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., Cochise County, Hydrologic Unit 15050202, in Spanish land grant of San Juan de las Boquillas y Nogales, at right bank 0.5 mi downstream from Willow Wash, 2.6 mi north of Fairbank, and 8 mi northwest of Tombstone.

DRAINAGE AREA.--1,730 mi^2, approximately, of which 696 mi^2 is in Mexico.

REMARKS.--Diversions above station, mostly by pumping from ground water, for irrigation of 3,200 acres in 1978, excluding an unknown amount in Mexico.

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
1967	07-26-67	7,790		1977	08-23-77	8,900	
1968	12-20-67	7,340		1978	10-09-77	24,200	
1969	07-28-69	2,950		1979	01-18-79	10,200	
1970	08-03-70	5,400		1980	08-15-80	1,400	
1971	08-10-71	9,220		1981	08-01-81	5,640	
1972	08-12-72	12,900		1982	09-10-82	6,500	
1973	08-21-73	1,880		1983	09-10-83	4,720	
1974	07-20-74	18,500		1984	10-02-83	13,600	
1975	09-14-75	4,500		1985	12-28-84	10,500	
1976	07-27-76	8,580		1986	08-18-86	4,410	

Discharge rating table developed October 1986

Gage height (ft)	Discharge (ft^3/s)	Gage height (ft)	Discharge (ft^3/s)
3.0	32	8.0	9,190
4.0	656	9.0	12,780
5.0	1,940	10.0	17,210
6.0	3,790	11.0	22,100
7.0	6,250	11.5	24,700

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)
18.0	67.4	4,820	13.0	2.0	16.2	1.9	3.8

GILA RIVER BASIN

09471550 SAN PEDRO RIVER NEAR TOMBSTONE, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1968-86

MONTH	MAXIMUM (FT3/S)	MINIMUM (FT3/S)	MEAN (FT3/S)	STANDARD DEVIATION (FT3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	998	0.00	95	247	2.6	14.4
NOVEMBER	61	2.8	16	14	0.88	2.4
DECEMBER	375	6.4	63	112	1.8	9.6
JANUARY	450	9.7	56	105	1.9	8.5
FEBRUARY	214	9.1	45	53	1.2	6.7
MARCH	179	9.1	37	42	1.1	5.7
APRIL	44	4.2	15	9.4	0.63	2.3
MAY	21	1.7	7.9	4.9	0.62	1.2
JUNE	22	0.00	3.8	5.8	1.5	0.6
JULY	369	1.8	104	102	0.98	15.8
AUGUST	820	15	160	188	1.2	24.1
SEPTEMBER	177	0.09	58	56	0.96	8.8
ANNUAL	157	13	56	36	0.64	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1969-86

PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT3/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	0.00	0.00	0.00	0.00	0.00	0.00
30	0.10	0.00	0.00	0.00	0.00	0.00
60	2.0	0.89	0.50	0.00	0.00	0.00
90	5.1	2.7	1.7	1.1	0.66	0.45
120	10	5.9	4.5	3.6	2.8	2.4
183	16	8.5	6.4	5.1	4.1	3.7

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1967-86

DISCHARGE, IN FT3/S, FOR INDICATED RECURRENCE INTERVAL IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
7,490	12,000	15,400	20,100	23,900	28,000

WEIGHTED SKEW (LOGS)= 0.08
MEAN (LOGS)= 3.88
STANDARD DEV. (LOGS)= 0.24

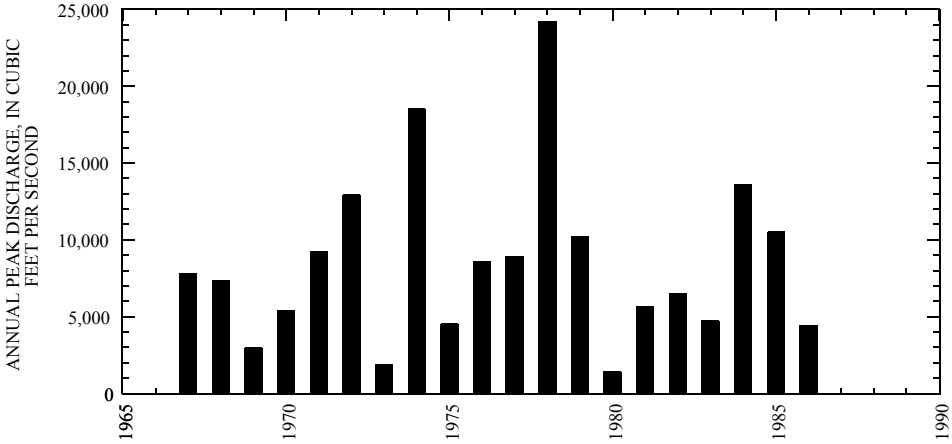
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1968-86

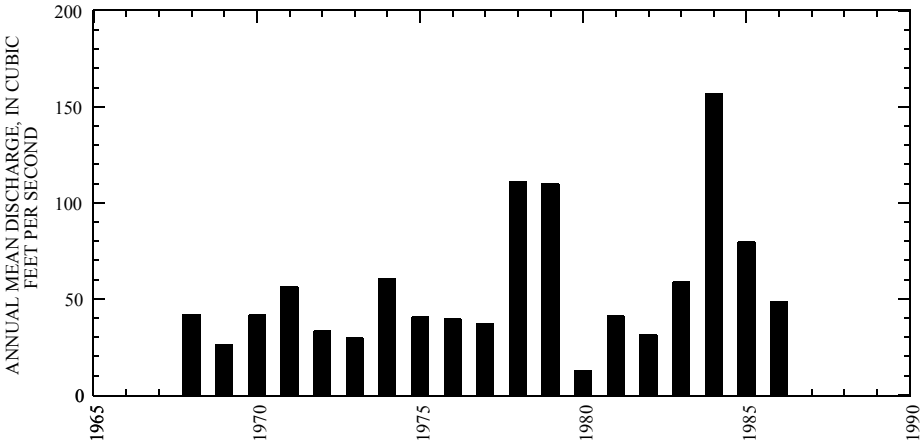
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10# 10%	25# 4%	50# 2%	100# 1%
1	1,840	4,060	6,440	10,900	15,600	21,900
3	1,120	2,370	3,670	6,030	8,470	11,600
7	654	1,320	1,940	2,950	3,890	5,020
15	431	816	1,130	1,590	1,980	2,410
30	285	501	666	896	1,080	1,280
60	198	332	420	527	602	674
90	145	237	294	358	402	441

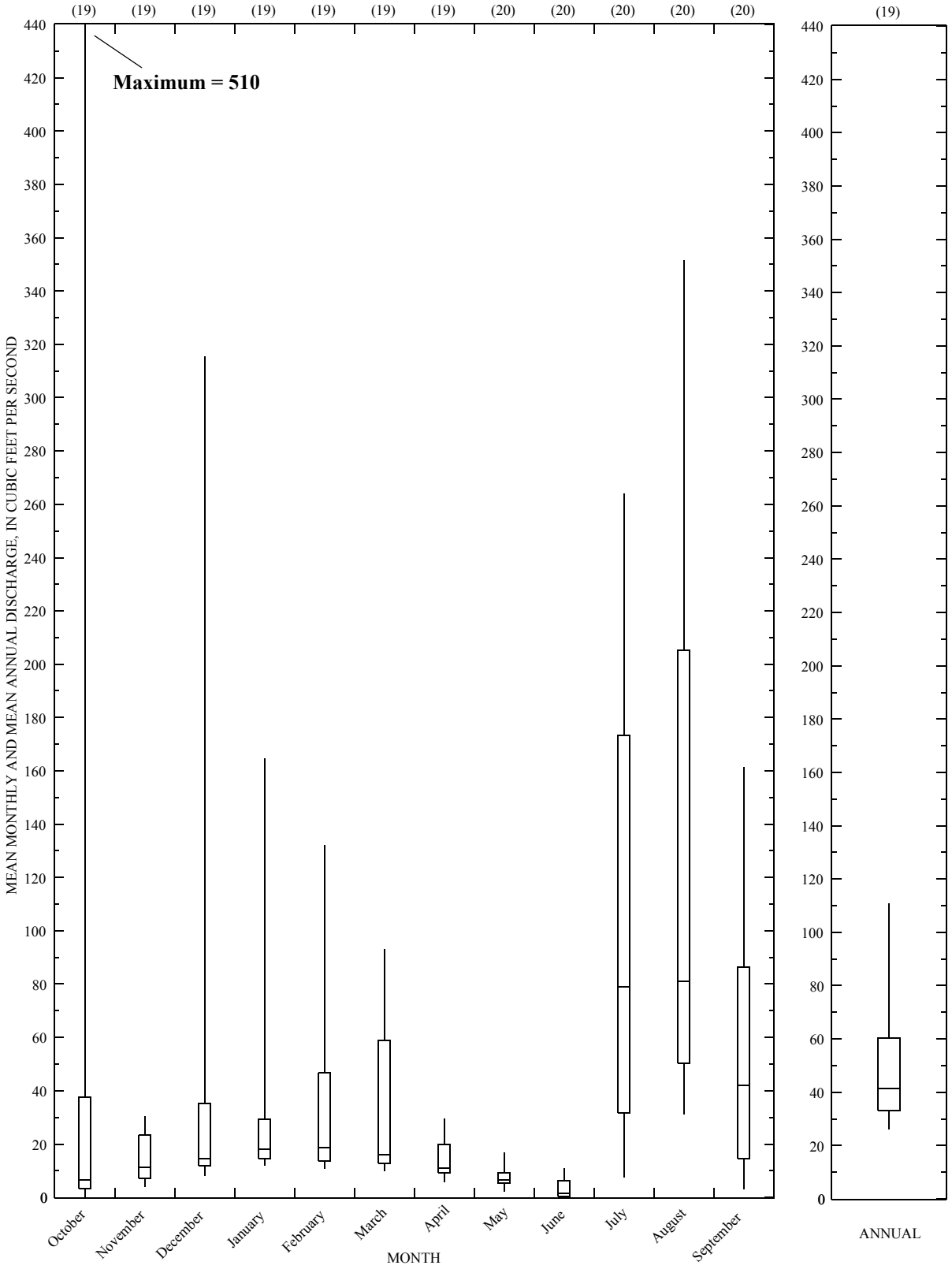
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1968-86

DISCHARGE, IN FT3/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%
898	182	82	49	36	23	17	13	10	6.9	3.7	0.03	0.00	0.00	0.00	0.00	0.00

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


ANNUAL PEAK DISCHARGE, IN CUBIC FEET PER SECOND
25,000
20,000
15,000
10,000
5,000
0
1965
1970
1975
1980
1985
1990


ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
200
150
100
50
0
1965
1970
1975
1980
1985
1990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(20)
(20)
(20)
(20)
(20)
(19)
Maximum = 510
MEAN MONTHLY AND MEAN ANNUAL DISCHARGE, IN CUBIC FEET PER SECOND
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
October
November
December
January
February
March
April
May
June
July
August
September
MONTH
ANNUAL