Water-Data Report 2007

04112500 RED CEDAR RIVER AT EAST LANSING, MI

Southeastern Lake Michigan Basin
Upper Grand Subbasin

LOCATION.--Lat 42°43′38″, long 84°28′41″ referenced to North American Datum of 1927, in SW ¼ sec.18, T.4 N., R.1 W., Ingham County, MI, Hydrologic Unit 04050004, in left downstream bridge abutment of Farm Lane Bridge on Michigan State University Campus in East Lansing, 4.0 mi upstream from Sycamore Creek, and 5.6 mi upstream from mouth.

DRAINAGE AREA.--355 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--August 1902 to December 1903, March 1931 to current year. Monthly discharge only for some periods, published in WSP 1307. Published as Red Cedar River at Agricultural College, August 1902 to December 1903 and as Cedar River at East Lansing, March 1931 to September 1965. Gage-height records collected in this vicinity 1911-19, and 1920-28 (flood seasons only), are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1307: 1936(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 824.39 ft above sea level. August 1902 to December 1903 nonrecording gage at site 0.8 mi downstream at different datum. March 1931 to November 1940 water-stage recorder at site 250 ft upstream at present datum.

REMARKS.--Records good. Prior to April 1975, occasional regulation at low flow by mill at Williamston, 16 mi upstream from station. Several measurements of water temperature were made during the year. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 24, 1904, reached a stage of 13.4 ft, discharge, 8,000 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	67	209	555	487	209	163	435	426	191	129	39	137
2	76	180	937	610	223	284	428	473	199	109	37	102
3	89	159	1,040	593	161	424	398	478	351	99	36	83
4	108	146	934	529	155	420	376	432	733	95	33	73
5	134	139	742	731	171	350	340	364	1,320	89	35	65
6	135	134	590	1,010	159	264	304	300	1,440	84	39	60
7	117	135	506	1,070	149	227	274	251	1,320	87	51	74
8	100	142	425	984	145	216	255	223	1,110	79	54	84
9	87	151	e356	862	140	227	240	432	905	70	53	74
10	78	155	283	733	139	382	234	897	757	69	52	68
11	78	204	261	616	139	890	248	919	639	61	43	96
12	89	237	282	547	136	1,090	439	697	539	58	41	116
13	105	238	449	551	137	1,110	594	491	451	55	36	107
14	117	222	583	580	131	1,080	566	355	365	53	34	88
15	115	204	590	637	128	1,020	483	305	269	52	31	76
16	105	282	519	802	133	893	406	507	197	51	32	69
17	160	607	445	839	132	741	337	574	167	50	31	64
18	267	699	383	832	130	614	286	478	148	52	29	60
19	273	630	330	649	130	526	258	379	168	55	43	57
20	236	509	290	536	133	462	240	306	161	55	132	54
21	200	408	268	e470	141	408	225	259	159	52	159	54
22	185	331	284	420	147	506	214	230	142	49	171	53
23	216	274	368	354	148	707	204	210	130	44	150	50
24	238	237	415	325	138	691	195	188	119	41	152	49
25	222	216	413	298	142	617	224	173	105	39	155	57
26	191	202	393	234	145	605	331	223	97	40	128	80
27	174	193	358	300	145	572	542	334	151	44	114	60
28	188	188	320	281	146	535	604	345	234	41	94	53
29	257	185	285	208	---	508	545	308	193	44	91	49
30	266	287	261	216	---	475	459	251	155	e43	184	47
31	241	---	275	216	---	427	---	210	---	40	190	---
Total	4,914	7,903	14,140	17,520	4,132	17,434	10,684	12,018	12,915	1,929	2,469	2,159
Mean	159	263	456	565	148	562	356	388	430	62.2	79.6	72.0
Max	273	699	1,040	1,070	223	1,110	604	919	1,440	129	190	137
Min	67	134	261	208	128	163	195	173	97	39	29	47
Cfsm	0.45	0.74	1.28	1.59	0.42	1.58	1.00	1.09	1.21	0.18	0.22	0.20
In.	0.51	0.83	1.48	1.84	0.43	1.83	1.12	1.26	1.35	0.20	0.26	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	104	144	184	222	294	494	453	295	183	88.8	60.8	73.5
Max	571	735	494	739	1,036	1,162	1,494	1,310	627	578	366	426
(WY)	(1982)	(1993)	(1995)	(1993)	(2001)	(1948)	(1947)	(1956)	(1968)	(1994)	(1992)	(1903)
Min	14.8	21.2	20.5	29.0	28.6	58.6	62.3	52.9	20.4	5.70	9.24	14.6
(WY)	(1935)	(1964)	(1964)	(1940)	(1940)	(1934)	(1931)	(1931)	(1934)	(1934)	(1934)	(1939)

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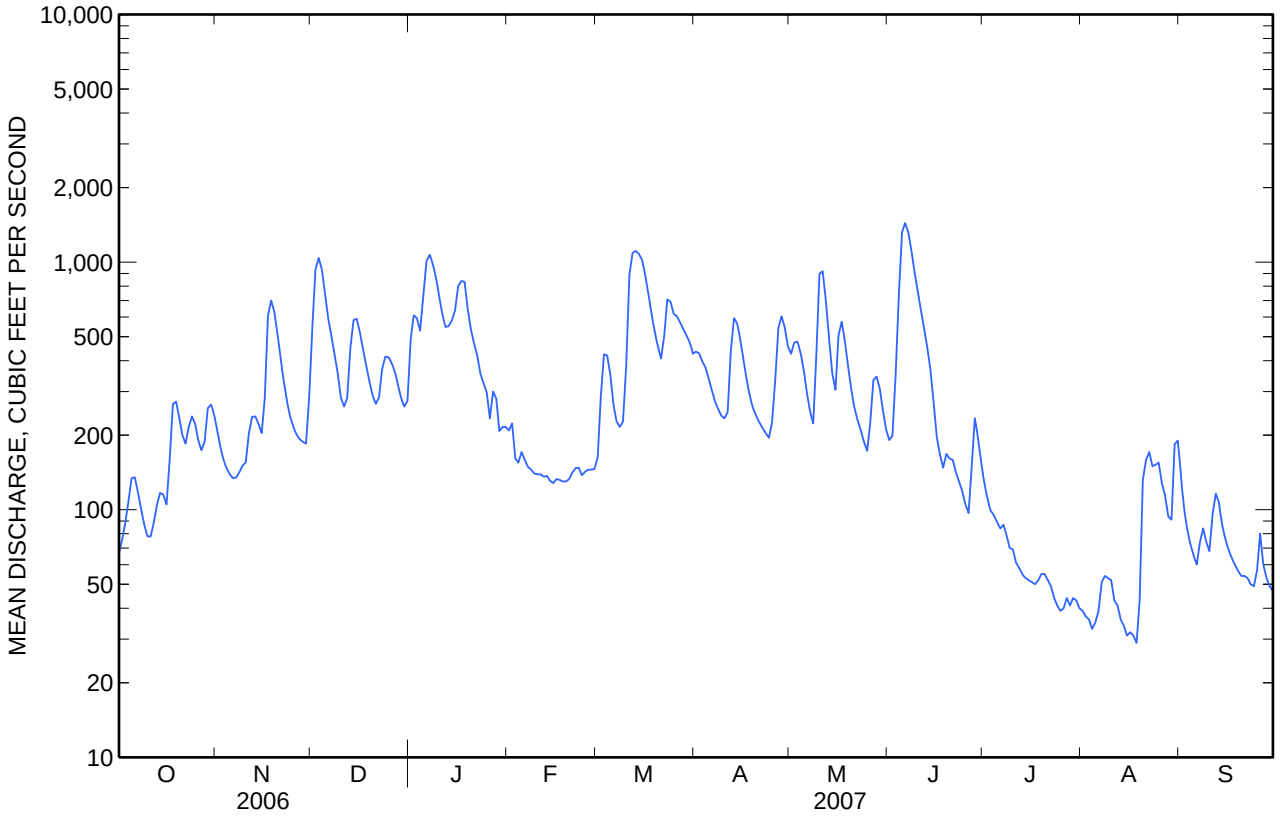
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1902 - 2007	
Annual total	101,739		108,217			
Annual mean	279		296		217	
Highest annual mean					431	1993
Lowest annual mean					43.3	1964
Highest daily mean	1,740	Mar 15	1,440	Jun 6	5,720	Apr 20, 1975
Lowest daily mean	30	Aug 18	29	Aug 18	3.0	Jul 31, 1931
Annual seven-day minimum	32	Aug 14	33	Aug 12	3.9	Jul 15, 1934
Maximum peak flow			1,460	Jun 6	5,940	Apr 20, 1975
Maximum peak stage			6.29	Jun 6	11.95	Apr 20, 1975
Instantaneous low flow			28	Aug 18 [a]	3.0	Jul 31, 1931
Annual runoff (cfsm)	0.785		0.835		0.612	
Annual runoff (inches)	10.66		11.34		8.31	
10 percent exceeds	611		633		513	
50 percent exceeds	199		216		108	
90 percent exceeds	58		53		30	

[a] Also occurred Aug. 19.