LITTLE COLORADO RIVER BASIN

09398000 CHEVELON CREEK NEAR WINSLOW, AZ

LOCATION.--Lat 34°55'35", long 110°31'51", in SE$^1/_4$SW$^1/_4$, sec.27, T.18 N., R.17 E., Navajo County, Hydrologic Unit 15020010, on right bank 3 mi upstream from mouth and 12 mi southeast of Winslow.

DRAINAGE AREA.--785 mi^2, of which 3.9 mi^2 is noncontributing.

REMARKS.--Storage and regulation by Chevelon Canyon Lake (capacity, 6,193 acre-ft) 57 mi upstream since June 1967. No known diversion above station. Chevelon Canal diverts 2 mi downstream from station for irrigation.

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
1916	01-19-16	9,500		1950	03-01-50	616	
1917	04-24-17	1,300		1951	08-30-51	7,200	
1918	03-13-18	6,200		1952	01-19-52	25,300	
1919	04-01-19	1,110		1953	03-12-53	650	
1920	12-05-19	9,000		1954	03-23-54	5,730	
1929	04-04-29	16,100		1955	06-135-5	1,800	
1930	03-27-30	519		1956	07-23-56	562	
1931	03-19-31	548		1957	01-09-57	8,680	
1932	02-10-32	3,100		1958	09-28-58	2,140	
1933	09-20-33	1,060		1959	08-14-59	1,320	
1934	00-00-34	2,700		1960	12-26-59	2,640	
1936	04-12-36	1,350		1961	07-30-61	500	
1937	02-08-37	1,820		1962	02-13-62	1,540	
1938	03-04-38	9,400		1963	08-21-63	1,620	
1939	08-03-39	2,410		1964	08-01-64	1,680	
1940	07-25-40	1,180		1965	01-08-65	13,100	
1941	03-15-41	1,630		1966	12-31-65	13,300	
1942	04-06-42	985		1967	12-07-66	8,890	
1943	03-11-43	1,330		1968	04-02-68	1,640	UR
1944	04-06-44	1,180		1969	01-2-669	5,120	UR
1945	08-04-45	2,620		1970	09-06-70	8,020	UR
1946	09-20-46	892		1971	08-24-71	4,150	UR
1947	08-04-47	2,460		1972	12-27-71	9,040	UR
1948	04-13-48	825		1979	12-18-78	[1]33,600	UR,HP
1949	04-14-49	1,150					

[1]Highest since 1923.

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)	Rainfall intensity, 24-hour 50-year (in)
27.7	77.1	6,440	70.0	3.0	18.4	2.1	4.2

LITTLE COLORADO RIVER BASIN

09398000 CHEVELON CREEK NEAR WINSLOW, AZ--Continued

MEAN MONTHLY AND ANNUAL DISCHARGES 1917-19, 1930-33, 1936-72

MONTH	MAXIMUM (FT3/S)	MINIMUM (FT3/S)	MEAN (FT3/S)	STANDARD DEVIATION (FT3/S)	COEFFICIENT OF VARIATION	PERCENT OF ANNUAL RUNOFF
OCTOBER	247	3.1	12	37	3.1	2.0
NOVEMBER	137	2.7	14	26	1.9	2.3
DECEMBER	347	2.8	37	76	2.1	6.1
JANUARY	663	2.6	58	135	2.3	9.6
FEBRUARY	338	2.7	64	89	1.4	10.6
MARCH	527	3.5	171	138	0.80	28.2
APRIL	733	3.9	181	188	1.0	29.9
MAY	211	2.2	23	39	1.7	3.7
JUNE	21	2.1	5.1	3.1	0.61	0.8
JULY	25	3.0	7.1	4.1	0.57	1.2
AUGUST	171	2.9	18	32	1.8	3.0
SEPTEMBER	182	2.5	15	31	2.0	2.5
ANNUAL	145	7.7	50	32	0.63	100

MAGNITUDE AND PROBABILITY OF ANNUAL LOW FLOW
BASED ON PERIOD OF RECORD 1918-19, 1930-33, 1937-72

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	2.1	1.5	1.2	0.94	0.72	0.60
3	2.3	1.7	1.4	1.2	0.95	0.82
7	2.6	2.0	1.7	1.5	1.3	1.2
14	2.8	2.3	2.0	1.9	1.7	1.5
30	3.2	2.7	2.5	2.3	2.1	2.0
60	3.7	3.2	2.9	2.7	2.5	2.3
90	4.0	3.3	3.0	2.8	2.5	2.4
120	4.1	3.5	3.4	3.3	3.3	3.3
183	5.1	3.9	3.6	3.4	3.3	3.3

MAGNITUDE AND PROBABILITY OF INSTANTANEOUS PEAK FLOW
BASED ON PERIOD OF RECORD 1916-20, 1929-34, 1936-67, 1968-72

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%
2,360	5,860	9,670	16,800	24,200	33,800

WEIGHTED SKEW (LOGS)= 0.24
MEAN (LOGS)= 3.39
STANDARD DEV. (LOGS)= 0.46

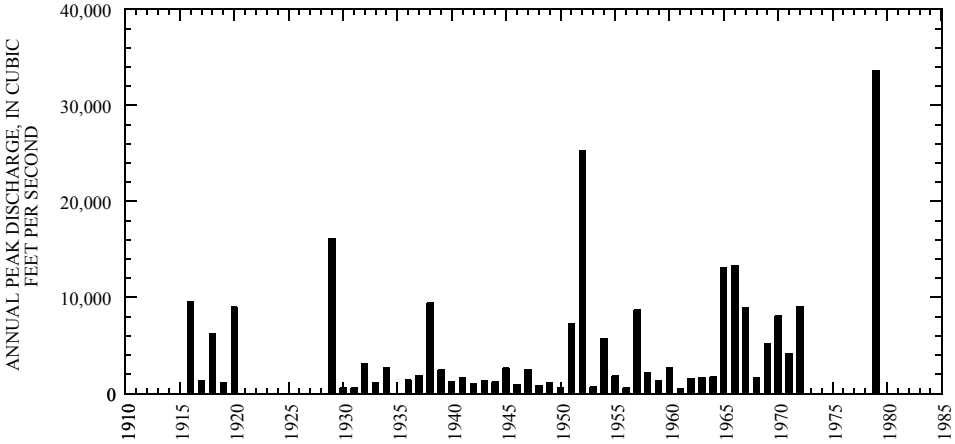
MAGNITUDE AND PROBABILITY OF ANNUAL HIGH FLOW
BASED ON PERIOD OF RECORD 1917-19, 1930-33, 1936-72

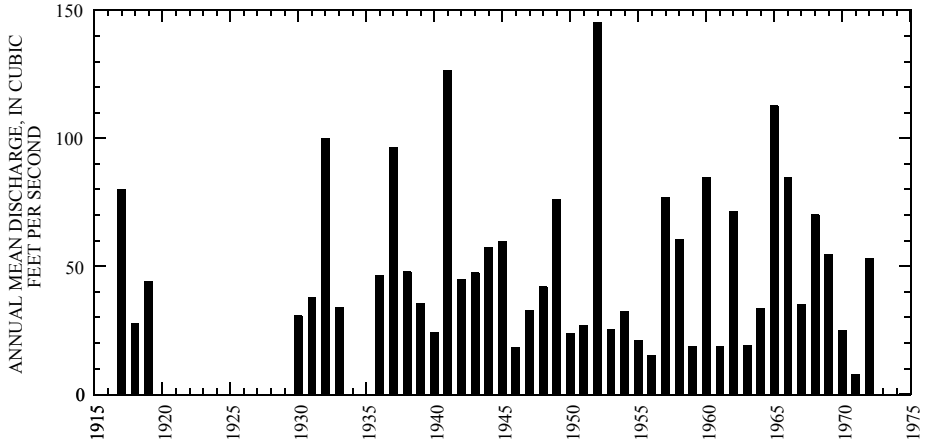
PERIOD (CONSECUTIVE DAYS)	DISCHARGE, IN FT3/S, FOR INDICATED RECURRENCE INTERVAL, IN YEARS, AND EXCEEDANCE PROBABILITY, IN PERCENT					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	1,040	2,430	3,950	6,880	10,000	14,300
3	830	1,650	2,370	3,490	4,480	5,630
7	629	1,090	1,390	1,760	2,010	2,260
15	449	703	843	989	1,080	1,150
30	304	479	575	674	734	783
60	188	317	401	502	572	637
90	140	246	319	411	478	543

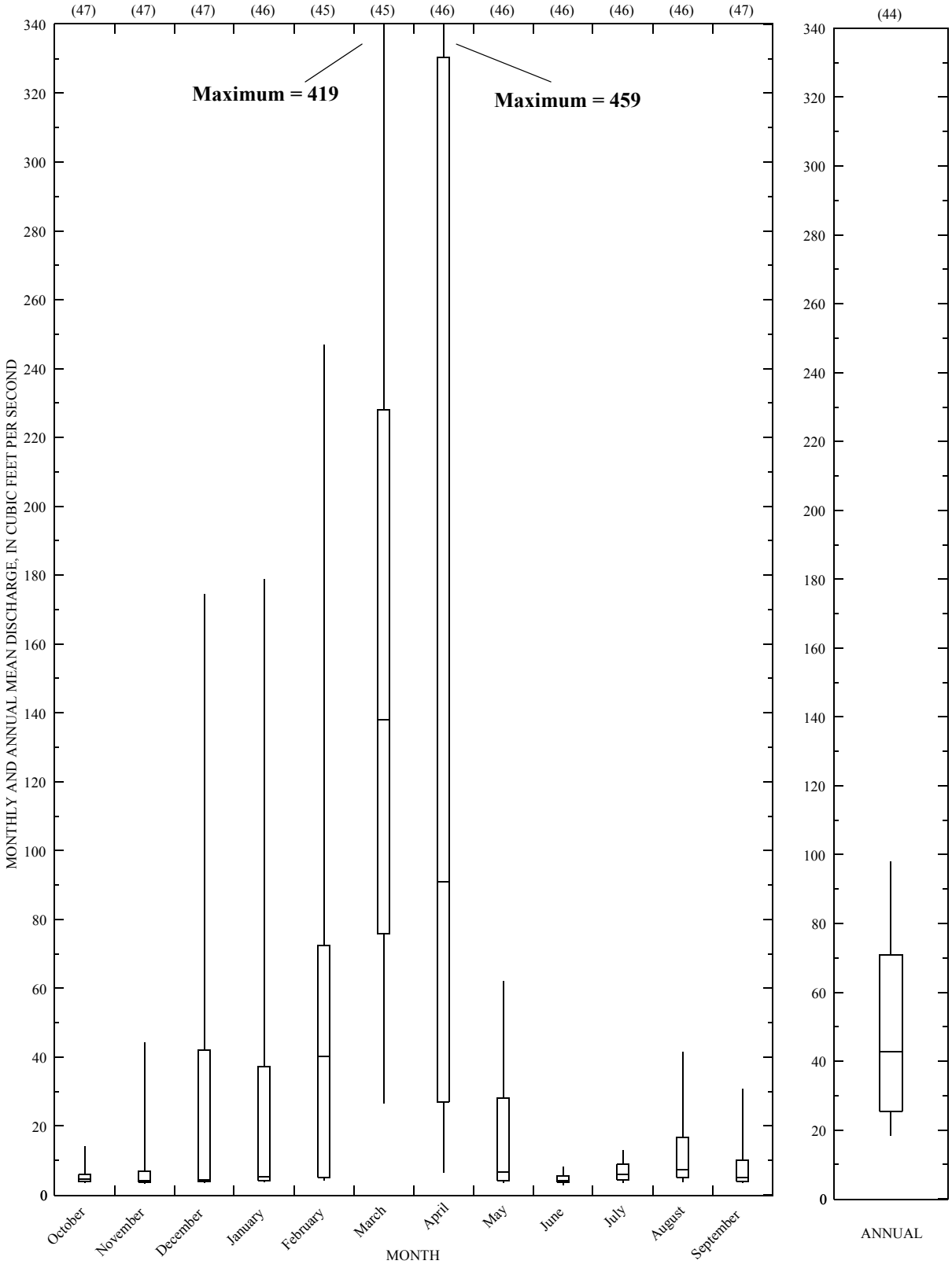
DURATION TABLE OF DAILY MEAN FLOW FOR PERIOD OF RECORD 1917-19, 1930-33, 1936-72

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%
768	267	113	60	33	9.0	5.6	5.1	4.7	4.3	3.8	3.3	3.0	2.1	1.8	1.7	1.1

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


ANNUAL PEAK DISCHARGE, IN CUBIC FEET PER SECOND
40,000
30,000
20,000
10,000
0
1910
1915
1920
1925
1930
1935
1940
1945
1950
1955
1960
1965
1970
1975
1980
1985


ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
150
100
50
0
1915
1920
1925
1930
1935
1940
1945
1950
1955
1960
1965
1970
1975


(47)
(47)
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(45)
(45)
(46)
(46)
(46)
(46)
(46)
(47)
(44)
Maximum = 419
Maximum = 459
MONTHLY AND ANNUAL MEAN DISCHARGE, IN CUBIC FEET PER SECOND
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
October
November
December
January
February
March
April
May
June
July
August
September
MONTH
ANNUAL