

LITTLE COLORADO RIVER BASIN

09401260 MOENKOPI WASH AT MOENKOPI, AZ

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

DRAINAGE AREA.--1,629 mi².

PERIOD OF RECORD.--July 1976 to current year. Records for October 1973 to July 1976, at site 2.5 mi upstream, not equivalent below 1.5 ft/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 ft³/s Sept. 30, 1983, gage height, 15.10 ft, from rating curve extended above 220 ft³/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 ft³/s occurred Aug. 4, 1929, at former gaging station site 3.5 mi downstream.

Annual peak discharges

Water year	Date	Annual peak discharge (ft ³ /s)	Discharge codes	Water year	Date	Annual peak discharge (ft ³ /s)	Discharge codes
1974	07-19-74	2,340		1986	09-09-86	7,970	
1975	09-13-75	2,380		1987	08-24-87	3,990	
1976	09-25-76	5,420		1988	08-27-88	7,280	
1977	07-21-77	4,120		1989	08-01-89	3,380	
1978	09-25-78	262		1990	07-08-90	2,090	
1979	11-12-78	330		1991	10-02-90	1,290	
1980	09-10-80	1,740		1992	09-19-92	3,110	
1981	07-14-81	4,640		1993	02-20-93	3,150	
1982	10-02-81	8,010		1994	10-06-93	2,970	
1983	09-30-83	10,100		1995	07-14-95	3,920	
1984	08-18-84	9,030		1996	09-14-96	737	
1985	09-12-85	520					

Discharge rating table developed October 1991

Gage height (ft)	Discharge (ft ³ /s)	Gage height (ft)	Discharge (ft ³ /s)
4.0	135	9.0	4,330
5.0	560	10.0	5,520
6.0	1,200	11.0	6,520
7.0	2,070	12.0	7,520
8.0	3,140	13.0	8,420

Basin characteristics

Main channel slope (ft/mi)	Stream length (mi)	Mean basin elevation (ft)	Forested area (percent)	Soil index	Mean annual precipitation (in)	Rainfall intensity, 24-hour	
						2-year (in)	50-year (in)
24.8	87.1	5,850	47.2	3.0	9.5	1.3	2.6

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MEAN MONTHLY AND ANNUAL DISCHARGES 1977-96

MONTH	MAXIMUM (FT ³ /S)	MINIMUM (FT ³ /S)	MEAN (FT ³ /S)	STAN- DARD DEVI- ATION (FT ³ /S)	COEFFI- CIENT OF VARI- ATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	82	0.24	9.2	19	2.0	8.7
NOVEMBER	71	1.1	7.2	15	2.1	6.8
DECEMBER	14	0.62	3.6	2.7	0.74	3.4
JANUARY	28	2.0	5.3	5.6	1.1	5.0
FEBRUARY	48	2.2	8.2	11	1.4	7.8
MARCH	11	2.0	3.9	2.4	0.60	3.7
APRIL	8.5	1.0	2.4	1.5	0.65	2.2
MAY	16	0.31	2.3	3.8	1.6	2.2
JUNE	11	0.00	0.75	2.3	3.2	0.7
JULY	92	0.00	14	24	1.7	12.9
AUGUST	129	0.00	24	33	1.3	22.9
SEPTEMBER	134	0.00	25	33	1.3	23.6
ANNUAL	19	2.1	8.8	5.6	0.64	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1978-96

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND NON-EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	20# 5%	50# 2%	100# 1%
1						
3						
7						
14						
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.17	0.03	0.00	0.00	0.00	0.00
90	0.63	0.32	0.22	0.17	0.12	0.09
120	1.6	0.70	0.44	0.30	0.18	0.13
183	2.9	1.4	0.99	0.75	0.55	0.44

MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1977-96

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1974-96

DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,320	5,820	7,760	10,500	12,700	15,000
WEIGHTED SKEW (LOGS) = -0.12					
MEAN (LOGS) = 3.52					
STANDARD DEV. (LOGS) = 0.30					

PERIOD (CON- SECU- TIVE DAYS)	DISCHARGE, IN FT ³ /S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	539	1,270	2,000	3,260	4,480	5,960
3	279	603	881	1,300	1,650	2,030
7	136	290	415	591	733	881
15	69	151	220	323	409	502
30	40	85	121	173	216	261
60	24	51	74	107	136	168
90	18	38	54	78	98	120

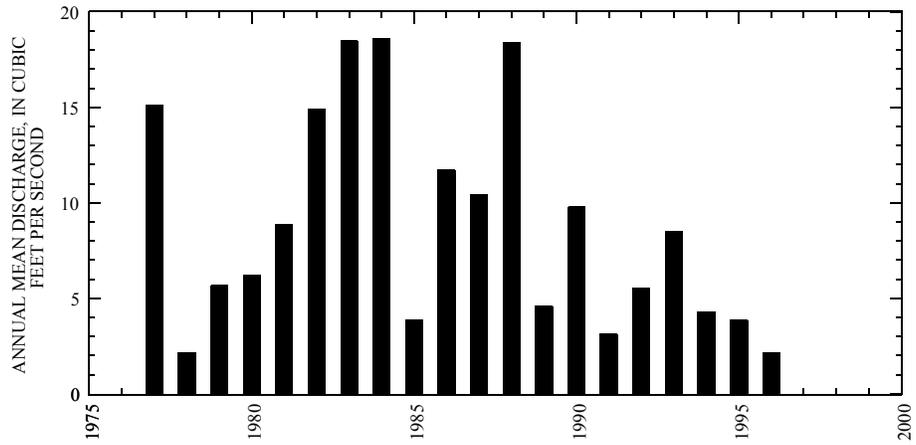
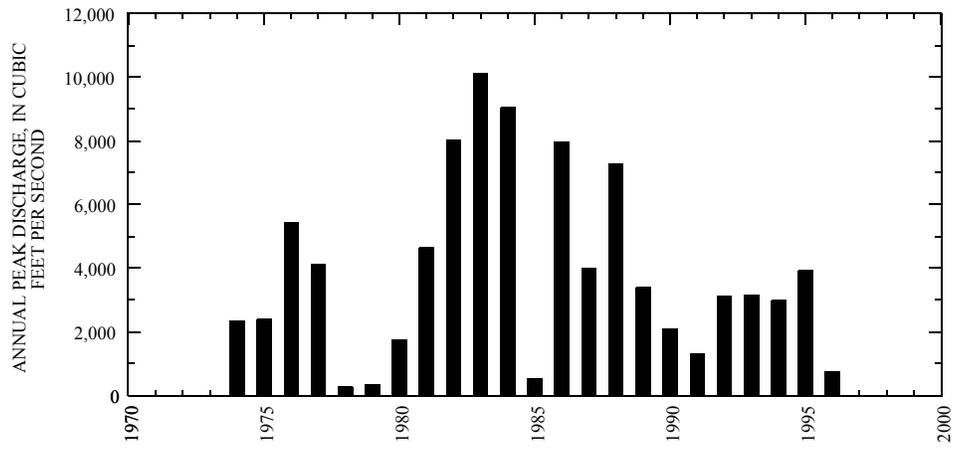
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1977-96

DISCHARGE, IN FT ³ /S, WHICH WAS EQUALED OR EXCEEDED FOR INDICATED PERCENT OF TIME																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
146	18	7.4	5.0	3.9	3.1	2.4	2.0	1.4	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Reliability of values in column is uncertain, and potential errors are large.

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