Water-Data Report 2007

05458900 WEST FORK CEDAR RIVER AT FINCHFORD, IA

Iowa Basin
West Fork Cedar Subbasin

LOCATION.--Lat 42°37′46″, long 92°32′36″ referenced to North American Datum of 1927, in SW ¼ SE ¼ sec.6, T.90 N., R.14 W., Black Hawk County, IA, Hydrologic Unit 07080204, on left bank 100 ft downstream from bridge on County Highway C55 at Finchford, 3.2 mi upstream from Shell Rock River, and 5.4 mi upstream from mouth.

DRAINAGE AREA.--846 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1945 to current year. Prior to October 1955, published as "West Fork Shell Rock River at Finchford".

REVISED RECORDS.--WSP 1438: Drainage area. WSP 1558: 1946 (M), 1947.

GAGE.--Water-stage recorder. Datum of gage is 867.54 ft above NGVD of 1929. Prior to June 10, 1955, nonrecording gage at same site and datum.

REMARKS.--Records are considered good, except for those estimated daily discharges, which are poor. An authorized diversion of 2,100 acre-ft is made into Big Marsh, 16 mi upstream from gage, each year between September 1 and November 15. Net effect on daily flows at gage is unknown. U.S. Geological Survey data collection platform with satellite and telephone modem telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of about 14 ft, from information by local resident, discharge about 12,800 ft^3/s.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	303	233	e449	820	e402	e503	2,020	2,870	1,530	647	245	1,180
2	286	228	e401	1,320	e402	e559	2,640	2,330	1,820	593	231	1,040
3	268	212	e368	1,580	e386	e549	3,860	1,890	2,000	545	217	941
4	254	202	e368	1,470	e379	e532	4,760	1,620	2,120	508	221	859
5	245	201	e525	1,240	e374	e530	4,840	1,470	1,990	479	249	785
6	216	199	e714	1,110	e377	e494	4,390	1,400	1,720	449	399	742
7	205	195	e910	992	e376	e511	3,640	1,530	1,570	420	421	725
8	199	194	e1,090	897	e370	e515	2,890	1,680	1,470	401	389	713
9	193	192	1,100	823	e383	e529	2,380	1,780	1,280	381	408	674
10	174	199	949	751	e379	e554	1,930	1,730	1,110	366	367	643
11	175	205	778	692	e393	e607	1,740	1,570	1,000	348	326	653
12	182	207	704	688	e397	e895	1,690	1,400	927	329	287	656
13	186	214	647	e527	e399	e1,520	1,720	1,260	857	313	262	634
14	182	230	540	e429	e399	e2,940	1,780	1,150	793	297	247	599
15	177	253	393	e415	e397	6,220	1,860	1,070	742	284	206	534
16	177	266	387	e404	e390	8,440	1,910	1,030	704	280	205	505
17	185	265	367	e590	e393	7,300	1,930	984	675	284	223	487
18	210	259	342	e691	e408	5,290	1,820	920	641	286	254	482
19	234	252	315	e762	e416	4,080	1,630	869	662	352	e426	491
20	246	247	306	e750	e425	3,160	1,440	826	779	460	e1,490	450
21	270	241	367	e685	e422	2,560	1,300	785	750	405	2,460	451
22	280	236	547	e646	e432	2,260	1,200	746	860	344	3,740	482
23	277	231	665	e621	e454	2,070	1,190	720	1,250	344	5,360	469
24	269	226	680	e537	e474	2,040	1,300	1,050	1,540	333	5,590	461
25	261	221	643	e504	e488	2,040	2,020	1,390	1,530	372	4,770	454
26	244	220	592	e481	e535	1,900	2,890	1,470	1,250	309	4,210	503
27	243	217	535	e491	e517	1,950	3,780	1,690	1,030	292	3,330	508
28	246	255	510	e481	e503	1,920	4,360	1,750	886	333	2,470	491
29	243	387	477	e446	---	1,710	4,150	1,520	783	345	1,880	474
30	238	475	450	e417	---	1,600	3,550	1,290	708	294	1,590	464
31	236	---	479	e426	---	1,660	---	1,290	---	264	1,350	---
Total	7,104	7,162	17,598	22,686	11,670	67,438	76,610	43,080	34,977	11,657	43,823	18,550
Mean	229	239	568	732	417	2,175	2,554	1,390	1,166	376	1,414	618
Max	303	475	1,100	1,580	535	8,440	4,840	2,870	2,120	647	5,590	1,180
Min	174	192	306	404	370	494	1,190	720	641	264	205	450
Ac-ft	14,090	14,210	34,910	45,000	23,150	133,800	152,000	85,450	69,380	23,120	86,920	36,790
Cfsm	0.27	0.28	0.67	0.87	0.49	2.57	3.02	1.64	1.38	0.44	1.67	0.73
In.	0.31	0.31	0.77	1.00	0.51	2.97	3.37	1.89	1.54	0.51	1.93	0.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	310	306	250	183	308	979	1,063	921	1,035	740	395	307
Max	1,412	1,502	1,165	995	2,303	2,456	4,170	3,472	3,358	3,995	3,023	2,149
(WY)	(1973)	(1973)	(1983)	(1973)	(1984)	(1961)	(1965)	(1999)	(1984)	(1993)	(1993)	(1965)
Min	14.9	22.3	14.2	9.35	6.37	86.2	81.8	80.1	39.5	26.6	15.2	16.9
(WY)	(1990)	(1959)	(1959)	(1959)	(1959)	(1954)	(1957)	(1957)	(1977)	(1977)	(1989)	(1989)

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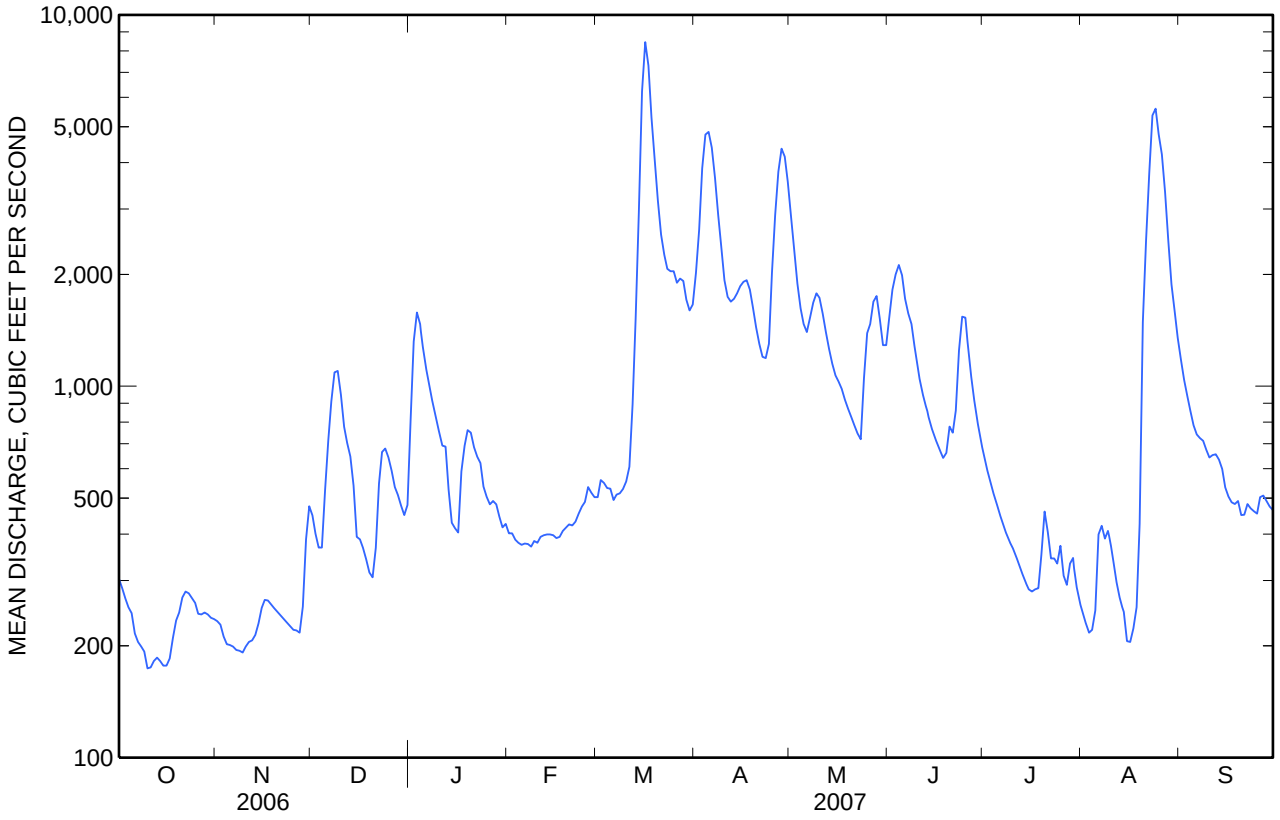
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1946 - 2007	
Annual total	192,738		362,355			
Annual mean	528		993		567	
Highest annual mean					1,800	1993
Lowest annual mean					65.5	1956
Highest daily mean	2,910	May 4	8,440	Mar 16	25,100	Jun 27, 1951
Lowest daily mean	90	Sep 9	174	Oct 10	5.9	Feb 26, 1959[a]
Annual seven-day minimum	98	Sep 3	179	Oct 10	6.1	Feb 23, 1959
Maximum peak flow			8,840	Mar 16	31,900	Jun 27, 1951
Maximum peak stage			13.76	Mar 16	18.45	Jul 29, 1990
Instantaneous low flow			168	Oct 10		
Annual runoff (ac-ft)	382,300		718,700		410,800	
Annual runoff (cfsm)	0.624		1.17		0.670	
Annual runoff (inches)	8.48		15.93		9.11	
10 percent exceeds	1,090		2,030		1,380	
50 percent exceeds	403		530		250	
90 percent exceeds	170		231		51	

[a] Also Feb 27, 1959.