	4.8	52	3.6	.76	.02	.01	3.1	.04
12	.58	4.2	1.3	13	4.2	39	3.1	.70	.02	.01	25	.06
13	.38	3.5	1.4	4.2	5.2	33	2.7	.61	.02	.01	3.4	.07
14	.32	3.2	1.3	2.8	9.5	28	2.4	.61	.02	.01	.81	2.7
15	.28	3.1	1.3	2.4	9.2	23	2.1	.61	.02	.00	61	3.1
16	.22	2.8	1.2	3.5	7.6	19	2.1	.54	.02	.00	10	1.2
17	.22	2.4	1.2	3.9	7.6	16	2.1	.48	.02	.00	2.3	.17
18	.22	2.2	1.2	2.7	13	14	2.0	.48	.01	.00	1.2	.12
19	.22	2.1	1.1	2.5	16	12	2.0	2.3	.01	.00	20	.09
20	.22	2.1	1.2	2.8	17	11	2.0	2.7	.01	.00	17	.08
21	3.3	2.1	1.2	3.0	17	9.2	7.3	.84	.02	.00	2.8	.08
22	105	2.1	1.2	3.7	15	8.5	4.9	.55	.02	.00	.71	.07
23	16	2.1	1.2	4.5	14	7.2	3.6	.46	.02	.00	.35	.05
24	4.5	1.8	1.2	4.8	11	6.4	2.7	.37	.01	.00	.29	.05
25	2.8	1.8	1.2	5.4	9.3	5.8	2.3	.32	.02	.00	.23	.05
26	2.1	1.8	1.2	4.9	9.7	5.3	2.1	.29	.02	.27	.16	.05
27	190	1.8	1.0	6.5	9.4	4.8	2.0	.22	.01	.25	.13	.05
28	31	1.6	.98	5.4	16	4.4	1.9	.22	.01	.03	.11	.04
29	13	1.5	1.0	4.7	---	4.1	1.5	.19	.01	.01	.11	.05
30	69	1.5	1.0	4.4	---	4.2	1.4	.14	.01	.01	.10	.04
31	29	---	1.0	3.8	---	3.5	---	.12	---	.01	.10	---
TOTAL	472.25	123.0	38.08	107.72	255.4	666.4	85.1	25.14	0.85	0.73	173.39	10.74
MEAN	15.2	4.10	1.23	3.47	9.12	21.5	2.84	.81	.028	.024	5.59	.36
MAX	190	16	1.5	13	17	169	7.3	2.7	.09	.27	61	3.1
MIN	.10	1.5	.98	.98	3.5	3.5	1.4	.12	.01	.00	.01	.04
AC-FT	937	244	76	214	507	1320	169	50	1.7	1.4	344	21
CFSM	.42	.11	.03	.10	.25	.59	.08	.02	.00	.00	.15	.01

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1947, 1994 - 2001, BY WATER YEAR (WY)

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	1.39	.70	2.63	5.21	19.1	24.2	8.11	1.10	.28	2.71	4.21	2.99												
MAX	15.2	4.10	32.9	35.4	159	79.2	67.2	7.03	1.59	32.0	23.0	17.1												
(WY)	2001	2001	1941	1941	1937	1941	1941	1941	1999	1999	2000	1999												
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.003	.000												
(WY)	1933	1933	1933	1934	1934	1934	1934	1935	1933	1934	1947	1932												

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

WATER YEARS  
1932 - 1947, 1994-2001

ANNUAL TOTAL	1799.35	1958.80	
ANNUAL MEAN	4.92	5.37	5.95
HIGHEST ANNUAL MEAN			24.2
LOWEST ANNUAL MEAN			.37
HIGHEST DAILY MEAN	190	190	1450
LOWEST DAILY MEAN	.01	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.01	.01	.00
ANNUAL RUNOFF (AC-FT)	3570	3890	4310
ANNUAL RUNOFF (CFSM)	.14	.15	.16
10 PERCENT EXCEEDS	6.5	11	11
50 PERCENT EXCEEDS	.81	1.3	.27
90 PERCENT EXCEEDS	.05	.01	.00

## GILA RIVER BASIN

## 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.**--No estimated daily discharges. Records poor. Flow is partially regulated by Goldwater Reservoirs (2) on Bannock 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, 247 ft<sup>3</sup>/s Sept. 23, 1999, gage height 4.87 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, 184 ft<sup>3</sup>/s Aug.03, gage height, 4.74 ft; minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	.31	.00	.06	.42	.43	.96	.32	.00	.14	.00	.00
2	.00	.11	.00	.07	.41	.22	.96	.33	.00	.15	.00	.00
3	.00	.13	.00	.09	.42	.22	.54	.44	.00	.00	11	.00
4	.00	1.0	.00	.09	.42	.22	.14	.23	.00	.00	1.3	.00
5	.00	.69	.00	.09	.38	.21	.14	.18	.00	.00	.00	.00
6	.00	.18	.00	.09	.33	.22	.14	.19	.00	.00	.00	.00
7	.00	.08	.00	.09	.42	5.3	.14	.18	.00	.00	.00	.00
8	.00	.00	.00	.09	.45	2.6	.14	.18	.00	.00	.00	.00
9	.00	.00	.00	.16	.42	1.7	.15	.15	.00	.00	.00	.00
10	.00	.00	.00	.10	.43	62	.15	.15	.00	.00	.01	.00
11	.00	.00	.00	.09	.42	56	.14	.16	.06	.00	.00	.00
12	.00	.00	.00	2.5	.51	29	.14	.13	.11	.11	14	.00
13	.00	.00	.00	.96	.67	18	.14	.14	.19	.12	5.1	.00
14	.00	.00	.00	.47	4.6	13	.14	.14	.19	.12	.00	.00
15	.00	.00	.00	.27	3.9	9.7	.14	.11	.18	.08	.55	.00
16	.00	.00	.00	1.4	2.9	7.0	.14	.10	.16	.07	.00	.00
17	.00	.00	.00	2.5	2.3	4.3	.14	.09	.13	.06	.00	.00
18	.00	.00	.00	2.5	2.3	3.2	.16	.08	.11	.00	.00	.00
19	.00	.00	.00	.99	1.5	1.7	.19	.12	.09	.00	.00	.00
20	.00	.00	.00	.79	.96	.79	.20	.08	.10	.00	.00	.00
21	.00	.00	.00	.82	1.1	.34	.22	.02	.14	.00	.00	.00
22	4.7	.00	.00	.68	1.3	.22	.25	.00	.17	.00	.00	.00
23	.00	.00	.00	.93	1.1	.22	.25	.00	.26	.00	.00	.00
24	.00	.00	.00	.62	.70	.23	.25	.00	.34	.00	.00	.00
25	.00	.00	.00	.44	.42	.27	.25	.00	.34	.00	.00	.00
26	.00	.00	.00	.32	.47	.28	.22	.00	.37	.00	.00	.00
27	12	.00	.00	.56	.38	.36	.23	.00	.31	.00	.00	.00
28	3.0	.00	.00	.75	.60	.69	.25	.00	.22	.00	.00	.00
29	2.5	.00	.00	.51	---	1.3	.33	.00	.21	.00	.00	.00
30	3.8	.00	.00	.42	---	1.1	.35	.03	.14	.00	.00	.00
31	2.7	---	.03	.42	---	.96	---	.08	---	.00	.00	---
TOTAL	33.20	2.50	0.03	19.87	30.23	221.78	7.59	3.63	3.82	0.85	31.96	0.00
MEAN	1.07	.083	.001	.64	1.08	7.15	.25	.12	.13	.027	1.03	.000
MAX	12	1.0	.03	2.5	4.6	62	.96	.44	.37	.15	14	.00
MIN	.00	.00	.00	.06	.33	.21	.14	.00	.00	.00	.00	.00
MED	.00	.00	.00	.44	.49	.96	.17	.11	.12	.00	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2001, BY WATER YEAR (WY)

MEAN	.55	.081	.069	.38	.62	3.81	.19	.059	.064	.017	.89	2.40
MAX	1.07	.083	.14	.64	1.08	7.15	.25	.12	.13	.027	1.03	11.0
(WY)	2001	2001	2000	2001	2001	2001	2001	2001	2001	2001	2001	1999
MIN	.036	.079	.001	.11	.19	.46	.13	.000	.000	.006	.75	.000
(WY)	2000	2000	2001	2000	2000	2000	2000	2000	2000	2000	2000	2001

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1999 - 2001	
ANNUAL TOTAL	100.23		355.46			
ANNUAL MEAN	.27		.97		.80	
HIGHEST ANNUAL MEAN					11.0	
LOWEST ANNUAL MEAN					.20	
HIGHEST DAILY MEAN	12	Oct 27	62	Mar 10	82	Sep 23 1999
LOWEST DAILY MEAN	.00	Apr 16	.00	Oct 2	.00	Oct 7 1999
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 16	.00	Oct 2	.00	Oct 14 1999
10 PERCENT EXCEEDS	.23		1.2		.67	
50 PERCENT EXCEEDS	.00		.08		.05	
90 PERCENT EXCEEDS	.00		.00		.00	

## 09503700 VERDE RIVER NEAR PAULDEN, AZ

**LOCATION.**--Lat 34°53'40", long 112°20'32", in SW1/4SE1/4 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.**--No estimated daily discharges. Records good. 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 28 .....	0130	*633	*3.97

Minimum daily discharge, 21 ft<sup>3</sup>/s Oct. 1-3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	31	27	26	26	27	25	24	22	22	23	25
2	21	49	27	26	26	26	25	24	22	21	23	25
3	21	38	27	26	26	26	25	24	22	21	24	25
4	22	32	27	26	27	26	25	24	22	21	25	25
5	22	29	27	26	27	26	25	24	22	22	23	25
6	21	28	27	26	27	26	25	24	22	22	23	25
7	21	28	27	26	27	27	25	24	22	22	25	25
8	21	27	27	26	27	27	25	24	22	22	25	25
9	21	27	27	27	27	26	25	24	22	22	25	25
10	22	27	27	26	27	27	25	24	22	22	36	25
11	21	29	27	26	27	26	25	24	22	22	26	25
12	21	28	27	28	27	27	25	24	21	22	25	25
13	22	27	27	27	27	26	25	24	22	22	25	27
14	22	27	27	26	28	26	25	24	22	22	25	26
15	22	27	27	26	27	26	25	24	22	21	25	26
16	22	27	27	26	27	26	25	23	22	21	24	40
17	22	27	27	26	27	25	25	23	21	21	24	33
18	22	27	27	26	27	25	25	23	21	22	24	24
19	22	27	27	26	27	25	25	24	21	22	24	22
20	22	27	27	26	27	25	25	24	21	22	25	22
21	23	27	27	26	27	25	25	23	21	22	25	22
22	45	27	26	26	27	25	25	23	22	22	25	22
23	25	27	27	26	27	25	25	23	22	22	24	22
24	23	27	27	26	27	25	25	23	22	22	24	22
25	22	27	27	26	27	25	25	23	22	23	24	22
26	22	27	27	26	27	25	24	23	22	22	24	22
27	117	27	27	27	27	25	25	23	21	22	24	22
28	173	27	27	27	27	25	25	23	21	22	24	22
29	56	27	27	26	---	25	24	22	21	22	24	22
30	51	27	26	26	---	24	24	22	21	22	24	22
31	41	---	26	26	---	24	---	22	---	23	25	---
TOTAL	1029	859	834	812	754	794	747	727	650	678	766	740
MEAN	33.2	28.6	26.9	26.2	26.9	25.6	24.9	23.5	21.7	21.9	24.7	24.7
MAX	173	49	27	28	28	27	25	24	22	23	36	40
MIN	21	27	26	26	26	24	24	22	21	21	23	22
AC-FT	2040	1700	1650	1610	1500	1570	1480	1440	1290	1340	1520	1470
CFSM	.02	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
IN.	.02	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2001, BY WATER YEAR (WY)

	MEAN	31.1	26.9	41.2	58.0	115	73.1	32.6	24.9	24.0	25.7	30.6	37.4
MAX	200	43.7	295	861	1443	669	155	30.7	36.4	80.9	440		
(WY)	1973	1986	1966	1993	1993	1978	1965	1967	1995	1996	1964	1983	
MIN	18.7	20.4	21.9	21.7	19.6	19.3	21.3	16.2	20.1	18.4	21.5	20.4	
(WY)	1964	1965	1978	1972	1964	1972	1972	1964	1964	1963	2000	1978	

## SUMMARY STATISTICS

## FOR 2001 WATER YEAR

## WATER YEARS 1963 - 2001

ANNUAL TOTAL	9390		
ANNUAL MEAN	25.7	42.9	
HIGHEST ANNUAL MEAN		215	1993
LOWEST ANNUAL MEAN		22.5	2000
HIGHEST DAILY MEAN	173	Oct 28	13700 Feb 20 1993
LOWEST DAILY MEAN	21	Oct 1	15 May 13 1964
ANNUAL SEVEN-DAY MINIMUM	21	Oct 6	15 May 13 1964
ANNUAL RUNOFF (AC-FT)	18630		31060
ANNUAL RUNOFF (CFSM)	.012		.020
ANNUAL RUNOFF (INCHES)	.16		.27
10 PERCENT EXCEEDS	27		29
50 PERCENT EXCEEDS	25		25
90 PERCENT EXCEEDS	22		22

## GILA RIVER BASIN

## 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.**--No estimated daily discharges. Records good.

**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, Sept. 1, 1920.

**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)
Oct. 27 .....	2230	*4,290	*6.02

Minimum daily discharge, 67 ft<sup>3</sup>/s on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	195	77	80	77	87	77	73	67	69	95	73
2	69	119	77	80	77	101	77	73	67	68	78	73
3	69	109	77	80	77	117	77	72	67	69	77	72
4	71	98	77	80	77	116	77	72	68	68	87	72
5	72	88	77	81	77	117	77	72	68	70	83	71
6	70	83	77	81	78	102	81	72	67	93	82	72
7	70	80	78	81	77	98	78	72	67	92	77	72
8	70	79	78	81	78	104	77	72	67	73	82	72
9	70	78	78	84	79	210	77	71	67	72	149	72
10	71	78	78	81	80	251	79	71	67	73	121	72
11	71	80	78	81	80	651	79	71	67	72	87	72
12	71	80	79	86	79	517	78	71	67	71	82	72
13	71	78	79	83	79	755	77	71	67	71	81	75
14	71	78	78	81	82	1040	74	71	68	81	110	74
15	71	77	78	80	80	914	75	70	68	74	94	74
16	71	77	78	81	79	387	75	70	68	69	81	73
17	71	77	78	80	80	258	74	70	68	69	79	75
18	71	77	78	79	79	193	74	70	68	69	77	78
19	71	77	78	79	79	140	74	72	67	70	77	74
20	71	76	78	78	79	115	74	72	67	71	78	73
21	74	77	78	77	80	106	75	71	67	69	78	72
22	172	77	78	77	85	98	76	70	69	69	76	71
23	123	77	79	77	84	92	74	70	69	69	75	69
24	88	77	80	76	82	87	74	69	69	69	75	69
25	78	76	79	76	81	85	73	68	69	70	74	70
26	76	76	79	77	84	81	73	68	71	72	74	70
27	580	77	79	80	83	80	73	68	70	70	73	69
28	947	77	80	79	83	79	74	68	69	70	72	70
29	204	77	80	78	---	78	73	68	70	69	73	70
30	154	77	80	77	---	77	73	68	70	72	73	70
31	361	---	80	77	---	77	---	67	---	160	74	---
TOTAL	4268	2552	2428	2468	2235	7213	2269	2183	2040	2323	2594	2161
MEAN	138	85.1	78.3	79.6	79.8	233	75.6	70.4	68.0	74.9	83.7	72.0
MAX	947	195	80	86	85	1040	81	73	71	160	149	78
MIN	69	76	77	76	77	77	73	67	67	68	72	69
AC-FT	8470	5060	4820	4900	4430	14310	4500	4330	4050	4610	5150	4290

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2001, BY WATER YEAR (WY)

	MEAN	116	124	188	202	452	468	199	87.6	76.8	102	101	105
MAX	1080	736	1032	2800	3485	2763	1520	355	90.5	670	201	670	670
(WY)	1973	1920	1966	1993	1980	1978	1973	1973	1987	1919	1919	1983	1983
MIN	67.9	69.6	75.0	73.4	73.8	73.2	68.6	68.5	61.6	64.1	74.4	66.3	66.3
(WY)	1979	1967	1968	1967	1972	1972	1968	1966	1974	1978	1976	1920	1920

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1915 - 2001
ANNUAL TOTAL	30434	34734	
ANNUAL MEAN	83.2	95.2	182
HIGHEST ANNUAL MEAN			645
LOWEST ANNUAL MEAN			77.5
HIGHEST DAILY MEAN	947	1040	30000
LOWEST DAILY MEAN	67	67	55
ANNUAL SEVEN-DAY MINIMUM	67	67	59
INSTANTANEOUS PEAK FLOW			50600
INSTANTANEOUS PEAK STAGE			19.10
ANNUAL RUNOFF (AC-FT)	60370	68890	131700
10 PERCENT EXCEEDS	83	96	192
50 PERCENT EXCEEDS	76	77	82
90 PERCENT EXCEEDS	68	69	73



## GILA RIVER BASIN

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## 09504000 VERDE RIVER NEAR CLARKDALE, AZ--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Mar. 1976 to Oct. 1979, Jan. 1980 to Aug. 1983, Oct. 1986 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
NOV 01...	1400	9	170	61	675	9.0	97	8.0	331	16.0	13.5	140	36.0
MAR 06...	1030	9	103	6.4	676	8.2	89	8.3	442	5.5	13.5	190	45.0
APR 17...	0950	9	74	5.1	--	11.1	--	8.3	511	26.0	15.5	220	52.0
17...	1000	7	74	8.1	--	11.1	--	8.3	500	26.0	15.5	220	52.0
MAY 30...	0850	9	73	5.1	675	6.3	77	8.3	488	23.0	19.0	220	50.0
DATE	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
NOV 01...	40.0	13.0	14.0	2.10	.5	14.0	144	175	.0	9.7	.1	5.8	70
MAR 06...	44.0	18.0	18.0	1.70	.6	19.0	215	262	.0	9.6	.2	7.1	59
APR 17...	53.0	23.0	24.0	1.70	.7	23.0	264	322	.0	12.0	.2	7.8	8
17...	54.0	22.0	24.0	1.70	.7	23.0	260	318	.0	12.0	.2	7.8	12
MAY 30...	51.0	23.0	23.0	1.80	.7	24.0	249	304	.0	12.0	.2	7.5	12
DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, TOTAL (MG/L AS NO3) (71887)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (00340)	E COLI, MTEC MF WATER (COL/100 ML) (31633)
NOV 01...	.27	202	167	.58	.02	.03	.2	.56	.80	3.5	.130	--	240
MAR 06...	.35	254	230	.22	.04	.05	.1	.18	.34	1.5	<.020	<5	E6k
APR 17...	.39	289	278	<.20	<.01	--	M	--	--	<.020	<5	E10k	
17...	.39	289	275	.22	<.01	--	M	--	.25	1.1	<.020	15	--
MAY 30...	.38	283	268	<.20	.01	.01	M	--	--	<.020	<5	E18k	
DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BERYL-LIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	BORON, DIS-SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOVERABLE (UG/L AS B) (01022)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)
NOV 01...	140	<1.00	<1.0	9.4	11	94.0	120	<1.00	<1.00	89	88	<.50	<.50
MAR 06...	E3k	<1.00	<1.0	14.0	14	140	140	<1.00	<1.00	130	130	<.50	<.50
APR 17...	E12k	<1.00	<1.0	17.0	17	180	180	<1.00	<1.00	160	160	<.50	<.50
17...	--	<1.00	<1.0	16.0	18	180	180	<1.00	<1.00	160	160	<.50	<.50
MAY 30...	26	<1.00	<1.0	19.0	18	180	190	<1.00	<1.00	160	160	<.50	<.50

## GILA RIVER BASIN

## 09504000 VERDE RIVER NEAR CLARKDALE, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
NOV 01...	<1.0	4	<2.0	3.0	10	1900	<2.00	3	7.5	62	<.10	<.10	<1.00
MAR 06...	<1.0	<1	<2.0	<2.0	M	160	<2.00	<2	7.0	14	<.10	<.10	<1.00
APR 17...	<1.0	1	<2.0	<2.0	M	210	<2.00	<2	7.6	16	<.10	<.10	<1.00
17...	<1.0	1	<2.0	<2.0	M	250	<2.00	<2	7.6	18	<.10	<.10	<1.00
MAY 30...	<1.0	<1	<2.0	<2.0	M	180	<2.00	<2	6.1	13	<.10	<.10	<1.00

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL RECOV- ERABLE (UG/L AS TL) (01059)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 01...	4	<1.0	<1.0	<1.0	<1.00	140	<2.00	<2.0	<2	6	64	29
MAR 06...	<1	<1.0	<1.0	<1.0	<1.00	160	<2.00	<2.0	<2	<2	16	4.4
APR 17...	<1	<1.0	<1.0	<1.0	<1.00	190	<2.00	<2.0	<2	<2	12	2.4
17...	<1	<1.0	<1.0	<1.0	<1.00	190	<2.00	<2.0	<2	<2	58	12
MAY 30...	<1	<1.0	<1.0	<1.0	<1.00	190	<2.00	<2.0	<2	4	18	3.5

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range

## GILA RIVER BASIN

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## 09504000 VERDE RIVER NEAR CLARKDALE, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
MAR 06...	1035	2	.02	<.030	<.1	<.02	.03	<.20	<.020	<3	<.50	<1.00	<.50
DATE		CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)					
MAR 06...		<1.0	<2.0	<2	<2.00	<1.0	<1.00	<2					

Remark codes used in this report:  
< -- Less than

## 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 (AZ Department of Transportation bench mark).

**REMARKS.**--No estimated daily discharges. Records good. 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 13.....	1830	*817	*4.95

Minimum daily discharge, 27 ft<sup>3</sup>/s on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	72	34	34	41	126	38	31	29	32	27	28
2	29	48	33	34	39	116	36	30	30	33	28	28
3	29	37	33	34	46	116	35	30	29	32	27	28
4	30	43	33	34	120	97	35	31	29	31	28	28
5	30	54	32	34	189	96	37	30	30	41	28	28
6	29	44	32	35	222	112	67	30	30	27	27	28
7	29	36	32	34	248	191	124	30	29	28	27	27
8	29	34	32	34	167	266	131	30	29	28	29	27
9	29	33	32	38	99	257	85	30	29	28	28	27
10	30	35	32	36	79	397	68	30	29	28	29	27
11	30	38	32	35	68	275	66	29	29	28	35	28
12	29	36	32	56	57	259	188	30	29	28	31	27
13	29	35	33	45	54	437	230	31	29	29	43	41
14	29	35	32	40	54	520	184	30	29	29	52	29
15	29	39	32	39	45	409	97	29	29	29	31	29
16	29	37	32	44	44	236	65	29	29	28	30	29
17	29	35	32	43	46	210	50	29	29	28	29	29
18	29	35	32	40	82	165	42	29	29	28	29	28
19	29	35	33	39	133	158	37	31	29	28	29	28
20	29	34	33	39	142	186	35	31	29	28	32	28
21	49	34	33	39	139	183	34	30	29	27	30	28
22	77	34	33	41	137	162	35	30	29	27	29	28
23	35	38	33	46	128	140	33	29	30	27	28	28
24	34	41	32	57	93	106	33	29	33	27	28	28
25	32	39	33	79	68	85	32	29	33	28	28	28
26	31	36	33	67	77	71	32	29	33	29	28	28
27	60	34	33	59	99	62	32	29	33	28	28	28
28	45	34	34	51	122	54	31	29	33	27	28	28
29	40	33	34	47	---	48	31	29	31	27	28	28
30	86	34	34	46	---	44	31	29	31	28	28	28
31	99	---	34	42	---	40	---	29	---	27	28	---
TOTAL	1172	1152	1014	1341	2838	5624	1974	921	898	893	930	852
MEAN	37.8	38.4	32.7	43.3	101	181	65.8	29.7	29.9	28.8	30.0	28.4
MAX	99	72	34	79	248	520	230	31	33	41	52	41
MIN	29	33	32	34	39	40	31	29	29	27	27	27
AC-FT	2320	2280	2010	2660	5630	11160	3920	1830	1780	1770	1840	1690

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2001, BY WATER YEAR (WY)

	MEAN	36.5	53.0	86.7	106	186	263	124	34.7	28.4	30.6	32.6	38.0
	MAX	96.4	191	362	1084	980	703	376	67.1	34.0	44.5	49.1	103
	(WY)	1987	1983	1983	1993	1993	1982	1998	1983	1995	1986	1992	1983
	MIN	26.5	29.1	30.1	31.1	29.9	30.7	29.9	25.7	23.0	24.7	24.4	24.3
	(WY)	1995	1996	1996	1986	1996	1996	1989	1989	1985	1985	1985	1989

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1982 - 2001

ANNUAL TOTAL	13494	19609	
ANNUAL MEAN	36.9	53.7	84.5
HIGHEST ANNUAL MEAN			249
LOWEST ANNUAL MEAN			31.7
HIGHEST DAILY MEAN	407	Mar 29	520
LOWEST DAILY MEAN	26	Jul 29	27
ANNUAL SEVEN-DAY MINIMUM	27	Jul 23	27
ANNUAL RUNOFF (AC-FT)	26770	38890	61250
10 PERCENT EXCEEDS	42	114	135
50 PERCENT EXCEEDS	31	32	32
90 PERCENT EXCEEDS	27	28	27

## 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 except for estimated daily discharges, which are poor. 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 14.....	0045	*777	*3.97

Minimum daily discharge, 18 ft<sup>3</sup>/s on June 20, 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	98	36	36	40	113	39	28	22	22	22	25
2	20	63	36	34	39	133	35	27	21	22	21	25
3	20	48	35	34	38	114	34	26	21	22	23	26
4	20	48	34	34	57	101	34	27	21	21	24	26
5	21	68	35	33	140	87	34	27	21	22	26	28
6	20	50	34	34	199	95	57	27	20	50	25	e25
7	20	47	35	34	254	140	97	26	19	23	24	e25
8	19	37	35	34	201	262	148	26	19	22	27	e25
9	19	34	34	38	121	278	112	25	19	24	29	e25
10	21	33	33	36	90	338	84	25	19	24	28	e25
11	22	39	33	33	74	334	85	25	19	24	27	e25
12	22	40	33	45	63	310	106	24	19	23	30	e25
13	22	38	34	54	54	394	281	25	19	23	26	28
14	22	38	34	36	61	539	230	27	19	23	34	50
15	22	40	33	33	53	512	153	25	19	25	e50	32
16	22	40	34	36	44	278	99	24	19	25	e30	e30
17	22	39	33	38	46	219	71	24	19	23	e28	e35
18	21	37	35	38	51	184	54	25	19	22	e28	e30
19	21	35	35	37	111	157	45	28	19	23	e28	31
20	21	36	36	37	150	180	39	31	18	26	e30	e30
21	31	35	35	38	142	196	34	28	19	27	32	e30
22	272	34	35	38	139	174	36	25	18	24	28	31
23	76	34	36	40	132	155	35	24	20	e24	28	29
24	51	37	35	44	115	130	34	23	21	e24	27	27
25	40	39	35	60	81	98	33	23	21	e24	26	26
26	36	40	35	65	69	80	31	22	21	e24	27	26
27	72	38	36	59	95	68	30	22	21	e24	28	26
28	178	39	35	54	111	55	29	21	23	e24	28	27
29	68	37	36	48	---	50	29	21	24	e24	27	26
30	44	37	36	43	---	41	28	22	23	26	26	26
31	254	---	36	41	---	39	---	22	---	25	26	---
TOTAL	1539	1278	1077	1264	2770	5854	2156	775	602	759	863	845
MEAN	49.6	42.6	34.7	40.8	98.9	189	71.9	25.0	20.1	24.5	27.8	28.2
MAX	272	98	36	65	254	539	281	31	24	50	50	50
MIN	19	33	33	33	38	39	28	21	18	21	21	25
AC-FT	3050	2530	2140	2510	5490	11610	4280	1540	1190	1510	1710	1680

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2001, BY WATER YEAR (WY)

	MEAN	46.3	61.9	110	99.1	180	245	165	31.9	20.5	23.9	33.4	39.7
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	31.9	28.8	25.0	17.1	13.7	14.1	12.9	14.7	
(WY)	1990	1993	1996	1996	1970	1972	1996	1943	1943	1940	1944	1980	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1940 - 2001
ANNUAL TOTAL	13729	19782	
ANNUAL MEAN	37.5	54.2	86.5
HIGHEST ANNUAL MEAN			256
LOWEST ANNUAL MEAN			19.6
HIGHEST DAILY MEAN	355	539	14000
LOWEST DAILY MEAN	13	18	8.0
ANNUAL SEVEN-DAY MINIMUM	15	19	9.4
ANNUAL RUNOFF (AC-FT)	27230	39240	62630
10 PERCENT EXCEEDS	50	114	137
50 PERCENT EXCEEDS	30	33	32
90 PERCENT EXCEEDS	19	21	18

e Estimated



## GILA RIVER BASIN

## 09505200 WET BEAVER CREEK NEAR RIMROCK, AZ

**LOCATION.**--Lat 34°40'29", long 111°40'17", in NW1/4SW1/4 sec.24, T.15 N., R.6 E., Yavapai County, Hydrologic Unit 15060202, in Coconino National Forest, on right bank 4.5 mi northeast of Rimrock and 5.7 mi upstream from Red Tank Draw.

**DRAINAGE AREA.**--111 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Oct. 1961 to Sept. 1982 (continuous-record), Oct. 1982 to Sept. 1991 (annual maximums only), Oct. 1991 to current year.

**REVISED RECORDS.**--WRD Ariz. 1969: Drainage area. WRD AZ--93--1, 1993.

**GAGE.**--Water-stage recorder and concrete control. Datum of gage is 4,020 ft above sea level.

**REMARKS.**--No estimated daily discharges. Records fair. No known diversion or regulation above station.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 16,000 ft<sup>3</sup>/s Jan. 8, 1993, gage height, 17.21 ft from rating curve extended above 5,400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 5.4 ft<sup>3</sup>/s Aug. 14, 1962, July 1, 2, 5, 8, 9, 12, 21, 1967, June 2--5, 10--12, 28, July 5, 6, 1993.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 4.....	1630	*1,310	*6.94
Aug. 13.....	1830	882	6.30

Minimum daily discharge, 5.6 ft<sup>3</sup>/s, June 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	49	10	7.3	7.8	37	7.5	6.6	5.9	5.7	6.8	6.7
2	6.4	34	14	7.4	7.7	89	7.2	6.6	5.9	5.7	6.7	6.7
3	6.5	17	12	7.3	7.7	99	7.1	6.7	5.9	5.8	6.7	6.8
4	6.7	35	9.2	7.4	7.7	65	7.1	6.9	6.0	5.8	138	6.7
5	6.7	89	8.0	7.5	8.0	54	7.2	6.8	6.0	16	49	6.7
6	6.6	41	7.7	7.5	28	58	8.5	6.7	6.0	17	11	6.7
7	6.5	32	7.5	7.5	71	111	12	6.7	5.9	7.5	7.9	6.7
8	6.6	15	7.3	7.4	42	184	60	6.6	5.9	6.9	7.2	6.7
9	6.6	9.9	7.3	7.8	19	128	31	6.6	5.9	6.8	7.1	6.6
10	6.8	8.7	7.3	7.5	14	128	19	6.5	5.9	6.7	25	6.7
11	6.8	9.3	7.3	7.6	13	106	13	6.5	5.9	6.6	47	6.8
12	6.7	13	7.5	8.9	12	124	25	6.6	5.8	6.5	19	6.7
13	6.7	17	7.7	8.2	13	132	50	6.9	5.9	6.6	134	6.9
14	6.6	16	7.5	7.6	12	131	41	6.6	5.9	6.6	85	7.0
15	6.6	25	7.6	7.5	9.4	103	22	6.5	5.9	6.5	28	6.9
16	6.6	18	7.5	8.0	8.4	78	12	6.4	5.8	6.4	13	6.9
17	6.6	13	7.3	7.6	8.5	77	8.6	6.4	5.8	6.5	8.8	7.0
18	6.6	10	7.4	7.5	39	71	7.5	6.4	5.7	6.6	7.5	6.9
19	6.8	9.0	7.2	7.5	139	81	7.1	7.1	5.8	6.6	7.3	6.8
20	6.8	8.0	7.0	7.7	119	101	6.9	6.8	5.8	6.6	11	6.9
21	7.0	7.7	7.0	7.7	95	111	7.1	6.4	5.8	6.6	8.0	6.8
22	9.8	7.7	7.0	7.7	78	104	7.1	6.3	6.1	6.6	7.2	6.8
23	8.0	21	7.0	7.7	63	86	6.9	6.3	6.1	6.5	6.9	6.6
24	8.4	22	7.1	7.7	36	56	6.7	6.2	5.9	6.5	6.8	6.6
25	8.1	17	7.2	8.5	21	35	6.6	6.2	5.9	6.8	6.7	6.6
26	7.7	13	7.2	8.4	15	26	6.6	6.2	6.0	6.8	6.7	6.6
27	8.3	9.4	7.3	8.2	16	19	6.7	6.2	5.9	6.6	6.7	6.6
28	27	8.4	7.3	7.9	19	15	6.7	6.2	5.8	6.5	6.6	6.6
29	12	7.9	7.3	7.9	---	11	6.6	6.1	5.7	6.4	6.6	6.6
30	38	8.4	7.3	7.9	---	9.0	6.6	6.0	5.6	6.7	6.7	6.6
31	102	---	7.3	7.8	---	8.2	---	6.0	---	6.9	6.7	---
TOTAL	368.9	591.4	243.3	240.1	929.2	2437.2	427.3	201.0	176.4	222.3	701.6	202.2
MEAN	11.9	19.7	7.85	7.75	33.2	78.6	14.2	6.48	5.88	7.17	22.6	6.74
MAX	102	89	14	8.9	139	184	60	7.1	6.1	17	138	7.0
MIN	6.4	7.7	7.0	7.3	7.7	8.2	6.6	6.0	5.6	5.7	6.6	6.6
AC-FT	732	1170	483	476	1840	4830	848	399	350	441	1390	401
CFSM	.11	.18	.07	.07	.30	.71	.13	.06	.05	.06	.20	.06
IN.	.12	.20	.08	.08	.31	.82	.14	.07	.06	.07	.24	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2001, BY WATER YEAR (WY)

MEAN	14.0	14.3	29.8	42.2	68.3	107	67.9	10.9	6.70	8.73	10.7	11.2
MAX	231	128	253	601	438	500	433	109	9.88	28.0	75.0	81.9
(WY)	1973	1966	1979	1993	1980	1978	1973	1973	1972	1999	1992	1970
MIN	5.72	6.23	6.00	6.01	7.08	7.27	6.76	5.84	4.53	5.25	6.06	5.81
(WY)	1995	1996	1994	1994	1967	1967	1996	1993	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1962 - 2001
ANNUAL TOTAL	3555.4	6740.9	
ANNUAL MEAN	9.71	18.5	32.4
HIGHEST ANNUAL MEAN			103
LOWEST ANNUAL MEAN			7.70
HIGHEST DAILY MEAN	117	184	5230
LOWEST DAILY MEAN	6.4	5.6	4.2
ANNUAL SEVEN-DAY MINIMUM	6.4	5.7	4.3
ANNUAL RUNOFF (AC-FT)	7050	13370	23500
ANNUAL RUNOFF (CFSM)	.088	.17	.29
ANNUAL RUNOFF (INCHES)	1.19	2.26	3.97
10 PERCENT EXCEEDS	12	49	58
50 PERCENT EXCEEDS	7.3	7.3	7.3
90 PERCENT EXCEEDS	6.5	6.1	6.2

## 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 bench mark).

**REMARKS.**--No estimated daily discharges. Records good. 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 13.....	2015	*945	*4.47

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	28	2.5	.00	2.8	61	7.7	.03	.00	.00	.00	.00
2	.00	13	2.6	.00	1.9	91	4.9	.02	.00	.00	.00	.00
3	.00	11	1.9	.00	1.4	72	2.8	.02	.00	.00	.00	.00
4	.00	10	1.2	.00	24	53	1.7	.02	.00	.00	.00	.00
5	.00	62	.69	.00	138	42	1.2	.02	.00	.00	.00	.00
6	.00	34	.28	.00	184	51	6.4	.02	.00	.00	.00	.00
7	.00	22	.14	.00	227	105	44	.01	.00	.00	.00	.00
8	.00	12	.08	.00	129	232	107	.01	.00	.00	.00	.00
9	.00	5.1	.05	.00	51	188	79	.01	.00	.00	.00	.00
10	.00	2.7	.03	.00	42	230	44	.00	.00	.00	.00	.00
11	.00	3.2	.02	.00	33	210	33	.00	.00	.00	.00	.00
12	.00	16	.02	2.5	24	308	129	.00	.00	.00	.00	.00
13	.00	18	.01	1.4	18	407	207	.00	.00	.00	.00	.00
14	.00	13	.01	.10	18	335	187	.00	.00	.00	.00	.00
15	.00	17	.01	.05	9.8	257	70	.00	.00	.00	.00	.00
16	.00	14	.01	.05	8.0	149	36	.00	.00	.00	.00	.00
17	.00	9.1	.01	.08	22	138	19	.00	.00	.00	.00	.00
18	.00	5.6	.01	.08	81	110	11	.00	.00	.00	.00	.00
19	.00	3.0	.01	.03	147	116	6.3	.00	.00	.00	.56	.00
20	.00	1.8	.01	.02	141	148	3.4	.00	.00	.00	.00	.00
21	.15	.93	.01	.01	110	164	1.9	.00	.00	.00	.00	.00
22	28	.42	.00	.01	89	155	1.3	.00	.00	.00	.00	.00
23	.48	12	.00	.01	77	140	.67	.00	.00	.00	.00	.00
24	.01	21	.00	.01	49	96	.30	.00	.00	.00	.00	.00
25	.03	15	.00	.01	29	68	.18	.00	.00	.00	.00	.00
26	.00	11	.00	19	25	54	.12	.00	.00	.00	.00	.00
27	13	6.5	.00	18	44	41	.08	.00	.00	.00	.00	.00
28	4.5	3.9	.00	12	47	29	.06	.00	.00	.00	.00	.00
29	1.9	2.6	.00	7.6	---	21	.05	.00	.00	.00	.00	.00
30	18	2.3	.00	5.2	---	15	.03	.00	.00	.66	.00	.00
31	64	---	.00	3.8	---	12	---	.00	---	.00	.00	---
TOTAL	130.07	376.15	9.60	69.96	1772.9	4098	1005.09	0.16	0.00	0.66	0.56	0.00
MEAN	4.20	12.5	.31	2.26	63.3	132	33.5	.005	.000	.021	.018	.000
MAX	64	62	2.6	19	227	407	207	.03	.00	.66	.56	.00
MIN	.00	.42	.00	.00	1.4	12	.03	.00	.00	.00	.00	.00
MED	.00	11	.01	.01	43	110	5.6	.00	.00	.00	.00	.00
AC-FT	258	746	19	139	3520	8130	1990	.3	.00	1.3	1.1	.00
CFSM	.03	.09	.00	.02	.45	.93	.24	.00	.00	.00	.00	.00
IN.	.03	.10	.00	.02	.46	1.07	.26	.00	.00	.00	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2001, BY WATER YEAR (WY)

MEAN	8.33	17.0	57.6	57.5	109	158	106	7.99	.005	.43	1.78	11.6
MAX	246	251	602	814	850	678	598	208	.17	10.6	34.9	224
(WY)	1973	1966	1979	1993	1980	1978	1973	1973	1979	1999	1992	1970
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1961	1961	1961	1961	1961	1967	1972	1961	1961	1965	1962	1962

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1961 - 2001

ANNUAL TOTAL	1278.02	7463.15	
ANNUAL MEAN	3.49	20.4	44.2
HIGHEST ANNUAL MEAN			144
LOWEST ANNUAL MEAN			.35
HIGHEST DAILY MEAN	225	407	13100
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	2530	14800	32030
ANNUAL RUNOFF (CFSM)	.025	.14	.31
ANNUAL RUNOFF (INCHES)	.33	1.96	4.23
10 PERCENT EXCEEDS	8.3	69	96
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

## GILA RIVER BASIN

## 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>.

**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 fair.

**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, 22, 1986.

**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. 13 .....	1715	*1590	*3.63

Minimum daily discharge, 14 ft<sup>3</sup>/s on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	63	16	16	18	65	31	18	15	14	18	14
2	14	31	16	16	17	172	29	18	15	14	17	14
3	14	23	16	16	17	166	28	17	15	14	17	14
4	15	40	19	16	17	132	27	17	15	14	50	14
5	15	86	19	16	20	94	27	17	15	15	77	14
6	15	31	18	16	27	85	40	17	15	15	21	14
7	15	24	18	17	38	135	61	17	14	15	17	14
8	15	22	17	16	61	340	52	17	14	16	17	14
9	15	19	17	18	69	216	45	17	14	15	19	14
10	15	18	17	17	42	297	51	16	14	15	18	14
11	15	24	17	17	33	263	60	16	14	16	95	14
12	15	28	17	20	28	275	87	17	14	16	39	14
13	15	27	17	19	27	323	70	17	14	16	311	14
14	15	24	17	18	28	330	59	17	14	15	129	14
15	15	27	16	17	23	217	51	17	14	15	98	14
16	15	26	16	17	20	141	41	17	14	15	56	14
17	15	21	16	17	19	101	36	16	14	15	32	14
18	15	18	16	17	53	91	31	16	14	15	25	14
19	15	17	16	17	220	75	28	19	14	15	21	14
20	15	17	16	17	199	76	27	18	14	15	45	14
21	15	17	16	17	178	91	27	18	14	14	27	14
22	22	17	16	17	224	100	26	17	15	14	26	14
23	20	17	16	17	170	100	25	16	16	14	20	14
24	22	18	16	18	112	89	23	16	15	14	17	14
25	19	18	16	18	58	70	21	16	15	15	16	14
26	17	17	16	18	38	59	21	15	15	15	15	14
27	19	17	16	18	32	51	20	15	15	16	15	14
28	71	17	16	18	36	45	19	15	14	15	14	14
29	34	17	16	18	---	40	19	15	14	15	14	14
30	29	16	16	18	---	37	18	15	14	15	14	14
31	229	---	16	18	---	34	---	15	---	16	14	---
TOTAL	794	757	513	535	1824	4310	1100	514	433	463	1314	420
MEAN	25.6	25.2	16.5	17.3	65.1	139	36.7	16.6	14.4	14.9	42.4	14.0
MAX	229	86	19	20	224	340	87	19	16	16	311	14
MIN	14	16	16	16	17	34	18	15	14	14	14	14
AC-FT	1570	1500	1020	1060	3620	8550	2180	1020	859	918	2610	833

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2001, BY WATER YEAR (WY)

	MEAN	31.9	27.6	79.8	78.2	140	203	116	25.2	16.3	17.8	22.2	22.2
MAX	458	110	758	1136	956	886	923	157	24.8	34.9	102	113	113
(WY)	1973	1973	1979	1993	1980	1978	1973	1973	1984	1999	1992	1983	1983
MIN	13.8	15.2	15.7	16.3	14.8	15.3	15.4	14.3	13.2	13.8	13.5	14.0	14.0
(WY)	1977	1969	1970	1981	1974	1967	1967	2000	1970	2000	1980	2001	2001

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1965 - 2001
ANNUAL TOTAL	6419	12977	
ANNUAL MEAN	17.5	35.6	64.9
HIGHEST ANNUAL MEAN			199
LOWEST ANNUAL MEAN			16.0
HIGHEST DAILY MEAN	229	Oct 31	13100
LOWEST DAILY MEAN	13	May 30	11
ANNUAL SEVEN-DAY MINIMUM	13	May 30	12
ANNUAL RUNOFF (AC-FT)	12730	25740	46990
10 PERCENT EXCEEDS	19	75	100
50 PERCENT EXCEEDS	16	17	18
90 PERCENT EXCEEDS	14	14	15

## GILA RIVER BASIN

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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.

INSTRUMENTATION.--Specific conductance and water temperature recorder Oct. 1996 to Apr. 1997.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (MG/L) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 19...	1250	16	668	9.1	101	8.4	365	24.0	13.8	190	36.8	22.6	1.28
NOV 16...	1320	16	667	9.2	101	8.6	376	24.0	13.2	190	39.5	22.3	1.17
DEC 13...	1345	17	666	10.3	98	8.5	378	9.0	7.2	200	42.0	22.7	1.11
JAN 11...	1255	17	670	11.0	102	8.4	380	16.5	6.4	200	42.3	22.7	1.13
FEB 23...	1240	17	667	10.4	108	8.5	365	13.0	10.8	180	38.3	21.5	1.16
MAR 24...	1200	17	667	9.7	105	8.4	370	17.0	12.7	180	37.0	21.4	1.00
DATE	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
OCT 19...	.2	5.6	198	234	4	3.6	<.1	16.2	2.3	.29	210	208	<.020
NOV 16...	.2	5.6	200	224	10	3.5	<.1	15.6	1.9	.29	211	210	<.020
DEC 13...	.2	5.6	206	239	6	3.7	<.1	15.7	2.1	.30	222	216	<.020
JAN 11...	.2	5.4	208	249	2	3.1	.1	15.6	2.2	.29	214	217	<.020
FEB 23...	.2	5.4	202	228	9	3.6	<.1	17.6	2.1	.29	210	211	<.020
MAR 24...	.2	5.5	204	232	8	3.6	.1	14.6	1.9	.28	208	207	<.020
DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC-ULATE TOTAL (MG/L AS C) (00689)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT 19...	E.06	E.08	<.050	<.010	.034	.011	.011	.010	1.3	.2	<10	4.1	1
NOV 16...	<.10	<.10	<.050	<.010	--	E.005	<.010	.008	.82	.4	M	4.4	1
DEC 13...	<.10	E.06	<.050	<.010	.031	.008	.010	E.006	.76	.2	<10	3.1	<1
JAN 11...	<.10	<.10	<.050	<.010	--	E.005	<.010	E.006	.61	.2	M	2.7	<1
FEB 23...	E.06	.10	<.050	<.010	.043	.009	.014	.013	.81	.5	10	3.1	1
MAR 24...	E.07	E.08	<.050	<.010	--	.006	<.010	.008	.87	.3	<10	2.6	3

GILA RIVER BASIN  
09505800 WEST CLEAR CREEK NEAR CAMP VERDE, AZ--Continued  
(National Water-Quality Assessment Station)  
WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT	
19...	.04
NOV	
16...	.04
DEC	
13...	--
JAN	
11...	--
FEB	
23...	.05
MAR	
24...	.14

Remark codes used in this report:

< -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified



**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.

**INSTRUMENTATION**--Specific conductance and water temperature recorder Oct. 1996 to Apr. 1997.

**WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

			DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
MAR 07...	1130	9	101	666	10.2	99	8.2	182	7.5	8.3	--	88	20.0	
APR 03...	1210	9	28	665	9.0	102	8.5	288	17.5	14.9	0	150	32.6	
24...	1215	9	23	669	9.0	103	8.5	312	24.5	15.8	--	150	33.4	
MAY 22...	1240	9	17	668	8.3	107	8.7	356	28.0	21.1	--	180	37.7	
JUN 26...	1225	9	15	669	7.5	97	8.6	354	19.5	21.1	5	180	36.5	
JUL 11...	1355	9	16	666	7.5	101	8.6	356	29.5	23.3	--	170	34.5	
AUG 29...	1320	9	14	665	--	--	8.3	354	30.5	23.6	--	170	35.4	
29...	1321	7	14	--	--	--	8.3	355	--	--	--	180	36.6	
SEP 28...	0820	9	14	667	7.7	92	8.4	369	15.0	16.9	--	180	37.2	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
MAR 07...	9.32	.89	.1	2.6	91	109	1	1.8	<.2	13.1	2.1	.15	112	
APR 03...	16.3	.99	.2	4.3	147	170	5	3.5	E.1	13.5	1.9	.23	167	
24...	17.0	1.11	.2	4.5	158	181	6	3.6	<.2	13.5	2.0	.26	194	
MAY 22...	21.7	1.22	.2	5.8	184	210	7	3.4	E.1	15.8	1.8	.28	206	
JUN 26...	22.5	1.25	.2	6.2	179	206	6	3.6	E.1	17.9	1.9	.27	198	
JUL 11...	21.2	1.30	.2	5.7	183	204	10	3.0	E.1	17.6	1.8	.27	202	
AUG 29...	19.9	1.48	.2	5.5	179	201	8	3.6	E.1	16.3	1.9	.26	194	
29...	20.3	1.23	.2	5.3	176	205	5	3.6	E.1	16.7	2.0	.26	191	
SEP 28...	21.6	1.28	.2	5.8	194	227	5	3.8	E.1	16.5	2.1	.28	208	
DATE		SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	2,6-DI- ETHYL- ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)
MAR 07...	105	<.041	.14	.25	E.029	<.006	.077	.042	.025	.074	10	<3.2	<.002	
APR 03...	162	<.041	E.06	.14	<.047	<.006	--	.016	E.013	.023	60	4.2	<.002	
24...	170	<.041	.12	.12	<.047	<.006	--	.014	<.018	.020	<10	3.8	<.002	
MAY 22...	198	<.040	E.06	.09	E.028	<.006	--	.012	<.020	.020	<10	4.0	<.002	
JUN 26...	197	<.040	<.10	.12	E.029	.008	--	.009	<.020	.019	<10	4.3	<.002	
JUL 11...	195	<.040	E.06	E.07	E.030	<.006	--	.012	<.020	.019	<10	E3.2	<.002	
AUG 29...	191	<.040	E.07	.13	<.050	<.006	--	.018	<.020	.026	<10	5.6	<.002	
29...	192	<.040	E.07	.09	<.050	<.006	--	.020	<.020	.026	<10	5.7	<.002	
SEP 28...	205	<.040	E.07	<.10	<.050	<.008	--	.012	<.020	.019	M	4.1	<.002	

## GILA RIVER BASIN

09505800 WEST CLEAR CREEK NEAR CAMP VERDE, AZ--Continued  
(National Water-Quality Assessment Station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ACETO- CHLOR, WATER, FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER, FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIPPOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)
MAR 07...	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	79
APR 03...	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	106
24...	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	103
MAY 22...	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	119
JUN 26...	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	91
JUL 11...	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	109
AUG 29...	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	114
29...	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	109
SEP 28...	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	99
DATE	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC (UG/L) (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
MAR 07...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	82	<.004	<.035	<.027	<.050	<.006
APR 03...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	97	<.004	<.035	<.027	<.050	<.006
24...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	98	<.004	<.035	<.027	<.050	<.006
MAY 22...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	103	<.004	<.035	<.027	<.050	<.006
JUN 26...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	85	<.004	<.035	<.027	<.050	<.006
JUL 11...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	104	<.004	<.035	<.027	<.050	<.006
AUG 29...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	98	<.004	<.035	<.027	<.050	<.006
29...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	98	<.004	<.035	<.027	<.050	<.006
SEP 28...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	85	<.004	<.035	<.027	<.050	<.006
DATE	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)
MAR 07...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
APR 03...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
24...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
MAY 22...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
JUN 26...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.010	<.011	<.015	<.004	<.010
JUL 11...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
AUG 29...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
29...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
SEP 28...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010

## GILA RIVER BASIN

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09505800 WEST CLEAR CREEK NEAR CAMP VERDE, AZ--Continued  
(National Water-Quality Assessment Station)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDEDED (T/DAY) (80155)
MAR 07...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	16	4.4
APR 03...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	1	.08
24...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	9	.56
MAY 22...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	6	.28
JUN 26...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	4	.16
JUL 11...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	7	.30
AUG 29...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	5	.19
29...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	3	.11
SEP 28...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	1	.04

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

## GILA RIVER BASIN

09505800 WEST CLEAR CREEK NEAR CAMP VERDE, AZ--Continued  
(National Water-Quality Assessment Station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)		
JUL 11...	1215	2	--	5.8	1	31.4	E.01	<.008	<.09	<.1	<.1	<.2	.1		
SEP 28...	0822	1	14	--	--	--	--	--	--	--	--	--	--		
DATE	TIME	SAMPLE TYPE	SOLIDS, RESIDUE AT 180 DEG. C (00945)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	2,6-DIETHYL ANILINE WAT FLT GF, REC (UG/L) (82660)	ACETOCHLOR, WAT FLT REC (UG/L) (49260)	
JUL 11...	<.1	<10	<.040	E.04	<.050	<.006	E.004	<.020	<.004	<10	<3.0	--	--	--	
SEP 28...	--	--	--	--	--	--	--	--	--	--	--	.116	.106	--	
DATE	TIME	SAMPLE TYPE	ALACHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRAZINE, WATER, DISS, REC (UG/L) (39632)	BENFLURALIN WAT FLT GF, REC (UG/L) (82673)	BUTYLATE, WATER, DISS, REC (UG/L) (04028)	CARBARYL WATER FLTRD GF, REC (UG/L) (82680)	CARBOFURAN WATER FLTRD GF, REC (UG/L) (82674)	CHLORPYRIFOS DIS-SOLVED (UG/L) (38933)	CYANAZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD GF, REC (UG/L) (82682)	DEETHYL ATRAZINE, WATER, DISS, REC (UG/L) (04040)	DIAZINON D10 SRG WAT FLT GF, REC PERCENT (91063)	DI-AZINON, DIS-SOLVED (UG/L) (39572)
JUL 11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 28...	.104	.087	.100	.090	.123	E.051	E.075	.093	.116	.104	E.054	99	.100		
DATE	TIME	SAMPLE TYPE	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISULFOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHALFLURALIN WAT FLT GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT GF, REC PERCENT (91065)	LINDANE DIS-SOLVED (UG/L) (39341)	LINURON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALATHION, WATER, DISS, REC (UG/L) (39532)	METHYL AZINPHOS WAT FLT GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT GF, REC (UG/L) (82667)	METOLACHLOR WAT FLT GF, REC DISSOLV (UG/L) (39415)
JUL 11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 28...	.113	.077	.121	.104	.104	.101	86	.073	.106	.071	E.094	.082	.108		
DATE	TIME	SAMPLE TYPE	METRIBUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOLINATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROPRAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P'-DDE DISSOLV (UG/L) (34653)	PARATHION, DIS-SOLVED (UG/L) (39542)	PEBULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	PENDIMETHALIN WAT FLT GF, REC (UG/L) (82683)	PERMETHRIN CIS WAT FLT GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)
JUL 11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 28...	.097	.130	.130	.083	.100	.128	.109	.068	.092	.105	.105	.132	.118		

## GILA RIVER BASIN

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09505800 WEST CLEAR CREEK NEAR CAMP VERDE, AZ--Continued  
(National Water-Quality Assessment Station)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
JUL 11...	--	--	--	--	--	--	--	--
SEP 28...	.089	.104	E.126	E.102	.092	.101	.103	.090

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value



## GILA RIVER BASIN

## 09506000 VERDE RIVER NEAR CAMP VERDE, AZ

**LOCATION.**--Lat 34°26'54", long 111°47'21", in NW1/4 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, 9.0 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, 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 except for estimated daily discharges, which are poor. 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, 35 ft<sup>3</sup>/s July 15, 1997.

**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)
Oct. 28 .....	1745	*2550	*7.56

Minimum daily discharge, 46 ft<sup>3</sup>/s June 13, 1920.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	797	195	185	210	318	194	117	61	54	85	61
2	89	526	198	186	207	462	188	111	62	57	124	74
3	87	384	194	185	204	593	184	114	63	62	104	77
4	87	330	198	182	200	543	179	116	64	65	102	74
5	91	395	201	183	198	467	179	117	70	56	173	76
6	91	417	198	186	325	424	202	117	72	137	148	79
7	91	326	197	191	489	462	251	114	67	169	114	75
8	95	291	188	191	579	964	283	105	59	150	128	73
9	94	256	184	202	508	990	412	93	60	145	136	79
10	107	240	184	204	374	961	383	90	57	136	142	83
11	116	236	183	198	317	1300	334	85	57	133	193	89
12	120	239	184	210	281	1370	338	82	49	121	262	79
13	120	241	185	224	267	1810	455	77	46	100	353	79
14	125	244	186	227	268	2000	605	88	50	85	610	75
15	124	238	185	211	264	1990	516	91	52	83	356	88
16	125	243	186	213	244	1620	366	85	48	71	333	101
17	118	236	186	215	e222	1010	265	80	48	69	242	100
18	113	225	184	214	e220	829	218	78	55	65	186	94
19	113	215	184	209	e600	696	187	94	46	59	159	97
20	113	210	185	206	e700	644	172	124	46	56	334	100
21	115	204	188	205	656	666	163	130	54	54	198	98
22	292	204	188	204	624	659	171	120	57	56	151	96
23	564	201	190	205	569	608	176	103	60	59	133	94
24	343	199	190	205	506	529	168	85	77	53	116	92
25	263	207	191	207	407	443	160	83	82	57	105	85
26	222	204	190	211	331	364	141	81	78	78	95	85
27	226	203	191	229	292	308	130	74	76	70	92	84
28	1070	199	191	231	302	271	133	68	72	71	81	84
29	891	193	190	225	---	242	132	66	66	75	74	83
30	470	192	188	222	---	221	126	65	56	71	62	88
31	788	---	186	213	---	202	---	63	---	75	60	---
TOTAL	7340	8295	5868	6379	10364	23966	7411	2916	1810	2592	5451	2542
MEAN	237	276	189	206	370	773	247	94.1	60.3	83.6	176	84.7
MAX	1070	797	201	231	700	2000	605	130	82	169	610	101
MIN	77	192	183	182	198	202	126	63	46	53	60	61
AC-FT	14560	16450	11640	12650	20560	47540	14700	5780	3590	5140	10810	5040
CFSM	.05	.06	.04	.04	.08	.17	.05	.02	.01	.02	.04	.02
IN.	.06	.07	.05	.05	.08	.19	.06	.02	.01	.02	.04	.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2001, BY WATER YEAR (WY)

	MEAN	188	208	292	596	1071	1353	668	132	82.9	111	198	241
MAX	551	338	1350	7156	6160	4028	3050	337	123	232	616	1152	
(WY)	1941	1941	1941	1993	1993	1938	1941	1941	1992	1999	1992	1939	
MIN	106	169	189	198	180	159	118	74.6	60.3	48.4	103	83.0	
(WY)	1992	1939	2001	1936	1991	1999	1996	2000	2001	1997	1991	1989	

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1935 - 2001

ANNUAL TOTAL	60356	84934	425
ANNUAL MEAN	165	233	1403
HIGHEST ANNUAL MEAN			150
LOWEST ANNUAL MEAN			1993
HIGHEST DAILY MEAN	1070	2000	63400
LOWEST DAILY MEAN	37	46	35
ANNUAL SEVEN-DAY MINIMUM	45	49	40
ANNUAL RUNOFF (AC-FT)	119700	168500	307900
ANNUAL RUNOFF (CFSM)	.036	.050	.091
ANNUAL RUNOFF (INCHES)	.48	.68	1.24
10 PERCENT EXCEEDS	246	496	695
50 PERCENT EXCEEDS	165	184	186
90 PERCENT EXCEEDS	57	65	79

e Estimated

## GILA RIVER BASIN

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## 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 current year.

**GAGE.**--Water-stage recorder and weir in concrete flume. Datum of gage is 3,716.2 ft above sea level.

**REMARKS.**--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, 2, 1982; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	38	41	41	41	42	40	41	40	41	42	43
2	40	39	41	41	41	40	41	41	40	41	42	43
3	40	39	16	41	41	41	40	41	41	40	42	43
4	40	40	21	41	41	41	41	41	41	41	42	43
5	39	40	41	41	41	39	41	41	40	37	42	43
6	40	40	41	41	40	40	42	41	40	40	42	43
7	40	40	41	41	40	40	40	41	40	40	42	43
8	40	40	41	41	36	38	41	41	40	40	42	43
9	40	42	41	41	41	41	41	40	40	40	42	42
10	39	42	41	41	41	42	41	40	40	36	41	42
11	39	41	41	41	41	41	41	40	40	41	39	41
12	39	41	41	41	41	42	41	39	40	41	40	41
13	39	41	41	41	41	42	41	38	40	41	39	41
14	39	42	41	41	41	42	41	40	40	42	36	41
15	39	41	42	41	41	42	41	36	41	43	37	41
16	38	40	41	41	41	41	41	40	41	42	40	42
17	32	42	41	41	42	42	41	40	40	42	40	42
18	38	41	41	41	42	42	41	40	40	42	42	41
19	39	40	41	41	40	42	41	40	40	42	42	41
20	39	40	41	41	41	e41	41	40	40	42	42	41
21	39	41	41	41	41	e41	41	40	40	42	42	41
22	39	41	41	41	41	e41	41	40	40	42	42	42
23	39	39	41	41	41	40	41	40	41	42	42	42
24	37	39	41	41	41	40	42	40	41	41	43	41
25	37	39	41	41	41	40	41	40	41	41	43	41
26	38	39	40	40	41	40	41	40	41	42	43	42
27	37	40	40	41	42	40	42	41	41	42	43	41
28	27	40	40	41	42	41	41	40	41	42	43	41
29	28	40	36	41	---	41	42	40	41	42	43	41
30	37	40	40	41	---	41	41	40	41	42	43	41
31	38	---	40	41	---	41	---	40	---	42	43	---
TOTAL	1175	1207	1217	1270	1144	1267	1231	1242	1212	1274	1286	1253
MEAN	37.9	40.2	39.3	41.0	40.9	40.9	41.0	40.1	40.4	41.1	41.5	41.8
MAX	40	42	42	41	42	42	42	41	41	43	43	43
MIN	27	38	16	40	36	38	40	36	40	36	36	41
AC-FT	2330	2390	2410	2520	2270	2510	2440	2460	2400	2530	2550	2490

CAL YR 2000 TOTAL 14563 MEAN 39.8 MAX 42 MIN 16 AC-FT 28890  
WTR YR 2001 TOTAL 14778 MEAN 40.5 MAX 43 MIN 16 AC-FT 29310

e Estimated

## 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 NW1/4NE1/4 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, 29, May 5-7, 10, 12, 15, 18, June 2, 1969; no flow for long periods most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	14	14	14	14
2	.00	.00	.00	.00	.00	.00	.00	.00	14	14	14	14
3	.00	.00	.00	.00	.00	.00	.00	.00	14	14	14	14
4	.00	.00	.00	.00	.00	.00	.00	.00	14	14	14	14
5	.00	.00	.00	.00	.00	.00	.00	.00	14	14	14	14
6	.00	.00	.00	.00	.00	.00	.00	.00	14	14	14	14
7	.00	.00	.00	.00	.00	.00	.00	.00	14	14	14	14
8	.00	.90	.00	.00	.00	.00	.00	.00	14	14	13	14
9	.00	.02	.00	.00	.00	.00	.00	.00	14	14	10	14
10	.00	.00	.00	.00	.00	.00	.00	.38	14	11	14	14
11	.00	.00	.00	.00	.00	.00	.00	.08	14	13	14	14
12	.00	.00	.00	.00	.00	.00	.00	.07	14	14	14	14
13	.00	.00	.00	.00	.00	.00	.00	.00	14	14	9.6	14
14	.00	.00	.00	.00	.00	.00	.00	.00	14	14	14	14
15	.00	.00	.00	.00	.00	.00	.00	.05	14	14	14	14
16	.00	.00	.00	.00	.00	.00	.00	6.7	14	14	14	14
17	.00	.00	.00	.00	.00	.00	.00	14	14	14	14	14
18	.00	.00	.00	.00	.00	.00	.00	11	14	14	14	14
19	.00	.00	.00	.00	.00	.00	.00	14	14	14	14	14
20	.00	.00	.00	.00	.00	.00	.00	14	14	14	14	14
21	.00	.00	.00	.00	.00	.00	.00	13	10	14	14	14
22	.00	.00	.00	.00	.00	.00	.00	14	.18	14	13	14
23	.00	.00	.00	.00	.00	.00	.00	14	.08	14	14	14
24	.00	.00	.00	.00	.00	.00	.00	14	.08	14	14	12
25	.00	.00	.00	.00	.00	.00	.00	14	5.0	14	14	14
26	.00	.00	.00	.00	.00	.00	.00	14	14	14	14	14
27	.00	.00	.00	.00	.00	.00	.00	14	14	14	14	14
28	.00	.00	.00	.00	.00	.00	.00	14	14	14	14	14
29	.00	.00	.00	.00	---	.00	.00	14	14	14	14	14
30	.00	.00	.00	.00	---	.00	.00	14	14	14	14	14
31	.00	---	.00	.00	---	.00	---	14	---	14	14	---
TOTAL	0.00	0.92	0.00	0.00	0.00	0.00	0.00	213.28	365.34	430	423.6	418
MEAN	.0000	.031	.0000	.0000	.0000	.0000	.0000	6.88	12.2	13.9	13.7	13.9
MAX	.00	.90	.00	.00	.00	.00	.00	14	14	14	14	14
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.08	11	9.6	12
AC-FT	.00	1.8	.00	.00	.00	.00	.00	423	725	853	840	829
CAL YR 2000	TOTAL	689.31	MEAN	1.88	MAX	17	MIN	.00	AC-FT	1370		
WTR YR 2001	TOTAL	1851.14	MEAN	5.07	MAX	14	MIN	.00	AC-FT	3670		

## 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, 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 for 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 June 11-13, June 18-July 7, July 9, 19-27, 1996.

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 600 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. 24.....	0915	1390	4.08	Mar.7.....	1715	1410	4.10
Oct. 27.....	2000	*4100	6.40	Mar.10.....	1015	2250	4.82
Oct. 30.....	2400	2090	4.69	Jul 30 .....	0310	2090	4.69
Nov. 4.....	2230	1510	4.19	Aug.20 .....	0030	926	3.68

Minimum daily discharge, 0.56, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	199	7.1	5.8	14	353	21	9.9	4.1	1.5	29	9.0
2	.60	75	6.7	5.7	12	299	19	9.3	5.6	2.3	26	8.8
3	.56	38	6.7	5.5	12	211	17	8.7	5.7	3.3	25	9.0
4	.72	216	7.5	5.5	16	78	15	8.9	6.0	4.5	17	12
5	.89	498	8.4	5.5	16	48	15	9.2	6.5	4.6	16	10
6	.96	113	7.5	5.6	16	37	83	8.7	6.8	95	20	8.9
7	.75	59	7.0	5.5	15	388	164	8.4	6.4	38	28	8.4
8	.64	38	6.7	5.4	12	672	57	7.8	5.9	19	25	7.9
9	.61	26	6.7	8.6	11	145	44	6.9	5.5	16	25	7.6
10	.83	22	6.7	8.4	9.5	856	44	6.1	5.7	14	130	7.5
11	1.4	30	6.6	8.3	9.0	604	41	5.5	5.6	13	62	7.6
12	1.4	43	6.5	12	8.4	502	64	5.3	5.6	12	32	7.3
13	.98	35	7.1	11	9.3	481	50	6.1	5.6	11	34	7.5
14	.83	24	7.1	9.4	35	254	44	5.9	6.0	11	38	8.1
15	.72	20	7.5	8.7	36	166	36	5.7	6.8	9.8	23	56
16	.70	17	7.4	11	51	108	32	4.7	6.7	9.0	20	20
17	.69	14	7.0	11	70	80	30	4.0	6.8	8.6	18	16
18	.66	12	7.9	11	95	63	25	3.8	6.8	8.3	15	14
19	.75	11	7.8	9.6	110	52	23	6.3	6.6	8.0	14	13
20	.75	11	7.3	8.4	36	48	21	11	5.9	8.0	125	12
21	.81	11	7.2	7.9	26	52	19	16	6.5	7.5	21	10
22	122	10	7.2	8.1	20	59	20	13	7.5	7.2	19	9.7
23	51	9.2	7.4	8.5	18	66	22	11	9.9	6.6	15	9.3
24	523	8.8	7.4	8.3	16	64	19	9.4	9.0	6.2	13	9.0
25	111	8.6	7.4	7.9	14	55	16	9.1	5.5	6.9	12	8.7
26	31	8.2	7.5	8.1	14	47	13	8.6	4.3	54	11	8.8
27	571	8.9	7.5	11	15	40	14	8.1	3.2	23	9.9	8.0
28	1330	8.4	7.2	15	101	36	12	8.1	2.2	13	9.3	8.0
29	186	7.7	6.7	15	---	32	11	6.3	1.6	12	8.7	8.3
30	146	7.1	6.1	14	---	27	11	4.4	1.3	330	8.8	8.5
31	895	---	5.9	16	---	24	---	4.0	---	41	8.9	---
TOTAL	3982.91	1588.9	220.7	281.7	817.2	5947	1002	240.2	171.6	804.3	858.6	338.9
MEAN	128	53.0	7.12	9.09	29.2	192	33.4	7.75	5.72	25.9	27.7	11.3
MAX	1330	498	8.4	16	110	856	164	16	9.9	330	130	56
MIN	.56	7.1	5.9	5.4	8.4	24	11	3.8	1.3	1.5	8.7	7.3
AC-FT	7900	3150	438	559	1620	11800	1990	476	340	1600	1700	672
CFSM	.39	.16	.02	.03	.09	.58	.10	.02	.02	.08	.08	.03
IN.	.45	.18	.02	.03	.09	.67	.11	.03	.02	.09	.10	.04

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2001, BY WATER YEAR (WY)

	MEAN	30.0	33.6	59.9	127	160	176	86.7	28.2	17.4	20.7	34.1	30.0
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	.73	.83	1.42	2.25	3.69	6.29	4.29	.37	.43	.012	1.17	.73	
(WY)	1992	1963	1963	1963	1964	1977	1963	2000	1996	2000	1962	1992	

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1961 - 2001

	ANNUAL TOTAL	6904.81	16254.01	
ANNUAL MEAN	18.9	44.5	66.0	
HIGHEST ANNUAL MEAN			290	1993
LOWEST ANNUAL MEAN			5.64	2000
HIGHEST DAILY MEAN	1330	Oct 28	1330	Oct 28
LOWEST DAILY MEAN	.00	Jun 6	.56	Oct 3
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 6	.73	Oct 15
ANNUAL RUNOFF (AC-FT)	13700		32240	
ANNUAL RUNOFF (CFSM)	.057		.13	
ANNUAL RUNOFF (INCHES)	.78		1.83	
10 PERCENT EXCEEDS	17		76	
50 PERCENT EXCEEDS	3.5		9.9	
90 PERCENT EXCEEDS	.00		4.7	

**GILA RIVER BASIN**  
**09507980 EAST VERDE RIVER NEAR CHILDS, AZ--Continued**

**WATER-QUALITY RECORDS**

**PERIOD OF RECORD**--Dec. 1990 to current year.

**WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (000061)	TUR-BID-ITY (NTU) (000076)	BARO-METRIC PRES-SURE (MM OF HG) (000025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STAND-ARDS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (000095)	TEMPER-AIRE (DEG C) (000020)	TEMPER-AIRE WATER (DEG C) (000010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	
NOV 29...	1325	8.2	1.1	695	10.4	101	8.4	493	23.0	10.0	220	53.0	53.0	
JAN 23...	1510	9.0	.5	695	10.6	103	8.2	480	18.0	9.8	220	50.0	51.0	
JUN 14...	1445	6.0	7.3	692	7.6	102	8.3	406	32.5	25.2	170	35.0	35.0	
AUG 29...	1530	8.5	17	689	8.0	113	8.4	397	34.5	28.2	170	37.0	40.0	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
NOV 29...	22.0	22.0	1.80	.6	19.0	235	287	.0	13.0	.3	11.0	1	.38	
JAN 23...	22.0	23.0	1.70	.6	19.0	231	277	2	13.0	.3	11.0	<1	.35	
JUN 14...	20.0	20.0	2.50	.7	20.0	197	215	12	11.0	.3	5.4	11	.31	
AUG 29...	19.0	21.0	2.00	.5	16.0	191	226	4	8.4	.3	3.6	25	.30	
DATE		SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	E COLI, MTEC MF (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)
NOV 29...	280	261	<.20	.02	.03	<.02	--	<.020	5	E3k	E2k	<1.00	<1.0	
JAN 23...	261	255	<.20	.02	.03	<.02	--	<.020	<5	<1	<1	<1.00	<1.0	
JUN 14...	227	212	.30	<.01	--	<.02	--	<.020	11	E10k	E17k	<1.00	<1.0	
AUG 29...	223	202	.20	.02	.03	<.02	.18	<.020	11	E15k	E14k	<1.00	<1.0	
DATE		ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	BORON, DIS-SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
NOV 29...	26.0	27	66.0	67.0	<1.00	<1.00	120	120	<.50	<.50	<1.0	<1	<2.0	
JAN 23...	24.0	24	61.0	62.0	<1.00	<1.00	110	110	<.50	<.50	<1.0	<1	<2.0	
JUN 14...	39.0	40	51.0	55.0	<1.00	<1.00	140	140	<.50	<.50	<1.0	<1	<2.0	
AUG 29...	29.0	31	64.0	74.0	<1.00	<1.00	108	109	<.50	<.50	<1.0	1	<2.0	



## GILA RIVER BASIN

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## 09507980 EAST VERDE RIVER NEAR CHILDS, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)
NOV 29...	<2.0	M	50	<2.00	<2	20.0	22	<.10	<.10	<1.00	<1	<1.0	<1.0
JAN 23...	<2.0	M	50	<2.00	<2	7.4	11	<.10	<.10	<1.00	<1	<1.0	<1.0
JUN 14...	<2.0	M	340	<2.00	<2	9.8	30	<.10	<.10	1.20	<1	<1.0	<1.0
AUG 29...	<2.0	<2	710	<2.00	<2	5.8	56	<.10	<.10	<1.00	1	<1.0	<1.0

DATE	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL (UG/L AS TL) (01059)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 29...	<1.0	<1.00	230	<2.00	<2.0	<2	<2	26	.58
JAN 23...	<1.0	<1.00	230	<2.00	<2.0	11	6	3	.07
JUN 14...	<1.0	<1.00	190	<2.00	<2.0	4	2	11	.18
AUG 29...	<1.0	<1.00	190	<2.00	<2.0	<2	<2	31	.71

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range

## GILA RIVER BASIN

## 09507980 EAST VERDE RIVER NEAR CHILDS, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) (00925)	SODIUM, DIS- SOLVED (MG/L) (00930)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L) (00625)	NITRO- GEN, AMMONIA TOTAL (MG/L) (00610)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) (00630)	PHOS- PHORUS TOTAL (MG/L) (00665)	ALUM- INUM, DIS- SOLVED (UG/L) (01106)
JUN 14...	1450	2	5.7	1	24.4	<.02	<.030	<.1	<.20	<.01	<.02	<.020	<3
DATE		BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)		
JUN 14...	<.5	<1.00	<.50	<1.0	<2.0	<2	<2.00	<1.0	<1.00	<2			

Remark codes used in this report:

< -- Less than

## GILA RIVER BASIN

281

09508300 WET BOTTOM CREEK NEAR CHILDS, AZ  
(Hydrologic bench mark 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>.

## WATER-DISCHARGE RECORDS

**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.**--No estimated daily discharges. Records fair.

**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 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 .....	1800	164	5.67	Feb. 28 .....	2300	143	5.58
Oct. 24 .....	1200	213	5.86	Mar. 7 .....	1730	383	6.35
Oct. 27 .....	2340	578	6.75	Mar. 10 .....	0955	618	6.82
Oct. 31 .....	0015	660	6.89	Apr. 6 .....	0700	494	6.59

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	67	1.6	.59	14	97	1.7	1.0	.00	.00	.00	.00
2	.00	40	1.5	.58	11	80	1.4	.82	.00	.00	.00	.00
3	.00	27	1.4	.54	9.8	61	1.3	.68	.00	.00	.00	.00
4	.00	23	1.3	.56	11	49	1.1	.60	.00	.00	.00	.00
5	.00	34	1.2	.56	16	38	1.2	.54	.00	.00	.00	.00
6	.00	29	1.1	.57	16	32	173	.45	.00	.00	.00	.00
7	.00	29	1.0	.59	14	122	91	.38	.00	.00	.00	.00
8	.00	23	.99	.59	11	156	47	.33	.00	.00	.09	.00
9	.00	17	.94	1.1	9.4	79	31	.27	.00	.00	.19	.00
10	.00	14	.94	.74	7.5	237	26	.23	.00	.00	.20	.00
11	.12	29	.88	.70	6.3	152	36	.20	.00	.00	6.2	.00
12	.13	35	.86	1.3	5.4	99	63	.17	.00	.00	6.0	.00
13	.12	28	.82	1.6	4.7	84	47	.19	.00	.00	3.5	.00
14	.11	22	.81	5.0	47	63	33	.17	.00	.00	2.2	.00
15	.11	18	.80	4.2	63	47	23	.15	.00	.00	4.5	.00
16	.11	14	.74	4.3	64	35	17	.13	.00	.00	4.5	.00
17	.11	12	.70	4.8	54	26	13	.13	.00	.00	2.3	.00
18	.10	9.4	.70	5.1	57	20	9.7	.11	.00	.00	1.3	.00
19	.13	7.6	.69	5.3	62	15	7.8	.17	.00	.00	.77	.00
20	.18	6.4	.70	4.9	46	12	6.3	.18	.00	.00	.48	.00
21	.18	5.3	.70	4.4	35	9.6	4.9	.12	.00	.00	.32	.00
22	34	4.5	.66	4.3	27	8.2	4.6	.07	.00	.00	.22	.00
23	52	3.9	.65	4.1	21	7.1	4.1	.02	.00	.00	.16	.00
24	116	3.6	.64	4.2	16	6.0	3.2	.00	.00	.00	.12	.00
25	58	3.1	.64	4.3	12	5.0	2.7	.00	.00	.00	.08	.00
26	28	2.7	.64	4.3	11	4.0	2.3	.00	.00	.00	.02	.00
27	61	2.5	.61	6.2	9.6	3.4	2.0	.00	.00	.00	.00	.00
28	200	2.2	.61	9.5	51	2.9	1.7	.00	.00	.00	.00	.00
29	59	2.0	.60	12	---	2.6	1.4	.00	.00	.00	.00	.00
30	39	1.8	.59	15	---	2.2	1.2	.00	.00	.00	.00	.00
31	231	---	.59	16	---	1.9	---	.00	.00	.00	.00	---
TOTAL	879.40	516.0	26.60	127.92	711.7	1556.9	658.6	7.11	0.00	0.00	33.15	0.00
MEAN	28.4	17.2	.86	4.13	25.4	50.2	22.0	.23	.000	.000	1.07	.000
MAX	231	67	1.6	16	64	237	173	1.0	.00	.00	6.2	.00
MIN	.00	1.8	.59	.54	4.7	1.9	1.1	.00	.00	.00	.00	.00
AC-FT	1740	1020	53	254	1410	3090	1310	14	.00	.00	66	.00
CFSM	.78	.47	.02	.11	.70	1.38	.60	.01	.00	.00	.03	.00
IN.	.90	.53	.03	.13	.73	1.59	.67	.01	.00	.00	.03	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2001, BY WATER YEAR (WY)

	MEAN	5.46	7.66	19.4	38.1	42.3	46.0	10.5	.59	.082	1.02	4.09	3.03
MAX	103	52.0	111	373	345	321	56.6	2.07	.55	12.0	48.3	27.1	
(WY)	1973	1979	1968	1993	1980	1978	1998	1983	1979	1985	1992	1970	
MIN	.010	.17	.28	.26	.36	.29	.086	.000	.000	.000	.000	.000	
(WY)	1974	1976	1970	1970	2000	1977	1972	1972	1970	1970	1972	1972	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1967 - 2001
ANNUAL TOTAL	1791.41	4517.38	
ANNUAL MEAN	4.89	12.4	14.6
HIGHEST ANNUAL MEAN			47.2
LOWEST ANNUAL MEAN			.45
HIGHEST DAILY MEAN	231	Oct 31	3410
LOWEST DAILY MEAN	.00	May 4	.00
ANNUAL SEVEN-DAY MINIMUM	.00	May 4	.00
ANNUAL RUNOFF (AC-FT)	3550	8960	10590
ANNUAL RUNOFF (CFSM)	.13	.34	.40
ANNUAL RUNOFF (INCHES)	1.83	4.62	5.46
10 PERCENT EXCEEDS	9.9	38	22
50 PERCENT EXCEEDS	.25	.70	.50
90 PERCENT EXCEEDS	.00	.00	.00

## 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.**--No estimated daily discharges. Records good. 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, 19, 1958, caused by power regulation on Fossil Creek; minimum daily, 61 ft<sup>3</sup>/s July 18, 1958.

**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.**--:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 29 .....	0630	3630	9.78

Minimum daily discharge, 74 ft<sup>3</sup>/s June 15 and 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	1480	270	256	309	773	298	181	96	91	127	97
2	128	1020	274	255	301	904	280	170	92	81	137	90
3	129	696	276	254	297	1130	264	160	90	81	171	94
4	136	545	280	249	296	919	252	164	91	93	438	108
5	137	815	274	245	304	754	246	166	95	98	251	108
6	135	731	274	249	310	630	509	169	99	91	259	105
7	135	606	277	252	437	831	626	167	106	161	272	104
8	135	488	275	255	616	2030	499	165	102	229	255	105
9	138	426	265	281	653	1710	469	156	95	208	289	96
10	147	380	259	279	560	2050	538	143	87	203	294	100
11	158	379	257	276	440	2610	514	134	88	189	335	110
12	168	405	257	290	379	2190	582	129	85	187	299	116
13	175	401	259	302	344	2730	537	127	83	175	393	114
14	174	379	260	300	407	2780	657	122	76	154	817	125
15	175	365	259	300	483	2950	696	126	74	134	666	147
16	176	349	258	297	465	2500	583	132	80	122	474	143
17	176	343	258	297	436	1660	459	122	79	114	418	148
18	169	326	258	292	443	1140	366	118	76	107	323	144
19	168	314	257	289	670	968	315	122	77	102	277	138
20	167	304	260	284	1010	829	275	142	82	97	263	134
21	166	296	262	279	1030	799	250	168	74	90	391	137
22	395	290	262	279	826	811	242	177	77	86	271	134
23	614	284	263	278	757	794	245	169	88	83	235	129
24	1000	282	266	279	665	733	247	151	92	88	211	124
25	710	281	264	281	587	637	234	130	98	260	189	124
26	437	289	264	283	500	548	223	121	117	88	168	117
27	573	286	265	311	429	485	205	119	112	110	149	112
28	1830	285	266	329	456	440	192	113	111	102	140	109
29	2200	280	264	321	---	396	189	106	102	97	128	108
30	1010	273	265	319	---	354	186	103	99	222	117	106
31	1740	---	262	316	---	324	---	99	---	151	105	---
TOTAL	13731	13598	8210	8777	14410	38409	11178	4371	2723	4094	8862	3526
MEAN	443	453	265	283	515	1239	373	141	90.8	132	286	118
MAX	2200	1480	280	329	1030	2950	696	181	117	260	817	148
MIN	128	273	257	245	296	324	186	99	74	81	105	90
MED	169	357	264	281	450	831	289	134	90	107	263	113
AC-FT	27240	26970	16280	17410	28580	76180	22170	8670	5400	8120	17580	6990
CFSM	.08	.08	.05	.05	.09	.23	.07	.03	.02	.02	.05	.02

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2001, BY WATER YEAR (WY)

	MEAN	326	363	712	833	1181	1520	852	213	133	178	323	277
MAX	4194	1384	4644	12420	11020	10420	5638	1322	316	430	1184	1463	
(WY)	1973	1966	1979	1993	1980	1978	1973	1973	1955	1953	1951	1970	
MIN	155	192	227	224	220	194	155	113	82.6	75.5	127	98.5	
(WY)	1951	1963	1951	1961	1964	1972	1963	2000	1963	1958	1962	1956	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1946 - 2001
ANNUAL TOTAL	87467	131889	
ANNUAL MEAN	239	361	573
HIGHEST ANNUAL MEAN			2229
LOWEST ANNUAL MEAN			189
HIGHEST DAILY MEAN	2200	2950	110000
LOWEST DAILY MEAN	69	74	61
ANNUAL SEVEN-DAY MINIMUM	77	77	63
ANNUAL RUNOFF (AC-FT)	173500	261600	415200
ANNUAL RUNOFF (CFSM)	.043	.066	.10
10 PERCENT EXCEEDS	357	732	884
50 PERCENT EXCEEDS	203	259	238
90 PERCENT EXCEEDS	92	97	121

## 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 2000 TO SEPTEMBER 2001

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE OF HG (00025)	OXYGEN, SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
OCT 27...	1210	9	345	35	701	8.7	98	8.5	561	17.5	17.0	8	230
FEB 27...	1350	9	435	15	703	10.3	105	8.5	448	19.0	12.3	--	180
JUN 21...	1215	9	74	22	708	7.6	104	8.4	711	38.5	27.5	42	270
21...	1225	7	74	21	--	--	--	8.4	711	--	--	38	260
SEP 11...	1245	9	107	30	705	8.3	110	8.3	720	35.5	25.4	37	280
DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT 27...	46.0	50.0	27.0	28.0	2.90	1.0	33.0	218	250	8	21.0	.3	50.0
FEB 27...	39.0	42.0	21.0	23.0	1.60	.7	22.0	188	215	7	13.0	.2	29.0
JUN 21...	46.0	45.0	37.0	37.0	3.40	1	51.0	226	267	4	33.0	.4	91.0
21...	45.0	45.0	36.0	37.0	3.30	1	51.0	223	265	3	33.0	.4	91.0
SEP 11...	46.0	49.0	39.0	39.0	3.30	1	50.0	238	268	11	31.0	.4	89.0
DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (71845)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, TOTAL (MG/L AS NO3) (71887)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)
OCT 27...	40	.47	344	311	.47	.03	.04	.1	.44	.59	2.6	.060	<5
FEB 27...	16	.37	269	239	.23	.03	.04	<.02	.20	--	--	<.020	<5
JUN 21...	28	.57	420	397	1.8	.01	.01	<.02	1.8	--	--	.030	<5
21...	26	.57	419	393	<.20	.01	.01	<.02	--	--	--	.030	<5
SEP 11...	38	.57	419	402	<.20	<.01	--	<.02	--	--	--	.050	8
DATE	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	BORON, DIS-SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
OCT 27...	E10k	E57k	<1.00	<1.0	15.0	18	76.0	90.0	<1.00	<1.00	140	150	<.50
FEB 27...	E4k	<1	<1.00	<1.0	14.0	14	78.0	85.0	<1.00	<1.00	100	100	<.50
JUN 21...	E2k	E9k	<1.00	<1.0	23.0	24	71.0	76.0	<1.00	<1.00	230	230	<.50
21...	E30k	E8k	<1.00	<1.0	23.0	24	70.0	76.0	<1.00	<1.00	230	230	<.50
SEP 11...	E3k	30	<1.00	<1.0	23.0	23	74.0	91.0	<1.00	<1.00	221	233	<.50



## GILA RIVER BASIN

## 09508500 VERDE RIVER BELOW TANGLE CREEK ABOVE HORSESHOE DAM, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)
OCT 27...	<.50	<1.0	1	2.3	2.2	M	920	<2.00	<2	3.3	40	<.10	<.10
FEB 27...	<.50	<1.0	<1	<2.0	<2.0	M	570	<2.00	<2	6.9	18	<.10	<.10
JUN 21...	<.50	<1.0	<1	<2.0	<2.0	<2	560	<2.00	<2	7.1	27	<.10	<.10
21...	<.50	<1.0	<1	<2.0	<2.0	<2	560	<2.00	<2	6.6	27	<.10	<.10
SEP 11...	<.50	<1.0	2	<2.0	<2.0	<2	1020	<2.00	<2	13.0	48	<.10	<.10

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL SOLVED (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL SOLVED (UG/L AS TL) (01059)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 27...	1.10	3	<1.0	<1.0	<1.0	<1.00	680	<2.00	<2.0	2	4	36	34
FEB 27...	<1.00	2	<1.0	<1.0	<1.0	<1.00	420	<2.00	<2.0	5	6	19	22
JUN 21...	<1.00	2	<1.0	<1.0	<1.0	<1.00	810	<2.00	<2.0	6	4	38	7.6
21...	<1.00	2	<1.0	<1.0	<1.0	<1.00	810	<2.00	<2.0	4	4	33	6.6
SEP 11...	<1.00	3	<1.0	<1.0	<1.0	<1.00	910	<2.00	<2.0	6	3	46	13

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range

## 09508500 VERDE RIVER BELOW TANGLE CREEK ABOVE HORSESHOE DAM, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
SEP 11...	1250	2	5.9	1	37.0	33.0	.04	<.030	<.1	<.20	.01	<.02	<.020

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
SEP 11...	<3	<.5	<1.00	<.50	<1.0	<2.0	<2	<2.00	<1.0	<1.00	<2

Remark codes used in this report:  
< -- Less than

## GILA RIVER BASIN

## 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 (capacity tables dated 1978, based on survey in 1977-78) is 309,600 acre-ft divided as follows: Horseshoe Reservoir, 131,400 acre-ft between elevations 1,915.0 ft - sill of outlet gate - and 2,026.0 ft - top of spillway gates; 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). 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, 174,200 acre-ft Mar. 28; minimum, 76,590 acre-ft Oct. 1.

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76590	102800	105900	100600	107300	121100	169700	158900	159700	155700	153900	161200
2	76600	104400	105600	100200	107800	122800	168900	158800	159600	155700	153900	161100
3	76600	105500	105300	99830	107900	124800	167900	158700	159400	155400	154000	161000
4	76620	106200	105100	100100	107700	126200	167000	158700	159200	155200	154000	160900
5	76620	107400	104900	100000	107800	127600	166300	159200	159100	155000	154200	160800
6	76620	108500	104700	100000	108000	128700	166400	159100	159000	154700	154700	160600
7	76650	109400	104600	100000	108300	130900	166800	159300	158900	154500	154700	160500
8	76680	110100	104600	99720	108900	134500	166800	159500	158800	154400	154800	160300
9	76640	110600	104700	99980	109600	137700	166800	159600	158700	154400	154900	160100
10	76940	111000	104900	100100	110000	141400	167100	159700	158600	154500	155100	160100
11	77060	111500	104700	100400	110100	145900	167400	159700	158500	154600	155300	160000
12	77130	111900	104400	100900	109400	149600	167700	159800	158300	154700	155600	159900
13	77200	112300	104200	101200	109300	153700	167900	159800	158000	154800	155900	159900
14	77300	112500	104000	101400	109300	157700	168300	159800	157800	154900	156300	159800
15	77430	112600	103900	101700	109700	162000	168800	159700	157600	154800	157100	159800
16	77550	112400	104000	102000	110000	165600	169100	159700	157500	154700	158000	159700
17	77680	112100	104000	102400	111200	168100	168800	159700	157500	154600	158800	159700
18	78040	111600	104000	102600	112200	169600	168100	159600	157300	154500	159500	159700
19	78160	111200	104000	102800	113100	170700	167100	159600	157200	154400	160000	159600
20	78310	110700	104000	103100	114200	171500	165900	159500	157100	154300	160300	159600
21	78530	110000	103700	103500	115200	172200	164600	159600	156900	154200	160400	159500
22	80780	109500	103400	103800	116300	173000	163600	159700	156800	154100	160800	159500
23	82210	109300	103300	104000	117200	173600	162800	159900	156600	154000	161000	159400
24	84340	109000	103400	104100	117800	174000	162300	160000	156500	153800	161200	159400
25	85910	108700	103500	104400	118200	174200	161400	160100	156300	153700	161400	159300
26	86810	108500	103300	104700	118600	173800	160500	160000	156200	153800	161500	159300
27	88430	108000	102800	105400	118900	173400	159900	160000	156100	153800	161500	159200
28	91960	107400	102200	106000	119600	172700	159300	159900	156100	153800	161500	159100
29	95430	106900	101500	106400	---	172200	158700	159800	156000	153700	161500	159000
30	97310	106400	101100	106700	---	171200	158700	159800	155800	153700	161400	158800
31	100300	---	100900	107000	---	170500	---	159800	---	153800	161300	---
MAX	100300	112600	105900	107000	119600	174200	169700	160100	159700	155700	161500	161200
MIN	76590	102800	100900	99720	107300	121100	158700	158700	155800	153700	153900	158800
(*)	+23710	+6100	-5500	+6100	+12600	+50900	-11800	+1100	-4000	-2000	+7500	-2500

CAL YR 2000 MAX 112600 MIN 58800 (\*) +30400

WTR YR 2001 MAX 174200 MIN 76590 (\*) +82210

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

## 09510000 VERDE RIVER BELOW BARTLETT DAM, AZ

**LOCATION.**--Lat 33°48'30", long 111°39'46", in NW 1/4 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.

**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 hydrograph 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 those for estimated daily discharge, 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 of 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)--113 years, 667 ft<sup>3</sup>/s, 483,000 acre-ft/yr; median of yearly mean discharge, 540 ft<sup>3</sup>/s, 391,000 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, 13, 1901. Floods of Nov. 27, 1905, Mar. 4, 1938, reached maximum discharges of 96,000 ft<sup>3</sup>/s and 95,000 ft<sup>3</sup>/s, respectively.

1939--2000: 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, 1,110 ft<sup>3</sup>/s Apr. 21; minimum daily, 88 ft<sup>3</sup>/s Oct. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	179	512	458	206	113	874	119	121	122	e126	114
2	92	179	448	470	185	111	840	110	122	e122	e124	113
3	96	179	411	450	319	177	898	109	122	e123	e122	113
4	96	181	398	408	480	211	889	110	121	e125	120	114
5	98	181	357	307	291	175	823	116	121	e127	124	115
6	101	182	344	277	296	100	687	120	119	e130	123	115
7	96	182	348	275	339	94	580	118	e117	130	123	116
8	96	182	279	273	354	128	631	124	e116	130	124	118
9	102	182	223	275	354	191	541	128	e114	130	123	119
10	101	183	251	242	381	146	416	126	e112	130	123	119
11	96	183	326	119	443	144	425	125	e120	130	123	119
12	95	183	391	112	497	126	531	125	e123	130	123	119
13	93	224	365	172	447	166	512	121	e122	130	123	119
14	91	255	341	201	392	194	498	116	e123	130	123	121
15	91	288	321	197	352	252	509	125	e125	130	123	123
16	90	371	294	154	308	250	601	126	e124	130	123	122
17	98	438	258	143	301	300	752	125	e124	130	123	122
18	101	475	254	162	277	354	906	127	e123	130	122	121
19	92	487	270	164	251	417	980	128	e123	130	121	122
20	93	532	296	166	235	457	1020	130	e123	130	119	123
21	93	614	376	167	253	525	1070	131	e123	130	119	123
22	104	548	454	168	289	450	795	129	e122	130	e120	122
23	95	370	389	175	326	475	645	127	e122	130	e118	122
24	93	371	272	201	396	510	623	129	e122	130	116	121
25	89	386	243	215	423	653	845	129	e122	130	115	122
26	89	379	395	217	388	796	794	126	122	130	115	119
27	97	410	583	162	320	835	576	123	122	130	113	116
28	90	407	732	150	172	823	492	122	122	130	113	119
29	88	416	707	184	---	816	428	121	122	130	113	119
30	121	450	513	218	---	965	238	122	122	e130	114	120
31	178	---	403	217	---	874	---	121	---	e128	114	---
TOTAL	3047	9597	11754	7099	9275	11828	20419	3808	3636	3997	3725	3570
MEAN	98.3	320	379	229	331	382	681	123	121	129	120	119
MAX	178	614	732	470	497	965	1070	131	125	130	126	123
MIN	88	179	223	112	172	94	238	109	112	122	113	113
AC-FT	6040	19040	23310	14080	18400	23460	40500	7550	7210	7930	7390	7080

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2001, BY WATER YEAR (WY)

	331	333	515	587	920	1106	762	436	611	566	438	311
MEAN	331	333	515	587	920	1106	762	436	611	566	438	311
MAX	1046	692	4591	14770	13680	9024	5247	1383	1854	1445	1925	994
(WY)	1993	1981	1979	1993	1980	1978	1973	1995	1966	1968	1969	1951
MIN	21.2	27.3	33.5	27.1	.000	.39	4.43	7.45	47.7	37.7	23.9	22.3
(WY)	1979	1950	1970	1970	1981	1981	1981	1977	1970	1977	1977	1977

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1945 - 2001
ANNUAL TOTAL	70523	91755	
ANNUAL MEAN	193	251	574
HIGHEST ANNUAL MEAN			2545
LOWEST ANNUAL MEAN			169
HIGHEST DAILY MEAN	790	1070	84700
LOWEST DAILY MEAN	76	88	.00
ANNUAL SEVEN-DAY MINIMUM	92	92	.00
ANNUAL RUNOFF (AC-FT)	139900	182000	416200
10 PERCENT EXCEEDS	408	518	1150
50 PERCENT EXCEEDS	117	130	291
90 PERCENT EXCEEDS	93	112	44

e Estimated

## GILA RIVER BASIN

## 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 TEMPERATURES: 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 district office in Tucson, AZ.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
NOV 15...	1045	255	13	719	9.2	99	8.6	640	16.0	16.2	5	230	38.0
JAN 24...	1235	202	4.1	724	11.4	108	8.5	585	21.0	10.6	10	230	42.0
MAR 22...	1220	454	1.8	719	12.2	119	8.6	600	27.0	11.6	11	230	44.0
MAY 10...	1210	126	3.4	717	10.8	113	8.4	564	35.0	14.7	8	220	43.0
JUL 27...	1200	130	5.0	718	10.6	117	8.3	496	35.0	17.0	12	200	40.0
DATE	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
NOV 15...	40.0	34.0	37.0	3.70	1	49.0	229	260	10	30.0	.4	79.0	16
JAN 24...	43.0	30.0	31.0	3.30	1	40.0	219	250	8	23.0	.3	64.0	7
MAR 22...	44.0	30.0	30.0	3.10	1	37.0	223	255	8	23.0	.3	62.0	4
MAY 10...	43.0	27.0	28.0	2.60	.9	32.0	211	243	7	20.0	.3	53.0	6
JUL 27...	41.0	24.0	25.0	2.50	.9	28.0	187	214	7	16.0	.3	40.0	6
DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, TOTAL (MG/L AS NO3) (71887)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)
NOV 15...	.54	395	372	<.20	.03	.04	.1	--	--	--	.050	--	E5k
JAN 24...	.49	359	334	.61	.05	.06	.1	.56	.67	3.0	.020	<5	<1
MAR 22...	.48	354	333	.30	.02	.03	<.02	.28	--	--	<.020	10	<1
MAY 10...	.45	330	305	.31	<.01	--	M	--	.34	1.5	.020	7	E3k
JUL 27...	.40	294	263	.20	.01	.01	.1	.19	.25	1.1	.030	11	E1k
DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	BORON, DIS-SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNPLTRD TOTAL (UG/L AS CD) (01027)
NOV 15...	E2k	<1.00	<1.0	20.0	21	48.0	55.0	<1.00	<1.00	200	200	<.50	<.50
JAN 24...	E2k	<1.00	<1.0	16.0	16	52.0	56.0	<1.00	<1.00	170	170	<.50	<.50
MAR 22...	<1	<1.00	<1.0	16.0	15	57.0	59.0	<1.00	<1.00	160	160	<.50	<.50
MAY 10...	E1k	<1.00	<1.0	15.0	14	52.0	54.0	<1.00	<1.00	140	140	<.50	<.50
JUL 27...	E4k	<1.00	<1.0	15.0	15	50.0	54.0	<1.00	<1.00	120	120	<.50	<.50



## 09510000 VERDE RIVER BELOW BARTLETT DAM, AZ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
NOV 15...	<1.0	<1	2.4	2.7	M	480	<2.00	<2	8.8	69	<.10	<.10	1.60
JAN 24...	<1.0	<1	<2.0	<2.0	<2	190	<2.00	<2	2.4	20	<.10	<.10	<1.00
MAR 22...	<1.0	<1	<2.0	<2.0	M	70	<2.00	<2	2.0	12	<.10	<.10	1.20
MAY 10...	<1.0	<1	<2.0	<2.0	<2	120	<2.00	<2	8.6	23	<.10	<.10	<1.00
JUL 27...	<1.0	<1	<2.0	<2.0	M	170	<2.00	<2	17.0	51	<.10	<.10	1.40

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL SOLVED (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL SOLVED (UG/L AS TL) (01059)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
NOV 15...	2	<1.0	<1.0	<1.0	<1.00	810	<2.00	<2.0	10	14	26	18
JAN 24...	2	<1.0	1.1	<1.0	<1.00	720	<2.00	<2.0	9	4	6	3.3
MAR 22...	<1	<1.0	<1.0	<1.0	<1.00	720	<2.00	<2.0	4	3	3	3.7
MAY 10...	<1	<1.0	<1.0	<1.0	<1.00	630	<2.00	<2.0	3	<2	22	7.5
JUL 27...	<1	<1.0	<1.0	<1.0	<1.00	570	<2.00	<2.0	4	5	5	1.8

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range

## GILA RIVER BASIN

## 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 22 .....	1525	783	2.87
Oct. 28 .....	0100	*1230	*3.59
Oct. 31 .....	0445	569	2.47

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	e90	2.7	.55	16	31	4.6	4.1	.22	.44	.01	.00
2	.01	50	2.4	.48	14	42	3.7	3.6	.20	.44	.00	.00
3	.00	33	2.3	.44	13	39	3.3	3.0	.15	.45	.00	.00
4	.36	24	2.4	.77	14	33	2.7	2.8	.14	.47	.00	.00
5	.03	29	2.3	1.3	16	27	3.3	2.6	.16	.50	.00	.00
6	.02	33	2.2	1.1	16	22	72	2.5	.17	.50	.00	.00
7	.02	72	2.3	1.1	13	107	82	2.3	.27	.44	.00	.00
8	.02	50	2.3	1.2	12	202	43	2.0	.65	.37	.00	.00
9	.02	37	2.3	2.7	12	128	28	1.8	.57	.11	.00	.00
10	45	29	2.1	1.6	11	134	26	1.5	.48	.08	.00	.00
11	e13	28	1.7	1.2	9.2	137	32	1.3	.47	.08	.00	.00
12	e1.5	24	1.6	2.0	7.5	105	36	1.2	.47	.09	.00	.00
13	e.30	20	1.5	2.5	7.3	85	28	1.2	.44	.08	.00	.00
14	e.05	18	1.4	2.5	13	72	20	1.0	.40	.07	.00	.00
15	e.05	17	1.4	2.2	19	60	16	.93	.41	.05	.00	.00
16	e.05	14	1.2	4.2	18	50	13	.85	.42	.03	.00	.00
17	e.05	13	1.0	4.5	16	43	10	.84	.44	.03	.00	.00
18	e.05	10	.71	3.5	15	e40	8.5	.79	.50	.03	.00	.00
19	e.04	8.1	.74	2.8	13	e38	7.4	1.2	.54	.02	.00	.00
20	.04	7.1	.77	2.6	12	e32	6.2	1.1	.54	.02	.00	.00
21	.04	5.3	.79	2.5	11	e28	7.9	.82	.68	.01	.00	.00
22	243	4.4	.71	2.5	10	e23	27	.64	.62	.01	.00	.00
23	83	4.0	.72	2.7	9.2	e20	22	.49	.50	.01	.00	.00
24	135	3.7	.73	2.8	7.2	e18	14	.39	.48	.01	.00	.00
25	71	3.2	.72	2.6	6.6	e15	10	.37	.51	.01	.00	.00
26	33	4.5	.67	2.5	6.9	e13	7.5	.32	.61	.01	.00	.00
27	97	4.6	.68	5.8	7.4	e12	6.5	.32	.60	.01	.00	.00
28	406	3.7	.71	15	11	e11	5.7	.35	.57	.01	.00	.00
29	126	3.2	.73	16	---	e9.0	4.9	.35	.56	.01	.00	.00
30	79	2.8	.69	17	---	6.8	4.5	.34	.52	.01	.00	.00
31	e250	---	.61	18	---	5.4	---	.25	---	.01	.00	---
TOTAL	1583.66	645.6	43.08	126.64	336.3	1588.2	555.7	41.25	13.29	4.41	0.01	0.00
MEAN	51.1	21.5	1.39	4.09	12.0	51.2	18.5	1.33	.44	.14	.000	.000
MAX	406	90	2.7	18	19	202	82	4.1	.68	.50	.01	.00
MIN	.00	2.8	.61	.44	6.6	5.4	2.7	.25	.14	.01	.00	.00
AC-FT	3140	1280	85	251	667	3150	1100	82	26	8.7	.02	.00
CFSM	.31	.13	.01	.02	.07	.31	.11	.01	.00	.00	.00	.00
IN.	.36	.15	.01	.03	.08	.36	.13	.01	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2001, BY WATER YEAR (WY)

MEAN	6.93	6.96	42.6	61.8	80.6	90.4	26.1	7.02	2.33	1.91	4.26	4.12
MAX	194	72.3	426	1065	852	881	120	51.7	20.8	15.4	52.3	92.6
(WY)	1973	1973	1966	1993	1980	1978	1973	1973	1979	1994	1992	1970
MIN	.000	.000	.000	.000	.004	.11	.069	.000	.000	.000	.000	.000
(WY)	1961	1961	1963	1963	1990	1999	1972	1961	1961	1962	1961	1962

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1961 - 2001

ANNUAL TOTAL	2328.49	4938.14	
ANNUAL MEAN	6.36	13.5	27.7
HIGHEST ANNUAL MEAN			155
LOWEST ANNUAL MEAN			.16
HIGHEST DAILY MEAN	406 Oct 28	406 Oct 28	8300 Mar 2 1978
LOWEST DAILY MEAN	.00 Jun 9	.00 Oct 3	.00 Oct 1 1960
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 9	.00 Aug 2	.00 Oct 1 1960
ANNUAL RUNOFF (AC-FT)	4620	9790	20080
ANNUAL RUNOFF (CFSM)	.039	.082	.17
ANNUAL RUNOFF (INCHES)	.53	1.12	2.30
10 PERCENT EXCEEDS	4.5	33	42
50 PERCENT EXCEEDS	.13	1.2	.60
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

## GILA RIVER BASIN

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## 09511300 VERDE RIVER NEAR SCOTTSDALE, AZ

**LOCATION.**--Lat 33°33'31", long 111°40'07", in NW1/4NE1/4SE1/4 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, 1.0 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.**--No estimated daily discharges. Records good. 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 of 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.**--40 years, 622 ft<sup>3</sup>/s, 450,000 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 discharge, 859 ft<sup>3</sup>/s, Apr. 21, gage height 4.44 ft. Minimum daily discharge, 41 ft<sup>3</sup>/s, June 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	155	448	411	194	166	681	171	53	94	76	69
2	52	154	453	431	174	122	654	122	68	87	80	73
3	51	154	397	417	188	123	667	108	80	69	75	75
4	56	160	402	419	356	192	685	112	73	72	79	68
5	57	159	357	328	356	205	673	106	62	80	84	64
6	58	163	335	271	264	162	649	98	71	64	78	56
7	59	161	342	254	297	174	498	99	71	78	61	46
8	66	156	312	252	328	150	499	81	68	91	73	45
9	61	155	240	288	331	171	475	82	54	83	79	70
10	94	159	212	265	340	187	431	86	50	62	76	69
11	104	161	266	200	373	165	385	93	49	52	81	50
12	79	155	336	135	442	151	432	91	49	57	83	59
13	70	155	363	135	446	150	469	102	50	48	78	69
14	66	197	340	171	406	174	459	94	61	63	61	63
15	61	216	302	186	371	210	448	76	61	76	59	64
16	59	262	267	177	319	227	471	80	61	67	60	78
17	56	331	255	149	315	267	525	87	73	52	59	74
18	48	391	229	145	278	308	620	88	65	58	57	55
19	59	407	208	153	266	372	703	87	59	65	60	53
20	55	427	246	153	232	418	735	71	50	50	66	60
21	62	465	282	152	225	467	793	81	58	60	64	65
22	250	501	382	151	260	472	761	70	41	58	65	53
23	146	385	416	151	294	461	585	80	61	70	58	53
24	110	339	324	159	339	471	542	81	75	47	54	55
25	90	356	233	177	398	521	586	77	68	49	53	61
26	80	367	273	185	416	590	670	82	47	50	68	65
27	219	387	421	204	350	646	554	86	44	51	73	67
28	275	400	525	156	265	655	440	76	52	50	53	58
29	121	400	589	153	---	625	421	60	55	78	50	53
30	105	414	503	176	---	737	357	58	82	107	60	52
31	130	---	421	193	---	709	---	55	---	74	60	---
TOTAL	2860	8292	10679	6797	8823	10448	16868	2740	1811	2062	2083	1842
MEAN	92.3	276	344	219	315	337	562	88.4	60.4	66.5	67.2	61.4
MAX	275	501	589	431	446	737	793	171	82	107	84	78
MIN	48	154	208	135	174	122	357	55	41	47	50	45
AC-FT	5670	16450	21180	13480	17500	20720	33460	5430	3590	4090	4130	3650

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2001, BY WATER YEAR (WY)

	340	381	600	761	1191	1305	768	398	545	536	427	241
MEAN	340	381	600	761	1191	1305	768	398	545	536	427	241
MAX	996	643	4225	14140	13720	10090	5574	1416	1715	1343	1852	864
(WY)	1984	1981	1979	1993	1980	1978	1973	1973	1966	1968	1969	1983
MIN	.085	15.3	21.7	18.0	3.38	.000	.000	1.73	5.30	32.3	40.9	20.4
(WY)	1979	1962	1969	1970	1981	1981	1981	1977	1970	1977	1977	1990

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1961 - 2001	
ANNUAL TOTAL	59838		75305			
ANNUAL MEAN	163		206			
HIGHEST ANNUAL MEAN					2522	
LOWEST ANNUAL MEAN					151	
HIGHEST DAILY MEAN	631	Feb 9	793	Apr 21	81100	Jan 8 1993
LOWEST DAILY MEAN	36	Aug 4	41	Jun 22	.00	Nov 8 1961
ANNUAL SEVEN-DAY MINIMUM	43	Jul 24	53	Jun 9	.00	Nov 8 1961
ANNUAL RUNOFF (AC-FT)	118700		149400		450700	
10 PERCENT EXCEEDS	394		466		1170	
50 PERCENT EXCEEDS	96		135		303	
90 PERCENT EXCEEDS	50		55		32	

## GILA RIVER BASIN

## 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.**--No estimated daily discharges. Records fair. 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 OUTSIDE PERIOD OF RECORD.**--Maximum discharge 21,000 ft<sup>3</sup>/s June 22, 1972, at gage 7 mi upstream (09512100).

**EXTREMES FOR PERIOD OF RECORD.**--Maximum daily discharge 1,970 ft<sup>3</sup>/s, Jan. 11, 1993; minimum daily, no flow many days.

**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)
Oct. 28 .....	0430	*191	*1.46

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.82	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00
5	.00	.00	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00
6	.00	.57	.00	.00	.00	.00	39	.00	.00	.00	.00	.00
7	.00	1.4	.00	.00	.00	30	11	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	37	2.5	.00	.00	.00	.00	.00
9	.00	.00	.00	.44	.00	4.8	.75	.00	.00	.00	2.5	.00
10	.38	.00	.00	2.3	.00	.00	.00	.00	.00	.00	.00	.00
11	20	.00	.00	4.1	.00	.00	.00	.00	.00	.00	.00	.00
12	4.8	.00	.00	10	.00	.00	.00	.00	.00	.00	.00	.00
13	1.3	.00	.00	42	.00	.00	.00	.00	.00	.00	.00	.00
14	2.0	.00	.00	12	.05	.00	.00	.00	.00	.00	.00	.00
15	1.1	.00	.00	4.7	.00	.00	.00	.00	.00	.00	.00	.00
16	.86	.00	.00	9.2	.00	.00	.00	.00	.00	.00	.00	.00
17	.50	.00	.00	2.5	.00	.00	.00	.00	.00	1.7	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.78	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.05	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00
22	30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	4.2	.00	.00	.20	.00	.00	.00	.00	.00	.26	.00	.00
28	89	.00	.00	28	.06	.00	.00	.00	.00	.00	.00	.00
29	12	.00	.00	.43	---	.00	.00	.00	.00	.31	.00	.00
30	2.0	.00	.00	.00	---	.00	.00	.00	.00	9.0	.00	.00
31	2.5	---	.00	.00	---	.00	---	.13	---	.00	.00	---
TOTAL	186.69	2.89	0.00	115.87	0.11	71.80	53.40	0.13	0.00	12.05	2.53	0.00
MEAN	6.02	.096	.000	3.74	.004	2.32	1.78	.004	.000	.39	.082	.000
MAX	89	1.4	.00	42	.06	37	39	.13	.00	9.0	2.5	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	370	5.7	.00	230	.2	142	106	.3	.00	24	5.0	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2001, BY WATER YEAR (WY)

	MEAN	6.07	3.71	5.58	26.3	4.94	4.64	.37	.045	.065	.78	.67	3.15
MAX	46.8	29.9	39.5	225	23.6	16.9	1.78	.39	.55	6.17	2.64	21.9	
(WY)	1994	1994	1993	1993	1993	1993	2001	1995	1994	1999	1995	1995	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
(WY)	1993	1993	1994	1996	1999	1999	1993	1993	1993	1993	1993	1994	1993

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1993 - 2001
ANNUAL TOTAL	588.76	445.47	
ANNUAL MEAN	1.61	1.22	4.73
HIGHEST ANNUAL MEAN			25.8
LOWEST ANNUAL MEAN			.27
HIGHEST DAILY MEAN	215	89	1970
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	1170	884	3420
10 PERCENT EXCEEDS	.08	.53	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

## GILA RIVER BASIN

293

## 09512165 SALT RIVER AT PRIEST DRIVE NEAR PHOENIX, AZ

**LOCATION**--Lat 33°26'22", long 111°57'37", in NE 1/4 NE 1/4 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**--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 high-water mark profile at gage; no flow 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, 330 ft<sup>3</sup>/s on Apr. 6, gage height 2.80 ft; minimum daily discharge, 0.48 ft<sup>3</sup>/s, July 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	4.3	1.3	1.2	1.4	1.5	.96	2.2	1.7	.52	2.1	.98
2	1.7	5.3	1.3	1.2	1.4	1.2	.94	1.9	1.4	.91	2.5	.93
3	1.4	4.9	1.3	1.2	1.4	1.1	1.6	1.8	1.3	.74	2.6	.93
4	2.6	5.2	1.2	1.4	1.5	1.1	1.5	2.1	1.6	.48	3.4	1.0
5	2.0	5.5	1.2	1.6	1.5	1.0	4.3	2.1	1.4	.49	4.3	1.0
6	1.4	13	1.3	1.8	1.6	1.3	45	1.8	1.2	.82	3.8	1.1
7	1.2	13	1.3	2.5	2.3	8.8	21	2.1	1.2	.78	4.6	2.1
8	1.5	2.2	1.5	1.7	1.5	65	3.1	1.7	1.1	.91	2.3	1.4
9	1.9	1.9	1.8	4.4	1.4	8.0	2.8	1.5	1.0	.72	7.0	1.2
10	8.5	2.5	1.8	1.7	1.7	2.0	2.5	1.5	.93	1.0	3.7	2.1
11	17	2.6	1.7	3.3	1.4	1.7	2.1	1.5	.93	1.1	3.0	1.8
12	6.1	2.5	1.6	6.8	2.2	1.9	1.9	1.9	1.0	.84	1.8	1.2
13	3.3	3.0	1.4	44	2.1	1.4	1.8	1.8	1.3	1.7	1.8	1.1
14	1.9	2.6	1.1	12	6.2	1.2	1.8	1.9	1.1	1.8	1.9	1.2
15	3.7	2.2	1.1	4.0	2.2	1.2	1.8	2.1	1.0	1.9	1.5	1.2
16	1.7	2.1	1.2	6.1	1.8	1.1	1.8	1.7	.91	2.7	1.4	1.3
17	2.4	2.3	1.2	1.9	1.8	1.1	1.8	1.7	.80	26	1.4	1.4
18	1.6	2.1	1.2	1.9	1.9	1.5	1.9	2.0	1.1	7.0	.95	1.6
19	2.4	1.3	1.1	1.8	1.8	1.8	1.9	1.9	1.1	1.8	.90	1.7
20	4.1	1.3	1.1	1.5	1.7	1.6	2.2	2.0	.68	2.1	1.9	1.7
21	10	1.3	1.1	1.6	1.5	1.6	2.4	2.5	.72	1.9	1.5	2.6
22	23	1.4	1.2	1.6	1.4	1.3	2.1	1.7	.70	1.8	1.1	1.8
23	34	2.2	1.4	1.7	1.3	1.3	2.0	1.7	.79	1.7	.88	1.7
24	2.3	2.1	1.7	3.2	1.3	1.3	1.8	1.6	.78	1.9	2.0	2.7
25	2.0	1.3	1.7	1.2	1.6	1.2	1.9	1.6	.79	2.0	1.3	2.0
26	1.7	1.3	1.6	1.3	2.0	1.2	1.6	1.5	.82	2.0	.85	1.5
27	7.6	1.3	1.6	6.3	1.7	1.2	1.8	1.5	.72	1.7	2.1	1.4
28	78	1.3	1.8	2.4	4.8	1.2	1.9	1.5	.64	1.7	2.0	1.3
29	31	1.7	1.2	1.7	---	1.1	1.8	1.6	.64	7.6	1.5	1.1
30	6.8	1.5	1.2	1.6	---	1.0	1.7	1.7	.93	45	3.2	.95
31	26	---	1.2	1.5	---	.99	---	2.2	---	2.1	1.3	---
TOTAL	291.1	95.2	42.4	126.1	54.4	118.89	121.70	56.3	30.28	123.71	70.58	43.99
MEAN	9.39	3.17	1.37	4.07	1.94	3.84	4.06	1.82	1.01	3.99	2.28	1.47
MAX	78	13	1.8	44	6.2	65	45	2.5	1.7	45	7.0	2.7
MIN	1.2	1.3	1.1	1.2	1.3	.99	.94	1.5	.64	.48	.85	.93
AC-FT	577	189	84	250	108	236	241	112	60	245	140	87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	1.59	.63	1.19	23.6	658	947	169	.44
MAX	9.39	3.17	5.48	183	5309	7555	968	1.82
(WY)	2001	2001	1995	1995	1995	1995	1998	2001
MIN	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1995	1995	1996	1994	1994	1994	1994	1994

## SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1994 - 2001

ANNUAL TOTAL	1165.15	1174.65	169
ANNUAL MEAN	3.18	3.22	1098
HIGHEST ANNUAL MEAN			.000
LOWEST ANNUAL MEAN			1995
HIGHEST DAILY MEAN	194	Mar 6	78
LOWEST DAILY MEAN	.00	Feb 17	.48
ANNUAL SEVEN-DAY MINIMUM	.02	Feb 24	.67
ANNUAL RUNOFF (AC-FT)	2310	2330	122500
10 PERCENT EXCEEDS	2.7	4.3	2.0
50 PERCENT EXCEEDS	1.5	1.7	.00
90 PERCENT EXCEEDS	.96	1.0	.00



## GILA RIVER BASIN

## 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. No regulation or diversion upstream from station.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 9,200 ft<sup>3</sup>/s Jan. 8, 1993, gage height, 15.24 ft from rating curve extended above 7,000 ft<sup>3</sup>/s on basis of slope-area measurement at 9,200 ft<sup>3</sup>/s; 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 22 .....	0515	*815	*6.24
Oct. 24 .....	1000	792	6.19

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	8.7	.46	.56	4.6	32	.43	.40	.00	.00	.00	.00
2	.00	3.7	.43	.57	3.1	11	.42	.37	.00	.00	.00	.00
3	.00	1.9	.42	.55	2.6	6.0	.43	.35	.00	.00	.00	.00
4	.00	1.4	.42	.57	2.1	3.4	.47	.33	.00	.00	.00	.00
5	.00	1.1	.41	.53	1.9	2.2	.59	.32	.00	.00	.00	.00
6	.00	1.1	.42	.52	1.7	1.9	16	.30	.00	.00	.00	.00
7	.00	1.1	.45	.47	1.6	60	7.1	.27	.00	.00	.00	.00
8	.00	.81	.46	.48	1.4	45	3.2	.25	.00	.00	.00	.00
9	.00	.74	.47	1.8	1.3	9.9	2.5	.23	.00	.00	.00	.00
10	.00	.72	.51	1.5	1.3	9.4	2.9	.21	.00	.00	.00	.00
11	.00	.54	.52	.95	1.2	8.4	3.8	.19	.00	.00	.00	.00
12	.00	.69	.58	2.0	1.2	4.5	2.4	.16	.00	.00	.00	.00
13	.00	.78	.60	2.1	1.4	2.8	1.9	.14	.00	.00	.00	.00
14	.00	.75	.59	1.3	6.4	1.9	1.6	.12	.00	.00	26	.00
15	.00	.71	.59	1.1	12	1.5	1.4	.10	.00	.00	12	.00
16	.00	.67	.54	1.3	7.9	1.2	1.2	.08	.00	.00	.07	.00
17	.00	.63	.54	1.3	6.0	1.0	1.1	.07	.00	.00	.00	.00
18	.00	.58	.47	1.1	4.2	.90	.97	.05	.00	.00	.00	.00
19	.00	.55	.50	.93	2.8	.82	.98	.04	.00	.00	.00	.00
20	.00	.52	.54	.82	2.2	.74	1.0	.02	.00	.00	.00	.00
21	.00	.52	.55	.81	1.9	.68	1.0	.00	.00	.00	.00	.00
22	206	.52	.56	.75	1.8	.62	1.4	.00	.00	.00	.00	.00
23	16	.49	.55	.72	1.7	.59	1.2	.00	.00	.00	.00	.00
24	160	.47	.55	.70	1.5	.56	.94	.00	.00	.00	.00	.00
25	16	.50	.53	.67	1.4	.54	.78	.00	.00	.00	.00	.00
26	3.6	.45	.49	.69	1.7	.54	.68	.00	.00	.00	.00	.00
27	8.5	.46	.50	3.8	1.7	.53	.64	.00	.00	.00	.00	.00
28	64	.49	.52	11	8.4	.54	.60	.00	.00	.00	.00	.00
29	9.5	.48	.55	8.7	---	.53	.55	.00	.00	.00	.00	.00
30	5.9	.46	.55	6.6	---	.47	.48	.00	.00	.00	.00	.00
31	45	---	.56	6.9	---	.43	---	.00	---	.00	.00	---
TOTAL	534.50	32.53	15.83	61.79	87.0	210.59	58.66	4.00	0.00	0.00	38.07	0.00
MEAN	17.2	1.08	.51	1.99	3.11	6.79	1.96	.13	.000	.000	1.23	.000
MAX	206	8.7	.60	11	12	60	16	.40	.00	.00	26	.00
MIN	.00	.45	.41	.47	1.2	.43	.42	.00	.00	.00	.00	.00
AC-FT	1060	65	31	123	173	418	116	7.9	.00	.00	76	.00
CFSM	.21	.01	.01	.02	.04	.08	.02	.00	.00	.00	.01	.00
IN.	.24	.01	.01	.03	.04	.09	.03	.00	.00	.00	.02	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2001, BY WATER YEAR (WY)

MEAN	2.17	2.96	6.93	25.1	18.5	18.3	3.23	.95	.31	.78	2.00	1.83
MAX	17.2	12.9	48.3	370	164	123	14.0	6.54	3.27	10.5	19.3	11.1
(WY)	2001	1994	1983	1993	1993	1991	1983	1983	1999	1999	1992	1982
MIN	.000	.000	.000	.082	.28	.055	.084	.000	.000	.000	.000	.000
(WY)	1991	1990	1990	2000	1999	1999	2000	1989	1984	1982	1994	1981

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1980 - 2001

ANNUAL TOTAL	655.90	1042.97	
ANNUAL MEAN	1.79	2.86	6.89
HIGHEST ANNUAL MEAN			51.5
LOWEST ANNUAL MEAN			.20
HIGHEST DAILY MEAN	206	206	2750
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	1300	2070	4990
ANNUAL RUNOFF (CFSM)	.022	.035	.083
ANNUAL RUNOFF (INCHES)	.30	.47	1.13
10 PERCENT EXCEEDS	.68	3.7	5.3
50 PERCENT EXCEEDS	.00	.45	.48
90 PERCENT EXCEEDS	.00	.00	.00

## GILA RIVER BASIN

295

## 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 fair except for estimated daily discharges, which are poor. No diversion upstream from station.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 4,140 ft<sup>3</sup>/s Oct. 27, 2000, gage height 11.90 ft; minimum daily discharge, 0.20 ft<sup>3</sup>/s, July 24, 2001.

**EXTREMES FOR CURRENT RECORD.**--Maximum discharge, 4,140 ft<sup>3</sup>/s Oct. 27, gage height 11.90 ft; minimum daily discharge, 0.20 ft<sup>3</sup>/s, Jul. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.8	2.8	2.7	2.9	2.8	2.5	1.7	.79	.25	.52	1.0
2	1.3	2.8	2.8	2.7	2.8	2.8	2.5	1.6	.78	.28	.42	1.0
3	1.3	2.8	2.8	2.7	2.8	2.8	2.5	1.6	.75	.28	12	.99
4	1.4	2.8	2.8	2.7	2.9	2.8	2.5	1.5	.72	.29	3.9	1.0
5	1.3	2.7	2.9	2.7	3.0	2.8	2.5	1.5	.71	.49	1.5	.99
6	1.3	2.8	2.9	2.8	2.9	2.7	2.5	1.5	.69	3.8	e.69	.98
7	1.3	2.7	3.0	2.8	2.8	3.1	2.5	1.6	.65	.45	e.58	.95
8	1.3	2.7	2.9	2.8	2.7	3.4	2.5	1.5	.63	.48	e.58	.95
9	1.2	2.7	2.9	3.0	2.7	2.9	2.5	1.5	.60	.43	7.6	.95
10	1.3	2.7	3.0	2.8	2.8	2.8	2.5	1.4	.54	.58	4.2	.97
11	1.3	2.8	2.9	2.8	2.8	2.8	2.4	1.4	.49	.50	.48	.94
12	1.3	2.7	2.9	3.1	2.8	2.7	2.4	1.4	.47	.45	5.9	.95
13	1.3	2.7	2.9	2.9	2.9	2.7	2.4	1.4	.48	.53	3.9	.94
14	1.3	2.7	2.8	2.9	2.9	2.7	2.3	1.3	.45	.50	33	.97
15	1.3	2.7	2.8	2.9	2.8	2.7	2.4	1.3	.43	.41	e1.8	.96
16	1.3	2.7	2.8	2.9	2.8	2.7	2.3	1.3	.38	.35	3.3	.94
17	1.4	2.7	2.9	2.9	2.8	2.7	2.3	1.2	.37	.35	1.4	.92
18	1.4	2.7	2.8	3.0	2.8	2.7	2.2	1.3	.36	.35	1.3	.91
19	1.4	2.7	2.8	2.9	2.8	2.6	2.1	1.5	.35	.32	1.3	.88
20	1.4	2.7	2.8	2.9	2.8	2.7	2.1	1.4	.31	.29	6.8	.87
21	1.6	2.7	2.8	2.9	2.8	2.5	2.2	1.3	.33	.26	1.5	.88
22	37	2.8	2.9	2.8	2.8	2.5	2.1	1.3	.33	.23	1.4	.88
23	.89	2.8	2.9	2.9	2.8	2.5	2.1	1.2	.42	.21	1.2	.86
24	.71	2.8	2.8	2.9	2.8	2.5	2.0	1.1	.47	.20	1.2	.85
25	.67	2.8	2.8	2.9	2.8	2.5	1.9	1.1	.43	.28	1.1	.88
26	.63	2.8	2.7	2.8	2.9	2.5	1.9	.99	.54	1.0	1.1	.90
27	573	2.8	2.7	3.0	2.9	2.6	1.9	.95	.42	.56	1.0	.89
28	e8.8	2.8	2.7	3.0	2.8	2.6	1.8	.94	.34	.44	1.0	.90
29	3.7	2.8	2.7	3.0	---	2.6	1.8	.91	.27	.34	1.0	.93
30	3.5	2.8	2.7	3.0	---	2.5	1.8	.85	.24	.48	.99	.96
31	3.0	---	2.7	2.9	---	2.5	---	.82	---	.49	1.0	---
TOTAL	659.90	82.5	87.6	89.0	79.1	83.7	67.4	40.36	14.74	15.87	103.66	27.99
MEAN	21.3	2.75	2.83	2.87	2.83	2.70	2.25	1.30	.49	.51	3.34	.93
MAX	573	2.8	3.0	3.1	3.0	3.4	2.5	1.7	.79	3.8	33	1.0
MIN	.63	2.7	2.7	2.7	2.7	2.5	1.8	.82	.24	.20	.42	.85
MED	1.3	2.8	2.8	2.9	2.8	2.7	2.3	1.3	.46	.41	1.3	.94
AC-FT	1310	164	174	177	157	166	134	80	29	31	206	56

WTR YR 2001 TOTAL 1351.82 MEAN 3.70 MAX 573 MIN .20 MED 2.3 AC-FT 2680

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 high-water 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 27 .....	1930	*5070	*7.58

Minimum daily discharge, 0.10 ft<sup>3</sup>/s Sept. 23 and 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	e70	3.0	3.0	5.2	14	3.9	2.5	.92	.44	.40	.23
2	.29	e50	2.9	2.9	5.2	31	3.9	2.4	.90	.44	.40	.22
3	.29	e35	2.8	2.9	4.7	39	3.9	2.3	.88	.43	.39	.21
4	.37	e25	2.8	3.0	4.8	20	3.9	2.3	.86	.43	.74	.19
5	.37	e20	2.8	3.1	7.5	13	4.1	2.2	.85	.43	.98	.18
6	.39	e25	2.7	3.0	7.2	11	5.0	2.2	.80	.46	.43	.25
7	.39	e70	2.7	3.2	6.3	79	29	2.1	.78	.44	.44	.23
8	.40	e27	2.7	3.4	5.3	106	16	1.9	.74	.46	.48	.21
9	.43	e16	2.7	4.2	5.0	36	9.7	1.9	.72	.45	.49	.19
10	.47	e10	2.7	3.9	4.5	24	8.1	1.8	.71	.47	.50	.17
11	.46	e9.6	2.7	4.0	4.1	25	7.6	1.7	.66	.44	.41	.17
12	.50	e8.7	2.7	6.9	3.8	18	17	1.6	.68	.42	.36	.16
13	.50	e7.5	2.7	7.0	3.9	16	14	1.6	.69	.43	14	.17
14	.51	e6.0	2.7	6.3	5.9	13	8.5	1.5	.65	.40	19	.19
15	.54	e5.0	2.6	5.7	5.9	10	6.6	1.5	.65	.39	24	.19
16	.55	e4.2	2.6	5.5	5.3	7.2	5.5	1.4	.65	.39	.31	.19
17	.54	e4.0	2.6	4.9	5.2	6.1	4.7	1.4	.59	.39	.19	.17
18	.56	e4.0	2.6	4.9	7.6	5.2	4.3	1.3	.54	.43	.19	.17
19	.58	e3.9	2.6	4.6	30	5.1	4.2	1.4	.54	.41	.25	.17
20	.58	e3.8	2.7	4.5	33	4.9	4.0	1.3	.54	.40	.32	.16
21	.64	e3.7	2.6	4.4	16	4.6	4.0	1.3	.49	.39	.58	.14
22	121	e3.6	2.6	4.3	9.8	4.6	4.0	1.2	.48	.38	.17	.11
23	5.4	e3.6	2.8	4.3	7.9	4.4	3.9	1.2	.47	.40	.13	.10
24	1.7	e3.5	2.8	4.2	6.6	4.3	3.7	1.4	.47	.40	.13	.11
25	1.0	e3.5	2.7	4.4	5.8	4.1	3.4	1.2	.49	8.6	.12	.11
26	.98	e3.4	2.7	4.5	6.3	4.1	3.2	1.2	.50	1.2	.11	.11
27	804	e3.4	2.8	5.6	6.2	4.1	3.0	1.1	.47	.45	.11	.11
28	e114	e3.3	3.2	5.9	8.7	4.0	2.9	1.1	.46	.41	.12	.11
29	e7.3	e3.3	3.2	5.9	---	4.0	2.7	1.1	.45	.41	.13	.11
30	e73	3.2	2.9	5.3	---	3.9	2.6	1.0	.44	.42	.18	.10
31	e165	---	2.9	4.9	---	3.8	---	.99	---	.40	.21	---
TOTAL	1303.04	439.2	85.5	140.6	227.7	529.4	197.3	49.09	19.07	22.01	66.27	4.93
MEAN	42.0	14.6	2.76	4.54	8.13	17.1	6.58	1.58	.64	.71	2.14	.16
MAX	804	70	3.2	7.0	33	106	29	2.5	.92	8.6	24	.25
MIN	.29	3.2	2.6	2.9	3.8	3.8	2.6	.99	.44	.38	.11	.10
AC-FT	2580	871	170	279	452	1050	391	97	38	44	131	9.8
CFSM	.07	.03	.00	.01	.01	.03	.01	.00	.00	.00	.00	.00
IN.	.08	.03	.01	.01	.01	.03	.01	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2001, BY WATER YEAR (WY)

	9.34	9.35	28.7	32.1	61.8	49.8	19.8	3.35	2.60	10.9	31.9	16.3
MEAN	9.34	9.35	28.7	32.1	61.8	49.8	19.8	3.35	2.60	10.9	31.9	16.3
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	.14	.10	.077	.071	.021	.006	.000	.032	.007	.15	.31	.16
(WY)	1951	1950	1951	1951	1951	1951	1951	1951	1965	1960	1962	2001

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1940 - 2001

ANNUAL TOTAL	2957.84	3084.11	22.9
ANNUAL MEAN	8.08	8.45	143
HIGHEST ANNUAL MEAN			1.45
LOWEST ANNUAL MEAN			1993
HIGHEST DAILY MEAN	804	804	7290
LOWEST DAILY MEAN	.09	.10	.00
ANNUAL SEVEN-DAY MINIMUM	.11	.11	.00
ANNUAL RUNOFF (AC-FT)	5870	6120	16560
ANNUAL RUNOFF (CFSM)	.014	.014	.039
ANNUAL RUNOFF (INCHES)	.19	.20	.53
10 PERCENT EXCEEDS	11	13	19
50 PERCENT EXCEEDS	2.7	2.7	2.2
90 PERCENT EXCEEDS	.30	.21	.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>.

## WATER-DISCHARGE RECORDS

**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 maximum (\*), from rating curve extended on basis of slope-area measurement:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 28. ....	0200	*5640	*11.86

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	227	2.2	1.9	32	274	14	3.1	.42	.00	.00	.00
2	.15	75	2.2	1.9	27	183	13	2.8	.39	.00	.00	.00
3	.14	35	2.2	1.9	25	155	12	2.7	.36	.00	.00	.00
4	.21	20	2.2	2.0	26	134	11	2.7	.31	.00	.00	.00
5	.20	15	2.2	2.1	31	107	11	2.7	.28	.00	.00	.00
6	.17	14	2.1	2.2	39	94	15	2.6	.20	.00	.00	.00
7	.15	57	2.2	2.2	42	395	17	2.3	.18	.00	.00	.00
8	.14	24	2.3	2.3	38	1020	19	1.9	.14	.00	.00	.00
9	.13	14	2.2	3.2	33	e390	20	1.7	.13	.00	.00	.00
10	.22	7.9	2.3	3.0	30	e245	18	1.5	.11	.00	28	.00
11	.19	6.4	2.3	3.4	27	e230	17	1.2	.10	.00	139	.00
12	.17	6.3	2.3	21	24	e196	17	1.1	.12	.00	2.6	.00
13	.15	4.7	2.3	47	23	e169	15	1.1	.12	.00	.69	.00
14	.14	3.5	2.3	32	64	148	21	1.1	.10	.00	7.3	.00
15	.14	2.9	2.3	20	196	117	18	1.1	.09	.00	.70	.00
16	.13	2.7	2.2	20	100	96	14	.98	.05	.00	.94	.00
17	.12	2.4	2.1	21	82	77	11	.95	.03	.00	1.1	.00
18	.10	2.3	2.0	18	86	64	9.0	.97	.02	.00	.33	.00
19	.11	2.3	2.0	14	100	54	8.2	1.3	.01	.00	.09	.00
20	.11	2.2	2.1	12	102	47	7.4	1.6	.01	.00	.02	.00
21	.12	2.1	2.1	9.6	90	41	7.3	1.2	.01	.00	.02	.00
22	406	2.1	2.1	8.8	75	37	7.8	.82	.01	.00	.00	.00
23	192	2.1	2.1	8.6	65	33	7.2	.61	.01	.00	.00	.00
24	265	2.1	2.1	8.3	57	29	6.6	.42	.01	.00	.00	.00
25	90	2.1	2.1	8.9	49	27	5.8	.39	.01	.00	.00	.00
26	26	2.1	2.0	9.5	50	24	4.8	.40	.01	.00	.00	.00
27	384	2.1	2.0	26	62	22	4.2	.43	.00	.00	.00	.00
28	1640	2.1	2.1	55	98	20	3.8	.44	.00	.00	.00	.00
29	152	2.1	2.0	46	---	19	3.6	.46	.00	.00	e.00	.00
30	103	2.1	2.0	40	---	17	3.2	.49	.00	7.0	e.00	.00
31	970	---	2.0	36	---	15	---	.49	---	.00	e.00	---
TOTAL	4231.14	545.6	66.6	487.8	1673	4479	341.9	41.55	3.23	7.00	180.79	0.00
MEAN	136	18.2	2.15	15.7	59.8	144	11.4	1.34	.11	.23	5.83	.000
MAX	1640	227	2.3	55	196	1020	21	3.1	.42	7.0	139	.000
MIN	.10	2.1	2.0	1.9	23	15	3.2	.39	.00	.00	.00	.00
AC-FT	8390	1080	132	968	3320	8880	678	82	6.4	14	359	.00
CFSM	.12	.02	.00	.01	.05	.13	.01	.00	.00	.00	.01	.00
IN.	.14	.02	.00	.02	.06	.15	.01	.00	.00	.00	.01	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2001, BY WATER YEAR (WY)

	MEAN	24.1	20.5	74.9	191	321	265	56.1	11.8	4.47	10.9	28.8	31.4
	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	.12	.11	.10	.22	.66	.19	.000	.000	.000	.000	.35	.000
	(WY)	1976	1976	1978	1976	1977	1972	1972	1972	1971	1971	1975	2001

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1970 - 2001
ANNUAL TOTAL	6053.63	12057.61	
ANNUAL MEAN	16.5	33.0	85.7
HIGHEST ANNUAL MEAN			499
LOWEST ANNUAL MEAN			2.58
HIGHEST DAILY MEAN	1640	Oct 28	32700
LOWEST DAILY MEAN	.01	Aug 4	.00
ANNUAL SEVEN-DAY MINIMUM	.03	Jun 13	.00
ANNUAL RUNOFF (AC-FT)	12010	23920	62100
ANNUAL RUNOFF (CFSM)	.015	.030	.077
ANNUAL RUNOFF (INCHES)	.20	.40	1.05
10 PERCENT EXCEEDS	13	76	104
50 PERCENT EXCEEDS	1.0	2.1	2.8
90 PERCENT EXCEEDS	.09	.00	.21

e Estimated

## GILA RIVER BASIN

## 09513780 NEW RIVER NEAR ROCK SPRINGS, AZ

**LOCATION.**--Lat 33°58'27", long 112°05'54", in SW1/4SW1/4 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.**--No estimated daily discharges. Records fair.

**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 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	941	4.53	Feb. 14.....	1630	209	2.84
Oct. 24.....	0705	*1710	*5.57	Feb. 28.....	2300	247	2.99
Oct. 27.....	2245	436	3.49	Mar. 7.....	1610	448	3.60
Oct. 30.....	2205	759	4.21				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	57	1.0	.40	25	113	3.0	.70	.00	.00	.00	.00
2	.00	34	.96	.39	24	59	2.8	.62	.00	.00	.00	.00
3	.00	22	.87	.38	33	34	2.6	.56	.00	.00	.00	.00
4	.00	17	.81	.39	27	26	2.5	.58	.00	.00	.00	.00
5	.00	13	.77	.39	17	22	2.6	.61	.00	.00	.00	.00
6	.00	12	.67	.40	13	18	8.0	.57	.00	.00	.00	.00
7	.00	32	.69	.39	11	134	6.7	.55	.00	.00	.00	.00
8	.00	13	.66	.41	9.1	89	4.6	.50	.00	.00	.00	.00
9	.00	9.9	.60	1.4	7.8	47	3.7	.45	.00	.00	.00	.00
10	.00	8.5	.60	2.9	7.0	71	3.7	.39	.00	.00	.00	.02
11	.00	8.2	.56	1.7	6.2	67	4.8	.36	.00	.00	.00	.02
12	.00	7.1	.55	14	5.6	44	4.1	.29	.00	.00	.00	.00
13	.00	6.1	.54	28	5.7	34	3.7	.23	.00	.00	.00	.00
14	.00	5.5	.54	9.8	87	28	3.5	.20	.00	.00	.00	.00
15	.00	4.9	.54	6.5	54	23	3.0	.15	.00	.00	.00	.00
16	.00	4.3	.49	8.8	44	20	2.7	.09	.00	.00	.00	.00
17	.00	3.7	.48	10	52	17	2.4	.04	.00	.00	.00	.00
18	.00	3.2	.42	18	69	14	2.2	.01	.00	.00	.00	.00
19	.00	2.9	.41	11	42	12	2.1	.06	.00	.00	.00	.00
20	.00	2.6	.41	7.9	25	11	2.0	.11	.00	.00	.00	.00
21	.25	2.4	.49	6.6	19	9.4	2.0	.03	.00	.00	.00	.00
22	329	2.2	.49	5.8	16	8.2	2.1	.00	.00	.00	.00	.00
23	61	2.0	.48	5.3	14	7.5	2.0	.00	.00	.00	.00	.00
24	477	1.9	.47	5.1	11	6.7	1.7	.00	.00	.00	.00	.00
25	69	1.7	.44	4.9	9.8	6.2	1.5	.00	.00	.00	.00	.00
26	30	1.6	.44	4.6	10	5.0	1.3	.00	.00	.00	.00	.00
27	88	1.4	.44	22	8.8	4.7	1.2	.00	.00	.00	.00	.00
28	136	1.3	.44	37	90	4.3	1.0	.00	.00	.00	.00	.00
29	49	1.2	.44	34	---	4.0	.89	.00	.00	.52	.00	.00
30	155	1.1	.44	39	---	3.6	.77	.00	.00	.67	.00	.00
31	190	---	.43	38	---	3.2	---	.00	---	.00	.00	---
TOTAL	1584.25	283.7	17.57	325.45	743.0	945.8	85.16	7.10	0.00	1.19	0.00	0.04
MEAN	51.1	9.46	.57	10.5	26.5	30.5	2.84	.23	.000	.038	.000	.001
MAX	477	57	1.0	39	90	134	8.0	.70	.00	.67	.00	.02
MIN	.00	1.1	.41	.38	5.6	3.2	.77	.00	.00	.00	.00	.00
AC-FT	3140	563	35	646	1470	1880	169	14	.00	2.4	.00	.08
CFSM	.76	.14	.01	.16	.39	.45	.04	.00	.00	.00	.00	.00
IN.	.88	.16	.01	.18	.41	.52	.05	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2001, BY WATER YEAR (WY)

MEAN	2.58	5.31	18.8	35.6	40.9	41.3	4.94	1.15	.25	.71	1.28	3.49
MAX	51.1	52.4	218	573	348	444	29.5	10.5	2.17	8.55	15.3	104
(WY)	2001	1979	1979	1993	1980	1978	1992	1979	1980	1990	1971	1970
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1966	1968	1969	1970	1970	1971	1971	1966	1966	1966	1967	1968

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1966 - 2001
ANNUAL TOTAL	2005.64	3993.26	
ANNUAL MEAN	5.48	10.9	12.9
HIGHEST ANNUAL MEAN			71.7
LOWEST ANNUAL MEAN			.001
HIGHEST DAILY MEAN	477	477	5070
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	3980	7920	9360
ANNUAL RUNOFF (CFSM)	.081	.16	.19
ANNUAL RUNOFF (INCHES)	1.11	2.21	2.61
10 PERCENT EXCEEDS	3.0	28	10
50 PERCENT EXCEEDS	.00	.47	.00
90 PERCENT EXCEEDS	.00	.00	.00



## 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, except for estimated daily discharges, which are poor.

**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 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 .....	0615	*2690	*3.54	Oct. 30 .....	2055	500	2.15
Oct. 24 .....	1000	298	1.91	Jan. 27 .....	2200	156	1.70
Oct. 27 .....	1630	652	2.30	Aug. 14 .....	1730	1110	2.67

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
8	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.88	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.0	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	361	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	1.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	44	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	1.3	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
27	84	.00	.00	6.5	.00	e.00	.00	.00	.00	.00	.00	.00
28	13	.00	.00	2.5	.00	e.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	e.00	.00	.00	.00	.00	.00	.00
30	74	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	47	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	625.83	1.50	0.00	9.00	0.00	0.00	0.00	0.01	0.00	0.00	92.04	0.00
MEAN	20.2	.050	.000	.29	.000	.000	.000	.000	.000	.000	2.97	.000
MAX	361	1.5	.00	6.5	.00	.00	.00	.01	.00	.00	.88	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1240	3.0	.00	18	.00	.00	.00	.02	.00	.00	183	.00
CFSM	.31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00
IN.	.36	.00	.00	.01	.00	.00	.00	.00	.00	.00	.05	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2001, BY WATER YEAR (WY)

	MEAN	1.97	1.68	3.04	2.78	1.91	1.79	.000	.001	.008	1.33	3.16	1.80
MAX	25.6	41.4	60.0	55.7	24.1	45.7	.000	.032	.26	18.2	38.4	42.8	
(WY)	1973	1983	1983	1993	1978	1978	1968	1976	1972	1990	1990	1970	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
(WY)	1968	1968	1969	1968	1969	1968	1968	1968	1968	1968	1969	1968	

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1968 - 2001

ANNUAL TOTAL	639.32	728.38	
ANNUAL MEAN	1.75	2.00	1.63
HIGHEST ANNUAL MEAN			8.58
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	361	361	1170
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	1270	1440	1180
ANNUAL RUNOFF (CFSM)	.027	.031	.025
ANNUAL RUNOFF (INCHES)	.37	.42	.34
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

## GILA RIVER BASIN

## 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.

**AVERAGE DISCHARGE.**--9 years, 1075 ft<sup>3</sup>/s, 778,000 acre-ft/yr.

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

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 162,000 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 mean daily discharge, 468 ft<sup>3</sup>/s on Nov. 12. No flow Oct. 1--21, May 10--Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	232	5.8	9.5	14	49	11	.65	.00	.00	.00	.00
2	.00	196	5.2	9.1	14	36	11	2.1	.00	.00	.00	.00
3	.00	176	5.2	9.7	16	23	9.9	1.3	.00	.00	.00	.00
4	.00	151	5.3	9.8	20	21	9.9	1.0	.00	.00	.00	.00
5	.00	163	5.7	9.7	22	22	9.9	.72	.00	.00	.00	.00
6	.00	172	5.6	9.6	27	18	9.9	.55	.00	.00	.00	.00
7	.00	153	5.7	9.7	51	32	9.9	.41	.00	.00	.00	.00
8	.00	178	6.0	10	58	40	9.9	.21	.00	.00	.00	.00
9	.00	168	5.7	10	54	25	9.1	.03	.00	.00	.00	.00
10	.00	149	5.7	9.4	39	30	8.6	.00	.00	.00	.00	.00
11	.00	269	8.8	9.5	21	30	8.5	.00	.00	.00	.00	.00
12	.00	468	13	10	24	27	7.8	.00	.00	.00	.00	.00
13	.00	351	13	10	24	21	7.9	.00	.00	.00	.00	.00
14	.00	140	14	10	23	18	7.9	.00	.00	.00	.00	.00
15	.00	73	12	10	24	18	7.6	.00	.00	.00	.00	.00
16	.00	71	8.4	11	19	17	8.0	.00	.00	.00	.00	.00
17	.00	28	8.8	10	17	13	8.0	.00	.00	.00	.00	.00
18	.00	4.9	8.5	11	25	13	7.2	.00	.00	.00	.00	.00
19	.00	6.7	8.0	11	24	13	5.4	.00	.00	.00	.00	.00
20	.00	7.4	7.9	11	27	13	5.2	.00	.00	.00	.00	.00
21	.00	7.7	8.0	11	22	14	5.2	.00	.00	.00	.00	.00
22	173	6.3	8.3	12	17	14	6.1	.00	.00	.00	.00	.00
23	189	6.0	8.4	12	14	13	7.4	.00	.00	.00	.00	.00
24	92	5.8	8.6	11	13	13	7.6	.00	.00	.00	.00	.00
25	78	4.9	8.6	11	15	14	6.5	.00	.00	.00	.00	.00
26	107	6.7	7.6	12	34	15	3.5	.00	.00	.00	.00	.00
27	208	7.6	8.0	15	42	17	1.9	.00	.00	.00	.00	.00
28	348	7.2	8.7	18	44	16	1.7	.00	.00	.00	.00	.00
29	356	6.5	9.3	31	---	15	1.3	.00	.00	.00	.00	.00
30	307	6.6	9.5	35	---	11	.46	.00	.00	.00	.00	.00
31	252	---	9.9	19	---	11	---	.00	---	.00	.00	---
TOTAL	2110.00	3222.3	253.2	387.0	744	632	214.26	6.97	0.00	0.00	0.00	0.00
MEAN	68.1	107	8.17	12.5	26.6	20.4	7.14	.22	.000	.000	.000	.000
MAX	356	468	14	35	58	49	11	2.1	.00	.00	.00	.00
MIN	.00	4.9	5.2	9.1	13	11	.46	.00	.00	.00	.00	.00
AC-FT	4190	6390	502	768	1480	1250	425	14	.00	.00	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2001, BY WATER YEAR (WY)

	MEAN	20.2	85.6	61.7	6063	3529	2214	723	278	14.0	7.33	5.03	4.67
MAX	68.1	135	186	53880	26520	12960	5104	2431	97.6	55.6	42.2	19.7	
(WY)	2001	1994	1994	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
MIN	.11	26.3	8.17	4.14	13.7	18.6	4.49	.011	.000	.000	.000	.000	
(WY)	2000	1996	2001	1998	2000	1997	1997	1997	1997	1996	1994	1994	1994

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1993 - 2001

ANNUAL TOTAL	7478.91	7569.73		
ANNUAL MEAN	20.4	20.7		
HIGHEST ANNUAL MEAN			1075	
LOWEST ANNUAL MEAN			8376	1993
HIGHEST DAILY MEAN	468	Nov 12	10.3	2000
LOWEST DAILY MEAN	.00	May 9	132000	Jan 9 1993
ANNUAL SEVEN-DAY MINIMUM	.00	May 9	.00	Jul 2 1994
ANNUAL RUNOFF (AC-FT)	14830		.00	Jul 2 1994
10 PERCENT EXCEEDS	16			
50 PERCENT EXCEEDS	5.7			
90 PERCENT EXCEEDS	.00			

## 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, 1964--81 (annual maximums only), Oct. 1981 to Sept. 1991 (discharge above 500 ft<sup>3</sup>/s only), 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 high-water 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 21 .....	2400	*13,400	*13.44
Oct. 27.....	1700	10,600	12.75

No flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e8.4	e3.4	e3.5	e5.1	e2.0	e2.1	e.20	.00	.00	.00	.00
2	.00	e6.7	e3.4	e3.5	e5.1	e2.0	e2.1	e.10	.00	.00	.00	.00
3	.00	e6.6	e3.4	e3.5	e5.1	e2.0	e2.1	.00	.00	.00	.00	.00
4	.00	e6.4	e3.4	e3.5	e5.0	e2.0	e2.1	.00	.00	.00	.00	.00
5	.00	e6.2	e3.4	e3.6	e5.0	e2.0	e2.1	.00	.00	.00	.00	.00
6	.00	e6.1	e3.5	e3.8	e5.0	e2.0	e2.1	.00	.00	.00	.00	.00
7	.00	e5.9	e3.5	e4.0	e5.0	7.7	e2.1	.00	.00	.00	.00	.00
8	.00	e5.8	e3.5	e4.1	e4.9	6.2	e2.1	.00	.00	.00	.00	.00
9	.00	e5.7	e3.5	e4.3	e4.9	e2.1	e2.1	.00	.00	.00	.00	.00
10	.00	e5.5	e3.5	e4.5	e4.9	e2.1	e2.1	.00	.00	.00	.00	.00
11	.00	e5.3	e3.5	e4.6	e4.9	e2.1	e2.1	.00	.00	.00	.00	.00
12	.00	e5.2	e3.5	e4.8	e4.8	e2.1	e2.1	.00	.00	.00	.00	.00
13	.00	e5.1	e3.5	e5.0	e4.8	e2.1	e2.0	.00	.00	.00	.00	.00
14	.00	e4.9	e3.5	e5.2	e4.8	e2.1	e1.9	.00	.00	.00	.00	.00
15	.00	e4.8	e3.5	e5.3	e4.8	e2.1	e1.8	.00	.00	.00	.00	.00
16	.00	e4.6	e3.5	e5.5	e4.4	e2.1	e1.7	.00	.00	.00	.00	.00
17	.00	e4.4	e3.5	e5.5	e4.0	e2.1	e1.6	.00	.00	.00	.00	.00
18	.00	e4.3	e3.5	e5.5	e3.6	e2.1	e1.5	.00	.00	.00	.00	.00
19	.00	e4.2	e3.5	e5.4	e3.2	e2.1	e1.4	.00	.00	.00	.00	.00
20	.00	e4.0	e3.5	e5.4	e2.8	e2.1	e1.3	.00	.00	.00	.00	.00
21	e384	e3.8	e3.5	e5.4	e2.4	e2.1	e1.2	.00	.00	.00	.00	.00
22	e928	e3.7	e3.5	e5.4	e2.0	e2.1	e1.1	.00	.00	.00	.00	.00
23	e49	e3.5	e3.5	e5.3	e2.0	e2.1	e1.0	.00	.00	.00	.00	.00
24	47	e3.4	e3.5	e5.3	e2.0	e2.1	e.90	.00	.00	.00	.00	.00
25	45	e3.4	e3.5	e5.3	e2.0	e2.1	e.80	.00	.00	.00	.00	.00
26	45	e3.4	e3.5	e5.3	e2.0	e2.1	e.70	.00	.00	.00	.00	.00
27	1960	e3.4	e3.5	e5.2	e2.0	e2.1	e.60	.00	.00	.00	.00	.00
28	e699	e3.4	e3.5	e5.2	e2.0	e2.1	e.50	.00	.00	.00	.00	.00
29	e136	e3.4	e3.5	e5.2	---	e2.1	e.40	.00	.00	.00	.00	.00
30	e31	e3.4	e3.5	e5.2	---	e2.1	e.30	.00	.00	.00	.00	.00
31	e13	---	e3.5	e5.1	---	e2.1	---	.00	---	.00	.00	---
TOTAL	4337.00	144.9	108.0	148.4	108.5	74.2	45.90	0.30	0.00	0.00	0.00	0.00
MEAN	140	4.83	3.48	4.79	3.88	2.39	1.53	.010	.000	.000	.000	.000
MAX	1960	8.4	3.5	5.5	5.1	7.7	2.1	.20	.00	.00	.00	.00
MIN	.00	3.4	3.4	3.5	2.0	2.0	.30	.00	.00	.00	.00	.00
AC-FT	8600	287	214	294	215	147	91	.6	.00	.00	.00	.00
CFSM	.18	.01	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
IN.	.20	.01	.01	.01	.01	.00	.00	.00	.00	.00	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2001, BY WATER YEAR (WY)

	MEAN	8.78	.76	3.90	62.8	112	76.4	42.5	4.90	.34	1.58	9.07	12.0
MAX	140	4.83	27.8	1084	1290	445	424	44.2	1.97	10.4	39.7	71.0	
(WY)	2001	2001	1941	1993	1993	1941	1941	1941	2000	1941	2000	1997	
MIN	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	
(WY)	1943	1943	1995	1996	1996	1996	1996	1939	1939	1940	1940	1942	

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1939 - 2001

ANNUAL TOTAL	6057.40	4967.20	
ANNUAL MEAN	16.6	13.6	28.9
HIGHEST ANNUAL MEAN			220
LOWEST ANNUAL MEAN			.22
HIGHEST DAILY MEAN	1960	Oct 27	8280
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 15	.00
ANNUAL RUNOFF (AC-FT)	12010	9850	20910
ANNUAL RUNOFF (CFSM)	.021	.017	.036
ANNUAL RUNOFF (INCHES)	.28	.23	.49
10 PERCENT EXCEEDS	3.7	5.2	15
50 PERCENT EXCEEDS	.00	1.2	.43
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

## GILA RIVER BASIN

## 09517000 HASSAYAMPA RIVER NEAR ARLINGTON, AZ

**LOCATION.**--Lat 33°20'50", long 112°43'30", in NW1/4 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), 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 feet higher.

**REMARKS.**--Records fair except for estimated daily discharges, which are 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 22 .....	0845	4590	10.97
Oct. 27 .....	unknown	22,200	16.3

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	e90	89	124	e30	e65	e25	46	47	17	64	73
2	33	e.00	103	67	e30	e90	e30	43	42	25	74	82
3	21	e.00	104	45	e30	147	e25	40	54	32	74	85
4	55	e.00	93	45	127	123	e25	38	60	37	63	61
5	60	e.00	e80	58	131	117	e25	57	37	54	52	41
6	58	e.00	e90	73	114	122	e30	65	e15	104	55	41
7	50	e.00	109	98	136	151	e35	62	e20	88	61	60
8	53	e.00	107	e75	185	112	e45	63	37	93	59	42
9	69	e.00	116	e30	184	153	e45	44	31	86	35	61
10	112	e.00	117	100	199	154	e25	57	e20	71	72	73
11	107	e.00	133	134	140	171	89	51	e15	76	54	58
12	61	e.00	134	165	e85	139	69	58	41	89	72	44
13	37	e.00	156	199	e40	123	61	62	27	60	83	42
14	50	55	136	176	105	e65	49	72	e20	67	60	62
15	64	120	159	187	142	e40	56	e50	28	67	77	33
16	38	81	126	190	113	62	56	e42	30	59	61	40
17	43	85	118	198	92	42	49	48	e10	65	102	54
18	29	86	111	178	113	60	55	53	27	85	77	17
19	63	70	82	191	e75	49	58	40	25	79	77	28
20	72	59	e20	168	e30	80	54	57	e10	61	63	49
21	133	53	70	124	e30	60	69	52	27	35	55	51
22	e700	49	86	144	e30	39	72	42	22	46	52	40
23	e400	56	95	142	87	35	100	30	19	69	59	50
24	e240	55	134	e40	e50	34	75	46	33	70	55	51
25	e240	49	145	123	118	69	70	50	31	52	68	41
26	e140	54	102	131	148	54	67	34	48	78	53	46
27	e3400	51	74	186	169	e30	51	40	41	56	67	66
28	e2700	54	e20	214	105	59	60	34	41	46	56	41
29	e340	57	129	232	---	67	55	33	39	66	57	34
30	e140	76	148	181	---	e35	51	32	33	72	67	38
31	e100	---	146	107	---	e25	---	48	---	76	56	---
TOTAL	9661	1200.00	3332	4125	2838	2572	1576	1489	930	1981	1980	1504
MEAN	312	40.0	107	133	101	83.0	52.5	48.0	31.0	63.9	63.9	50.1
MAX	3400	120	159	232	199	171	100	72	60	104	102	85
MIN	21	.00	20	30	30	25	25	30	10	17	35	17
AC-FT	19160	2380	6610	8180	5630	5100	3130	2950	1840	3930	3930	2980
CFSM	.21	.03	.07	.09	.07	.06	.04	.03	.02	.04	.04	.03
IN.	.24	.03	.08	.10	.07	.07	.04	.04	.02	.05	.05	.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2001, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	95.2	57.0	90.3	95.0	111	68.0	43.6	48.8	37.2	50.9	52.7	60.1
MAX	312	109	124	146	336	131	65.3	80.7	50.3	121	69.1	86.1
(WY)	2001	1996	1993	1993	1993	1991	1999	1995	1991	1999	1999	1992
MIN	38.3	17.7	51.6	53.6	49.2	18.4	15.7	21.7	18.3	18.7	15.4	34.2
(WY)	1997	1997	1997	1995	1994	1994	1994	1996	1996	1994	1994	1994

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1990 - 2001
ANNUAL TOTAL	32057.20	33188.00	
ANNUAL MEAN	87.6	90.9	67.4
HIGHEST ANNUAL MEAN			92.7
LOWEST ANNUAL MEAN			38.5
HIGHEST DAILY MEAN	3400	3400	3400
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	63590	65830	48790
ANNUAL RUNOFF (CFSM)	.060	.062	.046
ANNUAL RUNOFF (INCHES)	.81	.84	.62
10 PERCENT EXCEEDS	145	143	118
50 PERCENT EXCEEDS	55	60	54
90 PERCENT EXCEEDS	22	27	18

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), 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 bench mark). 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
July 6.....	1615	*1,720	*7.25

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	32	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	445	.00	.00
7	.00	.00	.00	.00	.00	39	.00	.00	.00	17	.00	.00
8	.00	.00	.00	.00	.00	.21	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.66	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	63	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	1.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	72	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	127	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	32	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	69	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.05	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	104	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	176	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	655.15	32.01	0.00	0.00	0.00	39.21	0.00	0.00	0.00	462.00	0.66	0.00
MEAN	21.1	1.07	.000	.000	.000	1.26	.000	.000	.000	14.9	.021	.000
MAX	176	32	.00	.00	.00	39	.00	.00	.00	445	.66	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1300	63	.00	.00	.00	78	.00	.00	.00	916	1.3	.00
CFSM	.01	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
IN.	.01	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2001, BY WATER YEAR (WY)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	1.35	.13	.38	5.68	2.50	.98	.25	.62	.51	2.90	5.44	9.74									
MAX	21.1	1.07	4.41	84.8	22.5	10.4	2.79	4.41	4.47	18.0	38.3	117									
(WY)	2001	2001	1998	1993	1992	1992	1982	1981	1981	1996	1997	1984									
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000									
(WY)	1983	1981	1981	1981	1983	1983	1990	1990	1990	1983	1993	1991									

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1981 - 2001

ANNUAL TOTAL	699.70	1189.03	
ANNUAL MEAN	1.91	3.26	2.54
HIGHEST ANNUAL MEAN			9.60
LOWEST ANNUAL MEAN			.009
HIGHEST DAILY MEAN	176	Oct 31	445 Jul 6
LOWEST DAILY MEAN	.00	Jan 1	.00 Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00 Oct 1
ANNUAL RUNOFF (AC-FT)	1390	2360	1840
ANNUAL RUNOFF (CFSM)	.001	.002	.001
ANNUAL RUNOFF (INCHES)	.01	.02	.02
10 PERCENT EXCEEDS	.00	.00	.03
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00



## GILA RIVER BASIN

## 09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, AZ

**LOCATION.**--Lat 33° 13'45", long 112° 46'00", in SE 1/4 NE 1/4 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, except for estimated daily discharges, which are poor. Record is obtained by combining, on a daily basis, the flows of Gila Bend Canal, Enterprise Canal, and Gila River below Gillespie Dam (see sta 09519500).

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.**--66 years, 509 ft<sup>3</sup>/s, 368,800 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, 6,110 ft<sup>3</sup>/s, Oct. 28; minimum daily, 47 ft<sup>3</sup>/s, June 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	e550	232	251	203	230	150	112	77	52	121	110
2	111	e470	235	205	199	229	153	109	72	47	80	136
3	81	e370	233	206	201	244	183	114	60	50	96	147
4	92	e300	222	177	197	251	164	81	86	65	94	99
5	115	e260	196	196	199	255	154	97	75	58	88	78
6	124	e230	183	190	196	254	154	126	69	158	74	56
7	131	e240	205	218	221	288	171	133	54	287	91	77
8	129	e230	213	206	242	288	174	156	70	171	90	86
9	125	240	221	209	273	275	215	133	88	154	97	76
10	143	242	236	222	277	276	196	101	58	106	76	114
11	188	239	246	224	268	279	210	110	75	133	119	88
12	153	235	244	242	241	286	195	100	59	115	120	112
13	118	278	250	247	217	268	188	87	66	124	156	88
14	103	311	253	238	224	260	165	124	94	97	106	113
15	127	324	256	243	255	240	172	126	99	113	126	122
16	133	284	253	245	247	232	168	99	98	113	136	115
17	99	266	241	248	236	197	136	96	89	109	158	128
18	107	257	241	251	229	214	148	96	92	134	185	127
19	131	274	213	262	234	199	176	97	62	119	155	112
20	158	278	171	262	195	202	180	94	65	96	128	118
21	151	274	182	246	184	214	181	95	57	87	115	98
22	479	255	177	242	193	169	183	94	70	48	115	96
23	567	249	199	246	214	155	195	69	57	94	109	104
24	307	248	229	222	190	153	200	97	47	99	93	124
25	316	217	244	232	206	197	167	97	62	66	96	91
26	307	225	234	227	221	213	172	97	68	93	83	121
27	239	221	188	228	244	197	147	117	64	97	92	119
28	e6110	215	170	243	249	178	139	110	77	101	92	136
29	e1300	207	193	257	---	215	137	104	62	64	91	94
30	e900	217	231	250	---	193	133	96	67	109	98	88
31	e700	---	250	230	---	165	---	73	---	100	103	---
TOTAL	13857	8206	6841	7165	6255	7016	5106	3240	2139	3259	3383	3173
MEAN	447	274	221	231	223	226	170	105	71.3	105	109	106
MAX	6110	550	256	262	277	288	215	156	99	287	185	147
MIN	81	207	170	177	184	153	133	69	47	47	74	56
AC-FT	27490	16280	13570	14210	12410	13920	10130	6430	4240	6460	6710	6290

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2001, BY WATER YEAR (WY)

	MEAN	270	110	445	1388	1582	1203	571	236	66.5	76.2	174	119
MAX	10150	365	11800	47520	36450	12100	7199	4031	229	555	1434	542	
(WY)	1984	1994	1979	1993	1980	1993	1979	1941	1993	1984	1951	1946	
MIN	6.56	7.82	6.94	10.3	10.9	13.6	11.8	8.10	3.58	1.91	2.18	8.66	
(WY)	1966	1963	1967	1964	1964	1964	1961	1963	1967	1967	1967	1962	

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1940 - 2001	
ANNUAL TOTAL	67222		69640			
ANNUAL MEAN	184		191		522	
HIGHEST ANNUAL MEAN					7921	
LOWEST ANNUAL MEAN					11.8	
HIGHEST DAILY MEAN	6110		6110		130000	
LOWEST DAILY MEAN	48		47		.00	
ANNUAL SEVEN-DAY MINIMUM	58		57		.43	
ANNUAL RUNOFF (AC-FT)	133300		138100		378300	
10 PERCENT EXCEEDS	253		258		329	
50 PERCENT EXCEEDS	150		164		79	
90 PERCENT EXCEEDS	71		77		13	

e Estimated

## 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 current year. 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, Apr. 1974 to July 1981.

WATER TEMPERATURES: Dec. 1950 to Feb. 1968, May to Aug. 1969, Oct. 1970 to Sept. 1971, Apr. 1974 to July 1981.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (000061)	TUR- BID- ITY (NTU) (000076)	BARO- METRIC PRES- SURE (MM OF HG) (000025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (000095)	TEMPER- ATURE AIR (DEG C) (000020)	TEMPER- ATURE WATER (DEG C) (000010)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARD- NESS TOTAL AS CACO3 (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 29...	1310	207	86	744	8.6	89	8.1	4380	23.5	15.6	520	800	180
APR 11...	1200	210	29	741	9.3	97	8.2	4590	20.5	14.9	540	810	180
JUN 20...	1045	79	35	740	8.2	110	8.2	5540	38.0	27.9	700	950	220
JUL 26...	1050	96	34	738	7.8	103	8.2	5150	38.0	27.1	660	920	218
DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)
NOV 29...	200	85.0	92.0	12.0	10	640	282	344	.0	910	1.6	580	170
APR 11...	190	87.0	87.0	11.0	11	690	268	327	.0	910	1.7	670	44
JUN 20...	220	97.0	98.0	9.70	12	840	247	301	.0	1100	1.7	830	73
JUL 26...	224	90.0	93.0	9.50	11	780	251	306	.0	1030	1.8	780	70
DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)
NOV 29...	3.84	2820	2580	1.9	1.00	1.29	7.7	.90	9.6	42.5	1.20	<5	230
APR 11...	4.05	2980	2710	.86	.09	.12	13.0	.77	14	61.4	1.20	24	E350k
JUN 20...	4.83	3550	3250	1.6	.09	.12	12.0	1.5	14	60.2	.230	19	E46k
JUL 26...	4.57	3360	3060	1.4	.04	.05	14.0	1.4	15	68.2	.380	20	E280k
DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)
NOV 29...	330	<1.00	<1.0	10.0	10	86.0	140	<2.00	<5.00	1800	1900	<2.00	<5.00
APR 11...	510	<1.00	<1.0	11.0	10	63.0	69.0	<2.00	<2.00	2200	2200	<2.00	<2.00
JUN 20...	140	<1.00	<1.0	7.2	8	69.0	80.0	<1.00	<1.00	2680	2700	<.50	<.50
JUL 26...	1600	<1.00	<1.0	6.4	7	71.0	86.0	<1.00	<2.00	2590	2630	<.50	<2.00

## GILA RIVER BASIN

## 09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
NOV 29...	<2.0	<5	<2.0	19.0	M	4400	<2.00	<5	94.0	270	<.10	<.10	4.70
APR 11...	<2.0	3	<2.0	<2.0	M	1100	<2.00	<2	64.0	110	<.10	<.10	3.80
JUN 20...	<1.0	2	<2.0	<2.0	<2	1300	<2.00	<2	93.0	200	<.10	<.10	2.40
JUL 26...	<1.0	3	<2.0	4.4	<2	1280	<2.00	4	51.0	147	<.10	<.10	3.70

DATE	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL SOLVED (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL SOLVED (UG/L AS TL) (01059)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 29...	11	6.5	5.8	<2.0	<5.00	3200	<2.00	<2.0	18	42	183	103
APR 11...	5	9.8	8.9	<2.0	<2.00	3200	<2.00	<2.0	9	12	35	20
JUN 20...	6	4.9	6.4	<1.0	<1.00	4000	<2.00	<2.0	14	11	50	11
JUL 26...	4	4.7	4.8	<1.0	<2.00	3880	<2.00	<2.0	<2	8	67	17

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range

## GILA RIVER BASIN

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## 09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, AZ--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

DATE	TIME	SAMPLE TYPE	PH WATER FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	CALCIUM DIS- SOLVED (MG/L) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) (00925)	SODIUM, DIS- SOLVED (MG/L) (00930)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L) (00625)	NITRO- GEN, AMMONIA TOTAL (MG/L) (00610)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) (00630)	PHOS- PHORUS TOTAL (MG/L) (00665)	ALUM- INUM, DIS- SOLVED (UG/L) (01106)	BARIUM, DIS- SOLVED (UG/L) (01005)
NOV 29...	1315	2	5.7	1	<.02	<.030	<.1	<.20	<.01	<.02	<.020	<3	<.5
DATE		BERYL- LIUM, DIS- SOLVED (UG/L) AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L) AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR) (01030)	COPPER, DIS- SOLVED (UG/L) AS CU) (01040)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	LEAD, DIS- SOLVED (UG/L) AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)	NICKEL, DIS- SOLVED (UG/L) AS NI) (01065)	ZINC, DIS- SOLVED (UG/L) AS ZN) (01090)			
NOV 29...		<1.00	<.50	<1.0	<2.0	<2	<2.00	<1.0	<1.00	<2			

Remark codes used in this report:

< -- Less than

## 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 except for estimated daily discharges, which are poor. 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, 6,100 ft<sup>3</sup>/s, Oct. 28; minimum daily, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	e550	232	168	112	174	58	48	.00	.00	38	.00
2	51	e470	235	126	111	173	61	50	.00	.00	7.7	.00
3	24	e370	233	128	116	170	87	50	.00	.00	.00	.00
4	34	e300	222	114	114	153	71	23	.00	.00	.00	.00
5	55	e260	196	118	119	157	62	2.6	.00	.00	.00	.00
6	67	e230	183	113	112	155	61	23	.00	66	.00	.00
7	75	e240	205	134	127	190	72	53	.00	150	.00	.00
8	70	e230	213	126	144	193	75	75	4.5	59	.00	.00
9	68	240	221	125	177	183	111	49	.00	39	.00	.00
10	84	242	235	137	181	186	92	18	.00	.04	.00	.00
11	130	239	244	144	172	191	107	16	3.2	.03	.00	.00
12	97	235	242	186	148	188	91	2.5	.00	3.4	17	.00
13	64	278	248	207	122	172	85	26	.00	.00	1.8	.00
14	43	311	204	199	131	168	66	48	.00	.00	4.6	.00
15	68	324	156	191	161	146	73	25	3.2	.00	110	.00
16	73	284	154	195	150	139	70	.11	45	.00	34	.00
17	40	266	144	200	139	100	53	.04	.16	.00	130	4.7
18	48	257	146	195	134	110	58	.03	.00	.00	146	3.4
19	81	274	124	173	141	97	80	.10	11	.00	85	.00
20	98	278	99	176	102	103	81	.02	19	.00	88	.00
21	109	274	106	162	95	112	83	.01	.00	.00	63	.00
22	420	255	111	160	100	74	86	.00	.00	.00	63	.00
23	494	249	142	166	120	63	99	.00	.00	.00	58	14
24	261	248	176	144	97	62	104	.00	.00	.00	50	.01
25	298	217	194	155	112	92	75	.00	.00	.00	23	.00
26	289	225	163	152	128	107	80	.06	.00	.00	.00	.00
27	226	221	107	184	153	94	55	17	.00	.00	.00	.00
28	e6100	215	97	203	174	77	48	28	.00	.00	.00	.00
29	e1300	207	116	167	---	112	48	2.9	.00	4.7	.00	.00
30	e900	217	143	161	---	92	47	.00	.00	.49	.00	.00
31	e700	---	164	158	---	69	---	.00	---	.04	.00	---
TOTAL	12425	8206	5455	4967	3692	4102	2239	557.37	86.06	322.70	919.10	22.11
MEAN	401	274	176	160	132	132	74.6	18.0	2.87	10.4	29.6	.74
MAX	6100	550	248	207	181	193	111	75	45	150	146	14
MIN	24	207	97	113	95	62	47	.00	.00	.00	.00	.00
AC-FT	24640	16280	10820	9850	7320	8140	4440	1110	171	640	1820	44

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2001, BY WATER YEAR (WY)

	MEAN	667	178	435	2792	2267	2011	687	240	15.4	34.6	106	93.5
MAX	10140	344	3475	47510	25600	12050	5248	3233	102	417	788	355	
(WY)	1984	1994	1985	1993	1993	1993	1993	1993	1993	1984	1992	1992	
MIN	12.0	57.3	26.2	.79	21.7	9.03	.33	.000	.000	.000	.067	.30	
(WY)	1997	1989	1982	1982	1997	1999	1986	1981	1988	1988	1982	1985	

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1981 - 2001

ANNUAL TOTAL	43063.06	42993.34	
ANNUAL MEAN	118	118	789
HIGHEST ANNUAL MEAN			7847
LOWEST ANNUAL MEAN			28.6
HIGHEST DAILY MEAN	6100	Oct 28	130000
LOWEST DAILY MEAN	.00	Sep 28	.00
ANNUAL SEVEN-DAY MINIMUM	2.0	Apr 30	.00
ANNUAL RUNOFF (AC-FT)	85420	85280	571400
10 PERCENT EXCEEDS	236	234	550
50 PERCENT EXCEEDS	70	75	50
90 PERCENT EXCEEDS	2.2	.00	.00

e Estimated



## GILA RIVER BASIN

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## 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.**--No estimated daily discharges. Records 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 daily discharge, 1.9 ft<sup>3</sup>/s, Mar. 8; no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.32	.25	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.25	.09	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.97	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.97	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.94	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.92	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.92	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.92	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.97	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.99	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.95	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.84	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.75	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.07	.77	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.69	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.50	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.34	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.07	26.18	0.34	0.00	0.00	0.00	0.00	0.00
MEAN	.0000	.0000	.0000	.0000	.002	.84	.011	.0000	.0000	.0000	.0000	.0000
MAX	.00	.00	.00	.00	.07	1.9	.25	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.1	52	.7	.00	.00	.00	.00	.00

CAL YR 2000 TOTAL 207.29 MEAN .57 MAX 4.7 MIN .00 AC-FT 411  
WTR YR 2001 TOTAL 26.59 MEAN .073 MAX 1.9 MIN .00 AC-FT 53

## GILA RIVER BASIN

## 09520280 GILA RIVER NEAR DATELAND, AZ

**LOCATION.**--Lat 32° 52'56", long 113° 32'26", in NE1/4NE1/4NE1/4 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.**--No estimated daily discharges. Records fair. 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.**--No flow all year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 2000 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00  
WTR YR 2001 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00

## GILA RIVER BASIN

311

## 09520500 GILA RIVER NEAR DOME, AZ

**LOCATION.**--Lat 35°45'39", long 114°25'11", in SW1/4 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 good. 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.

1959-2001: 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 discharge, 351 ft<sup>3</sup>/s Feb. 27, gage height, 16.22 ft; no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	7.3	15	18	12	24	9.3	4.7	.41	.00	.56	1.5
2	9.8	7.4	19	19	14	23	10	3.7	.53	.46	.00	1.1
3	4.1	6.1	17	17	14	21	11	2.5	1.5	.39	.00	.89
4	3.9	6.1	17	17	21	20	9.3	2.9	.95	.00	.00	.35
5	3.4	8.6	17	16	21	20	8.3	2.0	1.2	.37	.03	.00
6	8.4	12	15	17	24	20	10	2.3	.48	2.5	1.4	.00
7	4.6	10	14	18	24	28	8.2	4.2	.00	3.0	.53	.00
8	4.6	9.6	14	16	21	22	7.5	1.9	.00	1.3	18	.03
9	4.7	8.0	16	18	20	19	7.5	1.3	.00	.00	18	.97
10	3.3	9.8	16	19	19	19	7.5	1.2	3.6	.00	9.5	.89
11	2.3	9.8	16	18	17	17	8.5	1.1	6.5	.00	12	.60
12	2.3	11	16	34	16	17	10	1.4	4.5	.00	20	.35
13	3.0	12	15	22	16	16	9.9	1.3	2.4	.00	12	.02
14	4.0	25	17	21	19	14	13	2.9	.71	.00	9.1	.00
15	3.6	13	20	21	19	15	11	3.7	.00	.00	5.3	.12
16	3.9	11	18	20	19	14	12	2.6	.14	4.1	3.3	.20
17	3.7	13	18	18	21	16	9.8	3.1	4.4	14	2.5	.64
18	3.4	13	18	20	21	15	13	3.4	7.1	14	1.9	.37
19	4.2	13	19	18	22	16	12	4.5	2.5	11	2.2	.10
20	3.9	14	19	18	21	14	12	1.7	1.6	5.6	1.8	.00
21	3.7	16	19	17	20	13	12	1.1	.68	2.4	1.3	.00
22	6.4	17	19	17	20	13	8.5	.84	.63	2.4	1.0	.00
23	7.2	41	20	16	19	14	9.5	.04	.05	3.2	1.1	.27
24	6.4	18	20	16	19	13	8.7	.16	.00	1.6	1.2	3.6
25	5.5	17	19	14	19	13	8.0	.28	.00	.18	1.3	2.5
26	5.4	15	19	18	21	11	7.5	.54	.00	.00	12	1.8
27	8.5	16	19	19	54	12	7.4	2.4	.00	.00	5.0	4.6
28	10	16	19	18	29	10	5.7	4.0	.00	.00	3.1	7.6
29	9.0	16	19	17	---	8.5	4.7	2.8	.00	.05	7.4	7.0
30	8.5	15	19	20	---	8.4	5.1	1.6	.00	1.7	5.2	8.2
31	7.1	---	19	14	---	12	---	1.0	---	1.9	2.9	---
TOTAL	162.9	406.7	547	571	582	497.9	276.9	67.16	39.88	70.15	159.62	43.70
MEAN	5.25	13.6	17.6	18.4	20.8	16.1	9.23	2.17	1.33	2.26	5.15	1.46
MAX	10	41	20	34	54	28	13	4.7	7.1	14	20	8.2
MIN	2.3	6.1	14	14	12	8.4	4.7	.04	.00	.00	.00	.00
AC-FT	323	807	1080	1130	1150	988	549	133	79	139	317	87

CAL YR 2000 TOTAL 3318.85 MEAN 9.07 MAX 51 MIN .00 AC-FT 6580  
WTR YR 2001 TOTAL 3424.91 MEAN 9.38 MAX 54 MIN .00 AC-FT 6790

## 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 SW1/4SW1/4 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.**--No estimated daily discharges. Records good. 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.

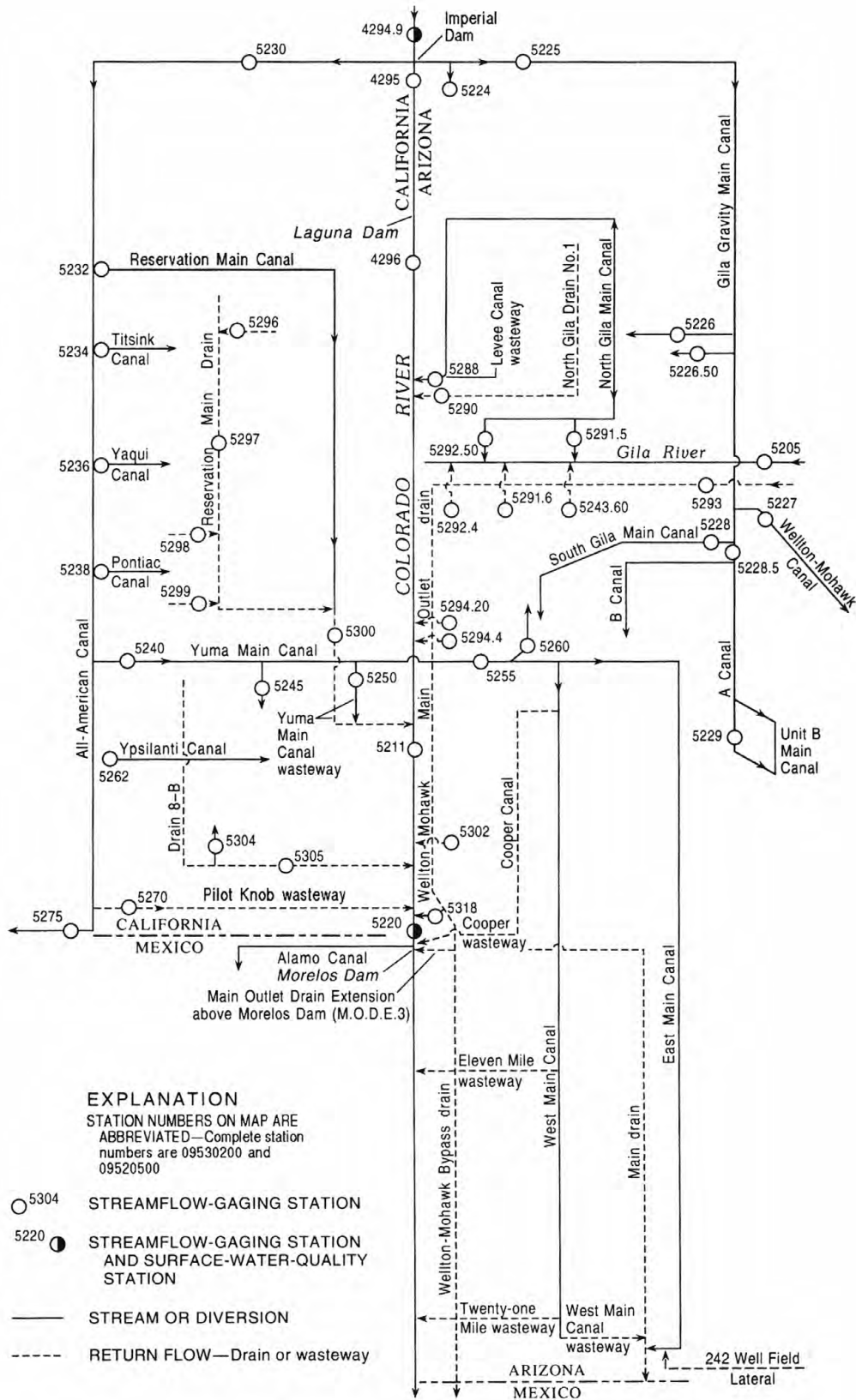
**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 4,210 ft<sup>3</sup>/s Feb. 28, gage height, 15.54 ft; minimum daily, 671 ft<sup>3</sup>/s Jan. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	823	877	878	915	838	2040	851	877	873	876	1060	1110
2	1180	844	889	875	819	1240	828	915	828	1340	e1050	1110
3	1380	820	926	859	814	1130	824	915	815	902	e1040	1150
4	1380	867	976	884	823	1130	823	916	822	877	1030	1150
5	1550	870	1110	839	823	1100	823	866	826	892	970	1120
6	1730	850	1100	757	806	1060	821	845	830	940	1440	1110
7	1480	849	990	758	847	1040	851	913	819	901	1160	1120
8	1760	835	955	724	823	1240	843	1300	805	913	971	1090
9	2080	814	950	723	844	1780	822	1210	836	1940	1170	1010
10	2370	854	970	706	859	1130	804	1200	816	2900	1380	1000
11	2440	813	1010	685	833	989	789	1210	785	2210	1680	1000
12	2240	758	1070	776	797	960	765	1150	786	1560	1840	1430
13	2770	741	1060	785	801	936	794	1120	787	1390	1800	1360
14	2000	848	922	796	773	894	1210	1250	749	1340	1850	1730
15	1700	863	862	727	816	869	1800	1220	735	1090	1700	1940
16	1890	852	870	695	873	893	1930	1190	748	924	1130	1180
17	1540	862	898	704	862	885	969	1160	749	832	1450	1330
18	1340	892	884	699	843	903	918	1230	766	835	1620	1100
19	1130	891	892	713	837	887	931	1190	763	869	1230	1080
20	992	870	824	715	839	884	934	1220	751	831	1410	1110
21	1010	838	842	688	825	1010	961	1650	754	853	1240	1080
22	1180	843	891	671	807	1180	905	1830	736	848	1430	1050
23	2320	865	860	745	845	1360	914	1480	730	852	1200	1230
24	2890	871	914	813	820	1450	1100	1350	747	1070	1060	2040
25	3090	849	937	819	818	1440	1180	1280	772	1370	1060	1360
26	1520	870	855	818	1500	2200	971	1250	776	1430	1050	1730
27	946	839	816	833	2640	1320	920	1370	905	907	1050	1350
28	899	860	836	787	3680	822	912	1720	969	924	1050	1010
29	899	874	821	824	---	824	917	1620	827	1140	1070	1010
30	914	882	864	863	---	834	871	1420	803	984	1180	1010
31	859	---	887	843	---	1110	---	1460	---	885	1000	---
TOTAL	50302	25461	28559	24039	28505	35540	28981	38327	23908	35625	39371	37100
MEAN	1623	849	921	775	1018	1146	966	1236	797	1149	1270	1237
MAX	3090	892	1110	915	3680	2200	1930	1830	969	2900	1850	2040
MIN	823	741	816	671	773	822	765	845	730	831	970	1000
AC-FT	99770	50500	56650	47680	56540	70490	57480	76020	47420	70660	78090	73590

CAL YR 2000 TOTAL 391423 MEAN 1069 MAX 3090 MIN 658 AC-FT 776400  
WTR YR 2001 TOTAL 395718 MEAN 1084 MAX 3680 MIN 671 AC-FT 784900

e Estimated



**Figure 6.** Streamflow-gaging stations and water-quality stations on streams, diversions, and return flows between Imperial Dam and the southerly international boundary.



**LOCATION.**--Lat 32°43'07", long 114°43'05", in NE1/4SE1/4 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.

## WATER-DISCHARGE RECORDS

**EXTREMES FOR CURRENT YEAR.**--Maximum daily discharge, 8,550 ft<sup>3</sup>/s Feb.28; minimum daily, 1,240 ft<sup>3</sup>/s May 13.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1870	2060	2970	2990	2580	7200	3200	2040	1830	1950	1880	1430
2	1680	1950	2980	2380	2710	5650	3250	2020	1780	2350	1950	1430
3	1290	2570	2600	2580	2470	3600	3260	2040	1780	2030	1760	1480
4	1310	2160	3070	2380	2460	2960	3260	1910	1780	2060	1860	1480
5	1530	1880	3070	2140	2610	3110	3290	1680	1780	2060	1790	1450
6	1870	2200	3140	2060	2500	3100	3240	1630	1790	2050	2430	1440
7	1610	2450	2880	2060	2540	4030	3260	1670	1790	2150	2180	1470
8	1800	2040	2780	2010	2500	4410	3430	1780	1770	2070	1770	1470
9	2240	2490	2750	1970	2550	6290	3330	1360	1830	2790	2070	1370
10	2270	2490	2870	2110	2550	4700	3210	1360	1800	3670	1610	1380
11	2540	2550	3010	3140	2680	4410	3110	1370	1880	3290	1770	1350
12	2520	2610	2540	3030	2740	3360	3140	1300	1880	2580	2070	1700
13	2460	2390	2990	3670	3140	3120	3170	1240	1890	2230	2030	1650
14	2280	2470	3040	3280	3530	3060	3420	1390	1890	2180	2060	1970
15	2630	2620	2990	2170	2800	3120	4030	1380	1890	2010	1970	2310
16	3210	2280	2530	1990	2770	3140	4340	1340	1890	1950	1440	1500
17	3320	1620	2360	2250	2770	3100	3260	1300	1900	1910	1620	1640
18	2820	1520	2350	2710	2760	3570	3050	1390	2000	1940	1840	1440
19	2120	1890	2580	3290	3100	3500	3090	1380	2000	1920	1510	1360
20	1900	2510	2430	2330	3460	3350	3100	1390	2000	1860	1650	1410
21	1900	2470	2180	2310	3450	3380	3150	1860	2000	1880	1500	1390
22	1900	2500	2200	2310	3640	3350	3670	2010	1970	1860	1650	1360
23	2470	2870	2270	2360	3570	3320	3600	1760	1980	1880	1500	1450
24	4130	2720	3120	2450	3420	3260	3320	1600	1970	2000	1370	2380
25	4980	2410	2580	2430	3030	3280	2830	1510	1940	2290	1360	1680
26	4590	2670	2690	2570	4560	3990	2540	1450	1940	2570	1350	1980
27	3570	2680	2240	3040	6710	3670	2450	1510	1960	1850	1360	1760
28	3390	2800	2200	2770	8550	3780	2450	1880	1960	1890	1360	1360
29	3640	2520	2210	2480	---	3360	2330	1670	1940	2070	1370	1350
30	2870	2660	2210	2560	---	3330	2420	1650	1900	1830	1490	1360
31	3370	---	2290	2650	---	3440	---	1740	---	1820	1340	---
TOTAL	80080	71050	82120	78470	92150	116940	95200	49610	56710	66990	52910	46800
MEAN	2583	2368	2649	2531	3291	3772	3173	1600	1890	2161	1707	1560
MAX	4980	2870	3140	3670	8550	7200	4340	2040	2000	3670	2430	2380
MIN	1290	1520	2180	1970	2460	2960	2330	1240	1770	1820	1340	1350
AC-FT	158800	140900	162900	155600	182800	232000	188800	98400	112500	132900	104900	92830
CAL YR 2000	TOTAL 957310 MEAN 2616 MAX 4980 MIN 1290 AC-FT 1899000											
WTR YR 2001	TOTAL 889030 MEAN 2436 MAX 8550 MIN 1240 AC-FT 1763000											

COLORADO RIVER MAIN STEM

315

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 district office in Tucson, AZ.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

			DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
NOV													
28...	0945	9	2880	--	760	9.9	100	8.0	1290	22.0	15.2	190	360
28...	0946	9	2880	3.1	760	9.9	100	8.0	1290	22.0	15.2	180	340
JAN													
24...	0930	9	2240	--	767	10.2	97	8.0	1320	15.0	13.0	180	350
24...	0935	7	2240	--	767	10.2	97	8.0	1320	15.0	13.0	180	340
MAR													
29...	0830	9	3250	5.3	761	8.0	88	8.0	1160	22.0	20.0	180	330
29...	0831	9	3250	8.0	761	8.0	88	8.0	1160	22.0	20.0	170	320
JUN													
21...	0900	9	2010	--	759	5.0	63	8.1	1390	30.0	27.0	180	340
21...	0905	9	2010	4.0	759	5.0	63	8.1	1390	30.0	27.0	180	340
JUL													
25...	0825	9	2160	--	761	5.2	66	8.0	1300	32.0	27.0	180	340
AUG													
23...	0815	9	1550	--	759	5.6	70	8.1	1370	31.0	26.6	170	340
23...	0816	9	1550	5.5	759	5.6	70	8.1	1370	31.0	26.6	190	360
DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)
NOV													
28...	91.1	--	30.9	--	4.50	3	134	168	205	--	127	.4	12.2
28...	88.0	86.0	30.0	30.0	4.50	3	130	168	205	.0	130	.4	--
JAN													
24...	87.5	--	31.3	--	4.41	3	138	166	202	--	135	.4	11.5
24...	85.8	--	31.1	--	4.41	3	137	166	--	--	136	.4	11.4
MAR													
29...	82.6	--	28.5	--	4.39	3	110	150	183	--	113	.3	10.0
29...	81.0	78.0	28.0	28.0	4.40	3	120	150	183	.0	110	.3	--
JUN													
21...	84.0	--	30.2	--	4.51	3	129	161	193	--	131	.4	12.0
21...	85.0	84.0	31.0	29.0	4.60	3	130	161	193	.0	130	.4	--
JUL													
25...	84.5	--	31.4	--	4.44	3	132	159	191	--	127	.4	12.0
AUG													
23...	83.9	--	31.5	--	4.53	3	147	171	205	--	146	.4	13.1
23...	88.0	88.0	33.0	32.0	5.30	3	150	171	205	.0	150	.4	--
DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO-GEN, DIS-SOLVED (MG/L AS N) (00602)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)
NOV													
28...	291	--	1.13	832	795	.072	.27	.28	--	--	.56	.288	1.27
28...	230	6	1.14	835	714	--	--	.22	.07	.09	--	--	--
JAN													
24...	294	--	1.16	850	805	.094	.32	.33	--	--	.64	.313	1.39
24...	294	--	1.16	850	802	.096	.30	.30	--	--	.62	.309	1.37
MAR													
29...	262	--	1.04	762	704	.078	.24	.31	--	--	.56	.318	1.41
29...	270	16	1.01	739	704	--	--	.33	.09	.12	--	--	--
JUN													
21...	290	--	1.15	848	780	.066	.23	.30	--	--	.62	.382	1.69
21...	290	9	1.12	825	766	--	--	.36	.12	.15	--	--	--
JUL													
25...	289	--	1.13	834	778	.081	.23	.29	--	--	.55	.306	1.35
AUG													
23...	305	--	1.17	858	836	.088	.28	.30	--	--	.67	.375	1.66
23...	310	14	1.20	880	838	--	--	.30	.12	.15	--	--	--

## COLORADO RIVER MAIN STEM

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, TOTAL (MG/L AS NO3) (71887)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)
NOV													
28...	.294	--	.006	.20	.21	.58	--	<.060	<.018	<.060	2.5	.8	--
28...	--	.3	--	--	.15	.52	2.3	--	--	<.020	--	--	15
JAN													
24...	.324	--	.011	.23	.24	.65	--	<.060	<.018	<.060	2.6	.7	--
24...	.320	--	.011	.21	.20	.62	--	<.060	<.018	<.060	2.6	.7	--
MAR													
29...	.328	--	.009	.16	.24	.64	--	<.060	<.018	E.043	3.0	.9	--
29...	--	.4	--	--	.24	.70	3.1	--	--	<.020	--	--	12
JUN													
21...	.396	--	.014	.16	.24	.70	--	<.060	E.016	<.060	2.5	.6	--
21...	--	.4	--	--	.24	.79	3.5	--	--	<.020	--	--	<5
JUL													
25...	.318	--	.012	.15	.21	.61	--	<.060	<.020	<.060	3.7	.5	--
AUG													
23...	.389	--	.014	.19	.22	.69	--	<.060	<.020	<.060	--	.2	--
23...	--	.4	--	--	.18	.74	3.3	--	--	<.020	--	--	9
DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)
NOV													
28...	--	--	1	.17	--	<2.0	--	90.9	--	<.06	--	184	--
28...	<1k	E17k	--	<1.00	<1.0	<1.0	2	90.0	90.0	<1.00	<1.00	180	180
JAN													
24...	--	--	<1	.16	--	1.3	--	83.9	--	<.06	--	194	--
24...	<1k	--	<1	.17	--	1.4	--	83.6	--	<.06	--	196	--
MAR													
29...	--	--	1	.09	--	2.0	--	88.0	--	<.06	--	151	--
29...	23k	68	--	<1.00	<1.0	2.0	2	87.0	92.0	<1.00	<1.00	150	150
JUN													
21...	--	--	1	.16	--	2.4	--	83.1	--	<.06	--	174	--
21...	47	70	--	<1.00	<1.0	2.2	2	83.0	84.0	<1.00	<1.00	180	180
JUL													
25...	--	--	2	.18	--	2.8	--	90.5	--	<.06	--	193	--
AUG													
23...	--	--	1	.17	--	2.9	--	93.4	--	<.06	--	202	--
23...	58	E98k	--	<1.00	<1.0	2.6	3	90.0	92.0	<1.00	<1.00	206	202
DATE	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
NOV													
28...	E.02	--	<.8	--	.16	1.7	--	<10	--	E.04	--	57.4	17.7
28...	<.50	<.50	<1.0	<1	--	<2.0	2.7	M	140	<2.00	<2	--	18.0
JAN													
24...	<.04	--	E.7	--	.20	1.6	--	<10	--	E.08	--	56.9	23.8
24...	E.02	--	E.8	--	.20	1.7	--	<10	--	E.07	--	57.6	24.2
MAR													
29...	<.04	--	<.8	--	.18	1.8	--	<10	--	.09	--	54.3	5.4
29...	<.50	<.50	<1.0	<1	--	<2.0	<2.0	<2	330	<2.00	<2	--	5.1
JUN													
21...	<.04	--	<.8	--	.15	1.8	--	<10	--	<.08	--	48.8	12.6
21...	<.50	<.50	<1.0	<1	--	<2.0	2.5	<2	200	<2.00	<2	--	14.0
JUL													
25...	<.04	--	<.8	--	.12	2.9	--	<10	--	E.05	--	50.2	12.6
AUG													
23...	E.02	--	<.8	--	.14	2.7	--	<10	--	<.08	--	53.4	10.4
23...	<.50	<.50	<1.0	<1	--	<2.0	<2.0	<2	310	<2.00	<2	--	10.0

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)
NOV													
28...	--	--	--	6.4	.38	--	E1.5	--	<1.0	--	1160	--	--
28...	38	<.10	<.10	--	<1.00	<1	2.0	1.6	<1.0	<1.00	--	1200	<2.00
JAN													
24...	--	--	--	6.6	1.01	--	2.5	--	<1.0	--	1180	--	--
24...	--	--	--	6.6	.98	--	2.5	--	<1.0	--	1160	--	--
MAR													
29...	--	--	--	5.8	.69	--	2.4	--	<1.0	--	1080	--	--
29...	130	<.10	<.10	--	1.30	1	2.2	2.2	<1.0	<1.00	--	1100	<2.00
JUN													
21...	--	--	--	6.0	.19	--	1.8	--	<1.0	--	1080	--	--
21...	50	<.10	<.10	--	<1.00	<1	1.2	1.5	<1.0	<1.00	--	1100	<2.00
JUL													
25...	--	--	--	6.7	<.06	--	1.9	--	<1.0	--	1110	--	--
AUG													
23...	--	--	--	6.8	<.06	--	2.2	--	<1.0	--	1220	--	--
23...	77	<.10	<.10	--	<1.00	<1	1.0	1.6	<1.0	<1.00	--	1200	<2.00

[illegible][illegible]

## 09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENSOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
NOV													
28...	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
25...	<.004	<.035	<.027	<.050	<.006	E.003	<.006	<.002	<.007	<.003	<.007	<.002	<.010
AUG													
23...	<.004	<.035	<.027	<.050	<.006	E.004	<.006	<.002	<.007	<.003	<.007	<.002	<.010
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURO N WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
NOV													
28...	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
25...	<.006	<.011	<.015	<.004	<.010	<.011	<.023	E.002	<.016	<.034	<.017	<.005	<.002
AUG													
23...	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	ALPHA COUNT, 2 SIGMA WAT DIS AS (PCI/L) (75987)	ALPHA RADIO. WATER DISS AS (PCI/L) (04126)	BETA, 2 SIGMA WATER, DISS, AS (PCI/L) (75989)	GROSS BETA, DIS- SOLVED (PCI/L) AS (03515)	RADIUM 226, DIS- SOLVED RADON (PCI/L) METHOD (09511)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	U-234 2 SIGMA WATER, DISS, (PCI/L) (75992)	URANIUM -234 WATER DISSOLV (PCI/L) (22610)	U-235 2 SIGMA WATER, DISS, (PCI/L) (75994)	URANIUM -235 WATER, DISS (PCI/L) (22620)	U-238 2 SIGMA WATER, DISS, (PCI/L) (75991)
NOV													
28...	<.009	--	--	--	--	--	--	3.76	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
24...	--	--	--	--	--	--	--	3.89	--	--	--	--	--
24...	--	--	--	--	--	--	--	3.87	--	--	--	--	--
MAR													
29...	--	3.5	9.08	2.6	7.50	.11	.03	3.46	.36	1.99	.02	.06	.24
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
21...	--	--	--	--	--	--	--	3.73	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
25...	<.009	--	--	--	--	--	--	4.22	--	--	--	--	--
AUG													
23...	<.009	2.6	3.25	3.9	9.62	.11	.03	3.76	.40	2.12	.02	.05	.24
23...	--	--	--	--	--	--	--	--	--	--	--	--	--



## 09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	U-238 SED, SUSP, TOTAL, DRY WGT (PCI/G) (75940)	URANIUM -238 WATER DISSOLV (PCI/L) (22603)	RA-226 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75943)	RA-226 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75944)	U-234 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75941)	U-234 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75942)	U-235 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (75947)	U-235 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/L) (75975)	U-238 2 SIGMA SED, SUSP, TOTAL, DRY WGT (PCI/G) (04113)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
NOV											
28...	--	--	--	--	--	--	--	--	--	10	78
28...	--	--	--	--	--	--	--	--	--	10	78
JAN											
24...	--	--	--	--	--	--	--	--	--	19	115
24...	--	--	--	--	--	--	--	--	--	20	--
MAR											
29...	.09	1.27	.08	.30	.05	.05	.02	M	.06	24	211
29...	--	--	--	--	--	--	--	--	--	24	211
JUN											
21...	--	--	--	--	--	--	--	--	--	12	65
21...	--	--	--	--	--	--	--	--	--	14	76
JUL											
25...	--	--	--	--	--	--	--	--	--	11	64
AUG											
23...	.07	1.27	.07	.30	.12	.14	.06	M	.08	13	55
23...	--	--	--	--	--	--	--	--	--	13	55

Remark codes used in this report:

&lt; -- Less than

E -- Estimated value

Null value remark codes used in this report:

M -- Presence verified, not quantified

Value qualifier codes used in this report:

k -- Counts outside acceptable range

## COLORADO RIVER MAIN STEM

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Water-quality measurements in the following table were made as part of the National Stream-Quality Accountind Network Program and ADEQ Fixed-Station Network Program. The following analyses are quality-assurance samples processed during the 2001 sampling period and are defined in the introductory text section titled "Water-Quality Control Data".

			UV	UV							NITRO-	NITRO-	NITRO-	NITRO-	
			ABSORB- ANCE 254 NM, WTR FLT (UNITS /CM) (50624)	ABSORB- ANCE 280 NM, WTR FLT (UNITS /CM) (61726)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)		
DATE	TIME	SAMPLE TYPE													
MAR 29...	0825	2	--	--	--	.01	<.001	<.025	<.02	<.002	--	.005	<.001		
AUG 23...	0820	2	.014	.010	350	87.4	32.0	149	13.2	.135	.407	.420	.013		
23...	0825	1	--	--	--	--	--	--	--	--	--	--	--		
DATE			NITRO- GEN, PAR TICULATE WAT FLT SUSP (MG/L AS N) (49570)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04) (00660)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L AS C) (00694)	CARBON, INOR- GANIC, PARTIC- ULATE TOTAL (MG/L AS C) (00688)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)
MAR 29...	--	--	--	--	<.007	--	--	--	<.3	<.20	--	<.2	<.20	<2	<.30
AUG 23...	<.022	.031	.010	<.1	<.1	<.1	<.1	1	.23	2.9	92.5	<.06	195	E.02	--
23...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE			CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)
MAR 29...	<.2	<.20	<.2	<3	<.30	--	<.1	<.2	<.50	--	<.2	<.10	<.10		
AUG 23...	<.8	.14	3.0	<10	<.08	54.4	9.7	7.0	<.06	2.2	<1.0	1170	<.04		
23...	--	--	--	--	--	--	--	--	--	--	--	--	--		
DATE			VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	2,6-DI- ETHYL ANILINE WAT FLT GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLT GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)
MAR 29...	--	<.5	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 23...	2.6	3	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	.098	.127	.113	.101	.104	.100	.111	E.115	E.128	.119	.125		
DATE			DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT GF, REC (UG/L) (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD GF, REC (UG/L) (82677)	EPTC WATER FLTRD GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT GF, REC (UG/L) (91065)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD GF, REC (UG/L) (82666)
MAR 29...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 23...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	.124	E.041	113	.113	.131	E.075	.103	.110	.119	.108	96	.101	.118		

COLORADO RIVER MAIN STEM

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09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)
------	--	---	--	---	--	--	---	--	--	---	---	--	--

MAR													
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	.109	E.142	.113	.118	.106	.112	.154	.082	.133	.117	.130	.073	.090

DATE	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, FLTRD DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	URANIUM NATURAL DIS- SOLVED (UG/L) AS U) (22703)
------	---	---	--	--	--	---	---	--	--	---	---	---	--

MAR													
29...	--	--	--	--	--	--	--	--	--	--	--	--	<.20
AUG													
23...	--	--	--	--	--	--	--	--	--	--	--	--	3.81
23...	.124	.120	.146	.146	.117	.113	E.174	E.111	.097	.115	.106	.082	--

Remark codes used in this report:

< -- Less than

E -- Estimated value

# **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 6 on p. 313 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. 325.

**09522600. NORTH GILA MAIN CANAL.**

LOCATION.--Water-stage recorder and sharp-crested weir, in SW1/4SW1/4 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 SW1/4NW1/4 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 NW1/4NE1/4 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.--Sparting flowmeter, in SE1/4SW1/4 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 NE1/4NW1/4 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 NW1/4SW1/4 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. 326.

**09523200. RESERVATION MAIN CANAL.**

LOCATION.--Water-stage recorder and, since Sept. 5, 1975, gate-opening recorder, in NE1/4NE1/4 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 NE1/4SW1/4 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 NW1/4SE1/4 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 NW1/4W1/4 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. 327.**

**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. 329.**

**09526000. DIVERSION FROM YUMA MAIN CANAL FOR MUNICIPAL SUPPLY FOR YUMA.**

LOCATION.--Sparling and Venturi flowmeters, in NW1/4NE1/4 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 SE1/4SE1/4 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. 335.**



## 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 2000 TO SEPTEMBER 2001

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 .....	3,700	500	26,460	4,000	18,282
November .....	2,790	483	21,850	2,640	12,430
December .....	2,300	351	19,090	2,650	9,414
CAL YR 2000	41,500	5,560	390,700	40,360	242,047
January .....	1,850	359	13,940	1,740	9,615
February .....	1,880	288	20,060	1,850	8,876
March .....	2,270	417	26,560	2,320	11,072
April .....	4,000	606	38,360	4,340	18,556
May .....	5,690	915	50,590	5,560	28,378
June .....	4,490	911	48,240	3,990	27,637
July .....	3,590	443	45,500	2,700	28,275
August .....	1,700	338	32,690	2,510	27,705
September .....	3,680	548	38,400	4,280	23,155
WTR YR 2001	37,940	6,160	381,700	38,570	223,295

Month	Unit B Main Canal 09522900	Reservation Main Canal 09523200	Titsink Canal 09523400	Yaqui Canal 09523600	Pontiac Canal 09523800
October .....	1,816	4,670	27	768	578
November .....	1,388	4,780	27	690	636
December .....	1,494	3,060	26	430	554
CAL YR 2000	28,611	56,970	401	8,800	6,030
January .....	1,196	2,590	22	386	293
February .....	936	2,920	18	276	341
March .....	1,305	2,720	20	390	358
April .....	2,113	5,620	50	984	596
May .....	3,345	7,450	80	1,220	604
June .....	3,451	5,170	59	767	376
July .....	3,104	4,180	28	759	195
August .....	3,164	3,270	15	742	464
September .....	2,521	4,300	81	527	223
WTR YR 2001	25,833	50,730	453	7,940	5,220

Month	Diversions from Yuma Main Canal 09524500	Division from Yuma Main Canal for Yuma supply 09526000	Ypsilanti Canal near Winterhaven, CA 09526200
October .....	958	2,031	1,470
September .....	595	1,805	1,000
December .....	452	1,801	754
CAL YR 2000	8,060	25,702	11,370
January .....	309	1,661	769
February .....	518	1,598	761
March .....	801	1,730	821
April .....	1,280	1,875	1,540
May .....	1,010	2,341	1,590
June .....	196	2,532	349
July .....	736	2,583	888
August .....	569	2,606	450
September .....	736	2,488	942
WTR YR 2001	8,160	25,051	11,330

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**

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**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.**--No estimated daily discharges. Records good except those below 500 ft<sup>3</sup>/s, 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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	972	894	592	84	960	303	532	2080	1550	597	1700	493
2	1690	800	539	792	581	199	1370	2050	995	1950	1740	478
3	1730	490	341	842	493	244	1480	2020	778	1920	1420	1460
4	1660	493	1010	862	287	149	1420	1570	1710	1660	931	1690
5	1630	293	934	606	856	700	1420	917	1760	1760	585	1660
6	1330	1020	778	469	965	562	1130	680	1820	1100	1580	1530
7	746	962	699	291	1050	77	724	1970	1930	848	1720	1270
8	562	992	608	961	980	179	501	2050	1700	845	1490	701
9	1600	912	468	925	838	342	1420	2050	1010	1520	1180	704
10	1290	607	347	622	479	234	1590	1810	710	1590	1270	1540
11	1610	473	999	456	351	194	1490	1800	1910	1910	503	1300
12	1260	397	1020	117	1180	550	1780	1200	1810	1630	437	1380
13	998	1190	850	241	1160	545	1150	619	2010	1510	1240	1280
14	706	1020	701	220	1220	569	473	1860	2080	984	1300	1230
15	410	958	534	528	1260	811	357	1900	1680	682	1340	773
16	1240	1080	576	553	892	738	1400	1830	931	1760	1120	657
17	1210	1010	325	523	683	530	1670	1970	578	1880	851	1660
18	1210	402	912	428	.00	413	1600	2030	1790	1950	449	1870
19	914	580	1100	350	.00	1280	1540	1030	1880	1880	384	1620
20	942	933	1060	364	.00	1620	1280	709	1840	1870	1330	1610
21	669	1060	790	154	.00	1610	750	1780	1880	1010	1350	1450
22	251	657	605	749	.00	1260	641	1620	1530	809	1120	1120
23	553	244	478	810	.00	1020	1440	1840	1000	1880	1180	592
24	523	711	104	738	182	756	1560	1900	581	1890	1090	1600
25	604	522	126	558	816	441	1410	1540	2000	1610	547	1620
26	424	398	858	456	1280	1510	1360	838	2070	1890	482	1490
27	454	846	864	258	956	1540	1280	845	2070	1570	1170	1730
28	486	852	948	282	443	1470	907	1900	2070	861	1270	1250
29	297	838	767	938	---	1580	552	2090	1590	447	1260	759
30	865	753	577	913	---	1050	1870	1910	844	1710	1410	532
31	824	---	310	739	---	682	---	1820	---	1650	1220	---
TOTAL	29660	22387	20820	16829	17912.00	23158	36097	50228	46107	45173	34669	37049
MEAN	957	746	672	543	640	747	1203	1620	1537	1457	1118	1235
MAX	1730	1190	1100	961	1280	1620	1870	2090	2080	1950	1740	1870
MIN	251	244	104	84	.00	77	357	619	578	447	384	478
AC-FT	58830	44400	41300	33380	35530	45930	71600	99630	91450	89600	68770	73490
CAL YR 2000	TOTAL	411533	MEAN	1124	MAX	2130	MIN	104	AC-FT	816300		
WTR YR 2001	TOTAL	380089.00	MEAN	1041	MAX	2090	MIN	.00	AC-FT	753900		

**LOCATION.**--Lat 32°52'17", long 114°28'47", in SE1/4NW1/4 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.

**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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6740	6100	6170	4650	5470	5970	9030	9130	7970	7820	8340	6490
2	7020	6300	5710	5080	5450	5460	9050	9330	7540	8180	8570	5730
3	7090	6660	5190	5640	5230	4260	9450	9290	6950	8800	7970	6290
4	7110	6150	5490	5640	4710	3990	9450	9040	7280	8870	7720	6660
5	6830	5560	5670	5400	5430	3980	9640	8290	7890	8880	7390	6800
6	6980	5410	5950	4630	5830	4250	9590	7860	8090	9030	7150	6900
7	6760	5710	6220	3450	5850	4780	9320	8470	8250	8310	7420	6720
8	6380	6070	6230	3840	6000	5040	9170	8690	8310	7820	7600	6540
9	6600	6410	5420	3850	5970	5900	9270	8530	7660	8130	7970	6010
10	6730	6300	5210	3690	5830	5410	9200	8690	7360	8670	7150	6580
11	6790	5670	5660	4330	5290	5510	9800	8590	7770	8600	6810	6780
12	6940	5460	5460	4270	6020	5880	9740	8290	8160	8700	6070	6630
13	6710	5790	5950	4540	6670	6500	9240	8210	8000	8430	6640	6790
14	6640	6280	6140	4140	6760	7480	8920	8680	8360	8270	6940	6260
15	6260	6450	5700	4220	6490	8360	8180	8700	7920	7840	6910	5790
16	7290	6040	4930	4620	6500	7830	9420	8830	7750	8480	6930	5420
17	7190	5530	4430	4210	6360	7550	9930	8670	7460	8430	6600	5930
18	6980	5060	5020	4830	5980	7720	10100	8450	8310	8660	6430	6320
19	6800	5370	5260	5290	6650	8570	10200	7980	8630	8610	6340	6770
20	6460	5980	5300	4460	7240	8750	9550	7400	8580	8590	6690	6720
21	6050	6240	5410	4030	7570	9060	9170	7540	8720	8490	6830	6520
22	5540	5950	4800	4570	7900	9290	8730	7860	9050	8130	7170	5710
23	5460	5210	4160	5280	7800	9030	9470	7840	8400	8230	7500	5450
24	5360	5730	4310	5230	7330	8580	9890	8000	8080	8620	7330	6110
25	6280	5510	4190	5420	6180	8400	9570	7830	8780	8420	7090	6260
26	7110	4950	5090	4890	6020	8820	9510	7610	8520	8480	6610	6260
27	6090	5520	5300	4740	6150	9210	9590	6510	8550	8450	6930	6390
28	5660	6160	5540	4310	6360	9600	8900	7460	8480	8170	6960	6090
29	5910	6020	5390	4450	---	9770	8460	7430	8290	8160	6950	5800
30	5750	6100	4530	4880	---	9390	9000	8140	8150	8260	6670	5560
31	6010	---	3960	5440	---	9050	---	7900	---	8270	6730	---
TOTAL	201520	175690	163790	144020	175040	223390	280540	255240	243260	260800	220410	188280
MEAN	6501	5856	5284	4646	6251	7206	9351	8234	8109	8413	7110	6276
MAX	7290	6660	6230	5640	7900	9770	10200	9330	9050	9030	8570	6900
MIN	5360	4950	3960	3450	4710	3980	8180	6510	6950	7820	6070	5420
AC-FT	399700	348500	324900	285700	347200	443100	556500	506300	482500	517300	437200	373500
CAL YR 2000	TOTAL 2656390		MEAN 7258	MAX 10700	MIN 3350	AC-FT 5269000						
WTR YR 2001	TOTAL 2531980		MEAN 6937	MAX 10200	MIN 3450	AC-FT 5022000						

**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.

**GAGE.**--Accusonic flowmeters.

**COOPERATION.**--Daily discharge record furnished by Yuma County Water Users' Association.

**EXTREMES.**--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.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	847	775	689	350	515	625	785	950	618	574	609	604
2	1230	712	648	361	515	610	860	1050	524	600	593	477
3	1480	665	525	519	516	601	979	1050	367	718	524	438
4	1490	706	379	577	411	525	1000	1040	403	729	467	445
5	1470	645	550	540	450	503	1020	930	554	691	305	508
6	1530	655	632	488	544	483	1040	785	629	730	150	610
7	1540	735	769	451	626	350	972	805	614	651	139	635
8	1460	765	825	435	664	350	717	1060	630	552	289	567
9	1460	736	695	508	681	350	712	1280	573	746	748	496
10	1390	750	464	438	635	350	784	1340	447	1170	848	528
11	1360	738	512	423	468	350	876	1340	485	1210	746	614
12	1400	585	605	373	461	350	900	1240	644	1220	555	619
13	1300	582	605	365	580	350	843	1220	671	1180	710	634
14	1120	746	639	365	607	372	765	1410	613	1110	1000	635
15	1170	760	632	365	675	443	690	1380	582	725	815	595
16	1170	693	511	429	723	621	764	1360	537	518	822	541
17	1040	695	377	465	719	756	882	1310	437	626	501	590
18	986	639	432	407	596	508	942	1360	560	911	695	602
19	1020	559	460	470	518	963	966	1340	657	719	375	969
20	981	630	543	426	622	1110	1020	1260	657	668	498	957
21	850	712	650	350	693	1340	924	935	625	679	618	856
22	581	676	577	350	675	1520	695	1120	693	481	1020	910
23	443	485	417	487	705	1700	796	1030	687	469	917	754
24	412	584	350	535	610	1730	1130	936	620	489	783	880
25	478	649	350	453	555	1070	1230	892	714	515	689	855
26	490	555	388	443	578	982	1050	1060	720	521	681	847
27	526	535	601	447	553	1090	1050	613	793	576	689	773
28	588	568	645	427	630	730	1020	448	794	578	770	895
29	572	657	526	370	---	857	912	759	753	422	784	960
30	641	670	443	426	---	817	842	1180	684	441	617	914
31	702	---	362	488	---	798	---	1290	---	568	611	---
TOTAL	31727	19862	16801	13531	16525	23204	27166	33773	18285	21787	19568	20708
MEAN	1023	662	542	436	590	749	906	1089	610	703	631	690
MAX	1540	775	825	577	723	1730	1230	1410	794	1220	1020	969
MIN	412	485	350	350	411	350	690	448	367	422	139	438
AC-FT	62930	39400	33320	26840	32780	46030	53880	66990	36270	43210	38810	41070

CAL	YR	2000	TOTAL	270828	MEAN	740	MAX	1540	MIN	123	AC-FT	537200
WTR	YR	2001	TOTAL	262937	MEAN	720	MAX	1730	MIN	139	AC-FT	521500

## 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 above 100 ft<sup>3</sup>/s and poor below. 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.**--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, 1999.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	46	115	160	100	463	171	158	81	67	50	117
2	511	e10	130	93	96	408	176	186	89	55	72	24
3	679	e10	144	84	96	364	193	156	84	83	64	13
4	613	e10	122	112	95	395	179	175	92	85	69	21
5	650	e10	297	95	95	376	189	132	98	77	105	11
6	648	e10	315	67	92	323	205	91	98	178	50	15
7	678	e10	227	95	115	130	230	58	99	89	55	15
8	694	68	161	80	126	250	212	184	112	66	149	55
9	712	85	135	90	146	241	189	396	114	244	229	43
10	595	111	158	99	121	236	161	453	82	538	147	38
11	533	80	218	96	106	243	150	448	77	530	171	55
12	709	109	285	143	69	237	138	366	91	565	164	39
13	532	72	306	168	104	220	174	362	84	592	328	32
14	342	75	148	163	120	203	185	498	96	571	595	32
15	419	88	97	109	157	204	163	479	80	289	320	24
16	393	96	100	88	157	266	123	450	99	67	259	29
17	280	91	115	109	148	252	123	424	95	64	15	53
18	190	98	117	47	188	10	110	522	129	272	256	10
19	180	108	133	137	114	251	121	485	68	72	10	286
20	124	84	76	123	111	278	146	537	87	58	21	299
21	73	86	84	94	107	438	140	236	99	88	124	240
22	33	61	118	74	109	625	116	396	85	74	480	261
23	e5.0	89	90	112	111	836	102	293	84	67	358	138
24	e5.0	120	145	127	127	890	286	195	85	38	263	249
25	2.0	99	176	55	225	370	333	195	118	69	222	182
26	13	78	100	50	290	362	155	496	67	23	346	155
27	e5.0	84	66	119	330	507	140	314	77	46	293	51
28	3.0	100	91	117	453	187	168	126	77	62	288	164
29	31	118	81	90	---	179	150	282	72	31	327	236
30	57	105	113	91	---	157	101	578	60	75	180	243
31	34	---	134	91	---	168	---	690	---	87	178	---
TOTAL	9872.0	2211	4597	3178	4108	10069	5029	10361	2679	5222	6188	3130
MEAN	318	73.7	148	103	147	325	168	334	89.3	168	200	104
MAX	712	120	315	168	453	890	333	690	129	592	595	299
MIN	2.0	10	66	47	69	10	101	58	60	23	10	10
AC-FT	19580	4390	9120	6300	8150	19970	9980	20550	5310	10360	12270	6210
CAL YR 2000	TOTAL 69443.0	MEAN 190	MAX 767	MIN 2.0	AC-FT 137700							
WTR YR 2001	TOTAL 66644.0	MEAN 183	MAX 890	MIN 2.0	AC-FT 132200							

e Estimated



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**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.

REVISED RECORDS.--WSP 1713: 1958, 1959 (Yuma municipal supply).

**REMARKS.**--Records good except those below 100 ft<sup>3</sup>/s, 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.**--1930 to current year: Maximum daily discharge, 984 ft<sup>3</sup>/s Oct. 9, 1992; no flow at times.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	701	719	570	190	408	162	593	792	515	507	559	462
2	710	690	514	264	418	202	666	859	424	510	521	438
3	787	672	379	435	413	237	758	863	283	619	460	415
4	816	704	246	459	316	130	789	841	311	635	398	424
5	795	654	253	437	355	110	811	798	456	601	200	497
6	830	662	297	407	437	136	818	679	527	552	100	595
7	828	721	540	356	508	215	728	747	510	562	84	618
8	736	697	661	341	532	100	505	864	505	486	140	491
9	732	645	560	406	532	105	510	868	453	502	474	412
10	795	638	299	330	493	114	588	876	365	617	660	459
11	804	652	290	321	361	107	700	872	408	660	546	533
12	674	475	312	230	367	113	741	864	553	635	380	550
13	750	496	299	197	476	130	655	847	573	557	382	591
14	765	657	477	202	469	169	551	857	517	520	405	597
15	740	643	522	256	512	239	507	870	502	436	495	560
16	753	582	407	341	554	355	632	876	437	437	563	505
17	739	573	256	356	551	490	744	861	342	562	486	531
18	796	537	308	349	406	539	798	822	431	630	439	619
19	836	438	317	333	403	696	810	836	581	627	365	675
20	825	532	450	303	505	803	831	716	570	590	452	651
21	749	626	542	256	567	828	765	677	526	573	472	606
22	548	602	450	267	534	846	579	660	608	401	521	637
23	467	396	318	365	549	844	660	700	603	391	536	606
24	452	464	205	397	473	817	814	737	535	433	507	622
25	470	547	174	393	329	680	858	678	596	435	453	661
26	468	470	283	378	288	599	866	553	653	487	335	681
27	537	444	520	326	223	564	885	295	701	528	381	705
28	578	466	537	309	177	542	852	322	717	505	462	725
29	538	530	436	277	---	653	762	473	681	378	456	714
30	583	551	326	331	---	645	716	599	624	354	428	661
31	668	---	228	385	---	604	---	600	---	464	433	---
TOTAL	21470	17483	11976	10197	12156	12774	21492	22902	15507	16194	13093	17241
MEAN	693	583	386	329	434	412	716	739	517	522	422	575
MAX	836	721	661	459	567	846	885	876	717	660	660	725
MIN	452	396	174	190	177	100	505	295	283	354	84	412
AC-FT	42590	34680	23750	20230	24110	25340	42630	45430	30760	32120	25970	34200
CAL YR 2000	TOTAL 197564		MEAN 540	MAX 907	MIN 44	AC-FT 391900						

## DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

## Return surface flows below Imperial Dam, AZ-CA

**095250000. YUMA MAIN CANAL WASTEWAY.**--See p. 328.

**095270000. PILOT KNOB POWERPLANT AND WASTEWAY.**--See p. 334.

**09528800. LEVEE CANAL WASTEWAY.**

LOCATION.--Water-stage recorder at sharp-crested weir, in SE1/4SW1/4 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 SE1/4SW1/4 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 NE1/4NW1/4 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 NW1/4SE1/4 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 SW1/4NW1/4 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 SE1/4SE1/4 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 NE1/4NW1/4 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 SW1/4NE1/4 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 SW1/4NW1/4 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 NW1/4NW1/4 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.

**DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM**

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**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 NE1/4NE1/4 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, SE1/4SW1/4 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 SW1/4NW1/4 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 SE1/4SE1/4 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 NW1/4SE1/4 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 SE1/4SW1/4 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 NE1/4NE1/4 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 SW1/4SW1/4 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 NW1/4NW1/4 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 2000 TO SEPTEMBER 2001

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 .....	59	374	73	799	1,940
November .....	100	311	154	754	1,670
December .....	45	250	86	369	1,660
CAL YR 2000	1,020	4,290	997	9,410	24,370
January .....	22	219	71	387	1,730
February .....	65	193	62	350	1,810
March .....	55	199	94	387	2,020
April .....	96	298	132	567	1,960
May .....	84	503	154	978	1,890
June .....	121	493	116	1,250	1,570
July .....	112	450	110	472	857
August .....	54	326	97	1,020	1,770
September .....	88	388	141	926	1,960
WTR YR 2001	900	4,000	1,290	8,260	20,850

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 .....	151	9,410	2,520	275	141
November .....	194	9,300	2,550	194	301
December .....	134	10,470	2,640	195	320
CAL YR 2000	1,200	110,300	32,260	2,410	3,490
January .....	176	10,350	2,640	151	320
February .....	99	8,770	2,220	109	254
March .....	114	9,200	2,290	124	178
April .....	83	8,980	2,480	144	173
May .....	38	8,840	2,280	208	178
June .....	83	8,700	2,100	165	173
July .....	85	3,850	1,420	250	65
August .....	71	6,990	2,100	88	75
September .....	104	10,150	2,160	193	309
WTR YR 2001	1,330	105,000	27,410	2,100	2,490

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 .....	131	960	74	315	4,180
September .....	159	1,070	34	282	4,260
December .....	147	912	65	330	4,190
CAL YR 2000	1,670	14,090	519	3,770	53,020
January .....	133	1,170	65	264	3,610
February .....	105	889	42	287	3,010
March .....	118	984	24	285	3,850
April .....	145	1,070	45	285	4,160
May .....	184	1,230	55	374	3,730
June .....	148	1,370	42	331	4,080
July .....	187	1,390	36	351	3,900
August .....	152	1,190	56	323	4,040
September .....	107	1,390	46	326	3,600
WTR YR 2001	1,720	13,630	583	3,750	46,610

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**

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Return surface flows below Imperial Dam AZ-CA--Continued

**MONTHLY RETURN FLOWS, IN ACRE-FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

Month	Yuma Mesa Outlet Drain 09530200	Reservation Drain No. 11 09530400	Drain 8-B 09530500	M.O.D.E. 2 (above) Morelos Dam 09531800
October .....	2,930	353	799	0
November .....	2,260	228	681	0
December .....	2,640	183	560	0
CAL YR 2000	37,650	2,650	8,710	0
January .....	3,490	302	553	0
February .....	2,900	221	494	0
March .....	2,790	193	486	0
April .....	4,790	220	500	0
May .....	6,170	219	517	0
June .....	5,840	202	544	0
July .....	5,420	159	638	0
August .....	4,270	198	738	0
September .....	5,140	204	760	0
WTR YR 2001	48,660	2,680	7,270	0

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 NW1/4SW1/4 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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	1040	2080	2690	1810	4230	1920	1160	867	1090	785	.00
2	549	1260	2070	1890	1930	3720	2040	1100	885	893	781	.00
3	.00	1930	1710	2090	1720	2270	2030	1140	893	1130	783	.00
4	.00	1990	2050	1680	1720	1880	2040	948	893	1220	782	.00
5	.00	1720	1920	1400	1770	2040	2070	807	893	1210	782	.00
6	.00	1160	2090	1400	1720	2120	2040	783	893	1190	803	.00
7	.00	1170	1920	1400	1720	2910	2010	783	893	1190	816	.00
8	.00	1400	2020	1290	1720	3070	2280	391	893	1200	782	.00
9	.00	1640	2010	1250	1720	3880	2120	.00	920	807	801	.00
10	.00	1560	2320	1460	1720	3030	2030	.00	893	805	.00	.00
11	.00	1360	2250	2420	1880	3020	1980	.00	1010	801	.00	.00
12	.00	1990	1720	2270	1900	2310	2030	.00	1010	803	.00	.00
13	296	1790	2190	2710	2260	2300	1970	.00	1000	804	.00	.00
14	1000	1860	2350	2300	2660	2310	1880	.00	1040	804	.00	.00
15	1140	2120	2360	1520	1990	2230	1930	.00	1050	824	.00	.00
16	1300	1730	1870	1470	1940	2230	2000	.00	1030	1010	.00	.00
17	1800	1080	1590	1580	1900	2230	2030	.00	1050	1050	.00	.00
18	1580	1060	1600	2040	1880	2570	1990	.00	1190	1090	.00	.00
19	1000	1400	1880	2500	2190	2400	1990	.00	1160	1020	.00	.00
20	999	1440	1710	1620	2480	2270	1990	.00	1200	936	.00	.00
21	999	1470	1630	1620	2490	2110	1990	.00	1210	946	.00	.00
22	998	1510	1630	1620	2740	1870	2640	.00	1210	938	.00	.00
23	1130	2080	1860	1620	2530	1660	2470	.00	1250	947	.00	.00
24	1600	1850	2880	1620	2460	1520	2010	.00	1160	908	.00	.00
25	2340	1600	2220	1620	2150	1570	1610	.00	1140	898	.00	.00
26	3320	1360	2420	1680	3110	1480	1580	.00	1140	897	.00	.00
27	2200	1910	1680	2010	3750	1920	1610	.00	1070	900	.00	.00
28	1690	1990	1650	1840	4180	2650	1600	.00	935	789	.00	.00
29	2100	1700	1680	1620	---	2230	1570	.00	1070	804	.00	.00
30	1300	1820	1580	1690	---	2190	1630	.00	1050	860	.00	.00
31	1100	---	1970	1770	---	1940	---	.00	---	861	.00	---
TOTAL	29651.00	47990	60910	55690	62040	74160	59080	7112.00	30898	29625	7115.00	0.00
MEAN	956	1600	1965	1796	2216	2392	1969	229	1030	956	230	.000
MAX	3320	2120	2880	2710	4180	4230	2640	1160	1250	1220	816	.00
MIN	.00	1040	1580	1250	1720	1480	1570	.00	867	789	.00	.00
AC-FT	58810	95190	120800	110500	123100	147100	117200	14110	61290	58760	14110	.00
(*)	0	0	36	0	226	0	0	0	0	0	0	0
CAL YR 2000	TOTAL 567429.00	MEAN 1550	MAX 3320	MIN .00	AC-FT 1125000	(*) 54						
WTR YR 2001	TOTAL 464271.00	MEAN 1272	MAX 4230	MIN .00	AC-FT 920900	(*) 262						

(\*) Return flow, in acre-feet, by Pilot Knob Wasteway (included in daily discharge table).

**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.

**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.

**COOPERATION.**--Daily discharges furnished by Imperial Irrigation District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4590	3960	2980	1460	3040	973	5830	6610	6210	5820	6620	5510
2	5000	3960	2660	2730	2890	921	5930	6780	5920	6430	6810	4900
3	5190	3780	2570	3090	2880	1260	6150	6720	5480	6690	6330	5300
4	5180	3300	2560	3350	2420	1350	6150	6630	5710	6680	6160	5660
5	5000	2810	2820	3300	2970	1280	6230	6370	6140	6720	5940	5710
6	5030	3430	2830	2590	3350	1510	6190	6090	6300	6870	5950	5730
7	4860	3540	3320	1310	3250	1430	6050	6460	6430	6260	6170	5560
8	4580	3770	3260	1830	3430	1580	5840	6730	6460	5840	6180	5470
9	4760	3840	2650	1890	3410	1400	6130	6800	5980	6110	6190	5050
10	4890	3820	2180	1620	3320	1650	5950	6980	5750	6360	6080	5560
11	5030	3470	2770	1450	2740	1920	6490	6850	6040	6210	5730	5740
12	5120	2580	2820	1580	3280	3290	6490	6810	6260	6210	5250	5590
13	4720	3200	2970	1390	3440	3830	6180	6590	6160	6120	5550	5740
14	4250	3420	3060	1370	3340	4810	6020	6730	6340	6010	5750	5290
15	3680	3370	2700	2190	3560	5700	5280	6770	6010	5950	5820	4900
16	4550	3470	2400	2610	3610	5040	6220	6920	5990	6510	5820	4510
17	4010	3530	2220	2230	3580	4660	6600	6790	5800	6390	5730	5160
18	4110	3130	2760	2110	3350	4250	6740	6580	6250	6460	5620	5270
19	4370	3050	2770	2290	3630	5000	6780	6260	6440	6460	5530	5430
20	4130	3510	2980	2180	3930	5200	6190	5760	6360	6460	5760	5440
21	3810	3730	3170	1810	4110	5430	5910	6300	6490	6400	5800	5360
22	3550	3500	2650	2230	4250	5620	5140	6500	6750	6240	5820	4560
23	3670	2170	1760	2900	4290	5440	5820	6550	6170	6360	6170	4360
24	3150	2920	1160	2900	4080	5150	6350	6660	5950	6680	6080	4880
25	3170	2900	1440	3170	3400	5120	6390	6580	6530	6600	5910	5070
26	3340	2660	2150	2560	2320	5530	6480	6300	6280	6530	5580	5210
27	3330	3140	2880	2100	1430	5780	6530	5610	6260	6550	5790	5280
28	3200	3290	3140	1820	1230	5840	6060	6490	6320	6410	5730	4900
29	3150	3260	3060	2200	---	6310	5740	6300	6100	6450	5720	4560
30	3610	3190	2330	2520	---	5990	6180	6590	6120	6500	5670	4350
31	3900	---	1410	2990	---	5870	---	6260	---	6430	5660	---
TOTAL	130930	99700	80430	69770	90530	119134	184040	202370	185000	197710	182920	156050
MEAN	4224	3223	2595	2251	3233	3843	6135	6528	6167	6378	5901	5202
MAX	5190	3960	3320	3350	4290	6310	6780	6980	6750	6870	6810	5740
MIN	3150	2170	1160	1310	1230	921	5140	5610	5480	5820	5250	4350
AC-FT	259700	197800	159500	138400	179600	236300	365000	401400	366900	392200	362800	309500
CAL YR 2000	TOTAL 1739670											
WTR YR 2001	TOTAL 1698584											
	MEAN	4753	MAX	7040	MIN	1160	AC-FT	3451000				
		4654	MAX	6980	MIN	921	AC-FT	3369000				

## 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 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 7.....	1200	*669	*6.62

No flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
6	.00	9.1	.00	.00	.00	.00	2.8	.00	e.00	e.00	.00	.00
7	.00	.80	.00	.00	.00	250	.15	.00	e.00	15	.00	.00
8	.00	.00	.00	.00	.00	13	.00	.00	e.00	12	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	6.6	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	e.00	31	.02	.00
12	.00	.00	.00	4.2	.00	.00	.00	.00	e.00	22	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.19	1.7	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	5.9	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	8.6	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	1.3	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	14	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	2.5	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.40	.36	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.11	.00
21	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.01	.00
22	17	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00
23	e4.1	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00
24	e.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00
25	e.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00
26	e.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00	.00
27	13	.00	.00	62	.00	.00	.00	e.00	e.00	.00	.00	.00
28	e1.0	.00	.00	3.3	.00	.00	.00	e.00	e.00	.00	.00	.00
29	e.00	.00	.00	.06	---	.00	.00	e.00	e.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	e.00	e.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	e.00	---	.00	.00	---
TOTAL	35.10	9.90	0.00	69.56	0.00	263.00	2.95	0.00	0.00	80.59	41.10	0.00
MEAN	1.13	.33	.000	2.24	.000	8.48	.098	.000	.000	2.60	1.33	.000
MAX	17	9.1	.00	62	.00	250	2.8	.00	.00	31	14	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	70	20	.00	138	.00	522	5.9	.00	.00	160	82	.00
CFSM	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
IN.	.00	.00	.00	.00	.00	.02	.00	.00	.00	.01	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2001, BY WATER YEAR (WY)

MEAN	4.38	1.14	1.76	2.30	1.78	1.24	.030	.073	.018	6.86	12.5	9.13
MAX	44.2	14.3	21.1	39.0	26.0	8.50	.35	1.97	.50	39.5	92.5	140
(WY)	1984	1979	1998	1993	1998	1983	1997	1976	2000	1976	1984	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.006	.000
(WY)	1974	1978	1973	1973	1974	1977	1973	1973	1973	1979	1975	1973

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1973 - 2001

ANNUAL TOTAL	499.41	502.20	
ANNUAL MEAN	1.36	1.38	3.45
HIGHEST ANNUAL MEAN			15.2
LOWEST ANNUAL MEAN			.13
HIGHEST DAILY MEAN	143	250	3320
LOWEST DAILY MEAN	.00 Jan 1	.00 Mar 7	.00 Sep 24
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1
ANNUAL RUNOFF (AC-FT)	991	996	2500
ANNUAL RUNOFF (CFSM)	.002	.002	.006
ANNUAL RUNOFF (INCHES)	.03	.03	.08
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated

## SAN SIMON WASH BASIN

## 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 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.....	2400	*5,170	10.04	Aug. 18 .....	0415	994	9.08
Nov. 8.....	1900	627	8.84				

No flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	5.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	2.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	1.4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	1.2	.00	.00	.00	.00	.00	.00	.00	.27	.01	.00
6	.00	5.7	.00	.00	.00	.00	1.5	.00	.00	1.6	.00	.00
7	.00	72	.00	.00	.00	58	.07	.00	.00	44	.00	.00
8	.00	477	.00	.00	.00	101	.00	.00	.00	48	.00	.00
9	.00	56	.00	.00	.00	42	.00	.00	.00	4.5	.00	.00
10	1.5	5.4	.00	.00	.00	3.5	.00	.00	.00	2.1	.00	.00
11	.14	e1.9	.00	.00	.00	.50	.00	.00	.00	8.5	.00	.00
12	.00	.00	.00	e1.4	.00	.01	.00	.00	.00	1.4	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	19	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	19	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	5.4	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	17	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	81	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	374	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	51	.00
20	.16	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.1	.00
21	30	.00	.00	.00	.00	.00	.00	.00	.00	.61	e1.9	.00
22	89	.00	.00	.00	.00	.00	.00	.00	.00	.12	.00	.00
23	1820	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	3060	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	210	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	7.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	3.2	.00	.00	e17	.00	.00	.00	.00	.00	.00	.00	.00
28	28	.00	.00	30	.00	.00	.00	.00	.00	.00	.00	.00
29	78	.00	.00	14	---	.00	.00	.00	.00	.00	.00	.00
30	7.1	.00	.00	2.9	---	.00	.00	.00	.00	.00	.00	.00
31	2.3	---	.00	e1.5	---	.00	---	.00	---	.00	.00	---
TOTAL	5337.20	641.80	0.00	66.80	0.00	205.01	1.57	0.00	0.00	111.10	574.41	0.00
MEAN	172	21.4	.000	2.15	.000	6.61	.052	.000	.000	3.58	18.5	.000
MAX	3060	477	.00	30	.00	101	1.5	.00	.00	48	374	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	10590	1270	.00	132	.00	407	3.1	.00	.00	220	1140	.00
CFSM	.14	.02	.00	.00	.00	.01	.00	.00	.00	.00	.01	.00
IN.	.16	.02	.00	.00	.00	.01	.00	.00	.00	.00	.02	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2001, BY WATER YEAR (WY)

	MEAN	29.6	3.43	4.51	7.42	4.05	2.36	.44	.036	.003	16.3	28.5	14.1
MAX	463	36.7	26.4	61.3	33.1	27.8	10.2	.49	.067	.113	106	103	
(WY)	1984	1973	1983	1993	1983	1983	1992	1987	1984	1990	1984	1976	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.73	.000	
(WY)	1974	1974	1973	1973	1974	1974	1973	1973	1973	1977	1985	1973	

## SUMMARY STATISTICS

## FOR 2000 CALENDAR YEAR

## FOR 2001 WATER YEAR

## WATER YEARS 1973 - 2001

ANNUAL TOTAL	6541.16	6937.89	
ANNUAL MEAN	17.9	19.0	9.32
HIGHEST ANNUAL MEAN			52.3
LOWEST ANNUAL MEAN			.97
HIGHEST DAILY MEAN	3060	3060	8030
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
ANNUAL RUNOFF (AC-FT)	12970	13760	6750
ANNUAL RUNOFF (CFSM)	.014	.015	.007
ANNUAL RUNOFF (INCHES)	.19	.21	.10
10 PERCENT EXCEEDS	3.7	3.0	4.3
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.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 good except for period of estimated record, which are 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 maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 11.....	1430	376	4.82	Nov. 7.....	0500	107	4.28
Oct. 23.....	0315	*839	*5.39				

Minimum daily discharge, zero flow Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.27	.33	.38	.48	.59	.42	.50	.47	.30	.40	.21
2	.04	.27	.33	.39	.48	.59	.40	.49	.43	.29	.39	.21
3	.00	.27	.33	.40	.49	.59	.39	.49	.44	.28	.39	.20
4	.01	.30	.33	.40	.50	.59	.38	.51	.44	.28	e.32	.18
5	.01	.41	.33	.40	.51	.58	.37	.52	.44	.31	e.32	.17
6	.03	.38	.33	.43	.51	.58	.43	.53	.43	.33	e.25	.17
7	.04	.28	.34	.46	.52	.62	.39	.52	.43	.35	.26	.16
8	.07	2.9	.35	.44	.59	.60	.39	.51	.40	.34	.27	.15
9	.08	.49	.35	.49	.53	.60	.36	.51	.42	.36	.28	.16
10	.09	.39	.35	.46	.56	.61	.44	.50	.46	.36	.28	.15
11	.52	.43	.35	.46	.57	.64	.56	.50	.46	.34	.28	.14
12	.79	.41	.35	.46	.58	.61	.59	.50	.48	.35	.28	.15
13	.33	.44	.32	.46	.58	.62	.54	.51	.44	.34	.27	.17
14	.26	.33	.35	.46	.58	.61	.53	.51	.43	.33	.28	.18
15	.20	.33	.35	.46	.58	.61	.64	.49	.43	.34	.30	.16
16	.19	.33	.35	.46	.58	.55	.53	.49	.42	.34	.29	.15
17	.20	.33	.35	.46	.58	.55	.54	.48	.46	.35	.28	.15
18	.24	.33	.35	.46	.58	.55	.61	.48	.59	.35	.27	.13
19	.26	.35	.35	.46	.58	.53	.64	.50	.60	.35	.28	.13
20	.27	.35	.35	.46	.60	.52	.67	.49	.43	.37	.28	.12
21	.31	.34	.35	.47	.61	.51	.71	.49	.35	.38	.26	.12
22	7.3	.33	.35	.48	.61	.52	.69	.51	.35	.37	.25	.11
23	349	.33	.35	.48	.61	.49	.67	.49	.34	.37	.25	.13
24	1.1	.33	.35	.48	.61	.50	.69	.49	.32	.37	.24	.27
25	.42	.33	.37	.48	.61	.51	.58	.48	.32	.38	.23	.33
26	.32	.33	.38	.48	.61	.50	.53	.50	.33	.37	.23	.20
27	.32	.33	.38	.49	.61	.50	.51	.53	.31	.38	.23	.07
28	.36	.33	.38	.49	.61	.49	.51	.53	.31	.38	.23	.08
29	.29	.33	.38	.48	---	.45	.50	.50	.30	.39	.23	.09
30	.27	.33	.38	.48	---	.44	.50	.47	.30	.39	.23	.11
31	.28	---	.38	.48	---	.42	---	.47	---	.41	.23	---
TOTAL	415.13	40.62	10.89	14.14	15.86	17.07	15.71	15.49	12.33	10.85	8.58	4.75
MEAN	13.4	1.35	.35	.46	.57	.55	.52	.50	.41	.35	.28	.16
MAX	349	28	.38	.49	.61	.64	.71	.53	.60	.41	.40	.33
MIN	.00	.27	.32	.38	.48	.42	.36	.47	.30	.28	.23	.07
AC-FT	823	81	22	28	31	34	31	31	24	22	17	9.4
CFSM	.17	.02	.00	.01	.01	.01	.01	.01	.01	.00	.00	.00
IN.	.20	.02	.01	.01	.01	.01	.01	.01	.01	.01	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

MEAN	3.46	.46	.25	.28	.32	.34	.33	.29	.23	1.61	9.17	1.09
MAX	13.4	1.35	.35	.46	.57	.55	.52	.50	.41	3.99	34.8	3.99
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	1998	1999	1999
MIN	.13	.060	.10	.13	.14	.15	.13	.074	.022	.15	.13	.055
(WY)	2000	1998	1998	1998	1999	1999	1999	1999	1999	2000	2000	2000

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1998 - 2001

	ANNUAL TOTAL	535.21	581.42	1.50
ANNUAL MEAN		1.46	1.59	3.55
HIGHEST ANNUAL MEAN				.25
LOWEST ANNUAL MEAN				.25
HIGHEST DAILY MEAN	349	Oct 23	349	Oct 23
LOWEST DAILY MEAN	.00	Oct 3	.00	Oct 3
ANNUAL SEVEN-DAY MINIMUM	.02	Sep 18	.03	Oct 1
ANNUAL RUNOFF (AC-FT)	1060		1150	1090
ANNUAL RUNOFF (CFSM)		.018		.020
ANNUAL RUNOFF (INCHES)		.25		.27
10 PERCENT EXCEEDS		.39		.59
50 PERCENT EXCEEDS		.33		.39
90 PERCENT EXCEEDS		.09		.20

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 2001 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)
Gila River Basin								
Walnut Creek below lower Lake Mary near Flagstaff, AZ (09400890)	Lat 35° 07' 17", long 111° 35' 32", in NE1/4NW1/4, sec.18, T.20 N., R.8 E., Coconino County, Hydrologic Unit 15020015, on left bank about 0.5 mi downstream from Lake Mary Road., 7.5 mi southeast of Flagstaff. Drainage area, undetermined.	1995–2001	--	--	--	04–00–97	10.21	--
Walnut Creek at Fisher Point near Flagstaff, AZ (09400920)	Lat 35° 09' 02", long 111° 35' 42", in SE1/4SW1/4, sec.31, T.21 N., R.8 E., Coconino County, Hydrologic Unit 15020015, about 0.4 mi downstream from the confluence of Walnut Creek and Skunk Canyon, 4.0 mi south of Flagstaff. Drainage area, undetermined.	1995–2001	--	--	--	--	a	--
Walnut Creek near upstream (west) boundary of Walnut Canyon National Monument near Flagstaff, AZ (09400930)	Lat 35° 09' 54", long 111° 31' 27", in NE1/4NE1/4, sec.34, T.21 N., R.8 E., Coconino County, Hydrologic Unit 15020015, 0.8 mi south of Walnut Canyon Rd. at Walnut Canyon boundary, 0.2 mi upstream of boundary, 5.5 mi southeast of Flagstaff. Drainage area, undetermined.	1995–2001	--	--	--	--	a	--
Cherry Creek near downstream boundary of Walnut Canyon National Monument near Flagstaff, AZ (09400940)	Lat 35° 09' 23", long 111° 28' 54", in NE1/4SW1/4, sec.31, T.21 N., R.9 E., Coconino County, Hydrologic Unit 15020015, 0.1 mi upstream from the confluence with Walnut Creek in Walnut Canyon National Monument, 7.5 mi southeast of Flagstaff. Drainage area, undetermined.	1995–2001	08–13–01	10.83	--	09–00–97	12.20	--
Vekol Wash near Stanfield, AZ (09488650)	Lat 32° 50' 30", long 112° 15' 04", in SW1/4SW1/4 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* 1997–2001	03–07–01	5.37	347	07–25–96	9.77	7,780
Tortilla Creek at Tortilla Flat, AZ (09501300)	Lat 33° 31' 38", long 111° 23' 13", in NW1/4 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, 1991–2001	10–22–00	5.30	272	09–01–71	13.23	7,500
Tributary to Granite Creek at Prescott, AZ (09502970)	Lat 34° 33' 04", long 112° 27' 37", in SW1/4SW1/4, sec.34, T.14 N., R.2 W., Yavapai County, Hydrologic Unit 15060202 on the Yavapai Indian Reservation near the southern boundary at Prescott. Drainage area, undetermined.	1994–2001	10–27–00	12.45	218	08–24–98	13.46	416
Government Canyon Wash at Prescott, AZ (09502980)	Lat 34° 33' 24", long 112° 26' 54", in SE1/4SE1/4, sec.27, T.14 N., R.2 W., Yavapai County, Hydrologic Unit 15060202 on the Yavapai Indian Reservation, 0.1 mi upstream of the mouth on the old Highway 89 bridge at Prescott. Drainage area, undetermined.	1994–2001	08–15–01	5.88	12	08–24–98	6.99	265
Goat Ranch Wash at Prescott, AZ (09502990)	Lat 34° 33' 27", long 112° 26' 37", in SW1/4SW1/4, sec.26, T.14 N., R.2 W., Yavapai County Hydrologic Unit 15060202 on the Yavapai Indian Reservation, 0.1 mi upstream of the mouth on the old Highway 89 bridge at Prescott. Drainage area, undetermined.	1994–2001	08–15–01	3.41	32	08–26–00	3.76	104

See footnotes at end of table.

Station name and number	Location and drainage area (mi <sup>2</sup> )	Period of record	Water year 2001 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)
Gila River Basin--Continued								
Slaughter House Wash near Prescott, AZ (09502995)	Lat 34° 33' 40", long 112° 26' 29", in NE1/4SW1/4, sec.26, T.14 N., R.2 W., Yavapai County, Hydrologic Unit 15060202 on the Yavapai Indian Reservation, 0.1 mi upstream from the mouth, on the downstream side of Highway 89 bridge abutment, 0.5 mi north of Prescott. Drainage area, undetermined.	1994–2001	08–15–01	9.70	98	08–24–98	10.99	2.85
Camp Creek near Sunflower, AZ (09510170)	Lat 33° 45' 35", long 111° 29' 44", in SW1/4 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, 1991–2001	10–28–00	1.30	36.1	03–02–78	5.05	402
Rock Creek near Sunflower, AZ (09510180)	Lat 33° 43' 49", long 111° 30' 28", in SW1/4 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 1991–2001	10–28–00	4.66	184	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 SW1/4 SW1/4SE1/4 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> .	1984–2001	10–10–00	2.37	1,248	10–06–93	3.89	4,700
Salt River tributary in South Mountain Park at Phoenix, AZ (09512200)	Lat 33° 20' 49", long 112° 05' 03", in NE1/4 NE1/4 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*, 1999–2001	--	--	--	08–15–90	10.31	1,210
Agua Fria River tribu- tary No. 2 near Rock Springs, AZ (09512700)	Lat 33° 02' 00", long 112° 08' 42", in SW1/4 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 1991–2001	08–14–01	5.88	373	08–02–64	19.54	1,200
Deadman Wash near New River, AZ (09513820)	Lat 33° 50' 30", long 112° 08' 40", in NW1/4 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, 1991–2001	10–22–00	7.50	714	12–25–59	7.00	1,850
Waterman Wash near Buckeye, AZ (09514200)	Lat 33° 19' 49", long 112° 30' 33", in SW1/4 NE1/4 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> .	1964–2001	10–22–00	6.22	3,650	08–08–97	7.80	9,400
Hartman Wash near Wickenburg, AZ (09515800)	Lat 33° 57' 46", long 112° 49' 40", in SW1/4 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, 1991–2001	10–21–00	7.60	2,351	09–14–67	8.05	2,600
Ox Wash near Morristown, AZ (09516600)	Lat 33° 53' 00", long 112° 39' 00", in NW1/4 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, 1991–2001	10–30–00	2.55	330	08–26–64	10.2	2,900
Jack Rabbit Wash near Tonopah, AZ (09516800)	Lat 33° 39' 32", long 112° 49' 40", in NE1/4 NW1/4 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, 1991–2001	10–27–00	15.11	27,000	10–27–00	15.11	27,000

Station name and number	Location and drainage area (mi <sup>2</sup> )	Period of record	Water year 2001 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)
Centennial Wash tributary near Wenden, AZ (09517200)	Lat 33°50'40", long 113°28'00", in SW1/4 SW1/4 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, 1991-2001	10-22-00	3.07	215	09-05-70	4.66	790
See footnotes at end of table.								
Gila River Basin--Continued								
Tiger Wash near Aguila, AZ (09517280)	Lat 33°44'30", long 113°16'43", in SW1/4 SW1/4 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, 1991-2001	10-21-00	7.84	3,850	09-26-97	10.17	8,070
Winter's Wash near Tonopah, AZ (09517400)	Lat 33°29'22", long 112°55'05", in SW1/4NW1/4 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, 1999-2001	07-06-01	3.49	607	09-25-76	10.10	3,640
Rainbow Wash tributary near Buckeye, AZ (09519600)	Lat 33°14'35", long 112°38'15", in NE1/4 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, c3.45 (1.02) mi <sup>2</sup> .	1963-79, 1983, 1991-2001	10-22-01	4.86	454	09-03-67	7.42	1,430
Bender Wash near Gila Bend, AZ (09519750)	Lat 32°54'25", long 112°33'05", in NE1/4 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, 1991-2001	--	a	--	02- --83	8.49	3,610
Sauceda Wash near Gila Bend, AZ (09519760)	Lat 32°52'14", long 112°45'30", in SE1/4SW1/4 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*, 1995-2001	--	a	--	09-25-76	6.30	3,153
Military Wash near Sentinel, AZ (09520100)	Lat 32°50'43", long 113°16'44", in SW1/4 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, 1991-2001	10-22-01	6.30	1,130	08-02-74	5.35	1,530
Crater Range Wash near Ajo, AZ (09520230)	Lat 32°33'44", long 112°52'37", in NW1/4 NW1/4 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 north of Ajo. Drainage area, 1.49 mi <sup>2</sup> .	1963-79, 1983, 1991-2001	02-28-01	1.19	8.65	09-04-69	3.70	590
Whitewater Draw Basin								
Whitewater Draw near Douglas, AZ (09537500)	Lat 31°21'08", long 109°35'04", in SW1/4SE1/4 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> .	1947-82*, b1983-2001	08-12-01	6.97	130	08-07-55	14.66	5,060

\* Operated as a continuous-record gaging station.

a No high water marks recorded.

b Record furnished by International Boundary and Water Commission.

c Portion of drainage basin is generally noncontributing.

d Revised.

e Estimated.

## 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 (\*\*).

## Discharge measurements at miscellaneous sites

					Measurements	
Stream or Spring	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Date	Dis-charge (ft <sup>3</sup> /s)
Colorado River Basin						
Grapevine Creek in Grand Canyon	Colorado River	Lat 36°02'14", long 112°01'18", sec. 25, T.31N., R.3E., Coconino County, Hydrologic Unit 15010001	----		04-10-01	0.0500
Grapevine East Spring in Grand Canyon	Colorado River	Lat 36°02'32", long 112°00'42", sec. 25, T.31N., R.3E., Coconino County, Hydrologic Unit 15010001	----		11-29-00 12-12-00 04-09-01	0.0025 0.0020 0.0010
Grapevine Main Spring in Grand Canyon	Colorado River	Lat 36°00'40", long 112°00'09", sec. 1, T.30N., R.4E., Coconino County, Hydrologic Unit 15010001	----		04-10-01 04-30-01	0.0040 0.0040
Hance Creek in Grand Canyon	Colorado River	Lat 36°00'58", long 111°57'33", sec. 4, T.30N., R.4E., Coconino County, Hydrologic Unit 15010001	----		04-8-01	0.0800
Hance Spring in Grand Canyon	Colorado River	Lat 36°00'15", long 111°57'04", sec. 10, T.30N., R.4E., Coconino County, Hydrologic Unit 15010001	----		04-8-01 05-11-01	0.0004 0.0020
Lonetree Creek in Grand Canyon	Colorado River	Lat 36°04'18", long 112°02'43", sec. 16, T.31N., R.3E., Coconino County, Hydrologic Unit 15010001	----		04-11-01	0.0080
Lonetree Spring in Grand Canyon	Colorado River	Lat 36°03'60", long 112°02'50", sec. 14, T.31N., R.3E., Coconino County, Hydrologic Unit 15010001	----		04-11-01 05-1-01	0.0010 0.0010
Miners Spring in Grand Canyon	Colorado River	Lat 36°00'59", long 111°58'17", sec. 4, T.30N., R.4E., Coconino County, Hydrologic Unit 15010001	----		05-24-00 11-28-00 04-7-01	0.0012 0.0011 0.0010
Red Canyon Spring in Grand Canyon	Colorado River	Lat 36°00'21", long 111°56'04", sec. 11, T.30N., R.4E., Coconino County, Hydrologic Unit 15010001	----		08-23-01 09-26-01	0.0070 0.0070
Sam Magee Spring in Grand Canyon	Colorado River	Lat 36°04'39", long 112°03'45", sec. 15, T.31N., R.3E., Coconino County, Hydrologic Unit 15010001	----		04-20-01	0.0010
Boucher East Spring in Grand Canyon	Colorado River	Lat 36°06'08", long 112°14'13", sec. 1, T.31N., R.1E., Coconino County, Hydrologic Unit 15010002	----		05-26-00 12-04-00 04-12-01	0.0070 0.0140 0.0170
Burro Spring in Grand Canyon	Colorado River	Lat 36°04'36", long 112°06'01", sec. 17, T.31N., R.3E., Coconino County, Hydrologic Unit 15010002	----		05-22-00 12-07-00 04-08-01	0.0070 0.0090 0.0100
Cable Spring in Grand Canyon	Colorado River	Lat 36°04'37", long 112°12'26", sec. 7, T.31N., R.2E., Coconino County, Hydrologic Unit 15010002	----		09-21-01	0.0004
Cottonwood Creek in Grand Canyon	Colorado River	Lat 36°01'28", long 111°59'12", sec. 32, T.31N., R.4E., Coconino County, Hydrologic Unit 15010002	----		05-25-00	0.0018
Forster Canyon #1 in Grand Canyon	Colorado River	Lat 36°13'54", long 112°32'00", sec. 29, T.33N., R.2W., Coconino County, Hydrologic Unit 15010002	----		02-14-01	0.0010
Horn Creek in Grand Canyon	Colorado River	Lat 36°04'50", long 112°08'35", sec. 11, T.31N., R.2E., Coconino County, Hydrologic Unit 15010002	----		05-22-00 12-06-00 04-07-01	0.0020 0.0030 0.0060
Mohawk Spring in Grand Canyon	Colorado River	Lat 36°12'50", long 112°58'10", sec. 30, T.33N., R.6W., Coconino County, Hydrologic Unit 15010002	----		09-18-01	0.0220
Monument Creek in Grand Canyon	Colorado River	Lat 36°05'00", long 112°11'10", sec. 9, T.31N., R.2E., Coconino County, Hydrologic Unit 15010002	----		05-24-00	0.1200
Monument Spring in Grand Canyon	Colorado River	Lat 36°03'56", long 112°10'32", sec. 16, T.31N., R.2E., Coconino County, Hydrologic Unit 15010002	----		12-05-00 12-05-00 04-09-01	0.1300 1.1300 0.2000
Pipe Creek in Grand Canyon	Colorado River	Lat 36°04'10", long 112°05'57", sec. 18, T.31N., R.3E., Coconino County, Hydrologic Unit 15010002	----		05-22-00 12-07-00 04-08-01	0.0090 0.0260 0.0220
Pumphouse Spring in Grand Canyon	Colorado River	Lat 36°04'39", long 112°07'31", sec. 13, T.31N., R.2E., Coconino County, Hydrologic Unit 15010002	----		05-22-00 12-07-00 04-07-01	0.0010 0.0020 0.0020
Royal Arch Spring in Grand Canyon	Colorado River	Lat 36°11'19", long 112°27'15", sec. 1, T.32N., R.2W., Coconino County, Hydrologic Unit 15010002	----		09-08-01	0.0140
Salt Creek Spring in Grand Canyon	Colorado River	Lat 36°04'37", long 112°09'40", sec. 15, T.31N., R.2E., Coconino County, Hydrologic Unit 15010002	----		05-23-00 12-06-00 04-10-01	0.0010 0.0020 0.0030
Slate Spring in Grand Canyon	Colorado River	Lat 36°06'58", long 112°17'07", sec. 33, T.32N., R.1E., Coconino County, Hydrologic Unit 15010002	----		09-22-01	0.0002
Little Colorado River	Colorado River	Lat 34°05'18", long 109°24'42", NW1/4SE1/4 sec. 17, T.8N., R.28E., Apache County, Hydrologic Unit 1502001	----	1975	06-26-01	43.9
Do.	.....do.....	Lat 34°05'14", long 109°23'47", NE1/4SW1/4 sec. 16, T.8N., R.28E., Apache County, Hydrologic Unit 1502001	----	----	06-26-01	41.2



## Discharge measurements at miscellaneous sites

Stream or Spring	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft <sup>3</sup> /s)
Do.	.....da.....	Lat 34°05'15", long 109°23'43", NW1/4SE1/4 sec. 16, T.8N., R.28E., Apache County, Hydrologic Unit 1502001	---	---	06-26-01	16.2
Do.	.....da.....	Lat 34°06'15", long 109°20'33", SW1/4NE1/4 sec. 12, T.8N., R.28E., Apache County, Hydrologic Unit 1502001	---	1975	06-26-01	16.5
Do.	.....da.....	Lat 34°06'39", long 109°18'52", NW1/4NW1/4 sec. 8 (revised), T.8N., R.29E., Apache County, Hydrologic Unit 1502001	122	1951-60, 1975	06-26-01	11.3
Do.	.....da.....	Lat 34°08'48", long 109°17'37", NW1/4SE1/4 sec. 29, T.9N., R.29E., Apache County, Hydrologic Unit 1502001	---	1975	06-26-01	5.45
Do.	.....da.....	Lat 34°09'44", long 109°18'06", SW1/4NW1/4 sec. 20, T.9N., R.29E., Apache County, Hydrologic Unit 1502001	---	1944, 1975	06-26-01	5.39
Do.	.....da.....	Lat 34°11'10", long 109°18'12", SW1/4SW1/4 sec. 8, T.9N., R.29E., Apache County, Hydrologic Unit 1502001	---	1975	06-26-01	5.25
Do.	.....da.....	Lat 34°12'08", long 109°17'55", NE1/4SW1/4 sec. 5, T.9N., R.29E., Apache County, Hydrologic Unit 1502001	---	1975	06-26-01	4.12
Do.	.....da.....	Lat 34°17'06", long 109°21'06", NE1/4NW1/4 sec. 11, T.10N., R.28E., Apache County, Hydrologic Unit 1502001	---	1975	06-26-01	1.99
Do.	.....da.....	Lat 34°18'52", long 109°21'24", SW1/4SE1/4 sec. 27, T.11N., R.28E., Apache County, Hydrologic Unit 1502001	---	1975	06-26-01	2.6
Nutrios Creek	Little Colorado River	Lat 34°05'28", long 109°12'09", SW1/4NE1/4 sec. 17, T.8N., R.30E., Apache County, Hydrologic Unit 1502001	---	1975	06-26-01	.20
Do.	.....da.....	Lat 34°08'16", long 109°13'54", NW1/4NW1/4 sec. 36, T.9N., R.29E., Apache County, Hydrologic Unit 1502001	---	1975	06-26-01	0
Do.	.....da.....	Lat 34°08'34", long 109°17'00", SW1/4SW1/4 sec. 28, T.9N., R.29E., Apache County, Hydrologic Unit 1502001	---	1975	06-26-01	.14
Water Canyon Creek	Little Colorado River	Lat 34°04'03", long 109°17'32", SE1/4SW1/4 sec. 21, T.8N., R.29E., Apache County, Hydrologic Unit 1502001	---	1975	06-26-01	.001
Do.	.....da.....	Lat 34°05'37", long 109°17'40", SE1/4NW1/4 sec. 16, T.8N., R.29E., Apache County, Hydrologic Unit 1502001	---	1975	06-26-01	0
Blue Springs in Grand Canyon	Colorado River	Lat 36°06'59", long 111°41'35", sec. 36, T.32N., R.6E., Coconino County, Hydrologic Unit 15020016	---		06-29-01	92.9000
Little Colorado River	Colorado River	Lat 34°23'14", long 109°23'53", NW1/4NE1/4 sec. 5, T.11N., R.28E., Apache County, Hydrologic unit 1502002.	---	1975	06-27-01	5.96
Do.	.....da.....	Lat 34°24'53", long 109°24'10", NE1/4NW1/4 sec. 29, T.12N., R.28E., Apache County, Hydrologic unit 1502002.	---	1975	06-27-01	5.35
Do.	.....da.....	Lat 34°26'00", long 109°22'40", SW1/4SW1/4 sec. 16, T.12N., R.28E., Apache County, Hydrologic unit 1502002.	---	1940-41	06-27-01	6.73
Do.	.....da.....	Lat 34°26'35", long 109°21'37", SE1/4NE1/4 sec. 15, T.12N., R.28E., Apache County, Hydrologic unit 1502002.	---	1975	06-27-01	7.51
Do.	.....da.....	Lat 34°28'07", long 109°21'23", NW1/4SW1/4 sec. 2, T.12N., R.28E., Apache County, Hydrologic unit 1502002.	---	1975	06-27-01	6.15
Do.	.....da.....	Lat 34°29'25", long 109°21'21", SW1/4NE1/4 sec. 34, T.13N., R.28E., Apache County, Hydrologic unit, 1502002.	---	1975	06-27-01	5.90
Do.	.....da.....	Lat 34°30'25", long 109°21'25", SW1/4NE1/4 sec. 27, T.13N., R.28E., Apache County, Hydrologic unit 1502002.	---	1975	06-27-01	.31
Do.	.....da.....	Lat 34°30'25", long 109°21'26", SW1/4NE1/4 sec. 27, T.13N., R.28E., Apache County, Hydrologic unit 1502002.	---	1975	06-27-01	1.27
Do.	.....da.....	Lat 34°32'32", long 109°22'10", SE1/4SE1/4 sec. 9, T.13N., R.28E., Apache County, Hydrologic unit 1502002.	---	1975	06-27-01	1.40
Do.	.....da.....	Lat 34°34'08", long 109°23'26", NW1/4NE1/4 sec. 5, T.13N., R.28E., Apache County, Hydrologic unit 1502002.	---	1975	06-27-01	.05
Do.	.....da.....	Lat 34°35'02", long 109°24'24", SE1/4SE1/4 sec. 30, T.14N., R.28E., Apache County, Hydrologic unit 1502002.	---	1975	06-27-01	.02

Discharge measurements at miscellaneous sites

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				Measurements		
Stream or Spring	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Date	Dis-charge (ft <sup>3</sup> /s)
Gila River Basin						
Gila River at Geronimo	Colorado River	Lat 33°05'38", long 110°01'49", SE1/4SW1/4SW1/4, sec.7 T.4 S., R.22 E., Graham County, Hydrologic Unit 15040005.	11,229		10-17-00	350
					02-13-01	204
					03-19-01	321
					05-14-01	160
					06-07-01	50.9
					06-18-01	30.3
					07-13-01	33.1
					08-16-01	240
					09-05-01	28.5
					09-18-01	26.0

**ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

**MISCELLANEOUS STATION ANALYSES**

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	
343308112274201 YP-12 (LAT 34 33 08N LONG 112 27 42W)--YAVAPAI-PRESCOTT INDIAN TRIBE														
APR 2001 10...	1240	650	6.8	--	11.0	620	.4	4	270	10	74.8	19.9	40.9	
343349112263701 YP-8 (LAT 34 33 49N LONG 112 26 37W)--YAVAPAI-PRESCOTT INDIAN TRIBE														
APR 2001 12...	1330	718	7.5	11.5	13.0	630	1.9	22	320	37	72.3	34.4	25.7	
DATE		SODIUM AD-SORPTION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L AS PER (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)
343308112274201 YP-12 (LAT 34 33 08N LONG 112 27 42W)														
APR 2001 10...	1	4.36	316	0	259	38.7	33.2	.4	31.8	402	.55	.337	1.49	
343349112263701 YP-8 (LAT 34 33 49N LONG 112 26 37W)														
APR 2001 12...	.6	2.89	347	0	286	21.9	58.3	.3	21.5	411	.56	--	--	
DATE		NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHATE, DIS-SOLVED (MG/L AS PO4) (00660)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)
343308112274201 YP-12 (LAT 34 33 08N LONG 112 27 42W)														
APR 2001 10...	.007	.345	<.041	.12	.46	.103	.119	.101	.309	2.5	169	<1.00	101	
343349112263701 YP-8 (LAT 34 33 49N LONG 112 26 37W)														
APR 2001 12...	<.006	<.047	<.041	.20	--	.106	<.060	E.013	--	3.6	91.7	<1.00	57	
DATE		CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)
343308112274201 YP-12 (LAT 34 33 08N LONG 112 27 42W)														
APR 2001 10...	<8.00	<10.0	<13.0	<4.7	<10	E.06	22.9	106	<.01	<45.0	<53.0	<2.4	<4.6	
343349112263701 YP-8 (LAT 34 33 49N LONG 112 26 37W)														
APR 2001 12...	<8.00	<10.0	<13.0	<4.7	500	E.04	<3.9	1230	<.01	<45.0	<53.0	<2.4	<4.6	
DATE		STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ALDRIN, TOTAL (UG/L) (39330)	AROCLOR 1254 PCB TOTAL (UG/L) (39504)	CHLORDANE, TECHNICAL TOTAL (UG/L) (39350)	P,P' DDD, TOTAL (UG/L) (39310)	P,P' DDE, TOTAL (UG/L) (39320)	P,P' DDT, TOTAL (UG/L) (39300)	DI-ELDRIN TOTAL (UG/L) (39380)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	HEPTACHLOR, TOTAL (UG/L) (39410)	HEPTACHLOR EPOXIDE TOTAL (UG/L) (39420)
343308112274201 YP-12 (LAT 34 33 08N LONG 112 27 42W)														
APR 2001 10...	598	<8.0	<20	<.040	<.1	<.1	<.1	<.04	<.1	<.020	<.060	<.030	<.800	
343349112263701 YP-8 (LAT 34 33 49N LONG 112 26 37W)														
APR 2001 12...	417	<8.0	<20	<.040	<.1	<.1	<.1	<.04	<.1	<.020	<.060	<.030	<.800	

**ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

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**MISCELLANEOUS STATION ANALYSES--Continued**

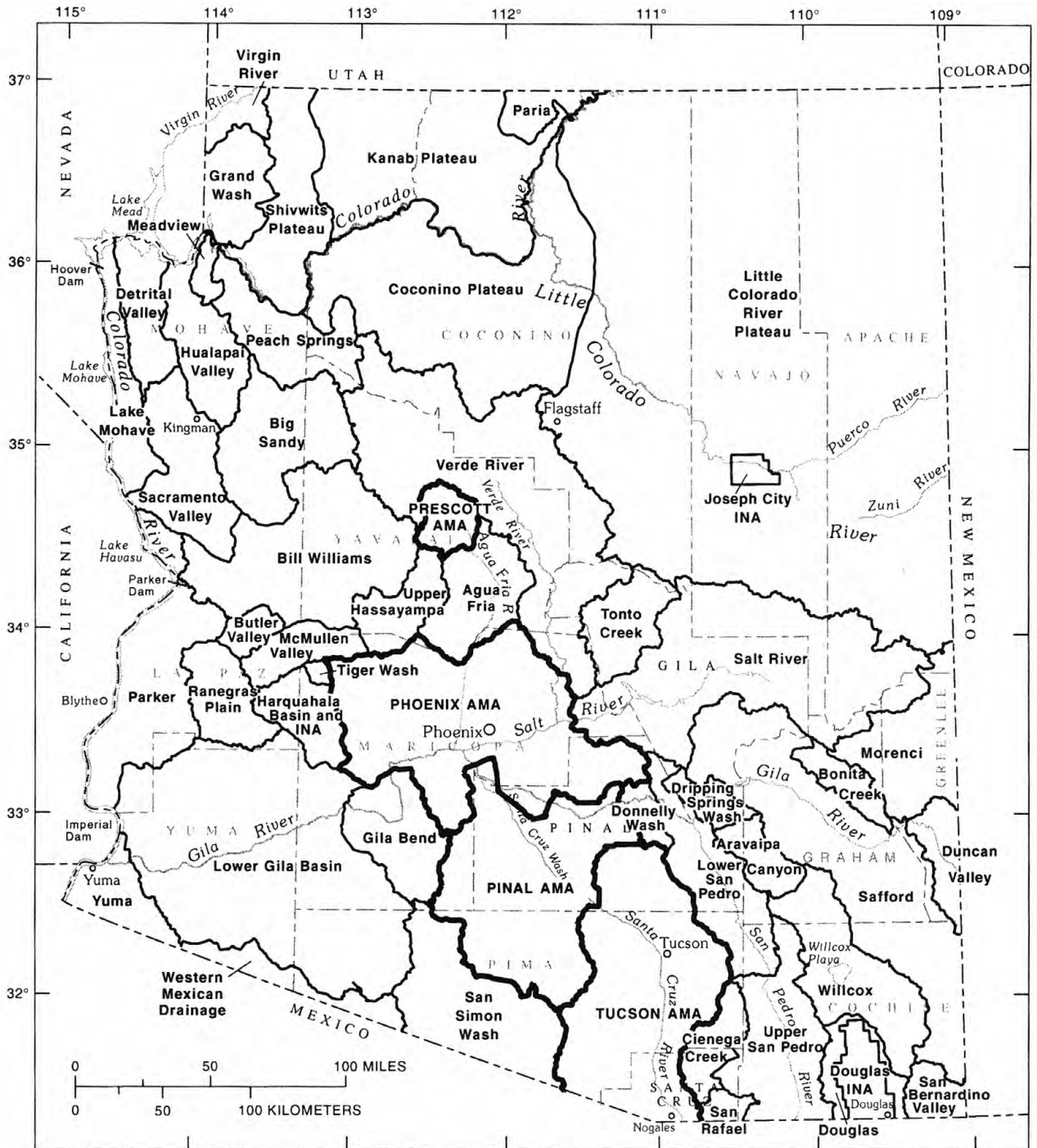
DATE	LINDANE TOTAL (UG/L) (39340)	TOX- APHENE, TOTAL (UG/L) (39400)	AROCLOR 1016/ 1242 PCB UNFLTRD (UG/L) (81648)	AROCLOR 1221 PCB TOTAL (UG/L) (39488)	AROCLOR 1232 PCB TOTAL (UG/L) (39492)	AROCLOR 1248 PCB TOTAL (UG/L) (39500)	AROCLOR 1260 PCB TOTAL (UG/L) (39508)	ENDO- SULFAN SULFATE TOTAL (UG/L) (34351)	ENDRIN ALDE- HYDE TOTAL (UG/L) (34366)	ISODRIN SUR SCD 1608 WTR, UNFLTRD PERCENT (90570)	PCB 207 SUR SCD 1608 WATER UNFLTRD PERCENT (99781)	ENDO- SULFAN- I WATER WHOLE REC (UG/L) (34361)	ALPHA BHC TOTAL (UG/L) (39337)
APR 2001 10...	<.030	<2	<.10	<1	<.1	<.1	<.1	<.6	<.2	54	70	<.1	<.03
APR 2001 12...	<.030	<2	<.10	<1	<.1	<.1	<.1	<.6	<.2	68	84	<.1	<.03
DATE	ALPHA- HCH-D6 SUR SCD 1608 WATER UNFLTRD PERCENT (99778)	ENDO- SULFAN II TOTAL (UG/L) (34356)	BETA BENZENE HEXA- CHLOR- IDE TOTAL (UG/L) (39338)	CHLOR- DANE CIS WATER WHOLE TOTAL (UG/L) (39062)	DELTA BENZENE HEXA- CHLOR- IDE TOTAL (UG/L) (34259)	CHLOR- DANE TRANS WATER WHOLE TOTAL (UG/L) (39065)	ETHANE, 1112- TRI- CHLORO- WAT UNF REC (UG/L) (77562)	1,1,1- TRI- CHLORO- ETHANE REC (UG/L) (34506)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	1,1,2- TRI- CHLORO- ETHANE REC (UG/L) (34511)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)
APR 2001 10...	63	<.04	<.03	<.1	<.09	<.1	<.03	<.03	<.09	<.06	<.06	<.04	<.04
APR 2001 12...	70	<.04	<.03	<.1	<.09	<.1	<.03	E.08	<.09	<.06	<.06	.25	<.04
DATE	1,1-DI- CHLORO- PRO- PENE, WAT, WH TOTAL (UG/L) (77168)	1,2,3- TRI- CHLORO- BENZENE WAT, WH REC (UG/L) (77613)	123-TRI- CHLORO- PROPANE WATER WHOLE TOTAL (UG/L) (77443)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (UG/L) (34551)	BENZENE 124-TRI- METHYL UNFILT RECOVER (UG/L) (77222)	DIBROMO CHLORO- PROPANE WATER WHOLE TOT. REC (UG/L) (82625)	1,2- DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	ETHANE 12DICL SURROG VOC UNFLTRD REC (UG/L) (99832)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	BENZENE 135-TRI- METHYL WATER UNFLTRD REC (UG/L) (77226)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)
APR 2001 10...	<.03	<.3	<.2	<.2	E.04	<.2	<.04	<.03	<.1	117	<.03	<.04	<.03
APR 2001 12...	<.03	<.3	<.2	<.2	<.06	<.2	<.04	<.03	<.1	118	<.03	<.04	<.03
DATE	1,3-DI- CHLORO- PROPANE WAT. WH TOTAL (UG/L) (77173)	BENZENE 14BRFL- SURROG VOC UNFLTRD REC (UG/L) (99834)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)	2,2-DI- CHLORO- PRO- PANE WAT, WH TOTAL (UG/L) (77170)	O- CHLORO- TOLUENE WATER WHOLE TOTAL (UG/L) (77275)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L) (77277)	P-ISO- PROPYL- TOLUENE WATER WHOLE TOTAL (UG/L) (77356)	ACRYLO- NITRILE TOTAL (UG/L) (34215)	BENZENE TOTAL (UG/L) (34030)	BROMO- BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	METHANE BROMO CHLORO- WAT UNFLTRD REC (UG/L) (77297)	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	BROMO- FORM TOTAL (UG/L) (32104)
APR 2001 10...	<.1	112	E.02	<.05	<.03	<.06	<.07	<1	<.04	<.04	<.04	<.05	<.06
APR 2001 12...	<.1	103	E.04	<.05	<.03	<.06	<.07	<1	<.04	<.04	<.04	<.05	<.06
DATE	METHYL- BROMIDE TOTAL (UG/L) (34413)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L) (77342)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- ETHANE TOTAL (UG/L) (34311)	CHLORO- FORM TOTAL (UG/L) (32106)	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	DI- BROMO- METHANE WATER WHOLE RECOVER (UG/L) (30217)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	METHYL ENE CHLORO- RIDE TOTAL (UG/L) (34423)	ETHYL- BENZENE TOTAL (UG/L) (34371)	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L) (39702)	ISO- PROPYL- BENZENE WATER WHOLE REC (UG/L) (77223)
APR 2001 10...	<.3	<.2	<.03	<.1	E.02	<.2	<.2	<.05	<.3	<.2	<.03	<.1	<.03
APR 2001 12...	<.3	<.2	<.03	<.1	E.02	<.2	<.2	<.05	<.3	<.2	<.03	<.1	<.03

**ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES  
WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

**MISCELLANEOUS STATION ANALYSES--Continued**

					TOLUENE	D8	TRI-	TRI-	CIS-1,2		BENZENE		
					SURROG	CHLORO-	CHLORO-	CHLORO-	-DI-	1,3-DI-	BENZENE	SEC	
					VOC	ETHYL-	FLUORO-	VINYL	CHLORO-	ETHENE	CHLORO-	WATER	
					UNFLTRD	ENE	METHANE	RIDE	WATER	PROPENE	UNFLTRD	UNFLTRD	
DATE	NAPHTH- ALENE TOTAL (UG/L) (34696)	STYRENE TOTAL (UG/L) (77128)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	TOLUENE TOTAL (UG/L) (34010)	REC PERCENT (99833)	TOTAL (UG/L) (39180)	TOTAL (UG/L) (34488)	TOTAL (UG/L) (39175)	TOTAL (UG/L) (77093)	TOTAL (UG/L) (34704)	REC (UG/L) (77224)	REC (UG/L) (77350)
343308112274201 YP-12 (LAT 34 33 08N LONG 112 27 42W)													
APR 2001 10...	<.2	<.04	E.1	<.06	<.05	104	E.03	<.09	<.1	<.04	<.09	<.04	<.03
343349112263701 YP-8 (LAT 34 33 49N LONG 112 26 37W)													
APR 2001 12...	<.2	<.04	<.1	<.06	E.05	102	E.05	<.09	<.1	E.02	<.09	<.04	<.03
DATE	METHYL TERT- BUTYL ETHER WAT UNF REC (UG/L) (78032)	BENZENE TERT- BUTYL- WATER UNFLTRD REC (UG/L) (77353)	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	HYDRO- CARBONS PET.WAT FREON CHR. IR. RECOV. (MG/L) (45501)							
343308112274201 YP-12 (LAT 34 33 08N LONG 112 27 42W)													
APR 2001 10...	<.2	<.06	<.03	<.09	1	3							
343349112263701 YP-8 (LAT 34 33 49N LONG 112 26 37W)													
APR 2001 12...	<.2	<.06	<.03	<.09	1	3							
Remark codes used in this report:													
< -- Less than													
E -- Estimated value													



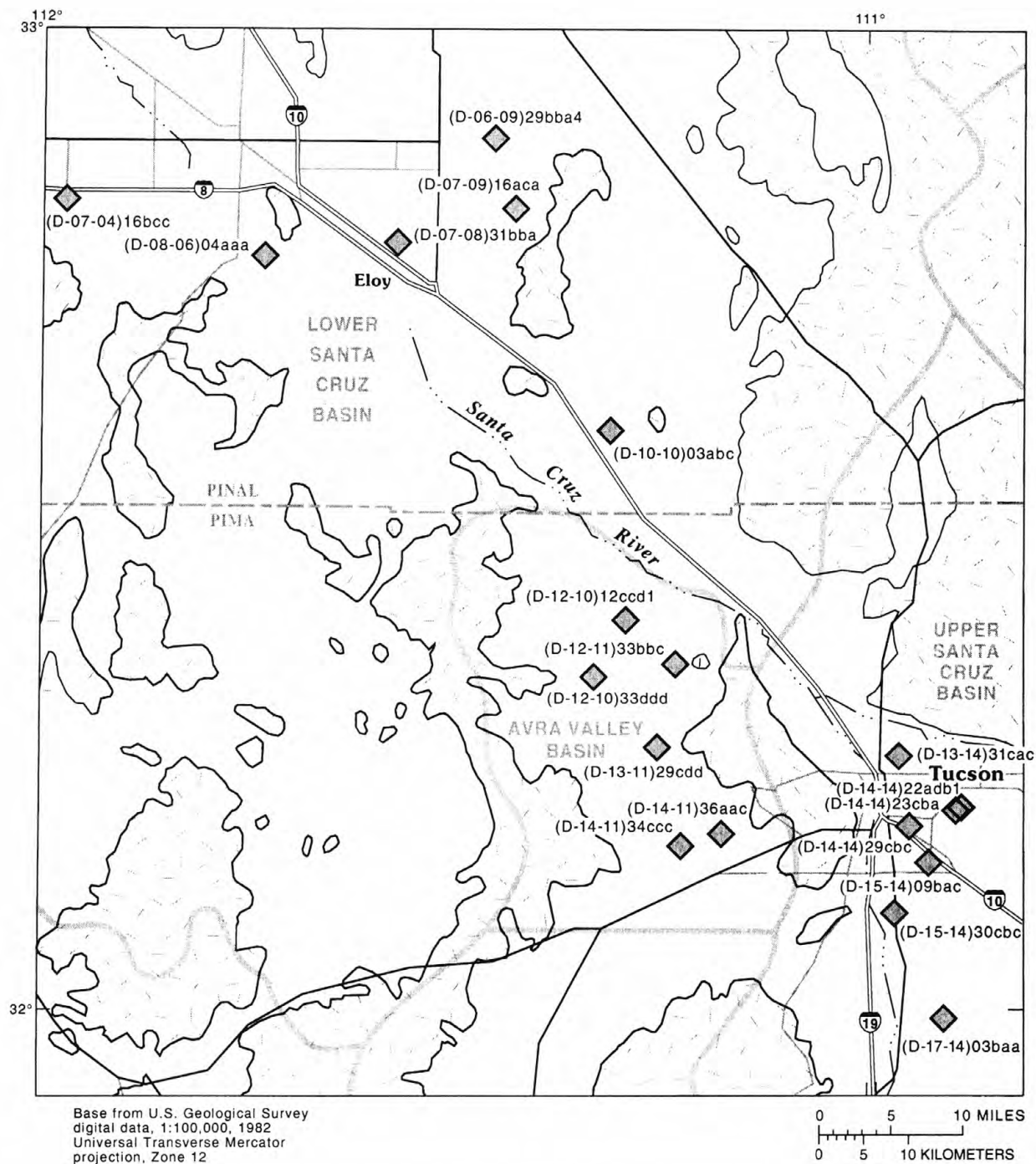


Base from U.S. Geological Survey  
State base maps, 1:500,000.  
Arizona, 1974; Nevada, 1965;  
New Mexico, 1965; and Utah, 1959

#### EXPLANATION

- BOUNDARY OF GROUND-WATER BASIN OR SUBBASIN
- BOUNDARY OF ACTIVE MANAGEMENT AREA (AMA)

**Figure 8.** Arizona Department of Water Resources ground-water basins, Active Management Areas (AMAs), and Irrigation Non-Expansion Areas (INAs).



- 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 9.** Location of wells and extensometer sites, south-central Arizona.

## GROUND-WATER LEVELS AND COMPACTION VALUES

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## 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 District Office in Tucson, AZ.

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 BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225.3	222.3	218.2	---	---	---	212.5	212.8	218.2	220.4	219.5	218.7
2	225.5	222.2	218.1	---	---	---	212.6	213.0	218.4	220.4	219.4	218.8
3	225.6	221.9	218.1	---	---	---	212.8	213.3	218.5	220.4	219.4	218.8
4	225.8	221.6	218.1	---	---	---	212.8	213.6	218.6	220.4	219.3	218.9
5	225.9	221.3	218.0	---	---	---	212.7	213.9	218.7	220.5	219.4	218.9
6	225.9	220.8	217.9	---	---	---	212.5	214.2	218.9	220.3	219.4	218.9
7	226.0	220.0	217.8	---	---	---	212.3	214.4	219.0	220.2	219.3	219.0
8	226.1	218.7	217.7	---	---	---	211.9	214.7	219.0	219.8	219.2	219.1
9	226.2	218.7	---	---	---	---	211.6	214.9	219.2	219.5	219.0	219.1
10	226.2	218.7	---	---	---	---	211.6	215.1	219.2	219.1	219.0	219.1
11	226.2	218.7	---	---	---	---	211.5	215.3	219.4	218.9	219.0	219.2
12	226.1	218.7	---	---	---	---	211.6	215.6	219.5	218.9	218.9	219.1
13	226.0	218.6	---	---	---	---	211.5	215.7	219.5	219.0	218.5	219.2
14	225.6	218.7	---	---	---	---	211.5	215.9	219.6	219.0	218.0	219.3
15	225.4	218.7	---	---	---	---	211.6	216.1	219.7	219.1	217.7	219.3
16	225.0	218.8	---	---	---	---	211.6	216.2	219.8	219.1	217.6	219.4
17	224.5	218.9	---	---	---	211.2	211.7	216.4	219.9	219.2	217.7	219.4
18	224.1	218.8	---	---	---	211.1	211.5	216.6	220.0	219.2	217.9	219.3
19	223.9	218.7	---	---	---	211.1	211.3	216.7	220.1	219.2	217.9	219.3
20	223.8	218.7	---	---	---	211.1	211.3	216.8	220.2	219.3	218.0	219.4
21	223.8	218.6	---	---	---	210.9	211.3	216.9	220.3	219.3	218.1	219.5
22	223.7	218.6	---	---	---	210.6	211.3	217.0	220.3	219.2	218.1	219.4
23	223.7	218.5	---	---	---	210.7	211.4	217.1	220.3	219.2	218.2	219.4
24	223.7	218.4	---	---	---	210.9	211.5	217.2	220.3	219.3	218.3	219.5
25	223.6	218.4	---	---	---	211.1	211.7	217.3	220.3	219.4	218.2	219.5
26	223.4	218.3	---	---	---	211.4	211.8	217.5	220.3	219.4	218.3	219.5
27	223.1	218.3	---	---	---	211.6	211.9	217.6	220.3	219.5	218.4	219.5
28	223.0	218.2	---	---	---	211.9	212.2	217.7	220.4	219.4	218.5	219.5
29	222.8	218.2	---	---	---	212.1	212.4	217.9	220.4	219.5	218.5	219.5
30	222.7	218.3	---	---	---	212.1	212.5	218.1	220.4	219.5	218.6	219.5
31	222.4	---	---	---	---	212.4	---	218.2	---	219.4	218.6	---
MEAN	224.7	219.2	---	---	---	---	211.9	215.9	219.6	219.5	218.6	219.2
MAX	226.2	222.3	---	---	---	---	212.8	218.2	220.4	220.5	219.5	219.5
MIN	222.4	218.2	---	---	---	---	211.3	212.8	218.2	218.9	217.6	218.7

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.185	.180	.175	.172	.169	.167	.166	.166	.174	.179	.176	.178
2	.185	.179	.174	.172	.169	.167	.166	.166	.174	.180	.176	.178
3	.186	.179	.174	.172	.169	.167	.166	.166	.175	.180	.177	.179
4	.186	.179	.174	.172	.169	.167	.166	.166	.175	.180	.177	.179
5	.186	.179	.174	.173	.169	.167	.166	.166	.175	.180	.176	.179
6	.186	.179	.174	.173	.169	.167	.166	.167	.175	.180	.176	.179
7	.186	.178	.174	.173	.169	.167	.166	.167	.176	.180	.176	.180
8	.186	.178	.174	.173	.169	.167	.166	.168	.176	.180	.177	.180
9	.186	.178	.174	.173	.169	.167	.166	.168	.176	.180	.177	.180
10	.186	.178	.174	.173	.169	.167	.166	.168	.176	.180	.177	.180
11	.186	.178	.174	.173	.169	.167	.165	.168	.177	.179	.177	.180
12	.186	.177	.173	.173	.169	.167	.165	.169	.177	.179	.177	.180
13	.186	.177	.173	.173	.169	.167	.165	.169	.176	.179	.177	.181
14	.186	.177	.173	.173	.169	.167	.165	.170	.177	.179	.177	.181
15	.185	.177	.173	.173	.169	.167	.165	.170	.177	.179	.177	.181
16	.185	.177	.173	.173	.169	.167	.165	.170	.177	.179	.177	.181
17	.185	.176	.173	.173	.169	.167	.165	.170	.177	.179	.177	.181
18	.184	.176	.173	.173	.169	.167	.165	.171	.177	.179	.177	.182
19	.184	.176	.173	---	.169	.167	.165	.171	.178	.179	.177	.182
20	.184	.176	.173	---	.169	.166	.164	.171	.178	.178	.177	.182
21	.184	.176	.173	---	.168	.166	.164	.172	.178	.178	.177	.183
22	.183	.176	.173	---	.168	.166	.164	.172	.178	.177	.177	.183
23	.183	.175	.173	---	.168	.166	.164	.172	.178	.177	.177	.183
24	.183	.175	.173	---	.168	.166	.164	.172	.179	.177	.177	.183
25	.182	.175	.173	---	.168	.166	.164	.173	.179	.176	.177	.183
26	.182	.175	.172	.169	.168	.166	.164	.173	.179	.176	.177	.183
27	.182	.175	.172	.169	.168	.166	.165	.173	.179	.176	.177	.184
28	.182	.175	.172	.169	.167	.166	.165	.173	.179	.176	.177	.184
29	.181	.175	.172	.169	---	.166	.165	.173	.179	.176	.178	.184
30	.180	.175	.172	.169	---	.166	.165	.174	.179	.176	.178	.185
31	.180	---	.172	.169	---	.166	---	.174	---	.176	.178	---
MEAN	.184	.177	.173	---	.169	.167	.165	.170	.177	.178	.177	.181
MAX	.186	.180	.175	---	.169	.167	.166	.174	.179	.180	.178	.185
MIN	.180	.175	.172	---	.167	.166	.164	.166	.174	.176	.176	.178

## GROUND-WATER LEVELS AND COMPACTION VALUES

## 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 District Office in Tucson, AZ.

PERIOD OF RECORD.--Nov. 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 106.09 ft below land-surface datum, Apr. 13, 1993; lowest recorded, 120.82 ft below land-surface datum, Aug. 25, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117.04	116.90	116.41	115.82	115.33	113.95	114.23	113.99	113.99	113.87	113.61	113.37
2	117.06	116.84	116.42	115.85	115.35	113.87	114.25	113.94	114.01	113.84	113.56	113.36
3	117.05	116.84	116.43	115.82	115.29	113.87	114.28	114.03	114.02	113.90	113.54	113.33
4	117.05	116.85	116.42	115.74	115.27	113.92	114.24	114.05	114.00	113.90	113.54	113.31
5	117.10	116.82	116.38	115.72	115.16	113.96	114.26	114.04	114.00	113.91	113.57	113.32
6	117.11	116.75	116.38	115.72	114.98	114.09	114.27	114.05	114.00	113.92	113.54	113.31
7	117.14	116.82	116.34	115.73	115.02	114.17	114.22	114.08	113.96	113.89	113.53	113.30
8	117.19	116.83	116.32	115.69	115.16	114.24	114.21	114.03	113.99	113.85	113.54	113.29
9	117.19	116.74	116.34	115.73	115.20	114.16	114.17	114.03	113.97	113.76	113.55	113.31
10	117.15	116.74	116.33	115.78	115.10	114.16	114.18	114.04	113.98	113.75	113.51	113.31
11	117.20	116.77	116.31	115.70	115.10	114.07	114.19	114.04	113.98	113.76	113.51	113.28
12	117.25	116.75	116.23	115.66	115.06	114.03	114.21	114.07	113.98	113.78	113.53	113.26
13	117.25	116.70	116.30	115.73	114.95	114.13	114.15	114.08	113.96	113.75	113.50	113.32
14	117.23	116.61	116.30	115.68	114.74	114.21	114.16	114.08	113.93	113.73	113.47	113.30
15	117.25	116.62	116.28	115.59	114.59	114.19	114.16	114.06	113.92	113.70	113.45	113.16
16	117.24	116.62	116.24	115.60	114.45	114.18	114.15	114.03	113.93	113.71	113.45	113.16
17	117.21	116.62	116.18	115.64	114.27	114.19	114.19	114.01	113.89	113.73	113.46	113.18
18	117.17	116.64	116.25	115.64	114.13	114.19	114.22	114.03	113.90	113.70	113.40	113.17
19	117.15	116.60	116.16	115.64	114.00	114.16	114.22	114.05	113.90	113.67	113.28	113.17
20	117.10	116.57	116.10	115.57	113.90	114.16	114.20	114.02	113.88	113.68	113.24	113.13
21	117.07	116.53	116.08	115.52	113.79	114.16	114.23	114.02	113.90	113.65	113.23	113.12
22	117.08	116.49	116.05	115.43	113.71	114.24	114.21	114.01	113.88	113.60	113.21	113.14
23	117.13	116.53	116.02	115.38	113.89	114.22	114.12	113.98	113.88	113.60	113.23	113.13
24	117.12	116.50	115.96	115.28	114.15	114.24	114.02	114.00	113.87	113.59	113.23	113.13
25	117.03	116.47	115.98	115.34	114.22	114.25	114.01	114.00	113.84	113.61	113.22	113.11
26	116.98	116.46	115.99	115.25	114.22	114.22	114.01	113.94	113.88	113.62	113.28	113.07
27	116.99	116.45	115.96	115.27	114.17	114.22	113.96	113.92	113.84	113.60	113.29	113.04
28	117.04	116.44	115.90	115.38	114.08	114.23	113.98	113.96	113.85	113.60	113.29	113.05
29	116.98	116.45	115.86	115.35	---	114.20	114.02	114.02	113.85	113.63	113.32	113.05
30	116.92	116.42	115.83	115.32	---	114.28	114.05	114.02	113.86	113.55	113.37	113.07
31	116.93	---	115.82	115.30	---	114.28	---	114.00	---	113.56	113.35	---
MEAN	117.11	116.65	116.18	115.58	114.62	114.14	114.16	114.02	113.93	113.72	113.41	113.21
MAX	117.25	116.90	116.43	115.85	115.35	114.28	114.28	114.08	114.02	113.92	113.61	113.37
MIN	116.92	116.42	115.82	115.25	113.71	113.87	113.96	113.92	113.84	113.55	113.21	113.04

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.179	.179	.180	.180	.181	.181	.180	.181	---	.181	.181	.181
2	.179	.179	.180	.180	.181	.181	.180	.181	.181	.181	.181	.181
3	.179	.179	.180	.180	.181	.181	.180	.181	.181	.182	.181	.181
4	.179	.179	.180	.180	.181	.181	.181	.181	.181	.182	.181	.181
5	.179	.179	.180	.180	.181	.181	.181	.181	.181	.182	.181	.181
6	.179	.179	.180	.180	.181	.181	.181	---	.181	.182	.181	.181
7	.179	.179	.180	.180	.181	.181	.181	---	.181	.182	.181	.181
8	.179	.179	.181	.180	.181	.181	.181	---	.181	.182	.181	.181
9	.179	.179	.181	.180	.181	.181	.181	---	.181	.182	.181	.181
10	.179	.179	.181	.180	.181	.181	.181	---	.181	.182	.181	.181
11	.179	.179	.181	.180	.181	.181	.181	---	.181	.182	.181	.181
12	.179	.179	.181	.180	.181	.181	.181	---	.181	.182	.181	.181
13	.179	.179	.181	.180	.182	.181	.181	---	.181	.182	.181	.181
14	.179	.179	.181	.180	.182	.181	.181	---	.181	.182	.181	.181
15	.179	.179	.181	.180	.182	.181	.181	---	.181	.182	.181	.181
16	.179	.179	.181	.180	.181	.180	.181	---	.181	.182	.181	.181
17	.179	.180	.181	.180	.181	.181	.181	---	.181	.182	.181	.181
18	.179	.179	.181	.180	.181	.180	.181	---	.181	.181	.181	.181
19	.180	.180	.182	.180	.181	.180	.181	---	.181	.181	.181	.181
20	.179	.180	.182	.180	.181	.180	.181	---	.181	.181	.180	.181
21	.180	.180	.181	.180	.181	.180	.181	---	.181	.181	.181	.181
22	.180	.180	.181	.180	.181	.180	.181	---	.181	.181	.181	.181
23	.180	.180	.181	.180	.181	.180	.181	---	.181	.181	.181	.181
24	.180	.180	.180	.180	.181	.180	.181	---	.181	.181	.181	.181
25	.180	.180	.180	.180	---	.180	.181	---	.182	.181	.181	.181
26	.180	.180	.180	.181	---	.180	.181	---	.181	.181	.181	.181
27	.180	.180	.180	.181	.181	.180	.181	---	.181	.181	.181	.181
28	.180	.180	.180	.180	.181	.180	.181	---	.181	.181	.181	.181
29	.180	.180	.180	.180	---	.180	.181	---	.181	.181	.181	.181
30	.180	.180	.180	.181	---	.180	.181	---	.181	.181	.181	.181
31	.180	---	.180	.181	---	.180	---	---	---	.181	.181	---
MEAN	.179	.179	.181	.180	---	.181	.181	---	---	.181	.181	.181
MAX	.180	.180	.182	.181	---	.181	.181	---	---	.182	.181	.181
MIN	.179	.179	.180	.180	---	.180	.180	---	---	.181	.180	.181



## GROUND-WATER LEVELS AND COMPACTION VALUES

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## 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 District Office in Tucson, AZ.

**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, 149.85 ft below land-surface datum, Sept. 7, 2001.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149.25	149.24	149.08	149.00	148.96	148.58	148.54	---	148.88	---	149.51	149.70
2	149.24	149.23	149.07	148.97	148.92	148.57	148.56	148.51	148.92	---	149.47	149.75
3	149.27	149.20	149.10	148.99	148.97	148.53	148.53	148.55	148.90	149.45	149.47	149.72
4	149.28	149.26	149.10	148.95	149.02	148.55	148.54	148.53	148.93	149.47	149.50	149.77
5	149.28	149.20	149.09	148.97	149.00	148.55	148.53	148.53	148.95	149.52	149.50	149.74
6	---	149.18	149.12	148.96	148.99	148.55	148.55	148.55	148.95	149.52	149.52	149.74
7	---	149.18	149.08	149.00	149.09	148.56	148.53	148.54	148.97	149.59	149.54	149.79
8	---	149.18	149.10	148.97	148.91	148.56	148.60	148.57	148.98	149.55	149.58	149.79
9	---	149.17	149.14	148.97	148.97	148.58	148.55	148.62	149.01	149.56	149.51	149.74
10	---	149.16	149.09	148.98	148.96	148.61	148.56	148.63	149.02	149.55	149.52	149.75
11	---	149.13	149.09	148.93	148.95	148.59	148.53	148.62	149.01	149.54	149.47	149.75
12	---	149.15	149.07	---	148.94	148.58	148.56	148.62	149.01	149.54	149.47	149.74
13	---	149.17	149.10	---	148.87	148.60	148.55	148.65	---	149.47	149.47	149.72
14	---	149.15	149.10	---	148.86	148.59	148.57	148.65	---	149.46	149.46	149.71
15	---	149.15	149.08	---	148.84	148.62	148.59	148.67	---	149.49	149.46	149.67
16	---	149.15	149.08	---	148.86	148.65	148.61	148.65	---	149.50	149.52	149.73
17	149.25	149.14	149.04	---	148.82	148.63	148.58	148.66	---	149.52	149.56	149.73
18	149.19	149.14	149.09	---	148.86	148.65	---	148.71	---	149.49	149.55	149.71
19	149.16	149.12	149.00	---	148.77	148.63	---	148.72	---	149.44	149.57	149.73
20	149.17	149.11	148.88	---	148.73	148.64	---	148.73	---	149.40	149.57	149.76
21	149.15	149.11	148.91	---	148.66	148.59	---	148.70	---	149.45	149.57	149.74
22	148.84	149.08	148.87	---	148.62	148.58	---	148.74	---	149.43	149.58	---
23	149.06	149.10	148.90	---	148.56	148.56	---	148.74	---	149.41	149.56	---
24	149.18	149.06	148.85	---	148.43	148.54	---	148.73	---	149.45	149.59	---
25	149.21	149.06	148.91	148.90	148.62	148.54	---	148.72	---	149.48	149.63	---
26	149.21	149.09	148.92	148.86	148.68	148.52	---	148.74	---	149.46	149.65	---
27	149.23	149.06	148.92	148.88	148.59	148.52	---	148.72	---	149.44	149.66	---
28	149.23	149.07	148.93	148.87	148.58	148.50	---	148.78	---	149.45	149.66	---
29	149.23	149.04	148.94	148.87	---	148.51	---	148.82	---	149.44	149.63	---
30	149.20	149.11	148.92	148.82	---	148.51	---	148.82	---	149.46	149.65	---
31	149.20	---	148.96	148.97	---	148.56	---	148.84	---	149.47	149.72	---
MEAN	---	149.14	149.02	---	148.82	148.57	---	---	---	---	149.55	---
MAX	---	149.26	149.14	---	149.09	148.65	---	---	---	---	149.72	---
MIN	---	149.04	148.85	---	148.43	148.50	---	---	---	---	149.46	---

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.044	.046	.045	.045	.045	.045	.045	.046	---	.049	.050	.050
2	.044	.046	.045	.045	.045	.045	.045	.046	.047	.049	.050	.050
3	.044	.046	.045	.045	.045	.045	.045	.046	.047	.049	.050	.050
4	.045	.046	.045	.045	.045	.045	.046	.046	.048	.049	.050	.050
5	.045	.046	.045	.045	.045	.045	.045	.046	.048	.049	.050	.050
6	.045	.046	.045	.045	.045	.045	.045	---	.048	.050	.050	.050
7	.046	.046	.045	.045	.045	.045	.045	---	.048	.050	.050	.050
8	.045	.046	.045	.045	.045	.045	.045	---	.047	.050	.050	.050
9	.045	.046	.045	.045	.045	.045	.045	---	.047	.049	.050	.050
10	.045	.046	.045	.045	.045	.045	.045	---	.048	.049	.050	.050
11	.045	.046	.045	.045	.045	.045	.045	---	.048	.050	.050	.050
12	.045	.046	.045	.046	.045	.045	.045	---	.048	.050	.050	.050
13	.046	.046	.045	.046	.045	.045	.045	---	.048	.049	.050	.050
14	.046	.046	.045	.046	.045	.046	.045	---	.048	.049	.050	.050
15	.046	.046	.045	.046	.045	.046	.045	---	.048	.049	.050	.050
16	.047	.046	.045	.046	.045	.046	.045	---	.048	.049	.050	.050
17	.047	.046	.045	.046	.045	.046	.045	---	.048	.049	.050	.051
18	.047	.046	.045	.046	.045	.045	.045	---	.048	.049	.050	.051
19	.047	.046	.045	.045	.045	.046	.045	---	.048	.050	.050	.051
20	.047	.046	.045	.045	.045	.046	.045	---	.048	.050	.050	.051
21	.047	.046	.045	.045	.045	.045	.045	---	.049	.050	.050	.051
22	.047	.046	.045	.045	.045	.045	.045	---	.049	.050	.050	.051
23	.047	.046	.045	.045	.045	.045	.046	---	.049	.049	.050	.051
24	.047	.046	.045	.045	.045	.045	.046	---	.049	.049	.050	.051
25	.047	.046	.045	.045	.045	.045	.046	---	.049	.049	.050	.051
26	.047	.046	.045	.045	.045	.045	.046	---	.049	.050	.050	.051
27	.046	.046	.045	.045	.045	.045	.046	---	.049	.050	.050	.051
28	.046	.046	.045	.045	.045	.045	.046	---	.049	.050	.050	.051
29	.046	.046	.045	.045	---	.045	.046	---	.049	.050	.050	.051
30	.046	.046	.045	.045	---	.045	.046	---	.049	.050	.050	.051
31	.046	---	.045	.045	---	.045	---	---	---	.050	.050	---
MEAN	.046	.046	.045	.045	.045	.045	.045	---	---	.049	.050	.050
MAX	.047	.046	.045	.046	.045	.046	.046	---	---	.050	.050	.051
MIN	.044	.046	.045	.045	.045	.045	.045	---	---	.049	.050	.050



## 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 District Office in Tucson, AZ.

**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, 400.19 ft below land-surface datum, Sept. 30, 2001.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	393.64	394.62	395.10	395.89	395.58	394.07	393.78	394.92	396.84	397.79	---	399.32
2	393.69	394.53	395.11	396.06	395.62	394.00	393.85	394.87	396.71	397.81	---	399.30
3	393.70	394.57	395.25	396.16	395.41	394.09	394.01	395.07	396.58	397.89	---	399.32
4	393.75	394.60	395.31	396.02	395.31	394.26	394.07	395.26	396.59	397.98	---	399.35
5	393.82	394.58	395.26	395.94	395.13	394.13	394.14	395.30	396.76	398.03	---	399.41
6	393.86	394.46	395.31	395.81	394.93	394.07	394.17	395.36	396.80	398.02	---	399.44
7	393.92	394.65	395.18	395.79	394.73	393.98	394.16	395.44	396.83	398.01	---	399.44
8	394.06	394.84	395.21	395.73	395.02	394.00	394.17	395.40	396.88	398.00	---	399.50
9	394.04	394.68	395.33	395.68	395.24	393.91	394.05	395.41	396.91	---	---	399.59
10	393.93	394.69	395.32	395.91	394.89	393.80	394.13	395.50	---	---	---	399.64
11	394.03	394.90	395.36	395.85	394.89	393.87	394.25	395.59	---	---	398.85	399.62
12	394.16	395.04	395.20	395.64	394.74	393.99	394.36	395.72	---	---	398.92	399.62
13	394.13	395.00	395.46	395.88	394.64	393.96	394.34	395.83	---	---	398.95	399.74
14	394.08	394.84	395.62	395.82	394.76	393.93	394.29	395.91	---	---	398.95	399.74
15	394.12	394.85	395.64	395.53	394.85	393.85	394.36	395.99	---	---	398.92	399.66
16	394.17	394.92	395.61	395.47	394.91	393.69	394.34	395.99	---	---	398.94	399.71
17	394.23	395.02	395.47	395.61	394.74	393.83	394.40	396.03	---	---	398.98	399.71
18	394.17	395.15	395.71	395.70	394.57	393.98	394.41	396.15	---	---	398.97	399.70
19	394.16	395.20	395.56	395.70	394.54	393.92	394.37	396.30	---	---	398.92	399.74
20	394.13	395.07	395.38	395.64	394.60	393.80	394.41	396.33	---	---	398.90	399.80
21	394.06	394.99	395.42	395.66	394.58	393.76	394.46	396.43	---	---	398.92	399.79
22	394.17	394.88	395.43	395.45	394.33	393.73	394.82	396.52	---	---	398.97	399.80
23	394.41	394.98	395.45	395.44	394.17	393.65	394.76	396.56	---	---	398.96	399.81
24	394.55	395.07	395.41	395.45	394.47	393.67	394.66	396.69	---	---	398.93	399.88
25	394.38	395.01	395.44	395.54	394.46	393.63	394.66	396.75	---	---	398.95	399.85
26	394.25	395.01	395.66	395.32	394.29	393.59	394.69	396.77	---	---	399.04	399.88
27	394.29	395.02	395.82	395.27	394.19	393.65	394.71	396.79	---	---	399.04	399.90
28	394.47	395.06	395.77	395.58	394.21	393.64	394.77	396.90	397.74	---	399.03	399.89
29	394.51	395.14	395.75	395.71	---	393.59	394.88	397.07	397.72	---	399.12	399.97
30	394.42	395.12	395.72	395.61	---	393.77	395.01	397.07	397.76	---	399.24	400.11
31	394.51	---	395.74	395.44	---	393.90	---	396.94	---	---	399.27	---
MEAN	394.12	394.88	395.45	395.69	394.78	393.86	394.38	396.03	---	---	---	399.67
MAX	394.55	395.20	395.82	396.16	395.62	394.26	395.01	397.07	---	---	---	400.11
MIN	393.64	394.46	395.10	395.27	394.17	393.59	393.78	394.87	---	---	---	399.30

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	.102	.106	.107	.105	.113	.117	.114	.113	.114	.114	.113
2	---	.104	.106	.105	.105	.114	.117	.115	.114	.114	.114	.113
3	---	.105	.105	.104	.107	.112	.116	.114	.114	.113	.114	.113
4	---	.105	.104	.104	.109	.110	.118	.113	.114	.114	.114	.113
5	---	.105	.105	.107	.110	.111	.116	.113	.114	.114	.114	.113
6	---	.106	.104	.108	.111	.111	.117	.113	.113	.114	.113	.113
7	.104	.105	.106	.108	.112	.111	.117	.113	.113	.114	.113	.113
8	.103	.102	.107	.108	.104	.110	.117	.113	.113	.114	.113	.113
9	.102	.104	.106	.109	.106	.113	.116	.114	.114	.114	.113	.112
10	.104	.105	.107	.109	.109	.114	.116	.114	.114	.114	.113	.112
11	.104	.103	.106	.105	.109	.114	.114	.114	.114	.114	.114	.112
12	.103	.100	.108	.107	.111	.111	.114	.113	.114	.114	.113	.112
13	.103	.100	.106	.108	.110	.112	.114	.113	.114	.114	.114	.113
14	.103	.103	.103	.105	.108	.112	.115	.112	.114	.114	.113	.112
15	.104	.104	.101	.105	.105	.113	.115	.112	.113	.114	.114	.112
16	.103	.103	.101	.109	.105	.119	.115	.113	.112	.114	.114	.112
17	.103	.102	.103	.110	.107	.120	.115	.114	.112	.114	.114	.112
18	.103	.100	.103	.107	.109	.117	.115	.113	.113	.114	.114	.112
19	.104	.098	.101	.106	.109	.117	.116	.113	.113	.114	.114	.112
20	.104	.101	.105	.105	.107	.118	.116	.113	.113	.113	.114	.112
21	.105	.103	.106	.106	.110	.119	.115	.113	.113	.113	.114	.112
22	.105	.105	.107	.105	.111	.119	.112	.113	.113	.114	.114	.112
23	.102	.104	.107	.107	.110	.119	.112	.113	.113	.113	.113	.112
24	.101	.104	.107	.109	.108	.119	.114	.113	.113	.113	.113	.112
25	.102	.105	.108	.109	.110	.119	.115	.113	.114	.114	.113	.112
26	.104	.105	.107	.109	.112	.119	.114	.113	.114	.114	.113	.111
27	.104	.106	.103	.108	.111	.119	.114	.114	.114	.114	.113	.111
28	.103	.105	.104	.111	.111	.118	.115	.114	.114	.114	.113	.111
29	.102	.105	.106	.111	---	.120	.114	.114	.114	.114	.113	.111
30	.104	.105	.107	.108	---	.118	.113	.113	.114	.114	.113	.111
31	.103	---	.108	.109	---	.116	---	.113	---	.114	.113	---
MEAN	---	.103	.105	.107	.109	.115	.115	.113	.113	.114	.113	.112
MAX	---	.106	.108	.111	.112	.120	.118	.115	.114	.114	.114	.113
MIN	---	.098	.101	.104	.104	.110	.112	.112	.112	.113	.113	.111

## GROUND-WATER LEVELS AND COMPACTION VALUES

355

## 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 District Office in Tucson, AZ.

**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, 230.2 ft below land-surface datum, Sept. 24, 2000.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	229.5	229.3	228.7	228.8	228.4	228.6	225.5	225.7	227.2	228.2	---	228.9
2	229.6	229.0	228.7	228.9	228.6	228.4	225.5	225.5	227.7	228.0	---	229.0
3	229.5	228.9	228.7	228.8	228.6	228.6	225.3	225.7	227.8	228.2	---	229.1
4	229.5	228.9	228.7	228.3	228.6	228.6	225.3	225.9	227.8	---	---	229.1
5	229.5	229.1	228.7	228.3	228.5	228.6	225.4	225.9	227.9	---	---	229.2
6	229.5	228.7	228.7	228.2	228.6	228.6	225.3	225.9	228.0	---	---	229.1
7	229.6	227.5	228.7	228.2	228.4	228.6	225.4	225.8	228.1	---	226.9	229.0
8	229.7	227.0	228.8	227.9	228.7	228.9	225.6	225.7	228.1	---	226.8	229.0
9	229.6	226.7	228.8	227.9	228.8	228.7	225.5	225.7	228.2	---	227.0	229.2
10	228.1	226.5	228.9	228.1	228.6	228.6	225.6	225.6	228.4	---	227.3	229.3
11	227.6	227.3	228.8	228.1	228.7	228.8	225.6	225.8	228.6	---	227.4	229.3
12	227.0	227.9	228.7	228.4	228.6	228.9	225.7	225.8	228.8	---	227.7	229.2
13	226.9	228.0	228.8	228.5	228.7	228.8	225.9	225.9	228.7	---	227.9	229.1
14	227.6	228.1	229.0	228.5	229.0	228.8	225.9	226.0	229.0	---	227.7	228.8
15	228.1	228.1	229.0	228.3	229.0	228.4	225.9	226.0	229.1	---	227.8	228.3
16	228.3	228.2	229.1	228.3	229.1	227.5	225.9	225.9	229.1	---	227.8	228.2
17	228.4	228.2	229.0	228.2	229.0	226.8	225.9	225.7	229.1	---	227.8	228.6
18	228.5	228.4	229.3	228.4	228.9	226.8	225.9	225.8	229.2	---	227.8	228.8
19	228.3	228.8	228.9	228.4	229.1	226.7	225.6	226.0	229.2	---	227.7	228.8
20	227.5	228.8	228.5	228.3	229.0	226.4	225.7	226.0	229.3	---	227.7	228.8
21	227.5	228.7	228.7	228.2	228.9	226.3	225.8	225.9	228.9	---	228.1	228.8
22	227.7	228.5	228.7	228.2	228.9	226.2	226.1	226.1	228.8	---	228.2	228.8
23	228.0	228.8	228.7	228.1	229.0	226.0	226.1	226.2	229.2	---	227.9	228.7
24	228.3	228.8	228.7	228.1	229.1	225.9	226.1	226.3	229.5	---	227.6	228.8
25	228.2	228.8	228.6	228.1	229.2	225.6	226.0	226.1	229.4	---	227.6	228.9
26	228.0	228.7	228.8	227.9	229.0	225.6	226.1	226.0	228.9	---	227.8	228.7
27	228.0	228.6	229.0	227.5	228.9	225.7	226.1	225.8	229.2	---	227.8	228.7
28	228.1	228.7	228.8	227.7	228.7	225.4	226.1	225.7	229.3	---	227.8	228.4
29	228.1	228.8	228.7	228.0	---	225.1	226.0	226.0	229.3	---	228.1	228.5
30	228.2	228.7	228.7	228.2	---	225.4	225.9	226.1	228.5	---	228.5	228.7
31	229.4	---	228.8	228.2	---	225.4	---	226.3	---	---	228.8	---
MEAN	228.4	228.4	228.8	228.2	228.8	227.3	225.8	225.9	228.7	---	---	228.9
MAX	229.7	229.3	229.3	228.9	229.2	228.9	226.1	226.3	229.5	---	---	229.3
MIN	226.9	226.5	228.5	227.5	228.4	225.1	225.3	225.5	227.2	---	---	228.2

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.267	.270	.273	.274	.276	.278	.280	.285	---	.294	.297	.300
2	.268	.270	.273	.274	.276	.278	.280	.286	.291	.294	.297	.301
3	.268	.270	.273	.274	.276	.278	.280	.286	.292	.295	.297	.301
4	.268	.270	.273	.274	.276	.278	.280	.286	.292	.295	.297	.301
5	.268	.270	.273	.274	.276	.278	.280	.286	.292	.295	.297	.301
6	.268	.270	.273	.275	.276	.278	.280	---	.292	.295	.297	.301
7	.268	.270	.273	.275	.276	.278	.280	---	.292	.295	.297	.302
8	.268	.270	.273	.275	.276	.278	.281	---	.292	.295	.298	.302
9	.268	.270	.273	.275	.276	.278	.281	---	.292	.295	.298	.302
10	.269	.270	.273	.275	.276	.278	.281	---	.292	.295	.298	.302
11	.269	.270	.273	.275	.276	.278	.281	---	.292	.295	.298	.302
12	.269	.272	.274	.275	.276	.278	.281	---	.293	.295	.299	.302
13	.269	.272	.274	.275	.276	.279	.281	---	.293	.295	.298	.302
14	.269	.272	.273	.275	.276	.279	.281	---	.293	.295	.299	.302
15	.269	.272	.274	.275	.276	.279	.282	---	.293	.295	.299	.302
16	.270	.272	.274	.275	.276	.279	.282	---	.293	.295	.299	.302
17	.270	.272	.274	.275	.276	.279	.282	---	.293	.295	.299	.302
18	.270	.272	.274	.275	.276	.279	.282	---	.293	.296	.299	.302
19	.270	.272	.274	.275	.276	.279	.283	---	.293	.296	.299	.302
20	.270	.272	.274	.275	.276	.279	.283	---	.293	.296	.299	.303
21	.270	.272	.274	.275	.276	.279	.284	---	.293	.296	.299	.303
22	.270	.272	.274	.275	.277	.279	.284	---	.293	.296	.299	.303
23	.270	.273	.274	.275	.277	.279	.284	---	.293	.296	.299	.303
24	.270	.273	.274	.275	.277	.279	.284	---	.293	.296	.299	.303
25	.270	.273	.275	.275	.277	.279	.284	---	.293	.296	.299	.304
26	.270	.273	.275	.275	.277	.279	.285	---	.294	.296	.299	.304
27	.270	.273	.275	.275	.277	.280	.285	---	.294	.297	.299	.304
28	.270	.273	.275	.276	.277	.280	.285	---	.294	.297	.299	.304
29	.270	.273	.274	.275	---	.280	.285	---	.294	.297	.300	.304
30	.270	.273	.274	.275	---	.280	.285	---	.294	.297	.300	.304
31	.270	---	.274	.276	---	.280	---	---	---	.297	.300	---
MEAN	.269	.272	.274	.275	.276	.279	.282	---	---	.296	.298	.302
MAX	.270	.273	.275	.276	.277	.280	.285	---	---	.297	.300	.304
MIN	.267	.270	.273	.274	.276	.278	.280	---	---	.294	.297	.300

## 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 District Office in Tucson, AZ.

**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, 328.7 ft below land-surface datum, Sept. 25, 30, 2001.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	324.6	325.1	325.4	325.8	326.3	326.3	326.5	326.8	327.0	327.9	328.1	328.1
2	324.7	325.1	325.4	325.8	326.5	326.3	326.7	327.0	327.1	327.9	328.1	328.2
3	324.6	325.1	325.4	325.9	326.3	326.4	326.7	327.1	327.0	328.0	328.1	328.3
4	324.7	325.1	325.5	325.8	326.3	326.4	326.7	327.0	327.2	328.0	328.1	328.3
5	324.7	325.1	325.4	325.9	326.2	326.5	326.7	327.0	327.3	328.0	328.1	328.3
6	324.7	325.0	325.4	325.9	326.2	326.5	326.7	327.1	327.3	328.0	328.1	328.3
7	324.8	325.2	325.4	326.0	326.2	326.5	326.8	327.0	327.2	328.0	328.1	328.3
8	324.9	325.3	325.4	326.0	326.4	326.5	326.8	327.0	327.2	327.8	328.1	328.4
9	324.8	325.2	325.5	326.0	326.4	326.5	326.7	327.1	327.4	328.0	328.2	328.4
10	324.8	325.2	325.5	326.1	326.3	326.5	326.8	327.1	327.5	327.9	328.2	328.4
11	324.8	325.3	325.5	326.1	326.4	326.5	326.7	327.0	327.4	328.0	328.2	328.5
12	324.8	325.2	325.4	326.1	326.3	326.6	326.9	327.0	327.4	328.0	328.2	328.5
13	324.8	325.2	325.6	326.2	326.2	326.5	326.8	327.0	327.3	327.9	328.3	328.5
14	324.8	325.1	325.6	326.1	326.4	326.5	326.8	327.0	327.5	327.9	328.3	328.6
15	324.8	325.2	325.6	326.0	326.4	326.5	326.8	326.9	327.5	327.9	328.2	328.6
16	324.9	325.3	325.7	326.2	326.4	326.5	326.9	326.8	327.4	327.9	328.2	328.5
17	324.9	325.3	325.7	326.2	326.4	326.6	326.8	326.9	327.4	327.9	328.2	328.5
18	324.9	325.3	325.7	326.2	326.4	326.6	326.8	326.9	327.5	327.9	328.2	328.5
19	324.9	325.3	325.6	326.3	326.5	326.6	326.7	326.9	327.6	327.9	328.2	328.6
20	324.9	325.3	325.5	326.3	326.5	326.6	326.8	326.8	327.6	327.9	328.2	328.5
21	325.0	325.3	325.6	326.2	326.4	326.6	326.8	326.9	327.7	327.9	328.1	328.5
22	324.9	325.2	325.5	326.1	326.3	326.6	327.0	326.9	327.6	327.9	328.1	328.4
23	325.0	325.3	325.6	326.2	326.2	326.6	326.8	326.9	327.5	327.9	328.0	328.4
24	325.0	325.3	325.6	326.2	326.4	326.6	326.8	326.9	327.7	327.9	328.0	328.4
25	324.8	325.3	325.7	326.2	326.3	326.6	326.8	326.9	327.7	328.0	327.9	328.5
26	324.9	325.3	325.8	326.0	326.3	326.5	326.8	326.8	327.8	327.9	328.0	328.6
27	324.9	325.4	325.7	326.2	326.3	326.6	326.8	326.8	327.8	327.9	328.0	328.6
28	325.1	325.4	325.7	326.3	326.3	326.6	326.8	326.9	327.8	328.1	328.0	328.6
29	325.0	325.3	325.8	326.3	---	326.6	326.8	327.0	327.9	328.1	328.0	328.6
30	325.0	325.4	325.7	326.3	---	326.6	326.8	326.9	327.9	328.0	328.1	328.7
31	325.0	---	325.8	326.3	---	326.6	---	326.9	---	328.1	328.1	---
MEAN	324.9	325.2	325.6	326.1	326.3	326.5	326.8	326.9	327.5	327.9	328.1	328.5
MAX	325.1	325.4	325.8	326.3	326.5	326.6	327.0	327.1	327.9	328.1	328.3	328.7
MIN	324.6	325.0	325.4	325.8	326.2	326.3	326.5	326.8	327.0	327.8	327.9	328.1

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.203	.201	.201	.202	.205	.206	.207	.208	---	.213	.215	.215
2	.203	.201	.201	.202	.205	.206	.207	.208	.212	.213	.215	.215
3	.203	.201	.201	.202	.205	.206	.207	.208	.212	.213	.215	.215
4	.203	.201	.201	.202	.205	.206	.207	.208	.212	.213	.215	.215
5	.203	.201	.201	.202	.205	.206	.207	.208	.212	.213	.215	.215
6	.203	.201	.201	.202	.205	.206	.207	---	.212	.213	.215	.215
7	.203	.201	.201	.202	.205	.206	.207	---	.212	.213	.215	.215
8	.203	.201	.201	.202	.205	.206	.207	---	.212	.213	.215	.216
9	.203	.201	.201	.202	.205	.206	.207	---	.212	.213	.215	.216
10	.203	.201	.201	.202	.205	.206	.207	---	.212	.214	.215	.216
11	.203	.202	.201	.202	.205	.207	.207	---	.212	.214	.215	.216
12	.203	.201	.201	.202	.205	.207	.207	---	.212	.214	.215	.216
13	.203	.201	.201	.202	.205	.207	.207	---	.212	.214	.215	.216
14	.203	.201	.201	.202	.205	.207	.208	---	.212	.214	.215	.216
15	.202	.201	.201	.202	.205	.207	.208	---	.213	.214	.215	.216
16	.202	.201	.201	.202	.205	.207	.208	---	.213	.214	.215	.216
17	.202	.201	.201	.202	.205	.206	.208	---	.213	.214	.216	.216
18	.202	.201	.201	.202	.205	.206	.208	---	.213	.214	.216	.216
19	.202	.201	.201	.202	.205	.206	.207	---	.213	.214	.216	.216
20	.202	.201	.201	.202	.205	.206	.207	---	.213	.214	.216	.216
21	.202	.201	.201	.202	.205	.206	.207	---	.213	.214	.216	.216
22	.202	.201	.201	.202	.205	.206	.207	---	.213	.214	.216	.216
23	.202	.201	.201	.203	.205	.206	.207	---	.213	.214	.216	.216
24	.202	.201	.201	.203	.205	.206	.207	---	.213	.214	.216	.216
25	.202	.201	.202	.203	.205	.206	.207	---	.212	.214	.216	.216
26	.202	.201	.202	.204	.205	.206	.207	---	.212	.214	.216	.216
27	.202	.201	.202	.204	.206	.206	.207	---	.212	.214	.216	.216
28	.202	.201	.202	.204	.206	.206	.207	---	.212	.215	.216	.216
29	.201	.201	.202	.204	---	.206	.208	---	.212	.215	.216	.216
30	.201	.201	.202	.204	---	.206	.208	---	.213	.215	.215	.216
31	.201	---	.202	.204	---	.207	---	---	---	.215	.215	---
MEAN	.202	.201	.201	.202	.205	.206	.207	---	---	.214	.215	.216
MAX	.203	.202	.202	.204	.206	.207	.208	---	---	.215	.216	.216
MIN	.201	.201	.201	.202	.205	.206	.207	---	---	.213	.215	.215

## GROUND-WATER LEVELS AND COMPACTION VALUES

357

## 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 District Office in Tucson, AZ.

**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, 321.94 ft below land-surface datum, Sept. 29, 30, 2001.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	319.20	320.04	319.79	319.48	319.74	---	319.70	319.90	320.17	320.70	321.11	321.49
2	319.25	319.99	319.77	319.51	319.70	---	319.76	319.93	320.17	320.70	321.08	321.48
3	319.24	320.04	319.79	319.51	319.69	---	319.80	320.03	320.17	320.75	321.07	321.48
4	319.26	320.03	319.74	319.44	319.71	---	319.76	320.02	320.24	320.75	321.12	321.52
5	319.31	319.99	319.74	319.48	319.69	319.61	319.81	319.97	320.28	320.77	321.15	321.54
6	319.31	319.98	319.72	319.48	319.69	319.71	319.81	319.99	320.26	320.76	321.13	321.54
7	319.35	320.04	319.66	319.50	319.67	319.73	319.78	319.99	320.26	320.77	321.15	321.54
8	319.43	319.96	319.66	319.45	319.85	319.80	319.81	319.96	320.29	320.76	321.18	321.58
9	319.39	319.81	319.67	319.53	319.77	319.70	319.77	319.99	320.33	320.77	321.18	321.61
10	319.44	319.81	319.64	319.59	319.70	319.72	319.87	320.02	320.34	320.78	321.18	321.61
11	319.67	319.86	319.61	319.50	319.76	319.74	319.83	320.02	320.34	320.81	321.19	321.60
12	319.71	319.81	319.57	319.53	319.71	319.70	319.88	320.05	320.32	320.82	321.24	321.62
13	319.66	319.74	319.68	319.59	319.73	319.62	319.83	320.04	320.39	320.82	321.25	321.69
14	319.68	319.67	319.63	319.50	319.78	319.60	319.86	320.05	320.48	320.82	321.21	321.65
15	319.69	319.71	319.58	319.46	319.81	319.54	319.87	320.05	320.45	320.82	321.23	321.64
16	319.73	319.82	319.59	319.51	---	319.50	319.86	320.02	320.45	320.87	321.28	321.66
17	319.78	319.89	319.53	319.51	---	319.61	319.89	320.06	320.45	320.89	321.29	321.68
18	319.80	319.94	319.60	319.51	---	319.63	319.88	320.08	320.46	320.87	321.28	321.70
19	319.84	319.98	319.45	319.48	---	319.59	319.87	320.09	320.51	320.88	321.28	321.72
20	319.85	319.98	319.46	319.46	---	319.58	319.90	320.06	320.56	320.92	321.30	321.74
21	319.82	319.97	319.51	319.44	---	319.62	319.91	320.09	320.52	320.91	321.33	321.73
22	319.88	319.92	319.47	319.36	---	319.62	320.01	320.10	320.52	320.92	321.37	321.75
23	320.01	320.02	319.52	319.40	---	319.63	319.89	320.08	320.54	320.95	321.36	321.78
24	319.99	319.95	319.46	319.55	---	319.66	319.90	320.11	320.57	320.98	321.35	321.82
25	319.91	319.94	319.48	319.69	---	319.66	319.93	320.11	320.60	320.99	321.38	321.78
26	319.93	319.90	319.55	319.41	---	319.67	319.93	320.10	320.59	321.02	321.42	321.81
27	319.97	319.87	319.52	319.46	---	319.70	319.93	320.10	320.65	321.01	321.40	321.83
28	320.06	319.87	319.46	319.59	---	319.69	319.95	320.14	320.63	321.04	321.40	321.83
29	320.02	319.85	319.48	319.60	---	319.68	319.99	320.19	320.64	321.05	321.47	321.88
30	319.96	319.82	319.46	319.62	---	319.78	319.98	320.17	320.68	321.01	321.47	321.90
31	320.03	---	319.46	319.64	---	319.75	---	320.15	---	321.08	321.46	---
MEAN	319.68	319.91	319.59	319.51	---	---	319.87	320.05	320.43	320.87	321.27	321.67
MAX	320.06	320.04	319.79	319.69	---	---	320.01	320.19	320.68	321.08	321.47	321.90
MIN	319.20	319.67	319.45	319.36	---	---	319.70	319.90	320.17	320.70	321.07	321.48

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.262	.264	.267	.269	.272	.272	.275	.277	---	.281	.282	.283
2	.262	.265	.267	.268	.269	.274	.274	.277	.280	.281	.282	.283
3	.262	.265	.267	.267	.271	.274	.273	.276	.280	.281	.282	.283
4	.262	.265	.266	.267	.272	.272	.275	.276	.280	.281	.283	.283
5	.262	.265	.266	.269	.272	.271	.275	.276	.279	.281	.283	.283
6	.263	.266	.267	.270	.273	.273	.275	.276	.279	.281	.283	.283
7	.262	.264	.266	.270	.273	.273	.275	---	.279	.282	.283	.283
8	.262	.263	.268	.270	.273	.273	.275	---	.279	.281	.283	.283
9	.262	.265	.268	.270	.271	.272	.276	---	.279	.281	.283	.283
10	.262	.265	.267	.271	.266	.273	.275	---	.279	.282	.283	.283
11	.262	.264	.267	.269	.272	.275	.274	---	.279	.282	.283	.283
12	.263	.264	.267	.267	.272	.273	.275	---	.280	.281	.283	.283
13	.263	.265	.268	.269	.272	.272	.275	---	.280	.281	.283	.283
14	.262	.266	.267	.270	.273	.273	.276	---	.279	.281	.283	.283
15	.263	.265	.265	.267	.272	.274	.276	---	.279	.281	.283	.283
16	.263	.265	.266	.269	.271	.273	.276	---	.279	.281	.283	.284
17	.263	.265	.266	.271	.271	.274	.276	---	.279	.281	.283	.284
18	.263	.264	.266	.271	.270	.274	.276	---	.280	.281	.283	.284
19	.264	.265	.269	.269	.272	.272	.276	---	.280	.281	.282	.284
20	.264	.266	.269	.269	.273	.272	.276	---	.280	.281	.282	.284
21	.264	.266	.268	.268	.273	.273	.276	---	.280	.281	.282	.284
22	.264	.267	.268	.269	.272	.273	.274	---	.280	.281	.282	.284
23	.263	.266	.268	.270	.272	.274	.275	---	.280	.281	.282	.284
24	.263	.265	.269	.271	.273	.274	.276	---	.281	.281	.282	.283
25	.264	.266	.269	.270	.274	.274	.277	---	.281	.281	.282	.283
26	.265	.266	.266	.272	.273	.274	.276	---	.281	.281	.282	.283
27	.265	.267	.266	.273	.269	.274	.277	---	.280	.281	.282	.283
28	.263	.266	.268	.269	.273	.274	.277	---	.281	.282	.283	.283
29	.264	.266	.269	.269	---	.274	.276	---	.281	.282	.283	.283
30	.265	.266	.269	.271	---	.274	.276	---	.281	.282	.283	.283
31	.264	---	.269	.271	---	.274	---	---	---	.282	.283	---
MEAN	.263	.265	.267	.270	.272	.273	.275	---	---	.281	.283	.283
MAX	.265	.267	.269	.273	.274	.275	.277	---	---	.282	.283	.284
MIN	.262	.263	.265	.267	.266	.271	.273	---	---	.281	.282	.283



## 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 District Office in Tucson, AZ.

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, 246.54 ft below land-surface datum, Sept. 27, 2001.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	242.06	242.91	242.63	242.79	243.40	243.00	242.94	243.93	---	245.03	245.66	246.03
2	242.15	242.85	242.62	242.90	243.47	242.95	243.19	243.84	---	245.24	245.77	246.00
3	242.17	242.87	242.70	242.95	243.33	243.05	243.27	243.91	---	245.27	245.69	246.02
4	242.15	242.85	242.77	242.88	243.30	243.17	243.29	244.04	---	245.36	245.66	246.17
5	242.17	242.83	242.76	242.76	242.62	243.21	243.38	244.10	---	245.28	245.71	246.20
6	242.21	242.70	242.81	242.65	242.13	243.18	243.43	244.06	---	245.33	245.56	246.14
7	242.22	242.88	242.69	242.66	242.45	243.25	243.39	244.13	---	245.35	245.58	246.07
8	242.30	243.02	242.63	242.58	242.64	243.33	243.36	243.99	---	245.28	245.67	246.02
9	242.34	242.94	242.66	242.54	242.57	243.15	243.39	243.68	---	245.24	245.65	246.06
10	241.96	242.96	242.65	242.71	242.55	243.00	243.54	243.64	---	245.14	245.63	246.12
11	241.05	243.08	242.70	242.70	242.73	243.10	243.69	243.62	---	244.75	245.58	246.20
12	240.85	243.18	242.58	242.60	242.80	243.28	243.84	243.59	---	245.12	245.71	246.11
13	241.53	243.20	242.76	242.78	242.74	243.28	243.86	243.64	---	245.20	245.85	246.23
14	241.80	243.09	242.90	242.71	242.90	243.31	243.86	243.76	---	245.21	245.56	246.21
15	242.00	243.08	242.93	242.55	242.95	243.26	243.93	243.74	---	244.94	245.45	245.45
16	242.16	243.13	242.93	242.53	243.08	243.16	243.97	243.64	---	244.72	245.72	245.90
17	242.30	242.93	242.83	242.65	243.00	243.29	244.01	243.56	---	244.89	245.79	246.01
18	242.30	242.68	242.97	242.74	242.94	243.49	244.01	243.63	---	244.41	245.81	246.14
19	242.29	242.69	242.92	242.80	242.93	243.54	243.98	243.66	---	245.01	245.76	246.21
20	241.86	242.69	242.77	242.79	242.92	243.51	243.95	243.64	---	245.13	245.76	246.28
21	242.10	242.63	242.86	242.81	242.93	243.28	243.97	243.55	---	245.17	245.71	246.28
22	242.29	242.50	242.78	242.78	242.67	242.69	244.35	243.59	---	245.14	245.73	246.29
23	242.56	242.54	242.79	242.79	242.58	243.11	244.14	243.45	---	245.40	245.77	246.25
24	242.71	242.61	242.58	242.90	242.81	243.20	244.20	243.45	---	245.47	245.77	246.24
25	242.67	242.58	242.61	243.26	243.29	243.25	244.21	---	---	245.53	245.38	246.15
26	242.63	242.58	242.84	243.07	243.13	243.09	244.22	---	---	245.53	245.45	246.25
27	242.62	242.60	242.93	242.90	243.07	242.89	244.15	---	245.05	245.54	245.74	246.39
28	242.77	242.63	242.85	243.11	243.04	242.76	244.08	---	245.05	245.59	245.76	246.32
29	242.80	242.65	242.82	243.16	---	242.62	244.12	---	244.91	245.64	245.93	246.35
30	242.73	242.62	242.78	243.10	---	242.81	244.10	---	244.95	245.56	246.01	246.40
31	242.82	---	242.67	243.13	---	242.83	---	---	---	245.50	245.99	---
MEAN	242.21	242.82	242.77	242.82	242.89	243.13	243.79	---	---	245.22	245.70	246.15
MAX	242.82	243.20	242.97	243.26	243.47	243.54	244.35	---	---	245.64	246.01	246.40
MIN	240.85	242.50	242.58	242.53	242.13	242.62	242.94	---	---	244.41	245.38	245.45

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.100	.101	.102	.102	.103	.105	.108	.112	.110	.111	.113	.113
2	.100	.101	.103	.102	.102	.106	.107	.111	.111	.111	.113	.113
3	.100	.101	.102	.102	.102	.105	.107	.111	.111	.111	.113	.114
4	.100	.101	.102	.101	.102	.103	.107	.111	.111	.111	.113	.114
5	.100	.101	.102	.101	.102	.104	.107	.111	.111	.111	.113	.114
6	.100	.102	.102	.101	.103	.104	.107	---	.111	.111	.113	.114
7	.100	.101	.102	.102	.104	.104	.107	---	.110	.111	.113	.114
8	.100	.101	.103	.103	.105	.104	.107	---	.111	.111	.113	.114
9	.100	.102	.103	.103	.105	.105	.107	---	.111	.111	.113	.113
10	.100	.102	.103	.103	.103	.106	.107	---	.111	.111	.113	.114
11	.100	.101	.103	.103	.102	.106	.107	---	.111	.112	.113	.114
12	.101	.101	.103	.103	.104	.105	.106	---	.111	.112	.113	.114
13	.100	.100	.103	.102	.104	.105	.107	---	.111	.112	.114	.114
14	.100	.100	.102	.103	.104	.105	.107	---	.111	.112	.113	.114
15	.100	.100	.102	.103	.104	.105	.107	---	.111	.112	.113	.115
16	.100	.100	.102	.101	.104	.105	.107	---	.111	.112	.113	.115
17	.100	.100	.102	.102	.103	.106	.107	---	.111	.112	.113	.115
18	.100	.100	.101	.103	.102	.106	.108	---	.111	.112	.113	.115
19	.100	.100	.101	.104	.102	.104	.108	---	.111	.112	.113	.115
20	.101	.101	.102	.103	.102	.105	.109	---	.111	.112	.114	.115
21	.101	.101	.102	.101	.103	.105	.109	---	.111	.112	.114	.115
22	.101	.101	.102	.100	.103	.105	.108	---	.111	.113	.114	.115
23	.100	.101	.102	.101	.103	.105	.109	.112	.111	.113	.114	.115
24	.100	.101	.102	.102	.103	.106	.110	.112	.111	.113	.114	.115
25	.101	.101	.103	.102	.104	.107	.110	.112	.111	.113	.114	.115
26	.101	.101	.103	.102	.105	.108	.110	.112	.111	.113	.114	.115
27	.101	.101	.101	.104	.106	.108	.111	.112	.111	.113	.114	.115
28	.100	.101	.101	.104	.104	.108	.111	.112	.111	.113	.114	.115
29	.100	.101	.101	.102	---	.108	.111	.112	.111	.113	.114	.115
30	.101	.101	.102	.102	---	.108	.111	.110	.111	.113	.114	.115
31	.101	---	.102	.102	---	.109	---	.110	---	.113	.114	---
MEAN	.100	.101	.102	.102	.103	.106	.108	---	.111	.112	.113	.114
MAX	.101	.102	.103	.104	.106	.109	.111	---	.111	.113	.114	.115
MIN	.100	.100	.101	.100	.102	.103	.106	---	.110	.111	.113	.113



## GROUND-WATER LEVELS AND COMPACTION VALUES

359

## 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 District Office in Tucson, AZ.

**PERIOD OF RECORD**--Mar. 1989 to current year.

**EXTREMES FOR PERIOD OF RECORD**--Highest water level recorded, 340.6 ft below land-surface datum, Nov. 8, 2000; lowest recorded, 361.5 ft below land-surface datum, Mar. 22, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340.2	340.3	339.9	339.6	339.4	338.5	---	---	337.1	337.2	337.1	337.3
2	340.2	340.1	339.9	339.6	339.5	338.6	---	---	337.0	337.1	337.0	337.3
3	340.1	340.2	339.9	339.7	339.4	338.6	---	---	336.9	337.1	336.9	337.1
4	340.1	340.2	340.0	339.6	339.2	338.8	---	---	337.0	337.1	336.8	337.1
5	340.2	340.3	340.0	339.6	339.1	338.8	---	---	337.1	337.2	337.0	337.1
6	340.2	340.2	340.0	339.5	339.0	338.8	---	---	337.2	337.3	337.0	337.2
7	340.2	340.2	339.9	339.6	338.6	339.0	---	---	337.2	337.3	337.0	337.3
8	340.4	340.4	339.8	339.6	339.0	339.3	---	---	337.1	337.2	337.1	337.4
9	340.4	340.3	340.0	339.7	339.1	338.9	---	---	337.2	337.1	337.0	337.4
10	340.4	340.1	340.0	339.8	339.1	338.8	---	---	337.1	337.2	337.0	337.4
11	340.5	340.2	340.1	339.8	339.0	339.0	---	---	337.1	337.2	337.0	337.3
12	340.5	340.2	339.9	339.7	338.9	339.1	---	337.2	337.1	337.2	337.1	337.3
13	340.5	340.2	340.0	339.9	339.1	338.9	---	337.3	337.1	337.2	337.1	337.5
14	340.4	340.1	340.1	339.8	339.0	338.9	---	337.3	337.2	337.2	337.1	337.6
15	340.5	340.1	340.0	339.7	339.1	338.9	---	337.2	337.3	337.2	337.0	337.5
16	340.4	340.1	340.0	339.7	339.1	338.8	---	337.0	337.1	337.2	337.1	337.5
17	340.3	340.1	339.9	339.7	339.0	338.8	---	337.0	337.1	337.2	337.1	337.5
18	340.2	340.2	339.9	339.8	338.8	339.0	---	337.1	337.0	337.2	337.2	337.5
19	340.2	340.1	339.9	339.8	338.8	338.9	---	337.1	337.0	337.1	337.2	337.4
20	340.2	340.0	339.8	339.7	338.7	338.6	---	337.1	337.0	337.0	337.1	337.4
21	340.2	339.9	339.6	339.7	338.6	338.6	---	337.0	337.1	337.1	337.1	337.4
22	340.1	339.7	339.6	339.4	338.4	338.7	---	336.9	337.0	337.0	337.0	337.3
23	340.3	339.8	339.6	339.4	338.3	338.6	---	336.9	336.9	337.0	337.0	337.3
24	340.3	339.9	339.6	339.4	338.5	338.6	---	337.0	337.0	337.4	337.0	337.4
25	340.2	339.8	339.6	339.4	338.6	338.6	---	337.0	337.3	337.5	336.9	337.3
26	340.0	339.9	339.8	339.3	338.5	338.6	---	337.0	337.2	337.0	337.0	337.3
27	340.1	339.8	339.8	339.2	338.5	---	---	336.9	337.3	337.1	337.0	337.4
28	340.2	339.8	339.7	339.4	338.5	---	---	337.1	337.1	337.0	337.0	337.3
29	340.1	339.8	339.7	339.5	---	---	---	337.1	337.3	337.2	337.1	337.3
30	340.1	339.8	339.6	339.4	---	---	---	337.2	337.2	337.1	337.3	337.5
31	340.1	---	339.5	339.3	---	---	---	337.1	---	337.0	337.3	---
MEAN	340.3	340.1	339.8	339.6	338.9	---	---	---	337.1	337.2	337.0	337.4
MAX	340.5	340.4	340.1	339.9	339.5	---	---	---	337.3	337.5	337.3	337.6
MIN	340.0	339.7	339.5	339.2	338.3	---	---	---	336.9	337.0	336.8	337.1

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.001	.000	.000	.000	---	.001	.001	.001	.001	.001	.000	.000
2	.001	.001	.000	.000	---	.001	.001	.001	.001	.001	.000	.001
3	.001	.001	.000	.000	---	.001	.001	.001	.001	.001	.000	.001
4	.001	.001	.000	.000	---	.001	.001	.001	.001	.001	.000	.001
5	.001	.001	.000	.000	---	.001	.001	.001	.001	.001	.000	.000
6	.001	.001	.000	.000	---	.001	.001	.001	.001	.001	.000	.001
7	.001	.001	.000	.000	---	.001	.001	.001	.001	.001	.000	.000
8	.001	.000	.000	.000	---	.001	.001	.001	.001	.001	.000	.001
9	.000	.001	.000	.000	---	.001	.001	.001	.001	.000	.000	.000
10	.001	.001	.000	.000	---	.001	.001	.001	.001	.000	.000	.001
11	.001	.001	.000	.000	---	.001	.001	.001	.001	.001	.000	.001
12	.001	.000	.000	.000	---	.001	.001	.001	.001	.001	.001	.001
13	.001	.000	.000	.000	---	.001	.001	.001	.001	.001	.001	.001
14	.001	.001	.000	.000	---	.001	.001	.001	.001	.001	.000	.000
15	.001	.001	.000	.000	---	.001	.001	.001	.000	.000	.001	.000
16	.001	.001	.000	.000	---	.001	.001	.001	.001	.001	.001	.000
17	.001	.000	.000	.000	---	.001	.001	.001	.001	.001	.001	.001
18	.001	.000	.000	.000	---	.001	.001	.001	.001	.001	.001	.000
19	.001	.001	.000	.000	---	.001	.001	.001	.001	.000	.000	.000
20	.001	.000	.000	.000	---	.001	.001	.001	.000	.000	.001	.000
21	.001	.001	.000	.000	---	.001	.001	.001	.000	.000	.001	.000
22	.001	.001	.000	.000	---	.001	.001	.001	.001	.000	.001	.001
23	.000	.001	.000	.000	---	.001	.001	.001	.001	.000	.001	.000
24	.000	.000	.000	.000	---	.001	.001	.001	.001	.000	.001	.001
25	.000	.000	.000	.000	---	.001	.001	.001	.001	.000	.001	.001
26	.001	.000	.000	.000	---	.001	.001	.001	.000	.000	.001	.001
27	.001	.000	.000	.000	---	.001	.001	.001	.001	.000	.001	.001
28	.000	.000	.000	.000	---	.001	.001	.001	.001	.000	.001	.001
29	.000	.000	.000	.000	---	.001	.001	.001	.001	.000	.001	.001
30	.001	.000	.000	---	---	.001	.001	.001	.001	.000	.001	.001
31	.001	---	.000	---	---	.001	---	.001	---	.000	.001	---
MEAN	.001	.000	.000	---	---	.001	.001	.001	.001	.000	.001	.001
MAX	.001	.001	.000	---	---	.001	.001	.001	.001	.001	.001	.001
MIN	.000	---	.000	---	---	.001	.001	.001	.000	.000	.000	.000

## GROUND-WATER LEVELS AND COMPACTION VALUES

## PIMA COUNTY

322009111191801. 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 District Office in Tucson, AZ.

**PERIOD OF RECORD.**--Aug. 1985 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 333.3 ft below land-surface datum, Mar. 13, 2001; lowest recorded, 349.8 ft below land-surface datum, Aug. 22, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	337.4	335.5	335.2	334.3	334.1	333.5	335.3	---	335.6	337.0	337.2	338.1
2	337.5	335.6	335.2	334.3	334.2	333.6	335.2	---	335.5	337.1	337.3	337.8
3	337.3	335.7	335.2	334.2	334.0	333.7	335.2	---	335.5	337.2	337.4	337.6
4	337.3	335.7	335.1	334.2	334.0	333.9	335.0	---	335.6	337.5	337.2	337.4
5	337.2	335.8	335.1	334.1	334.0	333.7	335.0	335.6	335.8	337.6	337.2	337.3
6	337.2	335.6	335.0	334.1	334.0	333.7	334.8	335.5	336.1	337.3	337.1	337.3
7	337.2	335.7	334.9	334.4	333.8	333.6	334.6	335.7	336.4	337.3	337.3	337.4
8	337.3	335.6	334.8	334.3	333.8	333.7	334.6	335.6	336.5	337.1	337.7	337.2
9	337.4	335.5	334.8	334.1	333.9	333.6	334.7	335.6	336.6	337.0	337.6	337.1
10	337.6	335.7	334.9	334.1	333.7	333.5	334.6	335.7	336.6	336.9	337.2	337.1
11	337.0	336.0	334.9	334.0	333.7	333.6	334.3	335.8	336.6	336.7	336.9	337.1
12	336.5	336.0	334.8	334.0	333.7	333.6	334.3	335.8	336.7	336.6	336.9	337.1
13	336.3	335.8	334.9	334.0	333.6	333.6	334.4	335.6	336.7	336.6	336.9	337.2
14	336.3	335.7	334.9	334.1	333.7	333.6	334.4	335.4	336.9	336.8	336.4	337.2
15	336.4	335.6	334.8	334.0	333.7	333.5	334.4	335.4	336.7	336.9	336.3	337.0
16	336.3	335.6	334.8	334.0	333.9	333.6	334.3	335.3	336.4	337.2	336.3	336.9
17	336.4	335.6	334.7	334.1	333.9	333.7	334.4	335.4	336.2	337.5	336.3	336.8
18	336.5	335.7	334.7	334.3	333.7	333.7	334.5	335.3	336.1	337.6	336.2	336.9
19	336.4	335.5	334.6	334.3	333.6	333.7	334.4	335.5	336.2	337.3	336.3	336.9
20	335.9	335.3	334.7	334.0	333.7	333.7	334.5	335.5	336.5	337.4	336.3	337.0
21	335.8	335.3	334.7	334.0	333.7	333.9	---	335.3	336.8	337.5	336.4	336.8
22	335.7	335.2	334.4	333.9	333.6	334.1	---	335.3	336.8	337.1	336.7	336.6
23	335.7	335.2	334.4	333.8	333.6	334.3	---	335.4	336.7	337.1	337.1	336.5
24	335.6	335.2	334.2	333.8	333.6	334.5	---	335.4	336.7	337.3	337.4	336.6
25	335.5	335.2	334.2	333.8	333.5	334.6	---	335.4	336.7	337.2	337.6	336.6
26	335.6	335.2	334.4	333.8	333.5	334.6	---	335.4	336.6	336.9	337.8	336.6
27	335.6	335.2	334.4	333.7	333.5	334.8	---	335.4	336.6	337.2	337.9	336.7
28	335.6	335.2	334.5	333.9	333.6	334.9	---	335.6	336.7	337.5	338.0	336.7
29	335.5	335.1	334.4	333.9	---	334.9	---	335.8	336.9	337.4	338.1	336.6
30	335.3	335.1	334.2	334.0	---	335.2	---	335.6	336.9	337.2	338.2	336.6
31	335.5	---	334.3	334.0	---	335.3	---	335.6	---	337.1	338.2	---
MEAN	336.4	335.5	334.7	334.0	333.8	334.0	---	---	336.4	337.2	337.1	337.0
MAX	337.6	336.0	335.2	334.4	334.2	335.3	---	---	336.9	337.6	338.2	338.1
MIN	335.3	335.1	334.2	333.7	333.5	333.5	---	---	335.5	336.6	336.2	336.5

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.149	.150	.154	.155	.151	.160	.160	.159	.159	.159	.160	.160
2	.149	.151	.155	.153	.150	.160	.160	.159	.159	.159	.160	.160
3	.149	.151	.154	.153	.152	.159	.160	.158	.159	.159	.160	.160
4	.149	.152	.154	.155	.152	.157	.160	.158	.159	.159	.159	.160
5	.149	.152	.154	.155	.154	.157	.160	.158	.158	.159	.159	.160
6	.149	.153	.154	.156	.155	.158	.160	.158	.159	.159	.159	.160
7	.149	.151	.155	.156	.156	.158	.158	.158	.159	.160	.159	.160
8	.149	.151	.156	.156	.153	.158	.159	.159	.159	.159	.160	.160
9	.149	.153	.155	.156	.152	.158	.160	.159	.159	.160	.160	.160
10	.150	.153	.156	.153	.155	.158	.157	.159	.159	.159	.160	.160
11	.149	.152	.156	.154	.155	.159	.157	.159	.159	.159	.160	.160
12	.149	.151	.157	.154	.156	.160	.157	.159	.159	.159	.160	.159
13	.149	.151	.154	.151	.157	.160	.157	.159	.159	.159	.160	.160
14	.149	.153	.153	.152	.155	.158	.158	.159	.159	.159	.160	.159
15	.149	.152	.153	.154	.155	.158	.158	.159	.159	.159	.160	.159
16	.149	.152	.153	.154	.153	.159	.158	.159	.159	.159	.160	.159
17	.149	.151	.154	.152	.154	.158	.158	.159	.159	.160	.160	.159
18	.149	.150	.153	.152	.156	.159	.158	.158	.159	.159	.160	.159
19	.150	.150	.153	.151	.156	.160	.159	.158	.159	.159	.160	.159
20	.150	.152	.156	.152	.155	.160	.158	.158	.160	.159	.160	.159
21	.151	.153	.156	.151	.155	.159	.158	.158	.160	.159	.160	.159
22	.151	.155	.156	.153	.157	.157	.156	.158	.159	.160	.160	.159
23	.150	.153	.156	.153	.158	.158	.157	.158	.159	.160	.160	.159
24	.150	.154	.157	.153	.156	.158	.158	.158	.159	.160	.160	.159
25	.151	.154	.158	.151	.156	.159	.158	.158	.159	.160	.160	.159
26	.152	.155	.156	.152	.158	.159	.158	.158	.159	.160	.160	.159
27	.152	.155	.154	.154	.159	.159	.159	.159	.159	.160	.160	.159
28	.150	.154	.155	.151	.158	.159	.159	.158	.159	.160	.160	.159
29	.151	.154	.156	.150	---	.159	.158	.158	.159	.160	.160	.159
30	.151	.154	.156	.152	---	.159	.158	.159	.159	.160	.160	.159
31	.150	---	.155	.153	---	.159	---	.159	---	.160	.160	---
MEAN	.150	.152	.155	.153	.155	.159	.158	.158	.159	.159	.160	.159
MAX	.152	.155	.158	.156	.159	.160	.160	.159	.160	.160	.160	.160
MIN	.149	.150	.153	.150	.150	.157	.156	.158	.158	.159	.159	.159

## GROUND-WATER LEVELS AND COMPACTION VALUES

361

## PIMA COUNTY

32205711134801. 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 District Office in Tucson, AZ.

**PERIOD OF RECORD.**--Mar. 1989 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 343.6 ft below land-surface datum, Sept. 26, 27, 28, 2001; lowest recorded, 354.5 ft below land-surface datum, Sept. 29, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	346.0	346.0	345.4	345.2	345.0	344.5	344.5	344.5	344.4	344.6	344.5	344.1
2	346.0	346.1	345.4	345.3	345.0	344.6	344.6	344.3	344.3	344.6	344.6	344.1
3	346.0	346.1	345.4	345.3	344.9	344.6	344.7	344.4	344.3	344.5	344.5	344.2
4	346.0	346.1	345.5	345.2	344.9	344.7	344.8	344.4	344.4	344.5	344.5	344.2
5	346.1	346.0	345.6	345.1	344.8	344.7	344.8	344.5	344.4	344.5	344.5	344.2
6	346.0	345.9	345.6	345.1	344.7	344.6	344.9	344.5	344.5	344.7	344.6	344.2
7	346.1	345.9	345.5	345.1	344.5	344.7	345.0	344.5	344.5	344.8	344.6	344.1
8	346.2	346.0	345.4	345.1	344.6	344.8	345.0	344.5	344.4	344.8	344.6	344.0
9	346.3	346.0	345.5	345.1	344.8	344.7	344.9	344.4	344.5	344.7	344.6	344.0
10	346.3	345.9	345.4	345.2	344.8	344.6	344.9	344.5	344.5	344.7	344.5	344.0
11	346.3	345.9	345.6	345.1	344.8	344.6	344.9	344.4	344.5	344.7	344.3	344.0
12	346.3	345.9	345.5	345.1	344.7	344.6	345.0	344.5	344.4	344.7	344.3	343.9
13	346.3	345.9	345.6	345.1	344.6	344.6	344.9	344.6	344.4	344.6	344.3	343.9
14	346.3	345.8	345.7	345.2	344.6	344.6	344.9	344.6	344.4	344.7	344.3	344.0
15	346.2	345.7	345.7	345.1	344.7	344.5	344.8	344.6	344.4	344.7	344.3	344.0
16	346.2	345.7	345.7	345.0	344.7	344.5	344.7	344.5	344.5	344.6	344.2	344.0
17	346.1	345.7	345.6	345.2	344.7	344.5	344.7	344.4	344.5	344.7	344.3	344.0
18	346.1	345.7	345.7	345.2	344.7	344.5	344.6	344.5	344.5	344.7	344.3	343.9
19	346.0	345.7	345.6	345.2	344.5	344.5	344.6	344.7	344.5	344.7	344.2	343.9
20	346.0	345.7	345.4	345.2	344.5	344.4	344.5	344.5	344.5	344.7	344.1	343.8
21	345.9	345.6	345.5	345.1	344.5	344.5	344.5	344.4	344.5	344.6	344.0	343.8
22	345.9	345.5	345.5	345.0	344.4	344.4	344.6	344.4	344.4	344.6	344.0	343.8
23	346.0	345.5	345.5	344.9	344.3	344.3	344.6	344.3	344.4	344.5	344.0	343.8
24	346.0	345.5	345.3	344.9	344.4	344.3	344.5	344.3	344.4	344.5	344.0	343.8
25	346.0	345.5	345.1	344.9	344.5	344.3	344.5	344.4	344.4	344.6	343.9	343.9
26	345.9	345.4	345.2	344.8	344.5	344.3	344.4	344.3	344.4	344.6	343.9	343.8
27	345.9	345.4	345.3	344.7	344.4	344.3	344.4	344.3	344.5	344.5	343.9	343.7
28	345.9	345.4	345.4	344.8	344.6	344.3	344.3	344.3	344.5	344.6	343.9	343.7
29	345.9	345.4	345.3	344.9	---	344.3	344.3	344.4	344.4	344.6	343.9	343.8
30	345.9	345.5	345.2	344.9	---	344.4	344.5	344.4	344.4	344.6	344.0	343.9
31	345.9	---	345.2	344.9	---	344.6	---	344.4	---	344.5	344.0	---
MEAN	346.1	345.7	345.5	345.1	344.6	344.5	344.7	344.4	344.4	344.6	344.2	344.0
MAX	346.3	346.1	345.7	345.3	345.0	344.8	345.0	344.7	344.5	344.8	344.6	344.2
MIN	345.9	345.4	345.1	344.7	344.3	344.3	344.3	344.3	344.3	344.5	343.9	343.7

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.060	.062	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
2	.060	.062	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
3	.060	.062	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
4	.061	.062	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
5	.061	.062	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
6	.061	.062	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
7	.061	.062	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
8	.061	.063	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
9	.061	.063	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
10	.061	.063	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
11	.061	.063	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
12	.061	.063	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
13	.061	.063	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
14	.061	.063	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
15	.061	.063	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063
16	.061	.063	.062	.062	.062	.062	.062	.063	.063	.064	.064	.063
17	.061	.063	.062	.062	.062	.062	.062	.063	.063	.064	.064	.063
18	.061	.063	.062	.062	.062	.062	.062	.063	.063	.064	.064	.063
19	.061	.063	.062	.062	.062	.062	.062	.063	.063	.064	.064	.063
20	.061	.063	.062	.062	.062	.062	.062	.063	.063	.064	.064	.063
21	.062	.063	.062	.062	.062	.061	.062	.063	.063	.064	.064	.063
22	.062	.063	.062	.062	.062	.062	.062	.063	.063	.064	.063	.063
23	.062	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063	.063
24	.062	.063	.062	.062	.062	.061	.063	.063	.064	.064	.063	.063
25	.062	.063	.062	.062	.062	.061	.063	.063	.064	.064	.063	.063
26	.061	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063	.064
27	.061	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063	.064
28	.061	.063	.062	.062	.062	.062	.063	.063	.064	.064	.063	.064
29	.062	.063	.062	.063	---	.062	.063	.063	.064	.064	.063	.063
30	.062	.063	.062	.062	---	.062	.063	.063	.064	.064	.063	.063
31	.062	---	.062	.062	---	.062	---	.063	---	.064	.063	---
MEAN	.061	.063	.062	.062	.062	.062	.062	.063	.063	.064	.064	.063
MAX	.062	.063	.063	.063	.063	.062	.063	.063	.064	.064	.064	.064
MIN	.060	.062	.062	.062	.062	.061	.062	.063	.063	.064	.063	.063

## 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 District Office in Tucson, AZ.

**PERIOD OF RECORD.**--Aug. 1984 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 240.6 ft below land-surface datum, Sept. 28, 2001; lowest recorded, 300.8 ft below land-surface datum, Sept. 14, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	254.0	251.8	249.6	247.9	246.1	249.5	251.8	251.2	245.9	249.0	247.2	247.0
2	253.9	251.5	249.5	248.0	246.1	249.0	251.9	251.8	245.9	248.9	246.4	246.9
3	253.7	251.6	249.6	247.9	246.0	248.9	251.7	251.8	245.7	248.9	246.2	246.6
4	253.5	251.5	249.5	247.7	246.0	248.7	252.0	251.6	245.5	248.8	245.8	246.3
5	253.6	251.4	249.4	247.6	245.8	248.3	252.5	251.8	245.5	248.8	245.6	246.2
6	253.5	251.2	249.4	247.5	245.6	248.1	252.4	252.6	245.8	248.8	245.5	246.1
7	253.5	251.3	249.3	247.5	245.3	247.8	251.7	252.7	246.3	248.5	245.5	246.1
8	253.5	251.2	249.1	247.3	245.6	247.4	251.3	252.4	246.4	247.9	246.8	245.9
9	253.5	251.0	249.1	247.3	245.9	246.8	251.0	252.3	246.5	246.6	247.7	245.9
10	---	251.0	249.1	247.4	245.6	246.4	251.7	251.9	246.3	246.8	247.7	244.5
11	---	251.1	249.1	247.3	245.7	246.2	252.1	251.7	246.2	246.8	247.6	243.6
12	---	251.0	249.0	247.3	245.6	246.1	252.3	251.9	246.4	246.9	247.4	243.2
13	---	250.9	249.0	247.4	245.5	245.9	250.9	252.0	247.1	246.8	247.3	243.1
14	---	250.7	249.2	247.3	245.6	245.8	250.6	252.0	248.7	246.7	247.3	242.9
15	---	250.7	249.1	247.1	245.7	245.8	250.3	251.9	248.8	246.5	247.3	242.6
16	---	250.7	249.0	247.0	246.6	245.7	250.1	251.7	248.8	247.1	247.4	242.4
17	---	250.6	248.9	247.1	248.5	245.8	250.0	251.5	248.7	247.9	247.4	242.3
18	---	250.6	248.9	247.1	249.5	245.9	249.7	251.1	248.6	248.1	247.5	242.0
19	---	250.5	248.7	246.9	250.8	245.9	249.3	250.9	248.3	248.1	247.6	241.9
20	---	250.3	248.6	246.8	251.0	246.7	249.2	250.6	247.1	248.4	247.0	241.8
21	---	250.2	248.4	246.6	251.5	247.5	250.5	250.3	247.0	248.5	246.0	241.6
22	---	250.0	248.5	246.3	251.7	248.2	251.3	249.8	247.4	248.4	245.8	241.5
23	---	250.0	248.4	246.3	251.5	248.6	251.2	248.6	248.5	248.2	245.8	241.3
24	---	250.0	248.2	246.3	251.5	249.9	250.9	247.1	248.5	248.3	245.8	241.2
25	---	250.0	248.3	246.3	252.5	251.1	250.6	246.8	248.5	248.5	245.4	241.1
26	252.1	249.9	248.3	246.1	252.7	251.0	250.4	246.4	248.6	248.7	245.3	241.0
27	252.0	249.7	248.3	246.1	252.8	251.2	250.5	246.2	248.8	248.7	246.1	240.9
28	252.0	249.7	248.2	246.3	250.7	251.3	250.5	246.2	248.9	248.6	246.9	240.8
29	252.0	249.6	248.0	246.3	---	251.4	250.6	246.0	248.9	248.6	247.0	240.7
30	251.8	249.7	248.0	246.1	---	251.6	251.0	245.9	248.9	248.2	247.3	240.8
31	251.8	---	247.9	246.1	---	251.6	---	245.9	---	248.1	247.3	---
MEAN	---	250.6	248.8	247.0	248.1	248.2	251.0	250.1	247.4	248.0	246.7	243.3
MAX	---	251.8	249.6	248.0	252.8	251.6	252.5	252.7	248.9	249.0	247.7	247.0
MIN	---	249.6	247.9	246.1	245.3	245.7	249.2	245.9	245.5	246.5	245.3	240.7

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.011	.008	.005	.002	.001	.010	.015	.020	.018	.025	.029	.031
2	.011	.008	.005	.002	.002	.010	.015	.020	.018	.025	.029	.031
3	.011	.008	.004	.002	.002	.010	.015	.020	.018	.026	.028	.030
4	.010	.008	.005	.002	.002	.010	.016	.021	.017	.026	.029	.030
5	.010	.008	.004	.002	.001	.011	.017	.021	.017	.026	.029	.031
6	.010	.007	.004	.002	.001	.010	.017	.022	.017	.026	.028	.031
7	.010	.007	.004	.002	.001	.010	.017	.022	.018	.026	.028	.031
8	.010	.007	.004	.002	.001	.009	.018	.023	.018	.025	.028	.030
9	.009	.007	.004	.001	.002	.009	.018	.023	.019	.025	.028	.030
10	.009	.007	.004	.001	.002	.008	.018	.023	.019	.025	.028	.029
11	.009	.007	.004	.002	.002	.008	.018	.022	.019	.026	.028	.029
12	.009	.007	.004	.001	.002	.008	.019	.022	.019	.026	.029	.028
13	.009	.007	.004	.001	.002	.008	.019	.022	.019	.026	.029	.028
14	.009	.007	.004	.001	.002	.007	.019	.022	.020	.026	.029	.028
15	.008	.007	.004	.001	.002	.007	.019	.023	.021	.026	.029	.028
16	.009	.007	.004	.001	.002	.007	.019	.023	.021	.026	.029	.027
17	.008	.007	.004	.001	.003	.007	.019	.023	.022	.026	.029	.027
18	.008	.007	.003	.001	.004	.007	.019	.022	.022	.025	.029	.027
19	.008	.007	.004	.001	.005	.007	.018	.022	.022	.026	.029	.026
20	.008	.007	.003	.001	.006	.007	.018	.021	.022	.026	.030	.026
21	.008	.007	.003	.001	.007	.007	.018	.021	.022	.027	.030	.026
22	.008	.006	.003	.001	.008	.007	.019	.021	.022	.027	.030	.027
23	.008	.006	.003	.001	.008	.007	.020	.020	.023	.027	.030	.026
24	.008	.006	.003	.001	.009	.008	.020	.020	.023	.027	.030	.026
25	.008	.006	.003	.000	.010	.009	.019	.019	.024	.027	.030	.026
26	.008	.006	.003	.000	.011	.010	.019	.019	.024	.027	.029	.026
27	.008	.006	.003	.000	.011	.011	.019	.018	.024	.028	.029	.026
28	.008	.006	.003	.000	.011	.012	.019	.018	.024	.028	.030	.026
29	.008	.006	.003	.000	---	.013	.019	.017	.025	.028	.031	.026
30	.008	.006	.002	.000	---	.014	.020	.017	.025	.028	.031	.026
31	.008	---	.002	.001	---	.015	---	.017	---	.028	.031	---
MEAN	.009	.007	.004	.001	.004	.009	.018	.021	.021	.026	.029	.028
MAX	.011	.008	.005	.002	.011	.015	.020	.023	.025	.028	.031	.031
MIN	.008	.006	.002	.000	.001	.007	.015	.017	.017	.025	.028	.026



## GROUND-WATER LEVELS AND COMPACTION VALUES

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## PINAL COUNTY

**32351011181001. Local number, (D-10-10)03abc****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 District Office in Tucson, AZ.**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 BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	246.7	246.7	246.3	246.4	246.2	246.1	246.1	246.7	246.6	246.8	247.5	247.2
2	246.8	246.5	246.3	246.3	246.3	246.2	246.2	246.7	246.6	246.8	247.6	247.1
3	246.8	246.5	246.4	246.2	246.4	246.1	246.3	246.7	246.6	246.9	247.5	247.0
4	246.8	246.5	246.3	246.3	246.3	246.1	246.5	246.7	246.6	246.9	247.5	246.9
5	246.8	246.4	246.2	246.3	246.3	246.1	246.5	246.8	246.7	247.0	247.6	246.9
6	246.8	246.3	246.2	246.3	246.3	246.3	246.5	246.8	246.7	247.1	247.5	246.8
7	246.8	246.4	246.2	246.2	246.3	246.2	246.6	246.8	246.7	247.1	247.5	246.7
8	246.8	246.5	246.1	246.2	246.2	246.1	246.5	246.8	246.6	247.2	247.5	246.7
9	246.8	246.5	246.2	246.3	246.2	245.9	246.4	246.8	246.7	247.3	247.6	246.6
10	246.8	246.5	246.2	246.3	246.2	245.9	246.4	246.7	246.6	247.2	247.5	246.7
11	246.8	246.5	246.3	246.2	246.2	246.0	246.5	246.6	246.4	247.2	247.4	246.5
12	246.8	246.5	246.3	246.2	246.2	246.2	246.6	246.7	246.4	247.2	247.4	246.6
13	246.8	246.5	246.2	246.3	246.1	246.1	246.6	246.8	246.5	247.3	247.4	246.5
14	246.6	246.5	246.3	246.3	246.1	246.1	246.6	246.7	246.6	247.3	247.4	246.6
15	246.7	246.6	246.4	246.3	246.3	246.1	246.6	246.7	246.6	247.3	247.4	246.5
16	246.7	246.6	246.3	246.3	246.3	246.2	246.6	246.7	246.6	247.3	247.5	246.4
17	246.6	246.6	246.4	246.3	246.3	246.3	246.6	246.7	246.7	247.3	247.3	246.3
18	246.7	246.6	246.4	246.3	246.3	246.3	246.7	246.7	246.7	247.4	247.3	246.2
19	246.8	246.6	246.5	246.4	246.3	246.4	246.7	246.6	246.7	247.4	247.3	246.3
20	246.8	246.6	246.5	246.4	246.2	246.4	246.8	246.6	246.7	247.4	247.3	246.2
21	246.7	246.6	246.4	246.4	246.3	246.3	246.9	246.7	246.8	247.4	247.2	246.2
22	246.7	246.5	246.4	246.3	246.2	246.4	246.9	246.8	246.7	247.4	247.2	246.2
23	246.9	246.5	246.3	246.3	246.2	246.3	246.8	246.8	246.7	247.4	247.1	246.1
24	246.8	246.6	246.4	246.2	246.2	246.3	246.8	246.7	246.7	247.4	247.1	246.2
25	246.8	246.6	246.3	246.3	246.3	246.2	246.8	246.7	246.8	247.4	247.1	246.1
26	246.8	246.5	246.3	246.2	246.1	246.2	246.8	246.7	246.7	247.5	247.1	246.1
27	246.8	246.4	246.4	246.2	245.9	246.2	246.7	246.7	246.7	247.4	247.1	246.1
28	246.7	246.5	246.4	246.2	246.1	246.2	246.7	246.6	246.7	247.4	247.1	246.0
29	246.7	246.4	246.4	246.2	---	246.2	246.7	246.6	246.8	247.5	247.1	246.1
30	246.6	246.3	246.3	246.2	---	246.1	246.7	246.6	246.8	247.5	247.1	246.2
31	246.7	---	246.3	246.2	---	246.1	---	246.6	---	247.5	247.1	---
MEAN	246.8	246.5	246.3	246.3	246.2	246.2	246.6	246.7	246.7	247.3	247.3	246.5
MAX	246.9	246.7	246.5	246.4	246.4	246.4	246.9	246.8	246.8	247.5	247.6	247.2
MIN	246.6	246.3	246.1	246.2	245.9	245.9	246.1	246.6	246.4	246.8	247.1	246.0

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.016	.014	.013	.012	.012	.012	.014	.017	.020	.019	.021	.021
2	.015	.014	.013	.012	.012	.012	.014	.017	.020	.019	.021	.021
3	.015	.014	.013	.012	.012	.012	.014	.017	.020	.019	.021	.021
4	.015	.014	.013	.012	.012	.013	.014	.017	.020	.019	.021	.021
5	.015	.014	.013	.012	.012	.013	.014	.017	.020	.019	.021	.021
6	.015	.014	.013	.012	.013	.013	.014	.017	.020	.019	.021	.021
7	.015	.014	.013	.012	.012	.013	.014	.018	.020	.019	.021	.021
8	.015	.014	.013	.012	.012	.013	.014	.018	.020	.019	.021	.021
9	.015	.014	.013	.012	.013	.013	.014	.018	.020	.019	.022	.020
10	.015	.013	.013	.011	.012	.013	.014	.018	.020	.019	.022	.020
11	.015	.014	.013	.012	.011	.013	.014	.018	.020	.019	.022	.020
12	.015	.014	.013	.012	.011	.013	.014	.018	.020	.019	.022	.020
13	.015	.014	.013	.012	.011	.013	.014	.018	.020	.019	.022	.020
14	.015	.014	.013	.012	.011	.013	.014	.019	.020	.019	.022	.020
15	.015	.014	.013	.012	.011	.013	.014	.018	.020	.019	.022	.020
16	.015	.013	.013	.012	.011	.013	.014	.018	.020	.019	.022	.020
17	.015	.013	.013	.012	.012	.014	.014	.018	.020	.019	.021	.020
18	.015	.013	.013	.012	.011	.014	.015	.018	.020	.019	.021	.020
19	.015	.013	.012	.012	.012	.014	.015	.018	.020	.020	.021	.020
20	.015	.013	.012	.012	.012	.014	.015	.018	.020	.020	.021	.019
21	.015	.013	.012	.013	.012	.014	.015	.019	.020	.020	.021	.019
22	.015	.013	.012	.013	.012	.014	.015	.019	.020	.020	.021	.019
23	.015	.013	.012	.013	.012	.014	.015	.019	.020	.020	.021	.019
24	.015	.013	.012	.013	.012	.014	.015	.019	.020	.020	.021	.019
25	.015	.013	.012	.013	.012	.014	.016	.019	.020	.020	.021	.019
26	.015	.013	.011	.013	.012	.014	.016	.019	.020	.020	.021	.019
27	.014	.013	.012	.012	.012	.014	.016	.019	.020	.020	.021	.019
28	.014	.013	.012	.013	.012	.014	.016	.019	.020	.020	.021	.019
29	.014	.013	.012	.013	---	.014	.016	.019	.020	.021	.021	.019
30	.014	.013	.012	.012	---	.013	.017	.019	.020	.021	.021	.019
31	.014	---	.012	.012	---	.014	---	.019	---	.021	.021	---
MEAN	.015	.013	.013	.012	.012	.013	.015	.018	.020	.020	.021	.020
MAX	.016	.014	.013	.013	.013	.014	.017	.019	.020	.021	.022	.021
MIN	.014	.013	.011	.011	.011	.012	.014	.017	.020	.019	.021	.019



## GROUND-WATER LEVELS AND COMPACTION VALUES

## PINAL COUNTY

324545111432201. Local number, (D-08-06)04aaa

LOCATION.--Lat 32° 45' 45", long 111° 43' 23", Hydrologic Unit 15050100, within the Picacho ground-water basin off I-10 on Bataglia Road. Owner: U.S. Geological Survey.

WELL CHARACTERISTICS.--Drilled observation well fitted with a borehole, pipe extensometer, diameter 15.0 in., depth 684 ft, open throughout casing.

INSTRUMENTATION.--Water-level and compaction recorders.

DATUM.--Elevation of land surface is 1,471.0 ft above sea level, from topographic map. Measuring point: Top of casing 2.4 ft above land-surface datum.

REMARKS.--Water level affected by pumping from nearby wells. For previous record, contact the District Office in Tucson, AZ.

PERIOD OF RECORD.--Aug. 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 175.0 ft below land-surface datum, Jan. 27, 2000; lowest recorded, 199.2 ft below land-surface datum, Sept. 13, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176.3	176.1	175.9	175.4	175.3	175.6	---	---	---	---	177.1	177.3
2	176.4	176.1	175.8	175.5	175.3	175.7	---	---	---	---	177.6	177.8
3	176.3	176.1	175.7	175.5	175.4	175.7	---	---	---	---	177.0	177.3
4	176.3	176.1	175.7	175.5	175.3	176.0	---	---	---	---	177.3	177.7
5	176.2	176.0	175.8	175.6	175.4	175.9	---	---	---	---	177.4	177.5
6	176.2	176.0	175.7	175.4	175.5	175.6	---	---	---	---	176.9	177.1
7	176.3	175.9	175.7	---	175.5	175.5	---	---	---	---	177.5	177.5
8	176.4	176.0	175.7	---	175.6	175.6	---	---	---	---	177.7	---
9	176.4	175.9	175.7	---	175.5	175.6	---	---	---	---	177.9	---
10	176.3	175.9	175.8	---	175.5	175.6	---	---	---	---	178.0	---
11	176.3	175.9	175.7	---	175.5	175.7	---	---	---	---	177.9	---
12	176.3	175.9	175.8	---	175.4	175.6	---	---	---	---	178.2	---
13	176.2	176.0	175.8	---	175.5	175.6	---	---	---	---	177.9	---
14	176.2	175.9	175.8	---	175.4	175.6	---	---	---	---	177.8	---
15	176.2	175.9	175.8	---	175.5	175.6	---	---	---	---	177.6	---
16	176.2	176.0	175.8	---	175.5	175.6	---	---	---	---	177.8	---
17	176.1	176.0	175.7	175.4	175.6	175.6	---	---	---	---	177.8	---
18	176.1	176.1	175.7	175.4	175.6	175.6	---	---	---	---	177.8	---
19	176.2	176.1	175.6	175.3	175.7	175.5	---	---	---	---	177.8	---
20	176.2	176.0	175.7	175.2	175.4	175.4	---	---	---	---	177.4	---
21	176.1	175.8	175.5	175.3	175.5	175.4	---	---	---	---	177.4	---
22	176.1	175.8	175.6	175.2	175.6	175.4	---	---	---	---	177.5	---
23	176.2	175.8	175.4	175.3	175.4	175.4	---	---	---	---	177.4	---
24	176.1	175.8	175.6	175.2	175.6	175.5	---	---	---	---	177.6	---
25	176.1	175.7	175.3	175.2	175.5	175.4	---	---	---	177.0	177.3	---
26	176.0	175.8	175.3	175.3	175.5	175.3	---	---	---	177.1	177.2	---
27	176.1	175.8	175.3	175.4	175.4	175.3	---	---	---	177.2	177.4	---
28	176.0	175.8	175.4	175.4	175.5	175.4	---	---	---	177.2	177.4	---
29	176.1	175.8	175.5	175.5	---	175.4	---	---	---	177.3	177.3	---
30	176.1	175.8	175.4	175.4	---	175.4	---	---	---	177.2	177.3	---
31	176.1	---	175.5	175.4	---	175.4	---	---	---	177.4	177.5	---
MEAN	176.2	175.9	175.6	---	175.5	175.5	---	---	---	---	177.5	---
MAX	176.4	176.1	175.9	---	175.7	176.0	---	---	---	---	178.2	---
MIN	176.0	175.7	175.3	---	175.3	175.3	---	---	---	---	176.9	---

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.123	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
2	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
3	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
4	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
5	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
6	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
7	.123	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
8	.123	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
9	.123	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
10	.123	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.128
11	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
12	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.128	.128
13	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
14	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
15	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
16	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127
17	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.128
18	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.128
19	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.128
20	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.128
21	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.128
22	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.128
23	.124	.124	.124	.125	.125	.125	.126	.126	.126	.127	.127	.128
24	.124	.124	.124	.125	.125	.125	.126	.126	.126	.127	.127	.128
25	.124	.124	.124	.125	.125	.126	.126	.126	.126	.127	.127	.128
26	.124	.124	.124	.125	.125	.126	.126	.126	.126	.127	.127	.128
27	.124	.124	.124	.125	.125	.126	.126	.126	.126	.127	.127	.128
28	.124	.124	.124	.125	.125	.126	.126	.126	.126	.127	.127	.128
29	.124	.124	.124	.125	---	.126	.126	.126	.126	.127	.127	.128
30	.124	.124	.124	.125	---	.126	.126	.126	.127	.127	.127	.128
31	.124	---	.124	.125	---	.126	---	.126	---	.127	.127	---
MEAN	.124	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.128
MAX	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.128	.128
MIN	.123	.124	.124	.124	.125	.125	.126	.126	.126	.127	.127	.127

## GROUND-WATER LEVELS AND COMPACTION VALUES

365

## PINAL COUNTY

324637111335001. Local number, (D-07-08)31bba

**LOCATION.**--Lat 32°46'37", long 111°33'46", Hydrologic Unit 15050100, within the Picacho ground-water basin in Eloy, north of Highway 87 on Houser Road. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS.**--Drilled observation well fitted with a borehole, pipe extensometer, diameter 8.0 in., depth 828 ft, open throughout casing.

**INSTRUMENTATION.**--Water-level and compaction recorders.

**DATUM.**--Elevation of land surface is 1,534.0 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 District Office in Tucson, AZ.

**PERIOD OF RECORD.**--July 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 243.9 ft below land-surface datum, Feb. 27, 2001; lowest recorded, 382.3 ft below land-surface datum, Sept. 13, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	277.9	264.9	254.6	---	249.4	244.9	249.1	264.4	267.3	282.8	292.3	283.2
2	277.6	264.4	254.6	---	249.2	244.7	249.8	264.2	267.8	283.2	292.5	283.1
3	277.2	264.1	254.3	---	248.6	244.4	250.4	264.5	268.2	283.6	293.1	282.6
4	276.9	263.9	254.5	---	248.1	244.2	251.2	264.6	268.8	284.0	293.3	282.1
5	276.3	263.3	254.3	---	247.9	244.4	252.2	264.5	269.5	284.5	293.3	281.6
6	276.1	263.3	253.9	249.8	247.6	244.4	253.0	264.5	270.0	284.9	293.4	281.2
7	275.8	264.5	254.0	249.5	247.4	244.5	253.7	264.6	270.6	285.4	293.4	280.9
8	275.6	266.7	253.7	249.8	247.2	244.7	254.3	264.7	271.2	285.9	293.6	280.2
9	275.0	268.7	253.3	249.8	247.3	244.9	255.1	264.7	271.9	286.3	293.0	279.6
10	274.9	266.3	253.1	250.6	247.2	245.1	256.0	264.7	272.5	286.8	292.7	278.9
11	274.7	262.0	254.2	251.9	246.5	245.5	256.8	264.7	273.2	287.1	292.6	278.6
12	274.1	---	254.4	---	246.3	245.5	257.5	264.6	273.8	287.4	293.4	278.0
13	273.5	---	---	---	246.0	245.7	258.1	264.6	274.3	287.7	291.8	277.8
14	273.2	---	---	---	246.0	245.6	258.5	264.6	274.7	288.0	291.4	277.2
15	272.7	---	---	---	246.4	245.7	259.1	264.5	274.9	288.4	291.0	276.7
16	272.1	---	---	---	---	245.6	259.8	264.9	275.2	288.6	290.5	276.3
17	271.5	---	---	---	---	245.6	260.2	265.2	275.4	289.1	289.6	276.1
18	270.9	---	---	252.3	---	245.6	260.7	265.1	275.8	289.2	288.9	275.7
19	270.8	---	---	251.9	---	245.7	261.2	265.3	276.2	289.3	288.4	275.0
20	270.5	---	---	249.0	---	245.7	261.7	265.4	276.8	289.4	287.5	274.7
21	270.1	---	---	248.6	---	245.6	262.3	265.4	277.3	289.6	286.6	274.3
22	269.7	---	---	248.3	---	245.7	262.8	265.5	277.6	289.9	285.8	273.8
23	269.2	256.1	---	248.0	---	245.9	263.3	265.4	278.1	290.1	285.2	273.3
24	268.7	259.3	---	248.2	---	246.0	263.5	265.4	278.6	290.5	284.7	272.8
25	267.9	262.3	---	248.6	---	246.3	263.6	265.5	279.5	290.9	284.4	272.5
26	267.6	265.0	---	249.0	---	246.4	263.8	265.6	279.9	291.1	283.9	272.0
27	267.6	265.0	---	249.3	---	246.8	263.9	265.8	280.5	291.2	283.9	271.7
28	267.1	261.2	---	250.5	244.5	247.2	264.1	266.0	281.2	291.4	283.8	271.3
29	266.4	256.8	---	249.8	---	247.6	264.3	266.4	281.7	291.6	284.1	270.8
30	265.7	255.0	---	249.3	---	248.1	264.6	266.6	282.4	291.9	283.6	270.5
31	265.4	---	---	249.7	---	248.7	---	266.9	---	292.0	283.2	---
MEAN	272.0	---	---	---	---	245.7	258.5	265.1	274.8	288.1	289.2	276.8
MAX	277.9	---	---	---	---	248.7	264.6	266.9	282.4	292.0	293.6	283.2
MIN	265.4	---	---	---	---	244.2	249.1	264.2	267.3	282.8	283.2	270.5

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.564	.553	---	---	.537	.532	.541	.543	.551	.567	.579	---
2	.563	.553	---	---	.537	.532	.541	.543	.552	.568	.579	---
3	---	.552	---	---	.537	.532	.542	.542	.552	.568	.579	---
4	---	.552	---	---	.536	.531	.543	.542	.553	.568	.579	---
5	---	.552	---	---	.536	.531	.544	.543	.553	.568	.580	---
6	---	.551	---	---	.535	.532	.545	.543	---	.569	.579	---
7	---	.551	---	---	.535	.532	.546	.544	---	.569	.579	---
8	---	.550	---	---	.535	.532	.546	.544	---	.569	.580	---
9	---	.550	---	---	.534	.532	.546	.544	---	.570	.579	---
10	---	.550	---	.540	.534	.533	.546	.544	---	.571	.580	---
11	---	.549	---	.540	.534	.533	.546	.544	---	.572	.580	---
12	---	.549	---	.540	.534	.533	.547	.544	.556	.573	.580	---
13	---	.549	---	.540	.534	.533	.547	.544	.556	.574	.580	---
14	---	.548	---	.540	---	.532	.547	.544	.557	.574	.580	---
15	---	.548	---	.539	---	.532	.547	.545	.557	.574	.580	---
16	---	.548	---	.539	---	.532	.547	.546	.557	.574	.580	---
17	---	---	---	.539	---	.532	.547	.546	.557	.573	.580	---
18	---	---	---	.538	---	.532	.547	.546	.558	.573	.581	---
19	.559	---	---	.538	---	.532	.547	.546	.559	.573	.580	---
20	.558	---	---	.538	---	.532	.547	.546	.560	.573	.581	---
21	.558	---	---	.537	---	.532	.547	.546	.561	.573	.581	---
22	.557	---	---	.537	---	.533	.547	.546	.562	.574	.581	---
23	.557	---	---	.537	---	.534	.547	.546	.562	.575	.581	---
24	.557	---	---	.537	---	.535	.547	.546	.563	.576	.581	---
25	.556	---	---	.538	---	.536	.546	.547	.563	.576	.581	---
26	.556	---	---	.539	---	.537	.546	.547	.564	.577	.581	---
27	.555	---	---	.539	---	.538	.545	.548	.565	.577	.581	---
28	.555	---	---	.539	.532	.538	.544	.548	.565	.578	.581	---
29	.554	---	---	.539	---	.538	.544	.549	.566	.578	.581	---
30	.554	---	---	.539	---	.539	.543	.550	.566	.578	.581	---
31	.554	---	---	.538	---	.540	---	.551	---	.579	.581	---
MEAN	---	---	---	---	---	.534	.545	.545	---	.573	.580	---
MAX	---	---	---	---	---	.540	.547	.551	---	.579	.581	---
MIN	---	---	---	---	---	.531	.541	.542	---	.567	.579	---

## GROUND-WATER LEVELS AND COMPACTION VALUES

## PINAL COUNTY

324856111250301. Local number, (D-07-09)16aca

LOCATION.--Lat 32°48'56", long 111°25'03", Hydrologic Unit 15050100, within the Picacho ground-water basin of AZ Highway 87 on Houser Road, 5 mi east of I-10. Owner: U.S. Geological Survey.

WELL CHARACTERISTICS.--Drilled observation well fitted with a borehole, pipe extensometer, depth 1,630 ft, open throughout casing.

INSTRUMENTATION.--Water-level and compaction recorders.

DATUM.--Elevation of land surface is 1,589.0 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 District Office in Tucson, AZ.

PERIOD OF RECORD.--Sept. 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 285.4 ft below land-surface datum, Jan. 29, 1996; lowest recorded, 306.3 ft below land-surface datum, Oct. 23, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	296.1	295.8	294.7	293.5	292.4	291.4	290.7	291.5	292.3	293.0	293.6	293.6
2	296.1	295.8	294.6	293.6	292.4	291.3	290.8	291.5	292.4	293.1	293.8	293.7
3	296.1	295.7	294.6	293.5	292.4	291.3	290.9	291.6	292.4	293.2	293.7	293.7
4	296.2	295.7	294.5	293.4	292.4	291.3	290.9	291.6	292.3	293.3	293.7	293.6
5	296.2	295.5	294.3	293.3	292.3	291.4	291.0	291.7	292.4	293.4	293.8	293.7
6	296.2	295.5	294.3	293.2	292.2	291.4	291.1	291.7	292.6	293.4	293.8	293.6
7	296.1	295.5	294.2	293.2	292.1	291.5	291.0	291.8	292.6	293.5	293.8	293.7
8	296.2	295.5	294.1	293.1	292.2	291.5	291.0	291.8	292.7	293.6	293.8	293.6
9	296.2	295.3	294.1	293.3	292.3	291.4	291.0	291.7	292.7	293.5	293.8	293.6
10	296.2	295.3	294.2	293.2	292.2	291.2	291.2	291.8	292.7	293.5	293.8	293.6
11	296.2	295.4	294.0	293.1	292.1	291.2	291.1	291.9	292.8	293.4	293.7	293.5
12	296.2	295.4	294.0	293.1	292.0	291.3	291.2	292.0	292.8	293.6	293.6	293.5
13	296.1	295.3	293.9	293.1	292.1	291.3	291.2	292.0	292.8	293.5	293.7	293.5
14	296.1	295.2	294.0	293.1	292.2	291.3	291.2	292.0	292.9	293.6	293.7	293.6
15	296.1	295.1	294.0	292.9	292.0	291.2	291.2	292.1	293.0	293.5	293.8	293.5
16	296.1	295.1	293.9	292.8	292.0	291.2	291.1	292.3	293.0	293.6	293.7	293.5
17	296.1	295.2	293.8	292.9	291.9	291.2	291.0	292.1	293.0	293.7	293.8	293.5
18	296.1	295.2	293.8	292.8	291.8	291.2	291.1	292.1	293.0	293.7	293.8	293.4
19	296.2	295.2	293.8	292.8	291.7	291.2	291.0	292.2	293.0	293.6	293.7	293.5
20	296.1	295.1	293.7	292.7	291.6	291.1	291.0	292.3	293.1	293.6	293.7	293.4
21	296.0	295.0	293.6	292.8	291.7	290.9	291.1	292.1	293.1	293.6	293.7	293.4
22	296.0	295.0	293.6	292.6	291.6	290.7	291.5	292.1	293.0	293.5	293.7	293.4
23	296.0	294.9	293.6	292.6	291.5	290.7	291.4	292.1	293.1	293.4	293.6	293.3
24	296.1	294.9	293.6	292.6	291.3	290.7	291.4	292.1	293.0	293.5	293.6	293.3
25	296.1	294.9	293.5	292.6	291.2	290.8	291.3	292.1	293.1	293.6	293.4	293.3
26	296.0	294.9	293.6	292.6	291.3	290.7	291.3	292.1	293.2	293.6	293.4	293.3
27	295.9	294.9	293.6	292.5	291.4	290.7	291.5	292.1	293.1	293.6	293.5	293.3
28	296.0	294.9	293.6	292.5	291.4	290.8	291.6	292.2	293.1	293.7	293.5	293.3
29	296.0	294.8	293.6	292.6	---	290.7	291.6	292.2	293.0	293.8	293.5	293.3
30	295.9	294.8	293.6	292.5	---	290.8	291.6	292.3	293.0	293.8	293.6	293.3
31	295.9	---	293.6	292.4	---	290.8	---	292.3	---	293.7	293.5	---
MEAN	296.1	295.2	293.9	292.9	291.9	291.1	291.2	292.0	292.8	293.5	293.7	293.5
MAX	296.2	295.8	294.7	293.6	292.4	291.5	291.6	292.3	293.2	293.8	293.8	293.7
MIN	295.9	294.8	293.5	292.4	291.2	290.7	290.7	291.5	292.3	293.0	293.4	293.3

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	.096	.097	.098	.099	.102	.102	.104	.107	.108	.110	.113
2	---	.096	.097	.098	.099	.102	.102	.104	.107	.108	.110	.113
3	---	.096	.097	.098	.099	.102	.102	.104	.107	.108	.110	.113
4	---	.096	.097	.098	.099	.102	.103	.104	.107	.108	.111	.113
5	---	.096	.097	.098	.099	.102	.103	.104	.107	.108	.111	.113
6	---	.096	.097	.098	.099	.102	.103	.104	.107	.108	.111	.113
7	---	.096	.097	.098	.100	.102	.103	.104	.107	.108	.111	.113
8	---	.096	.097	.098	.100	.102	.103	.104	.107	.108	.112	.113
9	---	.096	.097	.098	.100	.102	.103	.104	.107	.108	.112	.113
10	---	.096	.097	.098	.100	.102	.103	.105	.107	.108	.112	.114
11	---	.096	.097	.098	.100	.102	.103	.105	.107	.109	.112	.114
12	---	.096	.097	.098	.100	.102	.103	.105	.107	.109	.113	.114
13	---	.096	.097	.099	.100	.102	.103	.105	.107	.109	.113	.114
14	---	.096	.097	.099	.100	.102	.103	.105	.107	.109	.113	.114
15	---	.096	.097	.099	.100	.102	.103	.105	.108	.109	.113	.114
16	---	.096	.097	.099	.100	.102	.103	.105	.108	.109	.113	.114
17	---	.096	.098	.099	.100	.102	.103	.105	.108	.109	.113	.114
18	---	.096	.098	.099	.100	.102	.103	.106	.108	.109	.113	.114
19	.095	.096	.098	.099	.100	.102	.103	.106	.108	.109	.113	.114
20	.096	.096	.098	.099	.100	.102	.103	.106	.108	.109	.113	.114
21	.095	.096	.098	.099	.100	.102	.103	.106	.108	.109	.113	.114
22	.095	.096	.098	.099	.101	.102	.103	.106	.108	.109	.113	.114
23	.095	.096	.098	.099	.101	.102	.103	.106	.108	.109	.113	.115
24	.096	.096	.098	.099	.102	.102	.104	.106	.108	.109	.113	.115
25	.096	.096	.098	.099	.102	.102	.104	.106	.108	.109	.113	.114
26	.096	.096	.098	.099	.102	.102	.104	.106	.108	.109	.113	.114
27	.096	.096	.098	.099	.102	.102	.104	.106	.108	.109	.113	.115
28	.096	.096	.098	.099	.102	.102	.104	.106	.108	.109	.113	.115
29	.096	.096	.098	.099	---	.102	.104	.107	.108	.110	.113	.115
30	.096	.097	.098	.099	---	.102	.104	.107	.108	.110	.113	.115
31	.096	---	.098	.099	---	.102	---	.107	---	.110	.113	---
MEAN	---	.096	.097	.099	.100	.102	.103	.105	.108	.109	.112	.114
MAX	---	.097	.098	.099	.102	.102	.104	.107	.108	.110	.113	.115
MIN	---	.096	.097	.098	.099	.102	.102	.104	.107	.108	.110	.113

## GROUND-WATER LEVELS AND COMPACTION VALUES

367

## PINAL COUNTY

32490811574401. Local number, (D-07-04)16bcc

LOCATION.--Lat 32°49'08", long 111°57'44", Hydrologic Unit 15050306, within the Picacho ground-water basin approximately 20 mi west of I-10 on Stanfield Road. Owner: U.S. Geological Survey.

WELL CHARACTERISTICS.--Drilled observation well fitted with a borehole, pipe extensometer, depth 996 ft, open throughout casing.

INSTRUMENTATION.--Water-level and compaction recorders.

DATUM.--Measuring point: Top of casing 1.6 ft above land-surface datum.

REMARKS.--Water level affected by pumping from nearby wells. For previous record, contact the District Office in Tucson, AZ.

PERIOD OF RECORD.--Aug. 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 624.2 ft below land-surface datum, Aug. 31, 2001; lowest recorded, 671.8 ft below land-surface datum, Aug. 29, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	629.7	630.1	629.8	630.1	629.7	627.8	627.1	628.3	626.8	625.5	625.1	625.0
2	629.8	630.2	630.0	630.3	629.3	627.7	627.4	628.2	626.8	625.4	625.2	625.1
3	629.9	629.8	629.8	630.3	629.2	627.8	627.5	628.4	626.9	625.4	625.0	625.4
4	630.0	629.8	629.7	630.3	629.1	627.9	627.3	628.4	626.8	625.6	625.0	625.5
5	629.8	629.9	629.5	630.3	628.9	628.0	627.2	628.4	626.9	625.8	624.9	625.0
6	629.9	630.0	629.6	630.1	628.8	628.1	626.9	628.4	626.8	626.0	625.0	625.1
7	630.2	629.8	629.6	630.2	628.6	627.9	626.4	628.5	626.5	626.0	624.9	625.0
8	630.0	629.7	629.7	630.2	628.7	628.0	626.1	628.5	626.2	626.2	624.8	625.2
9	629.8	629.8	629.7	630.3	628.4	628.1	626.4	628.5	626.1	626.1	624.9	625.1
10	630.0	629.8	629.9	630.2	628.1	628.1	626.9	628.7	626.5	626.1	624.9	625.3
11	630.0	630.3	629.9	629.9	628.0	628.1	627.4	628.8	626.6	626.1	625.1	625.3
12	630.0	630.1	630.3	630.1	627.8	627.9	627.3	628.7	626.3	626.1	625.0	625.4
13	630.0	630.1	630.4	630.5	627.6	627.8	627.1	628.7	626.1	626.2	624.9	625.3
14	629.9	629.8	630.4	630.4	627.7	627.9	627.3	628.5	626.2	626.0	625.0	625.2
15	629.6	630.2	630.3	630.3	628.3	628.0	627.1	628.7	626.2	626.3	624.9	625.4
16	629.4	630.0	630.1	629.9	628.3	627.6	626.8	628.4	626.4	626.3	625.5	625.3
17	629.4	630.2	630.1	629.5	628.2	627.2	626.8	628.1	626.1	626.3	624.9	624.9
18	629.2	629.9	630.6	629.7	628.0	627.2	627.1	628.5	625.8	626.0	625.0	624.9
19	629.3	630.0	630.5	629.5	628.2	627.0	627.6	628.0	625.3	625.4	624.8	624.8
20	629.4	629.9	630.3	629.4	628.0	627.1	627.5	627.4	625.5	625.6	624.7	625.0
21	629.3	629.8	630.6	629.4	628.0	627.0	627.4	626.8	625.7	625.5	624.7	625.0
22	629.3	629.6	630.2	629.2	627.9	627.2	627.6	626.7	625.7	625.5	624.7	625.0
23	629.4	629.8	629.7	629.1	627.8	627.4	627.9	626.3	625.8	625.8	624.6	625.1
24	629.4	629.6	629.7	629.4	627.8	627.1	627.4	626.5	625.9	625.7	624.9	625.2
25	629.2	629.6	629.9	629.2	627.6	627.1	627.3	626.4	625.9	625.7	625.0	625.5
26	629.2	629.5	629.6	629.2	627.5	627.0	627.4	626.6	625.9	625.6	624.9	625.3
27	629.1	629.7	629.7	629.0	627.6	626.9	627.2	626.8	625.8	625.6	624.8	625.2
28	629.2	629.8	629.9	629.4	627.7	627.0	627.3	627.0	625.9	625.6	624.9	625.4
29	629.1	629.7	630.1	629.6	---	627.1	627.7	626.9	625.7	625.5	624.9	625.2
30	629.4	629.5	630.1	629.6	---	626.9	627.9	626.8	625.6	625.6	624.6	625.0
31	629.7	---	629.9	629.7	---	626.9	---	626.8	---	624.8	624.6	---
MEAN	629.6	629.9	630.0	629.8	628.2	627.5	627.2	627.8	626.2	625.8	624.9	625.2
MAX	630.2	630.3	630.6	630.5	629.7	628.1	627.9	628.8	626.9	626.3	625.5	625.5
MIN	629.1	629.5	629.5	629.0	627.5	626.9	626.1	626.3	625.3	624.8	624.6	624.8

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.241	.241	.241	.241	.242	.244	.246	.248	.250	.253	.256	.256
2	.241	.241	.241	.241	.242	.244	.246	.248	.250	.253	.256	.256
3	.241	.241	.241	.241	.242	.244	.247	.248	.250	.253	.256	.256
4	.241	.241	.241	.241	.242	.244	.247	.248	.250	.253	.256	.256
5	.241	.241	.241	.241	.242	.244	.247	.248	.250	.254	.256	.256
6	.241	.241	.241	.241	.242	.245	.247	.249	.250	.254	.256	.256
7	.241	.241	.241	.241	.243	.245	.247	.249	.250	.254	.256	.256
8	.241	.241	.241	.241	.243	.245	.247	.249	.250	.254	.256	.256
9	.241	.241	.241	.241	.243	.245	.247	.249	.251	.254	.256	.256
10	.241	.241	.241	.241	.243	.245	.247	.249	.251	.254	.256	.256
11	.241	.241	.241	.241	.243	.245	.247	.249	.252	.254	.256	.256
12	.241	.241	.241	.241	.243	.245	.247	.249	.252	.254	.256	.257
13	.241	.241	.241	.241	.243	.245	.247	.249	.252	.254	.256	.257
14	.241	.241	.241	.241	.243	.245	.247	.249	.252	.254	.256	.257
15	.241	.241	.241	.241	.243	.245	.247	.249	.252	.255	.256	.257
16	.241	.241	.241	.241	.243	.245	.247	.249	.252	.255	.256	.257
17	.241	.241	.241	.241	.243	.246	.247	.249	.252	.255	.256	.257
18	.241	.241	.241	.241	.243	.246	.247	.249	.252	.255	.256	.257
19	.241	.241	.241	.241	.243	.246	.247	.249	.252	.255	.256	.257
20	.241	.241	.241	.241	.244	.246	.248	.249	.252	.255	.256	.257
21	.241	.241	.241	.241	.244	.246	.248	.249	.253	.255	.256	.257
22	.241	.241	.241	.241	.244	.246	.248	.249	.253	.255	.256	.257
23	.242	.241	.241	.241	.244	.246	.248	.250	.253	.255	.256	.257
24	.241	.241	.241	.241	.244	.246	.248	.250	.253	.255	.256	.258
25	.241	.241	.241	.242	.244	.246	.248	.250	.253	.256	.256	.258
26	.241	.241	.241	.242	.244	.246	.248	.250	.253	.256	.256	.258
27	.241	.241	.241	.242	.244	.246	.248	.250	.253	.256	.256	.258
28	.241	.241	.241	.242	.244	.246	.248	.250	.253	.256	.256	.258
29	.241	.241	.241	.242	---	.246	.248	.250	.253	.256	.256	.258
30	.241	.241	.241	.242	---	.246	.248	.250	.253	.256	.256	.258
31	.241	---	.241	.242	---	.246	---	.250	---	.256	.256	---
MEAN	.241	.241	.241	.241	.243	.245	.247	.249	.252	.255	.256	.257
MAX	.242	.241	.241	.242	.244	.246	.248	.250	.253	.256	.256	.258
MIN	.241	.241	.241	.241	.242	.244	.246	.248	.250	.253	.256	.256



## GROUND-WATER LEVELS AND COMPACTION VALUES

## PINAL COUNTY

32524311264001. Local number, (D-06-09)29bba4

**LOCATION.**--Lat 32°52'43", long 111°26'40", Hydrologic Unit 15050100, within the Picacho ground-water basin off AZ Highway 87 on Steele Road along the CAP canal, 5 mi east of I-10. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS.**--Drilled observation well fitted with a borehole, pipe extensometer, diameter, 8 in., depth 1,520 ft, open throughout casing.

**INSTRUMENTATION.**--Water-level and compaction recorders.

**DATUM.**--Elevation of land surface is 1,542.0 ft above sea level, from topographic map. Measuring point: Top of casing 1.2 ft above land-surface datum.

**REMARKS.**--Water level affected by pumping from nearby wells. For previous record, contact the District Office in Tucson, AZ.

**PERIOD OF RECORD.**--Nov. 1989 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 234.4 ft below land-surface datum, Mar. 18, 1994; lowest recorded, 288.9 ft below land-surface datum, Oct. 1, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

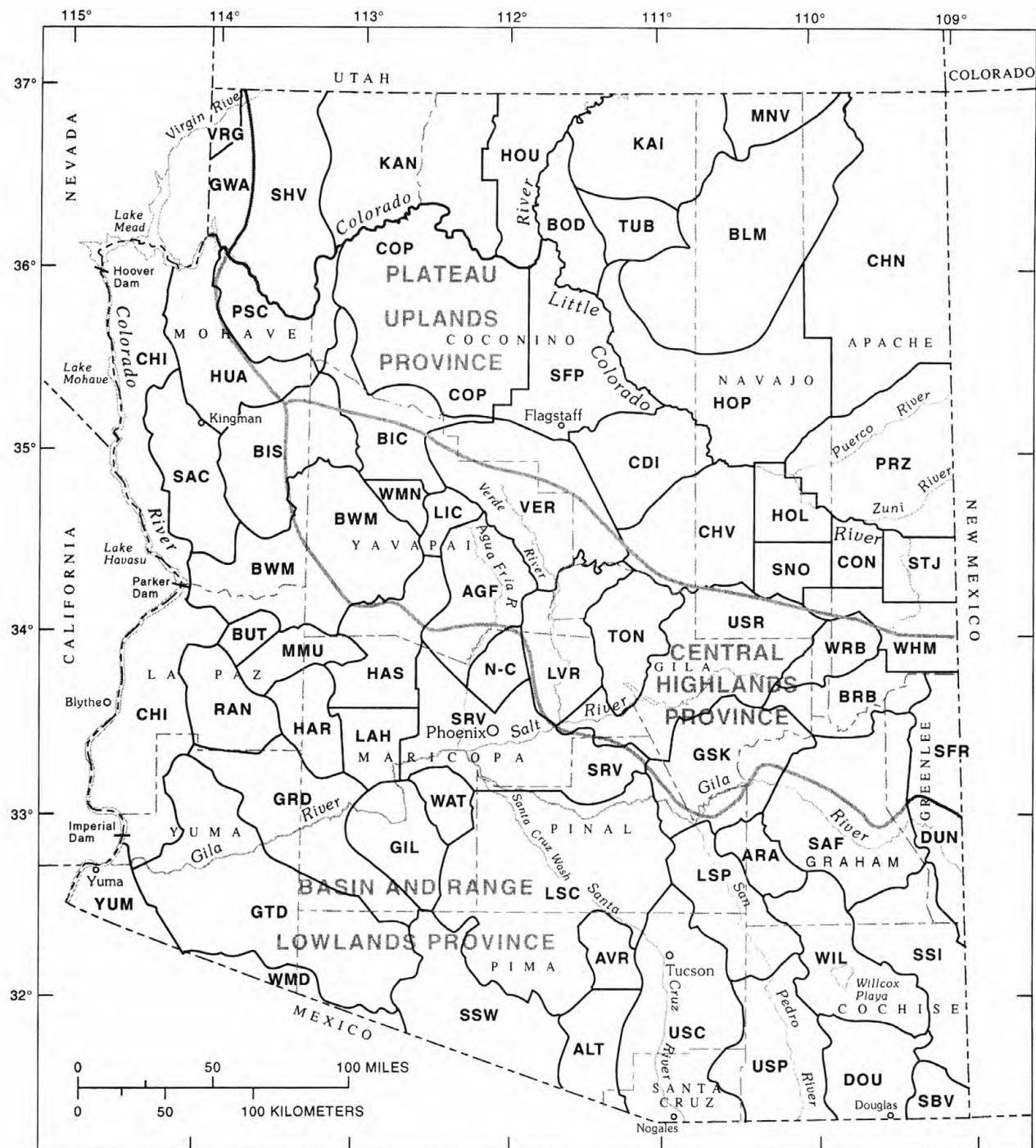
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	277.9	270.3	265.0	260.9	256.3	256.4	---	---	---	---	266.4
2	---	277.8	269.7	264.8	260.7	256.3	256.5	---	---	---	---	266.5
3	---	277.8	269.7	264.6	260.6	256.2	257.0	---	---	---	---	266.4
4	---	277.7	269.6	264.6	260.6	256.6	257.3	---	---	---	---	266.4
5	---	277.6	269.4	264.7	260.4	256.4	257.7	---	---	---	---	266.4
6	---	277.2	269.2	264.9	260.1	256.3	258.4	---	---	---	---	266.5
7	---	277.0	269.0	264.8	259.7	256.2	---	---	---	---	---	266.5
8	---	276.9	268.8	264.6	259.8	256.1	---	---	---	---	---	266.5
9	---	276.6	268.6	264.6	259.8	256.1	---	---	---	---	---	266.6
10	---	276.5	268.5	264.6	259.6	256.3	---	---	---	---	---	266.6
11	---	276.1	268.2	264.4	259.4	256.2	---	---	---	---	---	267.8
12	---	275.9	267.7	264.2	259.2	256.0	---	---	---	---	---	270.3
13	---	275.6	267.6	264.2	259.0	255.9	---	---	---	---	---	273.5
14	---	275.3	267.7	264.1	258.8	255.7	---	---	---	---	---	274.6
15	---	275.3	267.5	263.9	258.7	255.5	---	---	---	---	267.8	274.7
16	---	274.9	267.4	263.9	258.6	255.3	---	---	---	---	267.6	273.6
17	---	274.7	267.2	263.9	258.5	255.3	---	---	---	---	267.7	272.2
18	---	274.1	266.8	263.7	258.0	255.2	---	---	---	---	267.6	271.7
19	281.3	273.8	266.4	263.3	257.8	255.2	---	---	---	---	267.5	270.8
20	280.8	273.4	266.3	262.9	257.5	255.3	---	---	---	---	267.4	270.5
21	280.2	272.9	266.1	262.8	257.3	255.3	---	---	---	---	267.1	269.6
22	279.7	272.5	265.8	262.3	257.1	255.3	---	---	---	---	267.0	268.6
23	280.0	272.4	265.6	262.1	256.8	255.1	---	---	---	---	266.9	267.9
24	279.4	272.1	265.5	261.8	256.8	254.9	---	---	---	---	266.8	267.7
25	279.2	271.9	265.4	261.8	256.8	255.1	---	---	---	---	266.7	267.6
26	278.8	271.4	265.1	261.7	256.7	254.9	---	---	---	---	266.7	267.5
27	278.5	271.1	265.0	261.5	256.4	255.2	---	---	---	---	266.6	267.2
28	278.4	270.9	265.0	261.4	256.4	255.4	---	---	---	---	266.6	267.0
29	278.4	270.6	265.0	261.3	---	255.4	---	---	---	---	266.7	267.3
30	278.2	270.5	265.0	261.3	---	255.7	---	---	---	---	266.6	---
31	278.2	---	265.0	261.3	---	256.1	---	---	---	---	266.5	---
MEAN	---	274.6	267.2	263.4	258.6	255.7	---	---	---	---	---	---
MAX	---	277.9	270.3	265.0	260.9	256.6	---	---	---	---	---	---
MIN	---	270.5	265.0	261.3	256.4	254.9	---	---	---	---	---	---

COMPACTION SEDIMENT (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.079	.075	.062	.059	.054	.052	.053	.058	.063	.066	.070	.067
2	.079	.074	.062	.059	.054	.051	.053	.059	.064	.066	.070	.067
3	.079	.073	.062	.059	.054	.051	.054	.059	.064	.066	.070	.067
4	.079	.073	.061	.059	.054	.051	.054	.059	.064	.066	.070	.067
5	.079	.072	.061	.059	.054	.051	.055	.059	.064	.066	.071	.067
6	.079	.072	.061	.059	.053	.051	.055	.060	.064	.066	.071	.067
7	.079	.071	.061	.059	.053	.051	.055	.060	.064	.066	.071	.067
8	.079	.071	.061	.059	.053	.051	.056	.060	.064	.066	.071	.067
9	.079	.071	.061	.059	.053	.051	.056	.061	.065	.066	.071	.066
10	.079	.070	.060	.059	.053	.051	.056	.061	.065	.066	.070	.066
11	.079	.070	.060	.059	.053	.051	.056	.061	.065	.066	.070	.066
12	.079	.069	.060	.059	.053	.051	.056	.061	.065	.066	.070	.066
13	.079	.069	.060	.059	.053	.051	.056	.061	.066	.065	.070	.066
14	.079	.068	.060	.059	.053	.051	.056	.061	.066	.065	.070	.066
15	.078	.068	.060	.059	.052	.051	.057	.061	.067	.065	.070	.066
16	.078	.068	.060	.059	.052	.051	.057	.061	.067	.065	.070	.066
17	.078	.067	.060	.058	.052	.051	.058	.061	.067	.066	.070	.066
18	.078	.067	.060	.058	.052	.051	---	.061	.067	.066	.070	.066
19	.078	.067	.060	.058	.052	.051	---	.061	.067	.066	.070	.066
20	.078	.066	.060	.058	.052	.051	---	.061	.067	.067	.070	.065
21	.078	.066	.060	.058	.052	.051	---	.061	.067	.067	.070	.065
22	.078	.065	.059	.058	.052	.051	---	.061	.066	.067	.070	.065
23	.077	.065	.059	.057	.052	.051	---	.061	.066	.068	.070	.065
24	.077	.064	.059	.057	.052	.051	---	.061	.066	.068	.069	.065
25	.077	.064	.059	.057	.052	.051	---	.062	.066	.068	.069	.065
26	.076	.064	.059	.057	.052	.051	---	.062	.066	.069	.069	.065
27	.076	.063	.059	.056	.052	.051	---	.062	.066	.069	.069	.064
28	.076	.063	.059	.056	.052	.052	---	.062	.066	.069	.069	.064
29	.075	.063	.059	.056	---	.052	---	.062	.066	.070	.069	.064
30	.075	.062	.059	.056	---	.052	---	.063	.066	.070	.068	.064
31	.075	---	.059	.055	---	.053	---	.063	---	.070	.068	---
MEAN	.078	.068	.060	.058	.053	.051	---	.061	.066	.067	.070	.066
MAX	.079	.075	.062	.059	.054	.053	---	.063	.067	.070	.071	.067
MIN	.075	.062	.059	.055	.052	.051	---	.058	.063	.065	.068	.064







Base from U.S. Geological Survey  
State base maps, 1:500,000,  
Arizona, 1974; Nevada, 1965;  
New Mexico, 1965; and Utah, 1959

**Figure 10.** 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 MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
APR 11, 1990	82.5 S	MAY 21, 1997	84.2 S	AUG 26, 1999	85.1 S	JUN 14, 2000	85.4 S
NOV 07	83.52 S	OCT 16	84.50	DEC 14	85.2 S	JAN 09, 2001	85.8 S
JUN 25, 1992	84.20 S	MAR 09, 1998	84.8 S	FEB 04, 2000	85.2 S	FEB 28	85.6 V
OCT 29	83.40 V	APR 14, 1999	85.00 S	MAR 16	85.3 S		
OCT 28, 1993	82.80 V	JUN 22	85.0 S	APR 26	85.3 S		
	HIGHEST 82.5	APR 11, 1990					
	LOWEST 85.8	JAN 09, 2001					

## LITTLE COLORADO RIVER BASIN

SITE: 342024109220301

LOCAL NUMBER: A-11-28 22BDA2

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
FEB 08, 1990	61.7 S	OCT 15, 1997	76.99	MAR 03, 1999	78.9 V	SEP 21, 2000	82.2 V
NOV 06	64.79 V	MAR 10, 1998	76.7 V	JUN 15	79.0 V	DEC 04	81.3 V
OCT 29, 1991	66.56 S	AUG 06	79.5 V	SEP 30	79.9 V	FEB 21, 2001	80.9 V
OCT 28, 1992	67.09 V	SEP 17	79.5 V	MAR 28, 2000	79.9 V	MAY 16	81.0 V
OCT 27, 1993	69.39 V	NOV 25	79.0 V	JUN 27	79.7 V	AUG 22	81.6 V
	HIGHEST 61.7	FEB 08, 1990					
	LOWEST 82.2	SEP 21, 2000					

SITE: 343637109374901

LOCAL NUMBER: A-14-26W18DBC

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
FEB 08, 1990	31.2 S	NOV 01, 1995	37.22 S	MAR 03, 1999	30.3 V	DEC 04, 2000	36.6 V
NOV 05	36.10 V	OCT 14, 1997	37.30	JUN 15	46.2 V	FEB 21, 2001	33.5 V
OCT 28, 1991	41.60 V	MAR 10, 1998	28.8 V	SEP 30	35.4 V	MAY 16	37.7 V
OCT 26, 1992	36.00 V	AUG 06	46.4 V	MAR 28, 2000	32.6 V	AUG 22	39.0 V
OCT 26, 1993	34.58 S	SEP 17	41.3 V	JUN 27	40.4 V		
NOV 01, 1994	32.84 S	NOV 25	35.9 V	SEP 21	45.3 V		
	HIGHEST 28.8	MAR 10, 1998					
	LOWEST 46.4	AUG 06, 1998					

SITE: 344928109515301

LOCAL NUMBER: A-17-23 35DDB

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 12, 1998	305.6 V	MAR 03, 1999	306.1 V	JUN 27, 2000	310.3 V	MAY 16, 2001	314.4 V
AUG 06	310.8 V	JUN 15	310.1 V	SEP 21	319.5 V	AUG 22	316.0 V
SEP 17	311.2 V	SEP 30	312.5 V	DEC 04	316.5 V		
NOV 25	310.4 V	MAR 28, 2000	309.2 V	FEB 21, 2001	311.6 V		
	HIGHEST 305.6	MAR 12, 1998					
	LOWEST 319.5	SEP 21, 2000					

SITE: 345023110111401

LOCAL NUMBER: A-17-20 26DBC

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 05, 1990	300.60 V	OCT 28, 1996	301.7 V	JUN 15, 1999	302.8 V	FEB 21, 2001	VO
OCT 28, 1991	300.80 V	MAR 12, 1998	301.9 V	SEP 30	303.2 V	21	VO
OCT 27, 1992	300.80 V	AUG 06	302.6 V	MAR 28, 2000	301.8 V	MAR 20	VO
OCT 25, 1993	301.10 V	SEP 17	302.8 V	JUN 27	303.1 V	MAY 16	VO
NOV 02, 1994	301.5 V	NOV 25	302.6 V	SEP 21	303.3 V	16	VO
OCT 31, 1995	302.6 V	MAR 03, 1999	302.3 V	DEC 04	302.8 V		
	HIGHEST 300.60	NOV 05, 1990					
	LOWEST 303.3	SEP 21, 2000					

# WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

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## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

**SITE: 345310110062501**  
**LOCAL NUMBER: A-17-21 10CBA**

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 05, 1990	53.30 V	MAR 12, 1998	55.2 V	JUN 15, 1999	55.5 V	DEC 04, 2000	55.0 V
OCT 28, 1991	54.50 V	AUG 06	55.6 V	SEP 30	55.1 V	FEB 21, 2001	55.3 V
OCT 27, 1992	54.00 V	SEP 17	55.7 V	MAR 28, 2000	54.8 S	MAY 16	55.7 V
OCT 26, 1993	54.20 V	NOV 25	55.5 V	JUN 27	55.5 V	AUG 22	55.3 V
OCT 14, 1997	54.50	MAR 03, 1999	55.2 V	SEP 21	55.7 V		

HIGHEST 53.30 NOV 05, 1990  
 LOWEST 55.7 SEP 17, 1998 SEP 21, 2000 MAY 16, 2001

**SITE: 345333109474501**  
**LOCAL NUMBER: A-17-24 09ABD**

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 10, 1998	261.2 V	MAR 03, 1999	261.7 V	JUN 27, 2000	270.4 V	MAY 16, 2001	267.6 V
AUG 06	263.1 S	JUN 15	262.5 V	SEP 21	273.0 V	AUG 22	269.5 V
SEP 17	264.1 V	SEP 30	265.1 V	DEC 04	271.7 V		
NOV 25	264.5 V	MAR 28, 2000	265.4 V	FEB 21, 2001	268.6 V		

HIGHEST 261.2 MAR 10, 1998  
 LOWEST 273.0 SEP 21, 2000

**SITE: 345603110450301**  
**LOCAL NUMBER: A-18-15 28AAD**

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 07, 1990	265.90 V	SEP 17, 1998	266.9 V	JUN 27, 2000	267.1 V	MAY 16, 2001	266.9 V
OCT 28, 1991	265.90 V	NOV 25	267.0 V	SEP 21	267.0 V	JUL 11	266.8 V
OCT 29, 1992	266.20 V	MAR 10, 1999	266.9 V	DEC 04	267.3 V	AUG 21	266.9 V
OCT 27, 1993	266.40 V	JUN 15	266.8 V	JAN 08, 2001	266.7 V		
MAR 09, 1998	267.1 V	SEP 30	266.9 V	FEB 21	267.2 V		
AUG 06	267.0 V	MAR 28, 2000	266.8 V	MAR 20	266.9 V		

HIGHEST 265.90 NOV 07, 1990 OCT 28, 1991  
 LOWEST 267.3 DEC 04, 2000

**SITE: 350002110355501**  
**LOCAL NUMBER: A-19-16 36DBB**

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 07, 1990	35.40 V	OCT 31, 1996	36.5 V	MAR 10, 1999	34.5 V	DEC 04, 2000	36.3 S
OCT 29, 1991	35.86 S	OCT 16, 1997	37.00	JUN 15	35.0 V	FEB 21, 2001	35.8 V
OCT 28, 1992	35.20 V	MAR 09, 1998	34.4 S	SEP 30	35.1 V	MAY 16	35.6 V
OCT 27, 1993	35.80 V	AUG 06	34.4 V	MAR 28, 2000	35.1 S	AUG 21	36.8 V
NOV 01, 1994	36.1 V	SEP 17	34.6 V	JUN 27	36.2 S		
NOV 02, 1995	36.8 S	NOV 25	34.5 V	SEP 21	35.8 S		

HIGHEST 34.4 MAR 09, 1998 AUG 06, 1998  
 LOWEST 37.00 OCT 16, 1997

**SITE: 350828111391501**  
**LOCAL NUMBER: A-20-07 04DAC**

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 27, 1995	829 R	NOV 12, 1996	819.1 V	MAR 11, 1998	827.4 V	MAR 08, 2000	826.2 V
31	950.0 L	13	819.2 V	JUN 19	827.4 V	JUN 28	826.0 V
NOV 01	836.2 V	15	818.1 V	OCT 02	827.0 V	SEP 18	826.1 V
08	830.3 V	20	826.7 V	NOV 12	827.1 V	DEC 12	824.9 V
OCT 23, 1996	822.6 V	DEC 19	824.6 V	FEB 17, 1999	827.0 V	FEB 23, 2001	824.6 V
NOV 05	821.2 V	AUG 07, 1997	828.2 V	JUL 12	827.0 V	MAY 23	825.7 V
11	820.6 V	JAN 15, 1998	827.4 V	SEP 28	826.9 V	AUG 23	824.6 V

HIGHEST 818.1 NOV 15, 1996  
 LOWEST 950.0 OCT 31, 1995



## WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

SITE: 350848111381701

LOCAL NUMBER: A-20-07 03ACA

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 31, 1996	897.6 V	MAR 11, 1998	924.4 V	JUL 12, 1999	927.9 V	DEC 12, 2000	926.3 V
NOV 11	927.0 S	JUN 19	925.3 V	SEP 28	928.1 V	FEB 23, 2001	927.8 V
DEC 12	918.5 L	OCT 02	925.9 V	MAR 08, 2000	928.0 V	MAY 23	928.3 V
AUG 07, 1997	922.4 V	NOV 12	926.2 V	JUN 28	928.4 V	AUG 23	928.4 V
JAN 15, 1998	923.8 V	FEB 17, 1999	926.8 V	SEP 18	928.6 V		
	HIGHEST 897.6	OCT 31, 1996					
	LOWEST 928.6	SEP 18, 2000					

SITE: 351025111303701

LOCAL NUMBER: A-21-08 26DAB

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
AUG 13, 1997	1525.2 V	MAR 08, 2000	1578.6 A	DEC 05, 2000	1567.0 A	MAY 23, 2001	1571.6 AP
OCT 22, 1999	1576.3 A	SEP 19	1577.4 A	MAR 06, 2001	1563.6 A	AUG 24	1572.8 A
	HIGHEST 1525.2	AUG 13, 1997					
	LOWEST 1578.6	MAR 08, 2000					

SITE: 351127111360001

LOCAL NUMBER: A-21-07 24AAD

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
DEC 12, 1996	1313. R	APR 11, 1997	1315.3 V	JUN 27, 1997	1316.2 V	SEP 04, 1999	1321 R
21	1319.0 R	14	1315.3 V	JUL 18	1315.5 V	FEB 27, 2000	1336.0 R
MAR 27, 1997	1316.0 V	15	1315.3 V	AUG 07	1315.2 V	APR 03	1311.6 V
31	1315.8 V	16	1315.3 V	SEP 24	1313.9 V	JUL 05	1335.0 R
APR 01	1315.6 V	MAY 06	1314.40 V	JAN 15, 1998	1313.0 V	SEP 27	1336.0 R
02	1315.5 V	JUN 04	1319.9 VR	MAR 11	1312.8 V	27	1313.0 R
03	1315.4 V	05	1319.2 VR	APR 17	1312.6 V	DEC 07	1313.0 R
04	1315.3 V	06	1318.6 VR	JUN 19	1312.6 V	FEB 23, 2001	1313.0 R
07	1315.6 V	09	1317.9 VR	OCT 02	1312.4 V	MAY 25	1313.0 R
08	1315.5 V	10	1317.8 VR	NOV 12	1312.4 V	AUG 23	1313.0 R
09	1315.2 V	16	1316.9 V	FEB 17, 1999	1312.0 V		
10	1315.2 V	20	1316.2 V	JUL 27	1334 R		
	HIGHEST 1311.6	APR 03, 2000					
	LOWEST 1336.0	FEB 27, 2000	SEP 27, 2000				

SITE: 351223111342802

LOCAL NUMBER: A-21-08 17BCA2

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
FEB 18, 1997	1295.0 Z	MAY 16, 1997	1308.5 V	APR 06, 1998	1305.9 V	OCT 02, 1998	1305.2 V
22	1303.5 V	22	1308.0 V	07	1305.9 V	NOV 12	1305.5 V
MAR 13	1304.5 V	23	1308.0 V	08	1306.0 V	FEB 17, 1999	1305.5 V
14	1304.4 V	27	1307.9 V	10	1306.0 V	JUL 27	1323 R
26	1304.2 V	28	1307.8 V	13	1304.8 V	OCT 07	1328 R
APR 01	1317.2 VR	29	1307.8 V	14	1304.2 V	MAR 20, 2000	1336.0 A
02	1310.4 VR	30	1307.7 V	15	1304.1 V	JUL 05	1335.0 A
03	1308.6 VR	JUN 02	1307.6 V	16	1304.2 V	SEP 27	1361.0 R
MAY 06	1309.6 V	03	1307.7 V	17	1304.3 V	DEC 07	1482.0 RP
07	1309.2 V	12	1307.4 V	17	1304.4 V	FEB 23, 2001	1309.0 R
08	1309.2 V	AUG 07	1307.2 V	18	1304.6 V	MAY 25	1309.0 R
09	1309.2 V	SEP 24	1306.6 V	19	1304.6 V	AUG 23	1309.0 R
12	1308.6 V	JAN 15, 1998	1306.2 V	20	1304.6 V		
13	1308.6 V	MAR 13	1306.3 V	JUN 19	1305.4 V		
	HIGHEST 1295.0	FEB 18, 1997					
	LOWEST 1361.0	SEP 27, 2000					

SITE: 352214111324601

LOCAL NUMBER: A-23-08 21AAD

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JUN 19, 1998	1962.6 V	JUL 12, 1999	1963.2 V	JUN 28, 2000	1962.6 V	MAY 23, 2001	1960.6 V
OCT 02	1962.6 V	SEP 28	VO	SEP 20	1962.2 V	AUG 23	1961.2 V
NOV 12	1962.8 V	OCT 06	1962.9 V	DEC 12	1962.8 V		
FEB 17, 1999	1962.8 V	MAR 08, 2000	1962.8 V	FEB 23, 2001	1961.2 V		
	HIGHEST 1960.6	MAY 23, 2001					
	LOWEST 1963.2	JUL 12, 1999					

# WATER LEVELS IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

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## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

**SITE: 353410111284001**  
**LOCAL NUMBER: A-25-09 06CCD**

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
FEB 21, 1997	1587.2 V	OCT 02, 1998	1587.7 V	SEP 28, 1999	1588.4 V	DEC 12, 2000	1587.2 V
AUG 11	1586.2 V	NOV 12	1588.0 V	MAR 08, 2000	1588.4 V	FEB 23, 2001	1587.1 V
MAR 13, 1998	1587.5 V	FEB 17, 1999	1587.8 V	JUN 28	1588.3 V	MAY 23	1587.6 V
JUN 19	1587.7 V	JUL 12	1588.2 V	SEP 20	1588.0 V	AUG 23	1585.3 V
HIGHEST 1585.3 AUG 23, 2001 LOWEST 1588.4 SEP 28, 1999 MAR 08, 2000							

**SITE: 354229109345801**  
**LOCAL NUMBER: 17 110-04.68X02.91**

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 12, 1998	137.0 V	MAR 03, 1999	137.6 V	JUN 27, 2000	140.2 VP	MAY 16, 2001	138.2 V
AUG 06	138.2 VP	JUN 15	137.8 VR	SEP 21	142.9 VP	AUG 21	138.7 VP
SEP 17	137.7 V	OCT 07	137.4 V	DEC 04	138.7 VP		
NOV 25	137.7 V	MAR 28, 2000	136.5 VR	FEB 21, 2001	138.3 VP		
HIGHEST 137.0 MAR 12, 1998 LOWEST 138.2 MAY 16, 2001							

**SITE: 354646111294801**  
**LOCAL NUMBER: 03 098-13.94X15.20**

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 24, 1997	1062 R	NOV 12, 1998	1188.0 AP	SEP 28, 1999	1081.0 A	DEC 05, 2000	1067.8 A
MAR 27, 1998	1084.5 A	FEB 17, 1999	1081.0 A	MAR 16, 2000	1080.3 A	MAR 05, 2001	1065.5 A
MAY 22, 2001	1081. A	AUG 24, 2001	1079.9 A				
HIGHEST 1062 JAN 24, 1997 LOWEST 1084.5 MAR 27, 1998							

**SITE: 365403112452801**  
**LOCAL NUMBER: B-40-04 06AAC**

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
APR 11, 1990	82.5 S	MAY 21, 1997	84.2 S	AUG 26, 1999	85.1 S	JUN 14, 2000	85.4 S
NOV 07	83.52 S	OCT 16	84.50	DEC 14	85.2 S	JAN 09, 2001	85.8 S
JUN 25, 1992	84.20 S	MAR 09, 1998	84.8 S	FEB 04, 2000	85.2 S	FEB 28	85.6 V
OCT 29	83.40 V	APR 14, 1999	85.00 S	MAR 16	85.3 S		
OCT 28, 1993	82.80 V	JUN 22	85.0 S	APR 26	85.3 S		
HIGHEST 82.5 APR 11, 1990 LOWEST 85.8 JAN 09, 2001							

## QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

## SITE INFORMATION

LOCAL WELL NUMBER	STATE	COUNTY	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	HYDROLOGIC UNIT (OWDC)	PRIMARY USE OF WATER	DEPTH OF WELL (FEET)	TOP OF OPEN INTERVAL (FEET)	BOTTOM OF OPEN INTERVAL (FEET)
AGUA FRIA BASIN									
A-09-02 27CBB1	AZ	YAVAPAI	340525	1120900	15070102	H	100	--	--
A-11-02 25BDD	AZ	YAVAPAI	341815	1120615	15070102	P	232	32	232
A-12-01 26DAD2	AZ	YAVAPAI	342320	1121300	15070102	P	335	35	335
B-14-01 14ACC	AZ	YAVAPAI	343535	1122000	15070102	P	496	26	496
ALTAR VALLEY									
D-20-08 35BDB	AZ	PIMA	313850	1112955	15050304	H	650	495 598	595 650
ARAVAIPA VALLEY									
D-08-21 20BAD	AZ	GRAHAM	324345	1101320	15050203	S	56.0	--	--
BIG CHINO VALLEY									
B-18-03 25CDA	AZ	YAVAPAI	345440	1123200	15060201	H	334	234	334
B-19-04 04CAC	AZ	YAVAPAI	350330	1124135	15060201	I	500	32.0	500
B-21-02 14BCC	AZ	YAVAPAI	351207	1122837	15060201	P	1700	1390	1700
B-22-07 08DDD	AZ	YAVAPAI	351750	1130140	15060201	N	1000	704	1000
B-24-08 17DCD2	AZ	YAVAPAI	352735	1130825	15060201	S	1750	1500	1750
BIG SANDY VALLEY									
B-16-13 22CCC1	AZ	MOHAVE	344220	1133655	15030201	H	188	--	--
B-21-13 30DCB	AZ	MOHAVE	351005	1134200	15030201	N	820	708 808	808 820
CANYON DIABLO									
A-18-14 13ABD2	AZ	COCONINO	345750	1104825	15020008	P	620	20.0	620
COCONINO PLATEAU									
A-26-02 11DDB	AZ	COCONINO	353845	1120835	15010004	P	3450	2600	3450
A-30-02 24CAA	AZ	COCONINO	355810	1120745	15010004	P	3110	2330	3110
COLORADO RIVER, HOOVER DAM TO IMPERIAL DAM									
B-04-19 28BDD	AZ	LA PAZ	333940	1141330	15030106	H	69.0	60	69
B-04-19 29BCB1	AZ	LA PAZ	333945	1141500	15030106	P	591	365 511	403 591
B-09-20 01DBC2	AZ	LA PAZ	340855	1141730	15030104	P	400	263	400
B-14-20 33DCB	AZ	MOHAVE	343019.3	1142133.7	15030101	P	509	89	497
B-17-22 11DCC	AZ	MOHAVE	345200	1143520	15030101	I	180	--	--
B-20-22 24DDC	AZ	MOHAVE	350555	1133355	15030101	H	480	435	455
B-21-21 27CCB	AZ	MOHAVE	351016	1143059	15030101	P	1080	930 970 1010 1030	950 990 1030 1080
B-25-20 15AAA	AZ	MOHAVE	353335	1142350	15010014	S	700	--	--
DUNCAN BASIN									
20S 21W 17 111	NM	HIDALGO	323425	1090220	15040002	S	171	--	--
D-09-32 03AAA5	AZ	GREENLEE	324110	1090250	15040002	I	80.0	20	80
GILA BEND BASIN									
C-04-04 04DAA	AZ	MARICOPA	330630	1124000	15070101	I	650	--	--
C-06-06 10BCB	AZ	MARICOPA	325520	1125210	15070101	I	1390	994	1390
GILA RIVER FROM HEAD OF SAN CARLOS RESERVOIR TO KELVIN									
A-01-16 19BAD	AZ	GILA	332505	1104250	15040007	R	983	500 800	820 1000
GILA RIVER FROM PAINTED ROCK DAM TO TEXAS HILL									
C-04-11 21BCB	AZ	YUMA	330410	1132430	15070201	I	580	300 460 530 550	415 490 535 560
C-07-13 24ADA2	AZ	YUMA	324825	1133130	15070201	I	701	10	690
C-11-06 24ACA	AZ	PIMA	322730	1125000	15070202	P	1330	--	--
GILA RIVER FROM TEXAS HILL TO DOME									
C-09-19 04BBB	AZ	YUMA	324040	1141335	15070201	D	133	80.0	105

See codes used to identify Primary Use of Water at end of table.

QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

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SITE INFORMATION--Continued

HARQUAHALA PLAINS

B-05-09S02BBD	AZ	MARICOPA	334830	1131025	15070104	S	400	--	--
C-01-09 05CCC	AZ	MARICOPA	332150	1131245	15070104	P	1100	741	831
								845	1100

HASSAYAMPA BASIN

B-07-05 01CDB	AZ	MARICOPA	335825	1124355	15070103	P	110	50.0	96.0
B-09-06 02DCD	AZ	YAVAPAI	340840	1125045	15070103	P	1400	921	1030
								1030	1400

HOLBROOK

A-18-19 33DAD2	AZ	NAVAJO	345445	1101925	15020008	E	410	60	271
								271	410

HOUSE ROCK

A-41-08 14BCA	AZ	COCONINO	365725	1113030	14070006	P	1200	1030	1200
								880	1010
								1010	1200

HUALAPAI VALLEY

B-22-16 28BDA2	AZ	MOHAVE	351550	1135910	15010007	P	1010	500	740
								740	1010
B-23-13 20CCD	AZ	MOHAVE	352130	1134150	15010007	P	355	65	336
B-24-12 09AAD	AZ	MOHAVE	352905	1133335	15010007	P	385	--	--
B-26-18 03AAA1	AZ	MOHAVE	354035	1141105	15010007	H	700	600	700
								570	697
B-29-17 26AAA	AZ	MOHAVE	355250	1140405	15010005	P	1200	1060	1200

KANAB

B-40-04 17DDB	AZ	MOHAVE	365149	1124422	15010003	S	--	--	--
B-41-06 06BAD	AZ	MOHAVE	365914	1125900	15010009	P	98.0	30	42
								30	98
								80	98
B-42-06 31CCC	AZ	MOHAVE	365930	1125925	15010009	P	585	480	580

LOWER HASSAYAMPA

B-02-06 29BAB	AZ	MARICOPA	332935	1125350	15070104	I	1000	292	992
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LOWER SAN PEDRO BASIN

D-07-16 10ABC	AZ	PINAL	325035	1104150	15050203	P	136	24	136
D-10-18 21DDDB	AZ	PINAL	323245	1103010	15050203	H	120	--	--

LOWER SANTA CRUZ BASIN

D-05-03 16CCC2	AZ	PINAL	325907	1120350	15050303	H	935	640	905
D-05-07 23DDA	AZ	PINAL	325815	1112605	15050100	I	1500	--	--
D-06-04N04ABB	AZ	PINAL	325615	1115605	15050303	I	1010	313	607
D-06-04S04DDD3	AZ	PINAL	325525	1115545	15050303	P	755	510	737
D-07-04W01DAD	AZ	PINAL	325040	1115340	15050303	I	1460	500	822
								764	1370
								1370	1460
D-07-06 29DDD2	AZ	PINAL	324640	1114420	15050303	I	270	200	270
								115	190
D-07-06 34CDD2	AZ	PINAL	324550	1114250	15050303	I	770	312	657
								657	755
D-09-07 02CDD	AZ	PINAL	323940	1113540	15050303	I	562	126	542
								416	562
D-09-07 03ADD	AZ	PINAL	324005	1113610	15050303	I	1000	250	980
D-10-09 10AAD2	AZ	PINAL	323410	1112350	15050303	I	752	--	--
D-11-11 35DDD	AZ	PIMA	322530	1111100	15050303	I	502	400	480

LOWER VERDE RIVER

A-03-06 15ABA	AZ	MARICOPA	333635	1114320	15060203	P	735	447	735
								450	735
A-11-10 34DCA	AZ	GILA	341456	1111844	15060105	P	203	103	203
A-12-08 29AAA2	AZ	GILA	342415	1113110	15060203	U	--	--	--

MCMULLEN VALLEY

B-07-09 11AAA	AZ	MARICOPA	335815	1130930	15070104	I	1020	380	755
								755	1010

NEW RIVER-CAVE CREEK

A-04-02 11ADB	AZ	MARICOPA	334230	1120710	15070102	T	900	425	600
A-05-02 03DCB	AZ	MARICOPA	334805	1120830	15070102	H	410	295	380
								385	410
A-06-04 26DCC	AZ	MARICOPA	334945	1115500	15060106	P	485	423	485
								150	435

See codes used to identify Primary Use of Water at end of table.

## QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

## SITE INFORMATION--Continued

## PEACH SPRINGS CANYON

B-25-11 02CBC	AZ	MOHAVE	353445	1132550	15010002	S	--	--	--
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## RANEGRAS PLAIN

B-03-14 11DDC	AZ	LA PAZ	333635	1133940	15030105	P	665	--	--
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## SACRAMENTO VALLEY

B-17-18 12ABD	AZ	MOHAVE	345239	1140840	15030103	N	600	--	--
B-21-18 05DBD	AZ	MOHAVE	351400	1141325	15030103	P	1350	1030	1350

## SAFFORD BASIN

D-04-22 25BCB	AZ	GRAHAM	330330	1100300	15040005	I	93.0	27.0	92.0
D-07-26 15BCC	AZ	GRAHAM	324925	1094050	15040005	I	86.0	30.0	82.0
D-09-26 18DDA	AZ	GRAHAM	323850	1094305	15040005	S	1200	--	--

## SALT RIVER VALLEY

B-01-02 25BBC2	AZ	MARICOPA	332415	1122530	15070101	I	543	400	450
D-01-09 07BDC2	AZ	PINAL	332135	1112820	15050100	P	1000	--	--
D-01-10 35DBC	AZ	PINAL	331755	1111735	15050100	P	500	38	500

## SAN BERNARDINO VALLEY

D-24-30 23BBA2	AZ	COCHISE	312005	1091550	15080302	S	--	--	--
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## SAN FRANCISCO PEAKS

A-22-05 16DBC	AZ	COCONINO	351710	1115210	15060202	N	850	--	--
A-27-09 06ADB	AZ	COCONINO	354505	1112805	15020016	P	1600	1290	1600

## SAN SIMON BASIN

D-13-29 25CCC1	AZ	COCHISE	321550	1092050	15040006	I	863	403	803
D-18-32 33CAA	AZ	COCHISE	314900	1090455	15040006	S	391	793	863
								150	160
								245	250
								330	370
								380	391
D-20-32 29ABB	AZ	COCHISE	314000	1090540	15040006	H	412	--	--
D-21-31 03BCD2	AZ	COCHISE	313800	1091045	15040006	H	750	--	--

## SNOWFLAKE

A-13-21 26ADB2	AZ	NAVAJO	342940	1100451	15020005	P	440	380	440
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## UPPER SALT RIVER BASIN

A-09-13 25ABB	AZ	GILA	340600	1105755	15060103	I	237	117	237
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## UPPER SAN PEDRO BASIN

D-13-22 33DAC	AZ	COCHISE	321525	1100555	15050202	S	1440	454	1440
D-17-21 31DDA	AZ	COCHISE	315430	1101350	15050202	I	333	0	--
								90.0	--
D-22-20 01BBD	AZ	COCHISE	313305	1101610	15050202	P	710	491	642
D-24-21 03AAB	AZ	COCHISE	312255	1101135	15050202	H	--	642	710
								--	--

## UPPER SANTA CRUZ BASIN

D-11-14 32CCC	AZ	PIMA	322530	1105635	15050301	P	522	160	310
								310	522
D-12-12 16DDD	AZ	PIMA	322252	1110650	15050301	I	234	68.0	225
D-16-15 14ACB	AZ	PIMA	320240	1104655	15050301	C	905	445	900
D-17-14 07DDD	AZ	PIMA	315730	1105640	15050301	I	1500	150	720
								150	728
								700	1500
								1500	1500
D-19-13 29CBB2	AZ	PIMA	314445	1110230	15050301	H	--	--	--
D-19-17 17BBD	AZ	PIMA	314715	1103800	15050302	S	845	331	845
D-22-13 34ADD UNSURV	AZ	SANTA CRUZ	312820	1105940	15050301	I	200	30.0	200
D-24-14 05ADB2	AZ	SANTA CRUZ	312225	1105540	15050301	N	550	--	--

See codes used to identify Primary Use of Water at end of table.



QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

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SITE INFORMATION--Continued

UPPER VERDE RIVER

A-13-05 04BBA	AZ	YAVAPAI	343315	1114955	15060203	Z	205	100	205
A-13-05 27DCD1	AZ	YAVAPAI	342856	1114827	15060203	I	225	39.2	145
A-14-05 01BCD	AZ	YAVAPAI	343811	1114633	15060202	P	350	180	200
								210	350
A-15-03 12CDC	AZ	YAVAPAI	344215	1115910	15060202	P	700	500	700
A-15-04 02BCA1	AZ	YAVAPAI	344337	1115357	15060202	I	260	204	260
A-16-02 12CAD2	AZ	YAVAPAI	344642	1120520	15060202	N	833	640	833
A-16-03 34ADC	AZ	YAVAPAI	344428	1120048	15060202	P	300	75.0	300
A-17-06 08BDC	AZ	COCONINO	345210	1114520	15060202	P	747	505	706
A-18-07 15CCC2	AZ	COCONINO	345616	1113854	15060202	P	1250	1190	1250
A-20-07 20CCA	AZ	COCONINO	350547	1114057	15060202	P	1210	637	968
								968	1210

VIRGIN RIVER

B-41-15 33CAC	AZ	MOHAVE	365430	1135545	15010010	H	150	120	150
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WATERMAN WASH

C-02-02 19AAD	AZ	MARICOPA	331435	1122945	15070101	H	434	301	351
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WESTERN MEXICAN DRAINAGE

C-17-05 17ACB UNSURV	AZ	PIMA	315700	1124805	15080102	P	430	365	425
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WHITE MOUNTAINS

A-08-29 08ACA1	AZ	APACHE	340625	1091815	15020001	P	220	--	--
A-10-25 22BBD2	AZ	APACHE	341515	1094125	15020002	P	340	240	340

WILLCOX BASIN

D-14-25 11CAA	AZ	COCHISE	321350	1094555	15050201	S	100	80	100
D-15-24 20CAC	AZ	COCHISE	320640	1095515	15050201	I	450	150	280
								270	450
D-17-28 14CCB3	AZ	COCHISE	315705	1092825	15050201	H	120	--	--

YUMA

C-08-22 28CCC	AZ	YUMA	324158	1143145	15070201	I	169	116	168
C-10-24 12BCC	AZ	YUMA	323430	1144058	15030108	D	190	150	178

CODES USED TO IDENTIFY PRIMARY USE OF WATER

C Commercial	P Public Supply
D Drain	R Recreation
E Power	S Stock
H Domestic	T Institutional
I Irrigation	U Unused
N Industrial	Z Other

## QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

## WATER-QUALITY DATA

LOCAL IDENT- I- PIER	STATION	NUMBER	DATE	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
AGUA FRIA BASIN										
A-09-02 27CBB1	340527112085801	05-29-01	7.3	550	21.5	180	48.0	14.0	2.10	
A-11-02 25BDD	341816112061301	06-01-01	7.4	696	20.0	280	88.0	15.0	1.40	
A-12-01 26DAD2	342322112130001	06-01-01	7.2	917	18.0	390	120	23.0	.60	
B-14-01 14ACC	343540112195701	05-29-01	7.7	529	19.5	220	65.0	15.0	1.00	
ALTAR VALLEY										
D-20-08 35BDB	313850111295701	04-18-01	8.0	381	32.0	51	16.0	2.70	1.80	
ARAIPA VALLEY										
D-08-21 20BAD	324343110131501	08-29-01	7.5	340	19.0	120	35.0	9.00	2.80	
BIG CHINO VALLEY										
B-18-03 25CDA	345442112315801	05-30-01	8.1	394	18.5	140	23.0	21.0	2.20	
B-19-04 04CAC	350332112413701	05-30-01	7.8	479	21.5	190	33.0	26.0	2.30	
B-21-02 14BCC	351207112283701	09-11-01	7.6	614	24.5	210	52.0	19.0	1.40	
B-22-07 08DDD	351750113014001	05-30-01	7.8	479	24.5	220	56.0	20.0	1.30	
B-24-08 17DCD2	352730113081002	05-31-01	7.6	474	28.5	200	44.0	22.0	2.80	
BIG SANDY VALLEY										
B-16-13 22CCC1	344219113365701	09-07-01	8.8	500	26.0	7	2.20	.380	1.70	
B-21-13 30DCB	351006113420001	07-09-01	7.4	2930	31.5	320	41.0	52.0	7.30	
CANYON DIABLO										
A-18-14 13ABD2	345750110482501	09-05-01	7.5	2350	17.0	360	81.0	39.0	1.90	
COCONINO PLATEAU										
A-26-02 11DDB	353843112083301	09-10-01	7.4	902	27.0	350	74.0	41.0	3.40	
A-30-02 24CAA	355811112074501	09-10-01	7.6	460	22.5	230	49.0	27.0	1.30	
COLORADO RIVER, HOOVER DAM TO IMPERIAL DAM										
B-04-19 28BDD	333937114133001	08-21-01	7.2	445	28.0	220	73.0	8.30	1.70	
B-04-19 29BCB1	333946114150101	08-21-01	7.3	886	36.0	240	79.0	11.0	4.80	
B-09-20 01DBC2	340853114173201	08-21-01	7.5	1510	29.0	120	43.0	1.90	4.20	
B-14-20 33DCB	343022114213401	07-13-01	7.7	1490	27.5	270	63.0	28.0	6.50	
B-17-22 11DCC	345200114352001	07-12-01	7.2	4140	22.0	1000	270	84.0	8.00	
B-20-22 24DDC	350557113335701	07-12-01	7.5	2620	37.5	660	240	15.0	10.0	
B-21-21 27CCB	351015114305901	07-12-01	8.2	511	41.5	31	12.0	.190	4.30	
B-25-20 15AAA	353337114235201	07-10-01	8.0	342	29.5	80	20.0	7.40	3.30	
DUNCAN BASIN										
20S 21W 17 111	323425109022101	08-30-01	8.6	440	22.5	14	3.60	1.20	.70	
D-09-32 03AAA5	324108109025401	08-30-01	7.4	469	16.5	160	48.0	9.10	2.60	
GILA BEND BASIN										
C-04-04 04DAA	330632112395901	08-07-01	6.8	4380	27.7	990	320	46.0	11.0	
C-06-06 10BCB	325518112521101	04-05-01	8.4	1890	32.0	96	35.0	2.00	3.80	
GILA RIVER FROM HEAD OF SAN CARLOS RESERVOIR TO KELVIN										
A-01-16 19BAD	332507110425001	08-31-01	7.5	505	31.0	220	39.0	29.0	2.30	
GILA RIVER FROM PAINTED ROCK DAM TO TEXAS HILL										
C-04-11 21BCB	330415113242701	08-08-01	7.8	2790	31.5	550	200	13.0	8.70	
C-07-13 24ADA2	324823113312901	04-03-01	8.2	1710	35.0	99	33.0	4.10	5.00	
C-11-06 24ACA	322728112500201	04-02-01	8.3	973	42.5	44	13.0	2.90	3.50	
GILA RIVER FROM TEXAS HILL TO DOME										
C-09-19 04BBB	324040114133501	04-03-01	7.5	5050	22.5	850	200	84.0	8.10	
HARQUAHALA PLAINS										
B-05-09S02BBD	334830113102401	09-06-01	7.6	683	23.5	190	43.0	19.0	2.50	
C-01-09 05CCC	332149113124601	08-22-01	7.7	1010	37.0	82	17.0	9.50	4.70	

QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

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WATER-QUALITY DATA--Continued

LOCAL IDENT- IFIER	DATE	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ANC WATER UNPLTRD FET FIELD MG/L AS CACO3 (00410)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
AGUA FRIA BASIN										
A-09-02 27CBB1	05-29-01	1	45.0	201	--	14.0	.6	19.0	57.0	322
A-11-02 25BDD	06-01-01	.7	28.0	237	--	36.0	.4	33.0	61.0	410
A-12-01 26DAD2	06-01-01	1.0	45.0	284	--	54.0	.3	27.0	110	561
B-14-01 14ACC	05-29-01	.6	19.0	157	--	9.1	.1	22.0	92.0	326
ALTAR VALLEY										
D-20-08 35BDB	04-18-01	4	67.0	147	--	8.9	7.7	29.0	12.0	244
ARAVAIPA VALLEY										
D-08-21 20BAD	08-29-01	.9	22.0	148	--	5.8	.4	40.0	13.0	221
BIG CHINO VALLEY										
B-18-03 25CDA	05-30-01	.8	23.0	173	--	24.0	.7	72.0	5.8	278
B-19-04 04CAC	05-30-01	.7	23.0	223	--	13.0	.3	27.0	8.0	281
B-21-02 14BCC	09-11-01	1	46.0	166	--	29.0	.3	17.0	88.0	365
B-22-07 08DDD	05-30-01	.2	7.8	202	--	16.0	.2	14.0	10.0	261
B-24-08 17DCD2	05-31-01	.6	19.0	214	--	14.0	.5	19.0	6.2	263
BIG SANDY VALLEY										
B-16-13 22CCC1	09-07-01	16	100	123	--	39.0	2.5	19.0	45.0	289
B-21-13 30DCB	07-09-01	13	550	659	--	440	6.5	46.0	170	1710
CANYON DIABLO										
A-18-14 13ABD2	09-05-01	8	330	202	--	490	.2	11.0	130	1210
COCONINO PLATEAU										
A-26-02 11DDB	09-10-01	1	49.0	240	--	83.0	.5	10.0	92.0	499
A-30-02 24CAA	09-10-01	.1	5.1	209	--	8.3	.1	9.5	12.0	242
COLORADO RIVER, HOOVER DAM TO IMPERIAL DAM										
B-04-19 28BDD	08-21-01	.2	7.5	196	--	9.2	.1	38.0	5.4	290
B-04-19 29BCB1	08-21-01	3	96.0	152	--	63.0	.7	37.0	190	585
B-09-20 01DBC2	08-21-01	11	260	78	--	230	2.1	20.0	250	873
B-14-20 33DCB	07-13-01	5	200	141	--	210	1.4	22.0	260	882
B-17-22 11DCC	07-12-01	7	550	338	--	590	.5	25.0	1000	2730
B-20-22 24DDC	07-12-01	4	250	76	--	750	2.5	49.0	35.0	1400
B-21-21 27CCB	07-12-01	8	96.0	122	--	40.0	3.7	53.0	37.0	340
B-25-20 15AAA	07-10-01	2	38.0	114	--	14.0	.6	32.0	11.0	219
DUNCAN BASIN										
20S 21W 17 111	08-30-01	12	100	177	--	7.8	1.8	39.0	14.0	296
D-09-32 03AAA5	08-30-01	1	36.0	171	--	14.0	1.7	32.0	39.0	288
GILA BEND BASIN										
C-04-04 04DAA	08-07-01	7	520	149	--	1100	.8	24.0	370	2520
C-06-06 10BCB	04-05-01	15	330	39	--	430	5.4	31.0	150	1020
GILA RIVER FROM HEAD OF SAN CARLOS RESERVOIR TO KELVIN										
A-01-16 19BAD	08-31-01	.7	22.0	227	--	14.0	.3	33.0	10.0	292
GILA RIVER FROM PAINTED ROCK DAM TO TEXAS HILL										
C-04-11 21BCB	08-08-01	6	320	43	--	650	2.6	31.0	220	1550
C-07-13 24ADA2	04-03-01	14	310	65	--	300	4.9	17.0	230	956
C-11-06 24ACA	04-02-01	12	180	104	--	150	4.8	45.0	92.0	571
GILA RIVER FROM TEXAS HILL TO DOME										
C-09-19 04BBB	04-03-01	13	850	407	--	820	2.4	29.0	980	3220
HARQUAHALA PLAINS										
B-05-09S02BBD	09-06-01	2	66.0	156	--	69.0	.3	25.0	30.0	442
C-01-09 05CCC	08-22-01	9	190	151	--	130	2.6	22.0	120	602

## QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

## WATER-QUALITY DATA--Continued

LOCAL IDENT- I- FIER	DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
AGUA FRIA BASIN										
A-09-02 27CBB1	05-29-01	<.010	.220	<.010	.020	--	--	240	--	--
A-11-02 25BDD	06-01-01	<.010	1.20	<.010	<.010	--	--	41	--	--
A-12-01 26DAD2	06-01-01	<.010	2.30	<.010	.020	--	--	51	--	--
B-14-01 14ACC	05-29-01	<.010	1.90	<.010	.010	--	--	17	--	--
ALTAR VALLEY										
D-20-08 35BDB	04-18-01	<.010	2.40	<.010	.010	--	--	110	--	--
ARAUAIPA VALLEY										
D-08-21 20BAD	08-29-01	<.010	.910	<.010	.020	--	--	36	--	--
BIG CHINO VALLEY										
B-18-03 25CDA	05-30-01	<.010	.590	<.010	<.010	--	--	120	--	--
B-19-04 04CAC	05-30-01	<.010	3.40	<.010	.010	--	--	59	--	--
B-21-02 14BCC	09-11-01	.010	2.90	<.010	<.010	--	--	138	--	--
B-22-07 08DDD	05-30-01	<.010	3.40	<.010	<.010	--	--	38	--	--
B-24-08 17DCD2	05-31-01	<.010	1.60	<.010	<.010	--	--	100	--	--
BIG SANDY VALLEY										
B-16-13 22CCC1	09-07-01	<.010	1.20	<.010	<.010	--	--	260	--	--
B-21-13 30DCB	07-09-01	<.010	.150	<.010	<.010	--	--	2330	--	--
CANYON DIABLO										
A-18-14 13ABD2	09-05-01	.014	.250	<.010	<.010	--	--	63	--	--
COCONINO PLATEAU										
A-26-02 11DDB	09-10-01	.015	.440	<.010	<.010	--	--	245	--	--
A-30-02 24CAA	09-10-01	<.010	1.00	<.010	<.010	--	--	27	--	--
COLORADO RIVER, HOOVER DAM TO IMPERIAL DAM										
B-04-19 28BDD	08-21-01	<.010	6.70	<.010	<.010	--	--	42	--	--
B-04-19 29BCB1	08-21-01	<.010	2.70	<.010	<.010	--	--	248	--	--
B-09-20 01DBC2	08-21-01	<.010	3.30	<.010	<.010	--	--	478	--	--
B-14-20 33DCB	07-13-01	<.010	1.50	<.010	<.010	--	--	390	--	--
B-17-22 11DCC	07-12-01	.340	.050	<.010	<.010	--	--	340	--	--
B-20-22 24DDC	07-12-01	<.010	.520	<.010	<.010	<4.0	--	540	--	--
B-21-21 27CCB	07-12-01	<.010	4.70	<.010	<.010	21.0	--	238	--	--
B-25-20 15AAA	07-10-01	<.010	5.40	<.010	<.010	--	--	72	--	--
DUNCAN BASIN										
20S 21W 17 111	08-30-01	<.010	4.90	<.010	<.010	--	--	154	--	--
D-09-32 03AAA5	08-30-01	<.010	.720	<.010	.060	--	--	60	--	--
GILA BEND BASIN										
C-04-04 04DAA	08-07-01	<.010	9.80	<.010	<.010	--	--	530	--	--
C-06-06 10BCB	04-05-01	<.010	2.90	<.010	.030	--	--	1400	--	--
GILA RIVER FROM HEAD OF SAN CARLOS RESERVOIR TO KELVIN										
A-01-16 19BAD	08-31-01	<.010	1.50	<.010	<.010	--	--	36	--	--
GILA RIVER FROM PAINTED ROCK DAM TO TEXAS HILL										
C-04-11 21BCB	08-08-01	<.010	17.0	<.010	<.010	--	--	400	--	--
C-07-13 24ADA2	04-03-01	<.010	2.60	<.010	.020	--	--	1500	--	--
C-11-06 24ACA	04-02-01	<.010	3.90	<.010	.020	--	--	480	--	--
GILA RIVER FROM TEXAS HILL TO DOME										
C-09-19 04BBB	04-03-01	.462	.540	<.010	.040	--	--	1300	--	--
HARQUAHALA PLAINS										
B-05-09S02BBD	09-06-01	.020	21.0	<.010	<.010	--	--	125	--	--
C-01-09 05CCC	08-22-01	<.010	3.50	<.010	<.010	--	--	444	--	--

QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

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WATER-QUALITY DATA--Continued

LOCAL IDENT- I- PIER	DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
AGUA FRIA BASIN										
A-09-02 27CBB1	05-29-01	110	--	--	3.2	--	--	--	--	<2
A-11-02 25BDD	06-01-01	M	--	--	<1.0	--	--	--	--	4
A-12-01 26DAD2	06-01-01	M	--	--	<1.0	--	--	--	--	40
B-14-01 14ACC	05-29-01	M	--	--	5.7	--	--	--	--	<2
ALTAR VALLEY										
D-20-08 35BDB	04-18-01	M	--	--	<1.0	--	--	--	--	48
ARAIPA VALLEY										
D-08-21 20BAD	08-29-01	<2	--	--	<1.0	--	--	--	--	<2
BIG CHINO VALLEY										
B-18-03 25CDA	05-30-01	<2	--	--	<1.0	--	--	--	--	21
B-19-04 04CAC	05-30-01	<2	--	--	<1.0	--	--	--	--	<2
B-21-02 14BCC	09-11-01	M	--	--	<1.0	--	--	--	--	24
B-22-07 08DDD	05-30-01	<2	--	--	<1.0	--	--	--	--	2
B-24-08 17DCD2	05-31-01	M	--	--	<1.0	--	--	--	--	14
BIG SANDY VALLEY										
B-16-13 22CCC1	09-07-01	M	--	--	<1.0	--	--	--	--	<2
B-21-13 30DCB	07-09-01	20	--	--	3.2	--	--	--	--	78
CANYON DIABLO										
A-18-14 13ABD2	09-05-01	<2	--	--	<1.0	--	--	--	--	<2
COCONINO PLATEAU										
A-26-02 11DDB	09-10-01	M	--	--	8.6	--	--	--	--	11
A-30-02 24CAA	09-10-01	<2	--	--	<1.0	--	--	--	--	6
COLORADO RIVER, HOOVER DAM TO IMPERIAL DAM										
B-04-19 28BDD	08-21-01	<2	--	--	<1.0	--	--	--	--	<2
B-04-19 29BCB1	08-21-01	M	--	--	2.4	--	--	--	--	136
B-09-20 01DBC2	08-21-01	M	--	--	<1.0	--	--	--	--	<2
B-14-20 33DCB	07-13-01	M	--	--	<1.0	--	--	--	--	6
B-17-22 11DCC	07-12-01	1000	--	--	1600	--	--	--	--	<2
B-20-22 24DDC	07-12-01	20	--	--	7.1	--	--	--	--	<2
B-21-21 27CCB	07-12-01	M	--	--	<1.0	--	--	--	--	4
B-25-20 15AAA	07-10-01	M	--	--	<1.0	--	--	--	--	21
DUNCAN BASIN										
20S 21W 17 111	08-30-01	M	--	--	<1.0	--	--	--	--	<2
D-09-32 03AAA5	08-30-01	<2	--	--	<1.0	--	--	--	--	<2
GILA BEND BASIN										
C-04-04 04DAA	08-07-01	M	--	--	<1.0	--	--	--	--	2
C-06-06 10BCB	04-05-01	M	--	--	<1.0	--	--	--	--	<2
GILA RIVER FROM HEAD OF SAN CARLOS RESERVOIR TO KELVIN										
A-01-16 19BAD	08-31-01	<2	--	--	<1.0	--	--	--	--	59
GILA RIVER FROM PAINTED ROCK DAM TO TEXAS HILL										
C-04-11 21BCB	08-08-01	M	--	--	<1.0	--	--	--	--	<2
C-07-13 24ADA2	04-03-01	10	--	--	<1.0	--	--	--	--	3
C-11-06 24ACA	04-02-01	10	--	--	<1.0	--	--	--	--	<2
GILA RIVER FROM TEXAS HILL TO DOME										
C-09-19 04BBB	04-03-01	650	--	--	1400	--	--	--	--	<2
HARQUAHALA PLAINS										
B-05-09S02BBD	09-06-01	<2	--	--	2.5	--	--	--	--	1000
C-01-09 05CCC	08-22-01	10	--	--	1.3	--	--	--	--	<2



## QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

## WATER-QUALITY DATA--Continued

LOCAL IDENT- I- PIER	STATION	NUMBER	DATE	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
HASSAYAMPA BASIN										
B-07-05 01CDB	335825112435301		05-04-01	7.9	484	18.5	190	50.0	15.0	1.90
B-09-06 02DCD	340838112504501		08-20-01	7.5	427	30.0	150	51.0	5.70	2.10
HOLBROOK										
A-18-19 33DAD2	345444110192501		07-26-01	7.6	1540	17.0	280	57.0	34.0	2.40
HOUSE ROCK										
A-41-08 14BCA	365723111302801		08-28-01	7.3	1100	20.0	380	81.0	43.0	9.50
HUALAPAI VALLEY										
B-22-16 28BDA2	351552113590801		07-10-01	7.9	425	29.0	140	28.0	18.0	5.20
B-23-13 20CCD	352130113413901		05-31-01	7.6	735	20.0	280	57.0	34.0	6.00
B-24-12 09AAD	352904113333401		05-31-01	7.9	530	21.0	220	36.0	32.0	2.90
B-26-18 03AAA1	354036114110601		07-10-01	7.9	496	30.5	160	25.0	24.0	7.90
B-29-17 26AAA	355248114040501		07-10-01	7.7	651	30.0	240	65.0	19.0	6.00
KANAB										
B-40-04 17DDB	365149112442201		08-30-01	8.0	540	16.0	200	47.0	21.0	2.80
B-41-06 06BAD	365914112590001		08-29-01	7.5	1750	18.0	660	161	62.0	7.70
B-42-06 31CCC	365931112592301		08-29-01	7.7	520	18.5	200	35.0	27.0	3.10
LOWER HASSAYAMPA										
B-02-06 29BAB	332936112535001		05-03-01	7.9	1200	29.0	150	48.0	7.50	4.50
LOWER SAN PEDRO BASIN										
D-07-16 10ABC	325033110414901		06-25-01	7.5	630	21.0	250	85.0	10.0	2.50
D-10-18 21DDB	323244110300801		06-25-01	7.5	937	18.5	390	130	17.0	4.10
LOWER SANTA CRUZ BASIN										
D-05-03 16CCC2	325909112035001		06-11-01	8.4	660	28.5	59	14.0	5.90	2.50
D-05-07 23DDA	325813111360401		06-08-01	7.1	4650	25.0	1200	380	51.0	9.10
D-06-04N04ABB	325617111560601		06-06-01	7.6	1150	29.0	290	94.0	13.0	4.20
D-06-04S04DDD3	325523111554301		06-06-01	7.7	1340	29.0	400	130	19.0	3.50
D-07-04W01DAD	325041111534201		06-06-01	8.4	505	31.0	33	8.80	2.60	1.40
D-07-06 29DDD2	324645111442301		06-07-01	7.2	3330	24.0	1100	370	53.0	6.90
D-07-06 34CDD2	324550111424901		06-07-01	7.3	1190	27.5	250	80.0	11.0	4.10
D-09-07 02CDD	323954111353101		06-07-01	7.5	1090	25.5	340	110	16.0	3.70
D-09-07 03ADD	324007111361001		06-07-01	7.6	680	26.0	180	59.0	7.50	3.00
D-10-09 10AAD2	323413111235101		06-08-01	7.6	723	27.5	200	65.0	8.20	2.70
D-11-11 35DDD	322530111110001		04-16-01	7.2	944	23.0	340	110	16.0	2.40
LOWER VERDE RIVER										
A-03-06 15ABA	333639111433101		05-02-01	7.6	541	32.5	160	49.0	10.0	2.00
A-11-10 34DCA	341456111184401		07-24-01	7.1	384	18.0	170	43.0	14.0	.60
A-12-08 29AAA2	342415111311201		04-30-01	7.1	436	19.5	190	48.0	17.0	1.60
MCMULLEN VALLEY										
B-07-09 11AAA	335815113093001		08-20-01	7.6	528	30.0	110	24.0	12.0	3.30
NEW RIVER-CAVE CREEK										
A-04-02 11ADB	334230112070901		04-30-01	7.8	423	29.0	130	28.0	15.0	2.90
A-05-02 03DCB	334803112083201		05-02-01	7.9	535	32.0	90	18.0	11.0	3.70
A-06-04 26DCC	334943111545901		05-02-01	7.9	465	27.5	120	22.0	17.0	2.90
PEACH SPRINGS CANYON										
B-25-11 02CBC	353444113254901		05-31-01	7.7	678	20.0	290	59.0	34.0	1.50
RANEGRAS PLAIN										
B-03-14 11DDC	333637113394001		08-22-01	7.6	1620	31.0	140	55.0	1.40	2.80
SACRAMENTO VALLEY										
B-17-18 12ABD	345239114084001		07-11-01	7.8	578	34.5	180	40.0	20.0	4.30
B-21-18 05DBD	351401114132401		07-11-01	7.9	523	39.0	110	27.0	10.0	8.80
SAFFORD BASIN										
D-04-22 25BCB	330330110030001		08-29-01	7.2	500	20.0	110	36.0	5.40	1.10
D-07-26 15BCC	324926109405201		08-28-01	7.2	2870	19.0	250	71.0	18.0	6.50
D-09-26 18DDA	323850109430701		08-29-01	7.2	320	21.0	110	31.0	7.70	.90

QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

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WATER-QUALITY DATA--Continued

LOCAL IDENT- I- FIER	DATE	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD (MG/L AS CACO3) (00410)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
HASSAYAMPA BASIN										
B-07-05 01CDB	05-04-01	.9	28.0	191	--	16.0	.4	25.0	34.0	289
B-09-06 02DCD	08-20-01	1.0	28.0	150	--	17.0	.3	35.0	15.0	268
HOLBROOK										
A-18-19 33DAD2	07-26-01	5	200	176	--	290	.3	11.0	130	830
HOUSE ROCK										
A-41-08 14BCA	08-28-01	2	94.0	219	--	83.0	.3	12.0	250	707
HUALAPAI VALLEY										
B-22-16 28BDA2	07-10-01	1	29.0	144	--	24.0	1.1	54.0	17.0	275
B-23-13 20CCD	05-31-01	1	40.0	267	--	46.0	.6	62.0	36.0	449
B-24-12 09AAD	05-31-01	.6	19.0	174	--	40.0	.4	32.0	21.0	308
B-26-18 03AAA1	07-10-01	1	33.0	145	--	36.0	.7	42.0	30.0	303
B-29-17 26AAA	07-10-01	.8	30.0	138	--	69.0	2.1	29.0	63.0	377
KANAB										
B-40-04 17DDB	08-30-01	.9	30.0	185	--	24.0	.2	13.0	44.0	306
B-41-06 06BAD	08-29-01	3	150	322	--	100	.2	11.0	450	1140
B-42-06 31CCC	08-29-01	1	42.0	263	--	9.5	.7	13.0	12.0	301
LOWER HASSAYAMPA										
B-02-06 29BAB	05-03-01	6	180	81	--	240	4.7	20.0	99.0	664
LOWER SAN PEDRO BASIN										
D-07-16 10ABC	06-25-01	.9	32.0	198	--	8.8	.9	40.0	110	410
D-10-18 21DDB	06-25-01	1	66.0	223	--	19.0	1.2	30.0	280	684
LOWER SANTA CRUZ BASIN										
D-05-03 16CCC2	06-11-01	6	110	91	--	63.0	4.4	18.0	100	383
D-05-07 23DDA	06-08-01	7	580	142	--	910	.5	33.0	890	3020
D-06-04N04ABB	06-06-01	3	120	105	--	180	.2	24.0	150	682
D-06-04S04DDD3	06-06-01	2	110	99	--	190	.3	31.0	230	840
D-07-04W01DAD	06-06-01	8	100	132	--	29.0	1.4	25.0	58.0	316
D-07-06 29DDD2	06-07-01	4	300	225	--	380	.3	43.0	930	2390
D-07-06 34CDD2	06-07-01	4	140	120	--	150	.5	32.0	190	737
D-09-07 02CDD	06-07-01	2	85.0	131	--	97.0	.3	31.0	130	716
D-09-07 03ADD	06-07-01	2	67.0	132	--	49.0	.4	31.0	79.0	432
D-10-09 10AAD2	06-08-01	2	74.0	173	--	42.0	.6	34.0	95.0	462
D-11-11 35DDD	04-16-01	1	59.0	199	--	79.0	.3	33.0	130	581
LOWER VERDE RIVER										
A-03-06 15ABA	05-02-01	2	47.0	182	--	35.0	1.8	42.0	29.0	330
A-11-10 34DCA	07-24-01	.5	14.0	171	--	7.6	.5	32.0	9.9	229
A-12-08 29AAA2	04-30-01	.4	13.0	166	.16	31.0	.1	3.7	13.0	234
MCMULLEN VALLEY										
B-07-09 11AAA	08-20-01	3	70.0	133	--	54.0	2.5	27.0	28.0	318
NEW RIVER-CAVE CREEK										
A-04-02 11ADB	04-30-01	1	37.0	174	--	14.0	1.0	39.0	11.0	269
A-05-02 03DCB	05-02-01	4	86.0	206	--	17.0	3.4	51.0	16.0	354
A-06-04 26DCC	05-02-01	2	48.0	168	--	22.0	1.0	39.0	14.0	286
PEACH SPRINGS CANYON										
B-25-11 02CBC	05-31-01	.5	18.0	199	--	44.0	.2	16.0	28.0	369
RANEGRAS PLAIN										
B-03-14 11DDC	08-22-01	9	260	52	--	200	3.5	21.0	390	988
SACRAMENTO VALLEY										
B-17-18 12ABD	07-11-01	1	39.0	128	--	60.0	1.2	32.0	51.0	334
B-21-18 05DBD	07-11-01	2	57.0	105	--	43.0	.8	50.0	71.0	337
SAFFORD BASIN										
D-04-22 25BCB	08-29-01	2	58.0	126	--	46.0	1.3	28.0	41.0	296
D-07-26 15BCC	08-28-01	15	540	384	--	480	3.8	55.0	300	1740
D-09-26 18DDA	08-29-01	.8	19.0	81	--	6.0	.8	37.0	55.0	214

## QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

## WATER-QUALITY DATA--Continued

LOCAL IDENT- I- FIER	DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
HASSAYAMPA BASIN										
B-07-05 01CDB	05-04-01	.010	.880	<.010	.050	--	--	90	--	--
B-09-06 02DCD	08-20-01	<.010	5.30	<.010	<.010	--	--	42	--	--
HOLBROOK										
A-18-19 33DAD2	07-26-01	<.010	<.020	<.010	<.010	--	--	79	--	--
HOUSE ROCK										
A-41-08 14BCA	08-28-01	.012	.550	<.010	<.010	--	--	100	--	--
HUALAPAI VALLEY										
B-22-16 28BDA2	07-10-01	<.010	2.80	<.010	<.010	--	--	98	33.0	--
B-23-13 20CCD	05-31-01	.014	1.60	<.010	.030	--	--	130	--	--
B-24-12 09AAD	05-31-01	<.010	4.60	<.010	<.010	--	--	77	--	--
B-26-18 03AAA1	07-10-01	<.010	3.90	<.010	<.010	--	--	130	18.0	--
B-29-17 26AAA	07-10-01	<.010	2.50	<.010	<.010	--	--	86	3.0	--
KANAB										
B-40-04 17DDB	08-30-01	<.010	2.90	<.010	<.010	--	--	163	--	--
B-41-06 06BAD	08-29-01	.108	.760	.100	<.010	--	--	356	--	--
B-42-06 31CCC	08-29-01	.078	<.020	<.010	<.010	--	--	238	--	--
LOWER HASSAYAMPA										
B-02-06 29BAB	05-03-01	.019	2.60	<.010	<.010	--	--	730	--	--
LOWER SAN PEDRO BASIN										
D-07-16 10ABC	06-25-01	.013	.360	<.010	.020	--	--	48	--	--
D-10-18 21DDB	06-25-01	.014	.730	<.010	.030	--	--	110	--	--
LOWER SANTA CRUZ BASIN										
D-05-03 16CCC2	06-11-01	<.010	2.40	<.010	.010	--	--	160	--	--
D-05-07 23DDA	06-08-01	<.010	19.0	<.010	.010	--	--	1110	--	--
D-06-04N04ABB	06-06-01	<.010	7.60	<.010	<.010	--	--	160	--	--
D-06-04S04DDD3	06-06-01	<.010	15.0	<.010	<.010	--	--	200	--	--
D-07-04W01DAD	06-06-01	<.010	2.30	<.010	<.010	--	--	200	--	--
D-07-06 29DDD2	06-07-01	<.010	39.0	<.010	<.010	--	--	790	--	--
D-07-06 34CDD2	06-07-01	<.010	13.0	<.010	.010	--	--	210	--	--
D-09-07 02CDD	06-07-01	<.010	37.0	<.010	.010	--	--	86	--	--
D-09-07 03ADD	06-07-01	<.010	13.0	<.010	.010	--	--	90	--	--
D-10-09 10AAD2	06-08-01	<.010	8.30	<.010	.010	--	--	110	--	--
D-11-11 35DDD	04-16-01	<.010	7.10	<.010	.010	--	--	80	--	--
LOWER VERDE RIVER										
A-03-06 15ABA	05-02-01	.016	1.20	<.010	<.010	--	--	90	--	--
A-11-10 34DCA	07-24-01	<.010	1.10	<.010	<.010	--	--	15	--	--
A-12-08 29AAA2	04-30-01	3.08	.080	<.010	<.010	<4.0	80.0	30	<1.0	<2.0
MCMULLEN VALLEY										
B-07-09 11AAA	08-20-01	<.010	4.00	<.010	<.010	--	--	155	--	--
NEW RIVER-CAVE CREEK										
A-04-02 11ADB	04-30-01	.012	3.60	<.010	<.010	--	--	70	--	--
A-05-02 03DCB	05-02-01	.013	5.50	<.010	<.010	--	--	150	--	--
A-06-04 26DCC	05-02-01	<.010	4.30	<.010	<.010	--	--	<90	--	--
PEACH SPRINGS CANYON										
B-25-11 02CBC	05-31-01	<.010	11.0	<.010	<.010	--	--	74	--	--
RANEGRAS PLAIN										
B-03-14 11DDC	08-22-01	<.010	5.10	<.010	<.010	--	--	812	--	--
SACRAMENTO VALLEY										
B-17-18 12ABD	07-11-01	<.010	2.20	<.010	.010	--	--	120	--	--
B-21-18 05DBD	07-11-01	<.010	1.50	<.010	<.010	--	--	150	40.0	--
SAFFORD BASIN										
D-04-22 25BCB	08-29-01	.014	.860	<.010	.020	--	--	48	--	--
D-07-26 15BCC	08-28-01	.010	8.40	<.010	.030	--	--	513	--	--
D-09-26 18DDA	08-29-01	.010	1.80	<.010	<.010	--	--	15	--	--

## QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

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## WATER-QUALITY DATA--Continued

LOCAL IDENT- I- FIER	DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
HASSAYAMPA BASIN										
B-07-05 01CDB	05-04-01	<2	--	--	<1.0	--	--	--	--	3
B-09-06 02DCD	08-20-01	<2	--	--	<1.0	--	--	--	--	10
HOLBROOK										
A-18-19 33DAD2	07-26-01	30	--	--	2.2	--	--	--	--	<2
HOUSE ROCK										
A-41-08 14BCA	08-28-01	50	--	--	5.2	--	--	--	--	175
HUALAPAI VALLEY										
B-22-16 28BDA2	07-10-01	<2	--	--	<1.0	--	--	--	--	<2
B-23-13 20CCD	05-31-01	<2	--	--	<1.0	--	--	--	--	<2
B-24-12 09AAD	05-31-01	<2	--	--	<1.0	--	--	--	--	4
B-26-18 03AAA1	07-10-01	M	--	--	<1.0	--	--	--	--	32
B-29-17 26AAA	07-10-01	10	--	--	<1.0	--	--	--	--	5
KANAB										
B-40-04 17DDB	08-30-01	M	--	--	<1.0	--	--	--	--	5
B-41-06 06BAD	08-29-01	M	--	--	1100	--	--	--	--	6
B-42-06 31CCC	08-29-01	90	--	--	70.0	--	--	--	--	14
LOWER HASSAYAMPA										
B-02-06 29BAB	05-03-01	M	--	--	<1.0	--	--	--	--	<2
LOWER SAN PEDRO BASIN										
D-07-16 10ABC	06-25-01	<2	--	--	<1.0	--	--	--	--	3
D-10-18 21DDB	06-25-01	M	--	--	2.0	--	--	--	--	<2
LOWER SANTA CRUZ BASIN										
D-05-03 16CCC2	06-11-01	<2	--	--	<1.0	--	--	--	--	24
D-05-07 23DDA	06-08-01	30	--	--	<1.0	--	--	--	--	<2
D-06-04N04ABB	06-06-01	10	--	--	2.1	--	--	--	--	<2
D-06-04S04DDD3	06-06-01	20	--	--	1.0	--	--	--	--	6
D-07-04W01DAD	06-06-01	<2	--	--	<1.0	--	--	--	--	<2
D-07-06 29DDD2	06-07-01	M	--	--	<1.0	--	--	--	--	<2
D-07-06 34CDD2	06-07-01	M	--	--	<1.0	--	--	--	--	<2
D-09-07 02CDD	06-07-01	<2	--	--	<1.0	--	--	--	--	<2
D-09-07 03ADD	06-07-01	<2	--	--	<1.0	--	--	--	--	<2
D-10-09 10AAD2	06-08-01	<2	--	--	<1.0	--	--	--	--	<2
D-11-11 35DDD	04-16-01	<2	--	--	<1.0	--	--	--	--	<2
LOWER VERDE RIVER										
A-03-06 15ABA	05-02-01	M	--	--	1.5	--	--	--	--	<2
A-11-10 34DCA	07-24-01	<2	--	--	<1.0	--	--	--	--	3
A-12-08 29AAA2	04-30-01	630	<2.00	35.0	1400	<2.0	<4.0	180	<1.0	2
MCMULLEN VALLEY										
B-07-09 11AAA	08-20-01	<2	--	--	<1.0	--	--	--	--	<2
NEW RIVER-CAVE CREEK										
A-04-02 11ADB	04-30-01	<2	--	--	<1.0	--	--	--	--	<2
A-05-02 03DCB	05-02-01	<2	--	--	<1.0	--	--	--	--	6
A-06-04 26DCC	05-02-01	<2	--	--	<1.0	--	--	--	--	<10
PEACH SPRINGS CANYON										
B-25-11 02CBC	05-31-01	M	--	--	4.5	--	--	--	--	4
RANEGRAS PLAIN										
B-03-14 11DDC	08-22-01	M	--	--	4.5	--	--	--	--	20
SACRAMENTO VALLEY										
B-17-18 12ABD	07-11-01	M	--	--	<1.0	--	--	--	--	2
B-21-18 05DBD	07-11-01	<2	--	--	<1.0	--	--	--	--	<2
SAFFORD BASIN										
D-04-22 25BCB	08-29-01	<2	--	--	<1.0	--	--	--	--	<2
D-07-26 15BCC	08-28-01	<2	--	--	<1.0	--	--	--	--	<2
D-09-26 18DDA	08-29-01	M	--	--	2.9	--	--	--	--	21

## QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

## WATER-QUALITY DATA--Continued

LOCAL IDENT- I- FIER	STATION	NUMBER	DATE	PH WATER WHOLE FIELD (STAND- ARDS UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
SALT RIVER VALLEY										
B-01-02 25BBC2	332416112253201	08-07-01	8.0	2290	39.5	98	32.0	4.10	5.00	
D-01-09 07BDC2	332135111281801	05-01-01	9.2	505	50.0	--	.98	<.030	.40	
D-01-10 35DBC	331756111173701	05-01-01	7.3	1310	20.0	620	180	41.0	3.20	
SAN BERNARDINO VALLEY										
D-24-30 23BBA2	312003109154601	06-27-01	7.9	441	31.0	75	16.0	8.40	2.60	
SAN FRANCISCO PEAKS										
A-22-05 16DBC	351716111520901	06-21-01	8.1	196	11.5	86	18.0	10.0	1.20	
A-27-09 06ADB	354510111280101	08-28-01	6.9	1650	18.0	540	122	56.0	2.00	
SAN SIMÓN BASIN										
D-13-29 25CCC1	321552109205201	08-28-01	9.3	544	33.5	--	1.40	<.030	.60	
D-18-32 33CAA	314900109045501	06-28-01	6.7	178	19.0	44	14.0	2.30	2.00	
D-20-32 29ABB	314001109054201	06-28-01	7.9	295	23.5	81	23.0	5.60	4.20	
D-21-31 03BCD2	313754109104701	06-28-01	7.8	363	28.0	110	34.0	6.60	7.80	
SNOWFLAKE										
A-13-21 26ADB2	342940110045101	07-25-01	7.3	366	15.0	140	30.0	16.0	3.10	
UPPER SALT RIVER BASIN										
A-09-13 25ABB	340601110575701	07-24-01	7.8	293	17.5	130	46.0	4.50	.80	
UPPER SAN PEDRO BASIN										
D-13-22 33DAC	321526110055701	06-29-01	7.7	358	30.0	100	33.0	5.20	1.70	
D-17-21 31DDA	315429110135201	08-28-01	7.2	1100	18.5	280	76.0	23.0	2.00	
D-22-20 01BBD	313253110162401	08-27-01	7.6	358	23.5	170	48.0	11.0	.70	
D-24-21 03AAB	312255110113301	08-27-01	7.5	406	25.0	170	60.0	5.50	1.00	
UPPER SANTA CRUZ BASIN										
D-11-14 32CCC	322528110563301	04-16-01	7.3	277	23.0	99	29.0	6.40	1.40	
D-12-12 16DDD	322252111065001	04-16-01	7.5	438	26.0	140	46.0	7.10	1.90	
D-16-15 14ACB	320238110465201	04-17-01	7.3	998	26.0	390	120	23.0	2.80	
D-17-14 07DDD	315728110563901	04-17-01	7.5	772	25.0	290	97.0	12.0	3.20	
D-19-13 29CBB2	314448111023301	04-18-01	7.3	873	20.0	280	91.0	14.0	2.90	
D-19-17 17BBD	314719110383001	04-19-01	8.4	333	19.5	29	11.0	.400	1.00	
D-22-13 34ADD UNSURV	312818110594501	04-20-01	7.4	646	19.5	240	76.0	12.0	3.20	
D-24-14 05ADB2	312223110554201	04-19-01	7.0	556	20.5	200	62.0	10.0	3.50	
UPPER VERDE RIVER										
A-13-05 04BBA	343313111495701	06-22-01	7.5	614	21.5	250	47.0	33.0	4.20	
A-13-05 27DCD1	342856111482701	06-19-01	7.5	1100	18.5	450	82.0	60.0	4.40	
A-14-05 01BCD	343811111463301	09-06-01	7.3	831	20.5	350	82.0	35.0	5.60	
A-15-03 12CDC	344213111591101	06-20-01	7.3	681	23.0	240	44.0	31.0	5.00	
A-15-04 02BCA1	344337111535701	06-20-01	6.8	1280	21.0	550	140	49.0	6.00	
A-16-02 12CAD2	344642112052001	06-20-01	7.2	775	27.0	340	85.0	32.0	1.70	
A-16-03 34ADC	344428112004801	06-20-01	7.3	579	22.0	260	59.0	28.0	1.90	
A-17-06 08BDC	345212111452001	09-06-01	7.8	317	--	150	34.0	17.0	1.10	
A-18-07 15CCC2	345616111385401	09-06-01	8.1	272	11.5	130	25.0	16.0	1.00	
A-20-07 20CCA	350547111405701	08-27-01	7.9	390	10.0	200	48.0	19.0	.80	
VIRGIN RIVER										
B-41-15 33CAC	365429113554501	08-30-01	7.2	2540	22.0	870	198	91.0	15.0	
WATERMAN WASH										
C-02-02 19AAD	331437112294401	05-03-01	8.3	1260	29.0	49	17.0	1.60	4.60	
WESTERN MEXICAN DRAINAGE										
C-17-05 17ACB UNSURV	315655112480301	04-02-01	8.0	757	32.5	110	26.0	10.0	4.20	
WHITE MOUNTAINS										
A-08-29 08ACA1	340624109181601	07-25-01	7.5	658	15.5	240	48.0	29.0	1.40	
A-10-25 22BBD2	341516109412401	07-25-01	8.2	205	14.5	82	18.0	9.00	2.20	
WILCOX BASIN										
D-14-25 11CAA	321322109455301	06-26-01	7.7	1150	23.0	220	51.0	22.0	2.00	
D-15-24 20CAC	320645109551501	06-26-01	7.8	6060	24.0	340	79.0	34.0	6.70	
D-17-28 14CCB3	315703109282301	06-27-01	7.7	342	19.5	120	38.0	6.20	1.50	
YUMA										
C-08-22 28CCC	324158114314501	04-04-01	7.7	3380	22.5	480	110	51.0	6.00	
C-10-24 12BCC	323430114405801	04-04-01	7.6	2370	25.5	530	140	43.0	5.20	

Remark codes used in this report:  
 < -- Less than



QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

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WATER-QUALITY DATA--Continued

LOCAL IDENTI- FIER	DATE	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
SALT RIVER VALLEY										
B-01-02 25BBC2	08-07-01	19	430	82	--	530	5.0	25.0	130	1230
D-01-09 07BDC2	05-01-01	--	110	141	--	42.0	.6	30.0	9.6	--
D-01-10 35DBC	05-01-01	.8	46.0	246	--	43.0	.4	33.0	420	925
SAN BERNARDINO VALLEY										
D-24-30 23BBA2	06-27-01	4	71.0	203	--	6.3	.5	30.0	12.0	274
SAN FRANCISCO PEAKS										
A-22-05 16DBC	06-21-01	.3	5.7	91	--	2.4	<.1	22.0	4.2	120
A-27-09 06ADB	08-28-01	3	170	339	--	320	.4	13.0	120	1010
SAN SIMON BASIN										
D-13-29 25CCC1	08-28-01	--	110	106	--	24.0	2.4	21.0	98.0	--
D-18-32 33CAA	06-28-01	1	17.0	55	--	8.4	.7	59.0	10.0	152
D-20-32 29ABB	06-28-01	1	29.0	126	--	4.2	2.2	48.0	10.0	204
D-21-31 03BCD2	06-28-01	1	31.0	166	--	5.9	1.5	52.0	7.2	248
SNOWFLAKE										
A-13-21 26ADB2	07-25-01	.6	16.0	86	--	11.0	.1	22.0	71.0	222
UPPER SALT RIVER BASIN										
A-09-13 25ABB	07-24-01	.2	5.5	121	--	8.6	.2	24.0	2.1	177
UPPER SAN PEDRO BASIN										
D-13-22 33DAC	06-29-01	1	35.0	167	--	7.7	.5	51.0	4.3	242
D-17-21 31DDA	08-28-01	4	140	382	--	28.0	3.2	40.0	100	695
D-22-20 01BBD	08-27-01	.4	12.0	170	--	5.2	.1	31.0	5.9	219
D-24-21 03AAB	08-27-01	.6	19.0	177	--	6.3	.2	36.0	17.0	253
UPPER SANTA CRUZ BASIN										
D-11-14 32CCC	04-16-01	.7	17.0	106	--	5.8	.3	33.0	15.0	180
D-12-12 16DDD	04-16-01	1	31.0	128	--	23.0	.3	31.0	37.0	270
D-16-15 14ACB	04-17-01	1	63.0	195	--	20.0	.2	29.0	300	683
D-17-14 07DDD	04-17-01	1.0	38.0	195	--	22.0	.3	32.0	130	496
D-19-13 29CBB2	04-18-01	2	80.0	230	--	28.0	.6	38.0	180	584
D-19-17 17BBD	04-19-01	5	65.0	124	--	3.2	.5	13.0	38.0	207
D-22-13 34ADD UNSURV	04-20-01	1	43.0	230	--	27.0	.4	32.0	60.0	401
D-24-14 05ADB2	04-19-01	1	33.0	193	--	20.0	.3	38.0	41.0	350
UPPER VERDE RIVER										
A-13-05 04BBA	06-22-01	.8	30.0	261	--	15.0	.7	77.0	42.0	406
A-13-05 27DCD1	06-19-01	1	64.0	310	--	44.0	.2	41.0	220	704
A-14-05 01BCD	09-06-01	1	44.0	379	--	32.0	.4	27.0	13.0	469
A-15-03 12CDC	06-20-01	2	54.0	307	--	26.0	.4	42.0	9.2	397
A-15-04 02BCA1	06-20-01	1	75.0	592	--	52.0	.4	16.0	25.0	725
A-16-02 12CAD2	06-20-01	.6	27.0	238	--	22.0	.2	21.0	130	471
A-16-03 34ADC	06-20-01	.4	16.0	245	--	31.0	.2	20.0	7.2	313
A-17-06 08BDC	09-06-01	.2	5.3	155	--	4.2	<.1	18.0	2.2	175
A-18-07 15CCC2	09-06-01	.2	6.0	126	--	4.4	<.1	20.0	3.2	156
A-20-07 20CCA	08-27-01	.1	4.7	198	--	3.1	<.1	15.0	1.3	212
VIRGIN RIVER										
B-41-15 33CAC	08-30-01	4	240	228	--	330	.4	30.0	680	1730
WATERMAN WASH										
C-02-02 19AAD	05-03-01	14	220	65	--	250	5.5	16.0	110	692
WESTERN MEXICAN DRAINAGE										
C-17-05 17ACB UNSURV	04-02-01	5	110	159	--	87.0	2.2	64.0	54.0	473
WHITE MOUNTAINS										
A-08-29 08ACA1	07-25-01	2	55.0	320	--	12.0	.6	26.0	17.0	386
A-10-25 22BBD2	07-25-01	.4	8.3	82	--	7.8	<.1	26.0	6.5	130
WILLCOX BASIN										
D-14-25 11CAA	06-26-01	5	160	239	--	140	3.0	34.0	110	670
D-15-24 20CAC	06-26-01	28	1200	152	--	1400	2.0	18.0	640	3470
D-17-28 14CCB3	06-27-01	.9	23.0	134	--	9.3	.4	41.0	20.0	220
YUMA										
C-08-22 28CCC	04-04-01	10	520	245	--	670	.8	24.0	350	1880
C-10-24 12BCC	04-04-01	5	290	202	--	440	.3	25.0	290	1360

Remark codes used in this report:  
< -- Less than

## QUALITY OF WATER IN SELECTED WELLS IN GROUND-WATER AREAS IN ARIZONA

WATER-QUALITY DATA--Continued										
LOCAL IDENT- I- FIER	DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
SALT RIVER VALLEY										
B-01-02 25BBC2	08-07-01	<.010	3.50	<.010	<.010	--	--	700	--	--
D-01-09 07BDC2	05-01-01	<.010	5.90	<.010	<.010	--	--	70	--	--
D-01-10 35DBC	05-01-01	.016	2.40	<.010	.030	--	--	60	--	--
SAN BERNARDINO VALLEY										
D-24-30 23BBA2	06-27-01	.018	1.10	<.010	<.010	--	--	49	--	--
SAN FRANCISCO PEAKS										
A-22-05 16DBC	06-21-01	<.010	.380	<.010	.040	--	--	10	--	--
A-27-09 06ADB	08-28-01	.012	.290	<.010	<.010	--	--	114	--	--
SAN SIMON BASIN										
D-13-29 25CCC1	08-28-01	.010	.220	<.010	<.010	--	--	88	--	--
D-18-32 33CAA	06-28-01	.018	1.20	<.010	.090	--	--	17	--	--
D-20-32 29ABB	06-28-01	.019	.560	<.010	<.010	--	--	33	--	--
D-21-31 03BCD2	06-28-01	.018	.470	<.010	<.010	--	--	23	--	--
SNOWFLAKE										
A-13-21 26ADB2	07-25-01	<.010	.150	<.010	<.010	--	--	15	--	--
UPPER SALT RIVER BASIN										
A-09-13 25ABB	07-24-01	<.010	2.90	<.010	<.010	--	--	11	--	--
UPPER SAN PEDRO BASIN										
D-13-22 33DAC	06-29-01	.018	.730	<.010	<.010	--	--	47	--	--
D-17-21 31DDA	08-28-01	<.010	12.0	<.010	<.010	--	--	397	--	--
D-22-20 01BBB	08-27-01	<.010	.750	<.010	<.010	--	--	9	--	--
D-24-21 03AAB	08-27-01	<.010	.500	<.010	<.010	--	--	19	--	--
UPPER SANTA CRUZ BASIN										
D-11-14 32CCC	04-16-01	<.010	2.00	<.010	.050	--	--	10	--	--
D-12-12 16DDD	04-16-01	<.010	3.70	<.010	.010	--	--	40	--	--
D-16-15 14ACB	04-17-01	<.010	1.80	<.010	.010	--	--	90	--	--
D-17-14 07DDD	04-17-01	.012	10.0	<.010	.010	--	--	50	--	--
D-19-13 29CBB2	04-18-01	<.010	2.60	<.010	.050	--	--	120	--	--
D-19-17 17BBB	04-19-01	<.010	<.020	<.010	<.010	--	--	220	--	--
D-22-13 34ADD UNSURV	04-20-01	.053	2.00	.010	.050	--	--	80	--	--
D-24-14 05ADB2	04-19-01	<.010	5.60	<.010	.380	--	--	70	--	--
UPPER VERDE RIVER										
A-13-05 04BBA	06-22-01	.010	.180	<.010	.020	--	--	200	--	--
A-13-05 27DCD1	06-19-01	.012	.520	<.010	.050	--	--	320	--	--
A-14-05 01BCD	09-06-01	.016	.540	<.010	.010	--	--	534	--	--
A-15-03 12CDC	06-20-01	<.010	.240	<.010	.020	--	--	160	--	--
A-15-04 02BCA1	06-20-01	.013	1.40	<.010	.030	--	--	540	--	--
A-16-02 12CAD2	06-20-01	<.010	2.10	<.010	.030	--	--	140	--	--
A-16-03 34ADC	06-20-01	<.010	.710	<.010	.020	--	--	46	--	--
A-17-06 08BDC	09-06-01	.012	.110	<.010	<.010	--	--	13	--	--
A-18-07 15CCC2	09-06-01	<.010	1.00	<.010	<.010	--	--	7	--	--
A-20-07 20CCA	08-27-01	.018	.350	<.010	<.020	--	--	9	--	--
VIRGIN RIVER										
B-41-15 33CAC	08-30-01	<.010	1.70	<.010	<.010	--	--	899	--	--
WATERMAN WASH										
C-02-02 19AAD	05-03-01	.015	6.30	<.010	<.010	--	--	450	--	--
WESTERN MEXICAN DRAINAGE										
C-17-05 17ACB UNSURV	04-02-01	<.010	4.50	<.010	.030	--	--	410	--	--
WHITE MOUNTAINS										
A-08-29 08ACA1	07-25-01	<.010	1.20	<.010	.020	--	--	94	--	--
A-10-25 22BBB2	07-25-01	<.010	.560	<.010	.040	--	--	8	--	--
WILLCOX BASIN										
D-14-25 11CAA	06-26-01	.016	.870	<.010	<.010	--	--	180	--	--
D-15-24 20CAC	06-26-01	.018	.190	<.010	<.010	--	--	780	--	--
D-17-28 14CCB3	06-27-01	--	--	--	--	--	--	33	--	--
YUMA										
C-08-22 28CCC	04-04-01	.028	.870	.010	.080	--	--	690	--	--
C-10-24 12BCC	04-04-01	.180	<.020	<.010	.030	--	--	260	--	--

Remark codes used in this report:  
 < -- Less than

## WATER-QUALITY DATA--Continued

LOCAL IDENT- IFIER	DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
SALT RIVER VALLEY										
B-01-02 25BBC2	08-07-01	M	--	--	<1.0	--	--	1100	--	<2
D-01-09 07BDC2	05-01-01	<2	--	--	<1.0	--	--	--	--	19
D-01-10 35DBC	05-01-01	10	--	--	<1.0	--	--	--	--	280
SAN BERNARDINO VALLEY										
D-24-30 23BBA2	06-27-01	<2	--	--	<1.0	--	--	--	--	<2
SAN FRANCISCO PEAKS										
A-22-05 16DBC	06-21-01	40	--	--	<1.0	--	--	--	--	33
A-27-09 06ADB	08-28-01	90	--	--	19.0	--	--	--	--	1070
SAN SIMON BASIN										
D-13-29 25CCC1	08-28-01	<2	--	--	<1.0	--	--	--	--	<2
D-18-32 33CAA	06-28-01	<2	--	--	<1.0	--	--	--	--	5
D-20-32 29ABB	06-28-01	<2	--	--	<1.0	--	--	--	--	21
D-21-31 03BCD2	06-28-01	<2	--	--	<1.0	--	--	--	--	61
SNOWFLAKE										
A-13-21 26ADB2	07-25-01	<2	--	--	<1.0	--	--	--	--	<2
UPPER SALT RIVER BASIN										
A-09-13 25ABB	07-24-01	<2	--	--	<1.0	--	--	--	--	3
UPPER SAN PEDRO BASIN										
D-13-22 33DAC	06-29-01	M	--	--	<1.0	--	--	--	--	100
D-17-21 31DDA	08-28-01	<2	--	--	3.1	--	--	--	--	8
D-22-20 01BBD	08-27-01	<2	--	--	<1.0	--	--	--	--	<2
D-24-21 03AAB	08-27-01	<2	--	--	<1.0	--	--	--	--	23
UPPER SANTA CRUZ BASIN										
D-11-14 32CCC	04-16-01	<2	--	--	<1.0	--	--	--	--	3
D-12-12 16DDD	04-16-01	<2	--	--	<1.0	--	--	--	--	<2
D-16-15 14ACB	04-17-01	20	--	--	<1.0	--	--	--	--	<2
D-17-14 07DDD	04-17-01	M	--	--	<1.0	--	--	--	--	<2
D-19-13 29CBB2	04-18-01	<2	--	--	<1.0	--	--	--	--	26
D-19-17 17BBD	04-19-01	30	--	--	22.0	--	--	--	--	<2
D-22-13 34ADD UNSURV	04-20-01	<2	--	--	12.0	--	--	--	--	<2
D-24-14 05ADB2	04-19-01	<2	--	--	<1.0	--	--	--	--	48
UPPER VERDE RIVER										
A-13-05 04BBA	06-22-01	<2	--	--	<1.0	--	--	--	--	<2
A-13-05 27DCD1	06-19-01	<2	--	--	1.2	--	--	--	--	4
A-14-05 01BCD	09-06-01	<2	--	--	<1.0	--	--	--	--	3
A-15-03 12CDC	06-20-01	<2	--	--	<1.0	--	--	--	--	10
A-15-04 02BCA1	06-20-01	<2	--	--	<1.0	--	--	--	--	6
A-16-02 12CAD2	06-20-01	<2	--	--	<1.0	--	--	--	--	<2
A-16-03 34ADC	06-20-01	<2	--	--	<1.0	--	--	--	--	<2
A-17-06 08BDC	09-06-01	<2	--	--	<1.0	--	--	--	--	<2
A-18-07 15CCCC2	09-06-01	<2	--	--	<1.0	--	--	--	--	2
A-20-07 20CCA	08-27-01	<2	--	--	<1.0	--	--	--	--	14
VIRGIN RIVER										
B-41-15 33CAC	08-30-01	M	--	--	<1.0	--	--	--	--	64
WATERMAN WASH										
C-02-02 19AAD	05-03-01	M	--	--	<1.0	--	--	--	--	16
WESTERN MEXICAN DRAINAGE										
C-17-05 17ACB UNSURV	04-02-01	M	--	--	<1.0	--	--	--	--	47
WHITE MOUNTAINS										
A-08-29 08ACA1	07-25-01	<2	--	--	<1.0	--	--	--	--	<2
A-10-25 22BBD2	07-25-01	<2	--	--	<1.0	--	--	--	--	11
WILLCOX BASIN										
D-14-25 11CAA	06-26-01	40	--	--	12.0	--	--	--	--	370
D-15-24 20CAC	06-26-01	240	--	--	43.0	--	--	--	--	24
D-17-28 14CCB3	06-27-01	M	--	--	<1.0	--	--	--	--	22
YUMA										
C-08-22 28CCC	04-04-01	<2	--	--	790	--	--	--	--	4
C-10-24 12BCC	04-04-01	90	--	--	520	--	--	--	--	<2

Remark codes used in this report:  
< -- Less than

Null value remark codes used in this report:  
M -- Presence verified, not quantified



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## CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<b>Length</b>		
inch (in.)	$2.54 \times 10^1$	millimeter
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter
mile (mi)	$1.609 \times 10^0$	kilometer
<b>Area</b>		
acre	$4.047 \times 10^3$	square meter
	$4.047 \times 10^{-1}$	square hectometer
	$4.047 \times 10^{-3}$	square kilometer
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer
<b>Volume</b>		
gallon (gal)	$3.785 \times 10^0$	liter
	$3.785 \times 10^0$	cubic decimeter
	$3.785 \times 10^{-3}$	cubic meter
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter
	$3.785 \times 10^{-3}$	cubic hectometer
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeter
	$2.832 \times 10^{-2}$	cubic meter
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter
	$2.447 \times 10^{-3}$	cubic hectometer
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter
	$1.233 \times 10^{-3}$	cubic hectometer
	$1.233 \times 10^{-6}$	cubic kilometer
<b>Flow</b>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second
	$2.832 \times 10^1$	cubic decimeter per second
	$2.832 \times 10^{-2}$	cubic meter per second
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second
	$6.309 \times 10^{-2}$	cubic decimeter per second
	$6.309 \times 10^{-5}$	cubic meter per second
million gallons per day (Mgal/d)	$4.381 \times 10^1$	cubic decimeter per second
	$4.381 \times 10^{-2}$	cubic meter per second
<b>Mass</b>		
ton (short)	$9.072 \times 10^{-1}$	megagram or metric ton

*Sea level:* In this report “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.



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