GILA RIVER BASIN

09512830 BOULDER CREEK NEAR ROCK SPRINGS, AZ

LOCATION.--Lat 33°59'55", long 112°12'57", in SE$^1/_4$NW$^1/_4$NW$^1/_4$ sec.36, T.8 N., R.1 E., Yavapai County, Hydrologic Unit 15070102, on left bank 2.2 mi upstream from Agua Fria River, 1.5 mi southwest of Rock Springs, and 7.1 mi northwest of New River.

DRAINAGE AREA.--37.8 mi^2.

PERIOD OF RECORD.--May 1983 to September 1993 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,890 ft above sea level, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft^3/s Jan. 8, 1993, gage height, 10.79 ft, from rating curve extended above 31.1 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in most years.

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
1984	10-02-83	40		1989	02-06-89	21	
1985	12-27-84	239		1990	08-14-90	58	
1986	11-26-85	376		1991	03-01-91	3,230	
1987	03-04-87	32		1992	02-13-92	2,970	
1988	08-29-88	2,350		1993	01-08-93	10,000	

Discharge rating table developed January 1993

Gage height (ft)	Discharge (ft^3/s)	Gage height (ft)	Discharge (ft^3/s)
4.0	352	8.0	3,770
5.0	772	9.0	5,550
6.0	1,440	10.0	7,820
7.0	2,420	10.8	10,040

GILA RIVER BASIN

09512830 BOULDER CREEK NEAR ROCK SPRINGS, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1984-92

MONTH	MAXIMUM (FT3/S)	MINIMUM (FT3/S)	MEAN (FT3/S)	STANDARD DEVIATION (FT3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	0.38	0.00	0.08	0.14	1.7	1.9
NOVEMBER	0.37	0.00	0.11	0.14	1.2	2.7
DECEMBER	0.70	0.00	0.23	0.23	1.0	5.4
JANUARY	2.1	0.01	0.38	0.65	1.7	9.2
FEBRUARY	2.8	0.01	0.64	0.97	1.5	15.3
MARCH	6.3	0.01	0.84	2.1	2.4	20.1
APRIL	0.21	0.01	0.06	0.08	1.2	1.5
MAY	0.10	0.00	0.03	0.03	0.98	0.8
JUNE	0.02	0.00	0.00	0.01	2.1	0.1
JULY	0.11	0.00	0.01	0.04	2.7	0.3
AUGUST	13	0.00	1.7	4.3	2.5	41.5
SEPTEMBER	0.29	0.00	0.05	0.09	2.0	1.1
ANNUAL	1.6	0.02	0.35	0.51	1.4	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1985-92

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						
30						
60						
90						
120						
183	0.01	0.00	0.00	0.00	0.00	0.00

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD

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%
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WEIGHTED SKEW (LOGS)= ----
MEAN (LOGS)= ----
STANDARD DEV. (LOGS)= ----

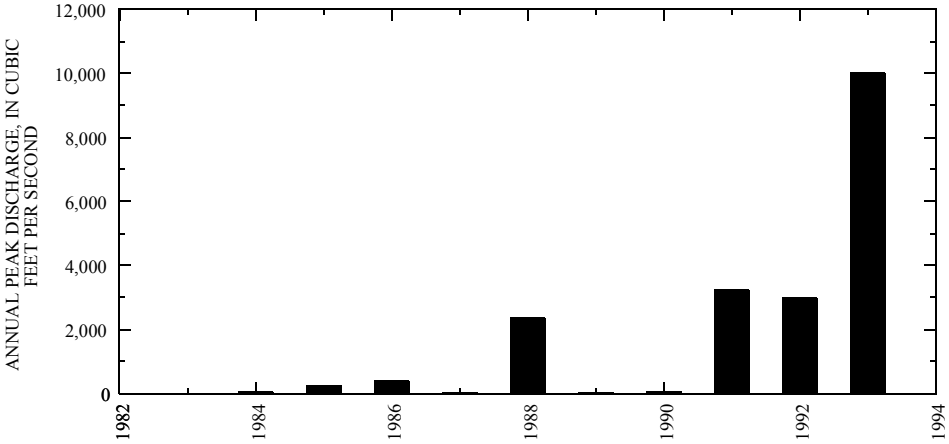
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1984-92

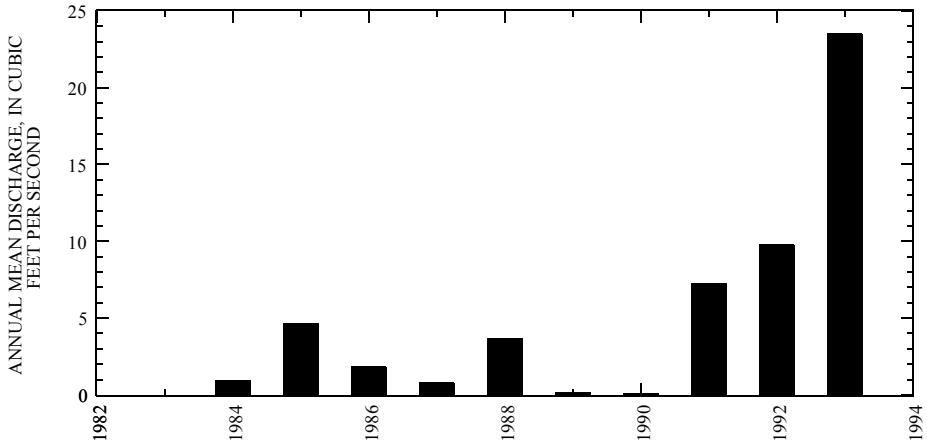
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	12	65	161	432	826	1,490
3	5.5	30	76	216	436	835
7	2.6	13	33	89	176	327
15	1.4	6.5	15	39	74	133
30	0.91	3.8	8.5	21	39	68
60	0.59	2.2	4.4	9.5	16	26
90	0.47	1.6	3.0	6.1	9.7	15

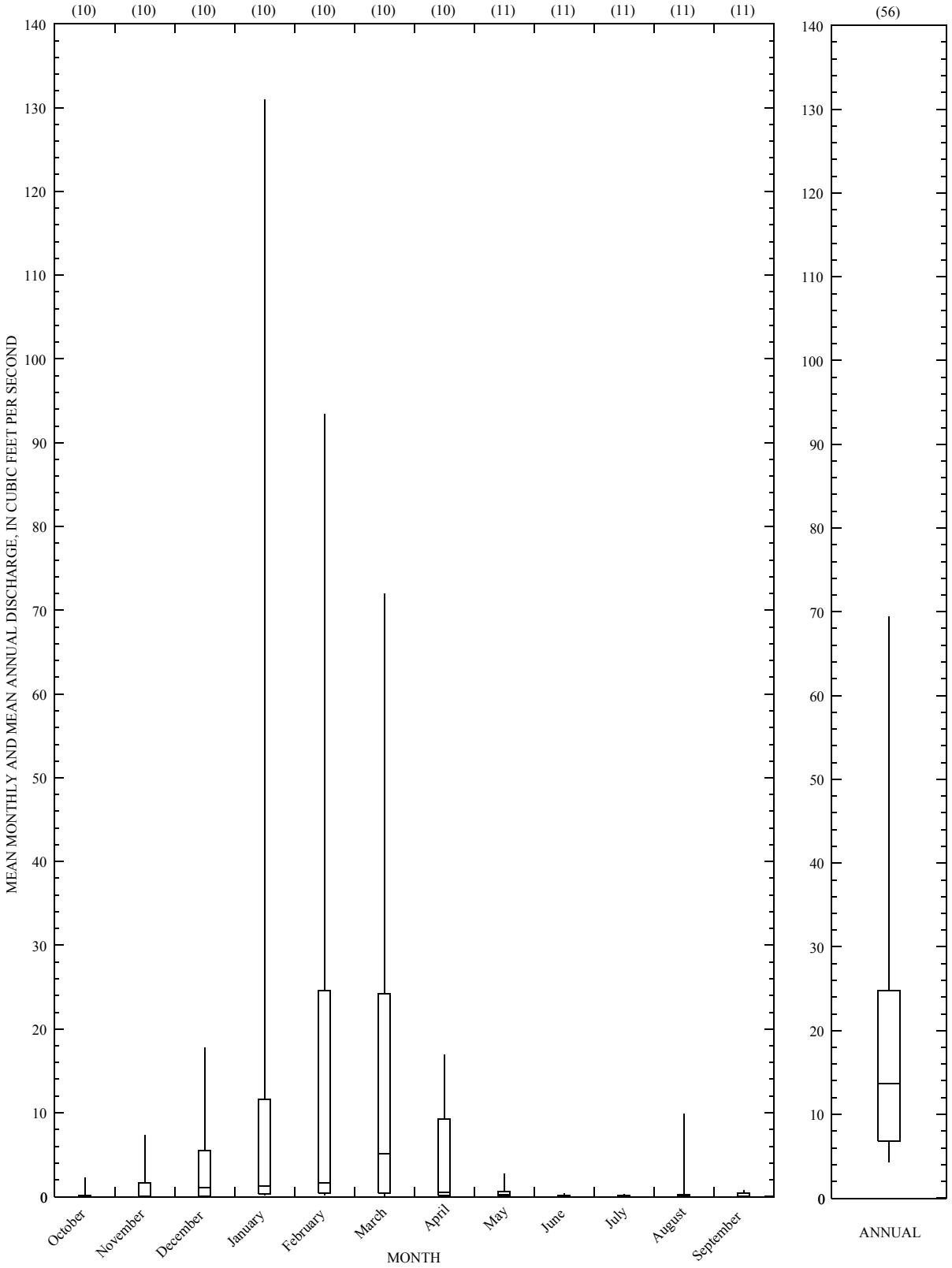
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1984-92

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%
1.9	0.45	0.30	0.18	0.12	0.04	0.02	0.02	0.01	0.00	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.


ANNUAL PEAK DISCHARGE, IN CUBIC FEET PER SECOND
12,000
10,000
8,000
6,000
4,000
2,000
0
1982
1984
1986
1988
1990
1992
1994


ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
25
20
15
10
5
0
1982
1984
1986
1988
1990
1992
1994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(11)
(56)
MEAN MONTHLY AND MEAN ANNUAL DISCHARGE, IN CUBIC FEET PER SECOND
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
October
November
December
January
February
March
April
May
June
July
August
September
MONTH
ANNUAL