Water-Data Report 2006

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 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	36	53	112	183	649	199	e271	147	272	86	51	78
2	35	41	98	205	531	193	e291	151	217	77	47	65
3	39	35	84	299	440	183	e293	161	194	72	113	58
4	36	33	70	322	388	170	e299	168	192	72	163	54
5	33	31	66	316	394	163	e295	162	170	71	116	56
6	31	31	54	285	437	163	e283	152	149	66	81	52
7	32	32	58	251	446	161	e317	145	137	63	64	47
8	32	52	52	221	405	163	e472	136	132	59	54	43
9	32	103	54	195	330	383	e515	128	121	56	48	43
10	26	79	51	172	293	785	480	129	107	57	44	41
11	26	60	49	163	267	1,010	e387	311	96	70	40	45
12	25	53	49	163	246	1,080	351	597	87	106	37	64
13	27	46	49	196	229	1,160	343	758	81	89	35	101
14	25	42	49	328	218	1,520	365	799	77	76	35	163
15	23	60	50	382	211	1,740	376	870	72	67	33	121
16	21	72	52	342	250	1,630	361	1,010	67	61	33	88
17	21	70	52	304	588	1,250	326	1,110	63	64	31	73
18	23	70	52	345	836	964	285	1,120	92	92	30	64
19	24	63	51	376	844	768	249	1,020	140	73	31	60
20	28	55	48	394	780	636	e227	878	134	65	34	58
21	30	52	47	571	617	540	e206	752	166	59	35	55
22	30	49	47	688	486	457	193	636	242	54	35	54
23	30	48	48	668	411	385	188	538	250	51	33	66
24	29	51	54	568	353	333	196	457	201	48	87	180
25	30	46	70	472	301	302	196	400	152	45	88	165
26	30	57	98	389	261	283	186	400	124	49	98	117
27	29	61	118	320	230	271	176	406	113	58	106	92
28	28	78	133	277	210	259	173	387	108	87	95	79
29	28	103	158	372	---	246	163	313	106	71	146	71
30	28	115	184	622	---	234	153	319	96	57	143	68
31	31	---	189	697	---	226	---	364	---	59	103	---
Total	898	1,741	2,346	11,086	11,651	17,857	8,616	14,924	4,158	2,080	2,089	2,321
Mean	29.0	58.0	75.7	358	416	576	287	481	139	67.1	67.4	77.4
Max	39	115	189	697	844	1,740	515	1,120	272	106	163	180
Min	21	31	47	163	210	161	153	128	63	45	30	41
Cfsm	0.08	0.16	0.21	1.01	1.17	1.62	0.81	1.36	0.39	0.19	0.19	0.22
In.	0.09	0.18	0.25	1.16	1.22	1.87	0.90	1.56	0.44	0.22	0.22	0.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	103	143	180	217	296	493	455	294	180	89.1	60.5	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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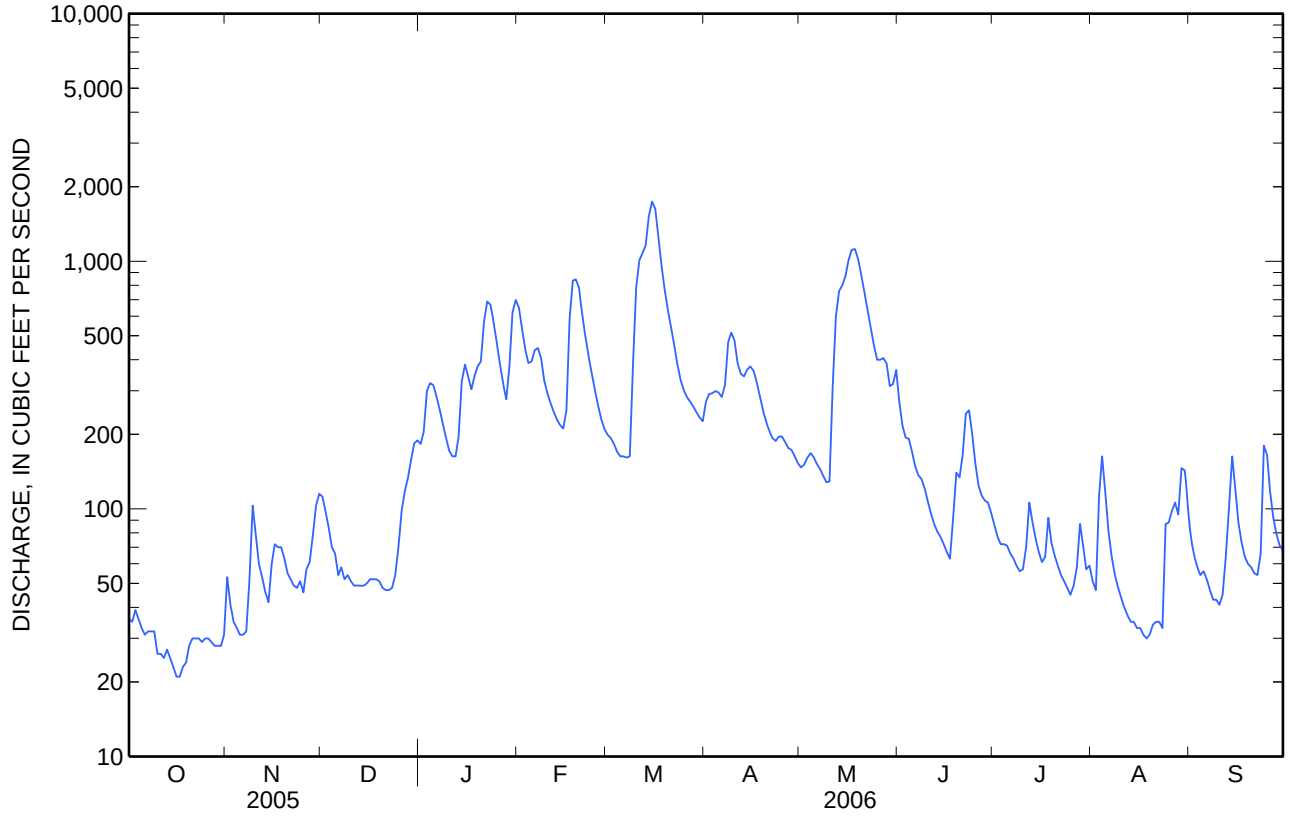
SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1902 - 2006	
Annual total	75,457		79,767			
Annual mean	207		219		216	
Highest annual mean					431	1993
Lowest annual mean					43.3	1964
Highest daily mean	1,980	Jan 15	1,740	Mar 15	5,720	Apr 20, 1975
Lowest daily mean	15	Sep 9	21	Oct 16	3.0	Jul 31, 1931
Annual seven-day minimum	15	Sep 9	23	Oct 13	3.9	Jul 15, 1934
Maximum peak flow			1,750	Mar 15	5,940	Apr 20, 1975
Maximum peak stage			6.74	Mar 15	11.95	Apr 20, 1975
Instantaneous low flow			20	Oct 16[a]	3.0	Jul 31, 1931
Annual runoff (cfsm)	0.582		0.616		0.609	
Annual runoff (inches)	7.91		8.36		8.27	
10 percent exceeds	552		534		510	
50 percent exceeds	82		115		108	
90 percent exceeds	25		33		30	

[a] Also occurred Oct. 17.