



Water-Data Report 2009

07160000 CIMARRON RIVER NEAR GUTHRIE, OK

Lower Cimarron Basin
Lower Cimarron-Skeleton Subbasin

LOCATION.--Lat 35°55'14", long 97°25'32" referenced to North American Datum of 1927, in NE ¼ SE ¼ sec.29, T.17 N., R.2 W., Logan County, OK, Hydrologic Unit 11050002, on downstream side left bank of State Highway 77 bridge, 1.6 mi downstream from Cottonwood Creek, 2.5 mi north of Guthrie, 6.1 mi upstream from Skeleton Creek, and at mile 121.4.

DRAINAGE AREA.--16,892 mi² of which 4,926 mi² probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1937 to September 1976, October 1983 to current year. Monthly discharge only for some periods, published in WSP's 1311 and 1731.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 896.50 ft above NGVD of 1929 (U.S. Army Corps of Engineers' bench mark). Prior to Mar. 19, 1939, nonrecording gage at railway bridge 1,200 ft upstream at datum 4.00 ft higher. From Mar. 19, 1939, to Sept.21, 1967, the datum was 4.00 ft higher, from Sept. 21, 1967, to Sept. 30, 1976, the datum was 2.00 ft higher at recording gage 125 ft upstream from railway bridge. From Sept. 14, 1967, to Sept. 30, 1976, supplementary water-stage recorder at present site and datum.

REMARKS.--Records fair except for estimated periods which are poor. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 27	2330	*20,300	*9.62
No other peak greater than base discharge			

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	549	655	435	481	488	359	764	4,290	521	310	1,140	455
2	531	643	428	468	454	361	948	4,120	487	268	475	378
3	513	620	425	460	439	363	1,270	3,580	472	251	295	343
4	495	593	417	451	413	363	947	2,950	493	232	528	317
5	474	696	416	441	403	363	810	2,350	473	233	514	322
6	494	1,230	414	438	394	367	744	2,730	415	389	322	296
7	534	1,070	413	439	401	362	667	2,530	393	268	571	290
8	559	704	411	440	409	361	609	2,310	383	252	306	279
9	673	635	424	439	425	363	563	1,890	370	234	201	449
10	864	623	425	439	655	381	527	1,550	362	215	166	344
11	699	647	440	432	1,910	523	502	1,330	374	184	933	448
12	601	661	439	427	1,580	412	565	1,200	379	168	2,330	434
13	553	618	431	426	617	395	1,090	1,100	372	154	803	3,840
14	595	594	439	420	515	395	978	1,060	356	143	479	2,720
15	1,170	571	450	416	464	390	802	1,020	347	136	406	2,080
16	3,700	547	e440	e400	434	385	746	1,920	366	138	313	1,470
17	3,990	522	e405	410	413	382	788	4,220	472	151	251	1,020
18	2,670	500	442	410	403	378	694	1,870	425	221	689	1,280
19	1,640	475	460	434	397	379	666	1,230	346	167	4,170	821
20	1,330	455	453	424	390	378	724	1,010	344	136	4,650	951
21	e1,150	440	e440	413	381	373	1,100	861	367	133	4,710	624
22	e1,030	437	e368	416	376	369	1,680	761	365	128	3,240	469
23	959	433	e368	415	370	363	1,220	695	339	139	1,710	408
24	935	442	e398	415	363	1,270	913	647	333	154	1,070	376
25	881	439	e445	412	366	2,570	762	620	403	137	752	335
26	864	441	500	410	368	1,120	675	603	377	127	583	310
27	811	437	512	e370	367	708	9,410	618	327	130	1,120	290
28	758	448	602	e370	363	1,020	13,600	693	379	173	1,520	269
29	719	442	615	e390	---	1,020	11,400	624	378	422	938	259
30	686	439	549	e440	---	773	6,880	605	380	1,070	837	237
31	665	---	517	501	---	736	---	568	---	1,790	588	---
Total	32,092	17,457	13,921	13,247	14,558	17,982	63,044	51,555	11,798	8,653	36,610	22,114
Mean	1,035	582	449	427	520	580	2,101	1,663	393	279	1,181	737
Max	3,990	1,230	615	501	1,910	2,570	13,600	4,290	521	1,790	4,710	3,840
Min	474	433	368	370	363	359	502	568	327	127	166	237
Ac-ft	63,650	34,630	27,610	26,280	28,880	35,670	125,000	102,300	23,400	17,160	72,620	43,860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,081	856	552	512	707	1,290	1,592	2,453	2,344	996	705	897
Max	13,800	8,748	2,874	2,266	4,063	6,603	9,372	20,630	14,860	9,542	4,182	3,988
(WY)	(1987)	(1999)	(1993)	(1993)	(1987)	(1998)	(1999)	(1993)	(1995)	(2007)	(1995)	(1989)
Min	0.79	0.70	1.39	6.38	21.7	24.7	66.5	63.0	58.6	9.58	26.1	8.03
(WY)	(1953)	(1955)	(1955)	(1940)	(1957)	(1955)	(1956)	(1971)	(1953)	(1954)	(1943)	(1954)

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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1938 - 2009	
Annual total	609,363		303,031			
Annual mean	1,665		830		1,163	
Highest annual mean					3,901	1987
Lowest annual mean					192	1953
Highest daily mean	37,500	Jun 10	13,600	Apr 28	112,000	May 17, 1957
Lowest daily mean	253	Sep 9	127	Jul 26	0.30	Oct 20, 1939 ^a
Annual seven-day minimum	269	Aug 5	135	Jul 21	0.39	Oct 19, 1939
Maximum peak flow			20,300	Apr 27	158,000	May 17, 1957
Maximum peak stage			9.62	Apr 27	^b 18.58	May 17, 1957
Annual runoff (ac-ft)	1,209,000		601,100		842,300	
10 percent exceeds	3,200		1,490		2,250	
50 percent exceeds	704		453		364	
90 percent exceeds	403		296		64	

^a Also Oct. 21-22, Nov. 2, 1939.

^b At datum then in use.

