Water-Data Report 2011

04111379 RED CEDAR RIVER NEAR WILLIAMSTON, MI

Southeastern Lake Michigan Basin
Upper Grand Subbasin

LOCATION.--Lat 42°40′59″, long 84°13′09″ referenced to North American Datum of 1927, in NE ¼ sec.4, T.3 N., R.2 E., Ingham County, MI, Hydrologic Unit 04050004, on right bank 20 ft upstream from bridge on State Highway 52, 1.5 mi upstream from Squaw Creek, 3.5 mi east of Williamston, and at mile 26.

DRAINAGE AREA.--163 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1975 to September 1989, July 2001 to September 2011 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 870 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. At times, low flow is affected by pumpage for irrigation. Several measurements of water temperature were made during the year. Gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 19, 1975, reached a stage of 10.41 ft, from floodmark, discharge, 2,670 ft^3/s.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 04111379, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/04111379.2011.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	27	28	55	101	e33	136	130	614	501	53	272	39
2	28	27	52	e133	e32	130	119	525	412	50	142	37
3	29	27	47	e110	e30	109	114	455	313	46	120	35
4	29	27	43	e86	e28	100	125	393	215	45	126	36
5	28	27	41	e68	e28	210	130	312	162	42	101	36
6	28	27	38	e58	e30	429	125	240	135	41	79	34
7	27	27	e36	e50	e30	e409	161	207	119	40	71	34
8	26	27	e34	e46	e29	356	195	182	107	38	67	38
9	25	27	e33	e43	e29	314	228	160	96	37	71	44
10	24	27	e34	e42	e29	409	236	144	93	36	112	61
11	22	26	34	e41	e29	500	231	134	102	37	102	107
12	22	26	36	e40	e32	521	259	135	97	44	74	109
13	23	26	e40	e39	e34	485	243	144	89	39	67	85
14	25	26	e37	e39	e38	429	199	259	80	34	85	62
15	26	26	e34	e39	e41	376	157	414	74	33	98	54
16	25	26	e31	e38	e47	332	136	460	79	32	90	50
17	24	28	e30	e38	e79	314	150	439	89	31	71	46
18	24	32	e29	e40	270	301	154	396	96	31	61	44
19	26	32	e29	e41	315	275	151	486	81	36	54	45
20	25	31	e29	e40	258	236	296	649	72	39	50	55
21	25	30	e29	e38	e133	340	436	624	68	35	55	60
22	27	31	e30	e36	e113	468	394	539	91	32	52	54
23	27	39	e30	e36	e107	539	455	469	109	31	47	48
24	27	41	e31	e36	e100	604	528	400	109	31	61	45
25	28	41	e32	e35	89	525	475	326	100	31	74	42
26	30	51	e31	e35	78	441	421	512	83	28	64	47
27	36	54	e30	e35	75	368	398	729	72	27	53	56
28	38	47	e29	e35	97	285	573	747	67	82	47	58
29	34	42	e30	e35	---	205	782	676	61	324	43	55
30	31	46	e31	e33	---	163	727	658	56	465	40	63
31	30	---	e41	e31	---	143	---	588	---	402	39	---
Total	846	972	1,086	1,517	2,233	10,452	8,728	13,016	3,828	2,272	2,488	1,579
Mean	27.3	32.4	35.0	48.9	79.8	337	291	420	128	73.3	80.3	52.6
Max	38	54	55	133	315	604	782	747	501	465	272	109
Min	22	26	29	31	28	100	114	134	56	27	39	34
Cfsm	0.17	0.20	0.21	0.30	0.49	2.07	1.78	2.58	0.78	0.45	0.49	0.32
In.	0.19	0.22	0.25	0.35	0.51	2.39	1.99	2.97	0.87	0.52	0.57	0.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	65.5	74.2	112	109	145	267	220	150	104	38.7	27.1	46.1
Max	329	265	248	325	411	504	415	420	306	73.3	80.3	250
(WY)	(1982)	(1989)	(1976)	(2005)	(1976)	(1982)	(2009)	(2011)	(1989)	(2011)	(2011)	(2008)
Min	15.7	26.9	25.6	22.3	20.8	103	80.5	40.8	16.6	10.8	9.27	11.3
(WY)	(2003)	(1977)	(2003)	(1977)	(2003)	(2003)	(2004)	(1987)	(1988)	(1988)	(1984)	(1978)

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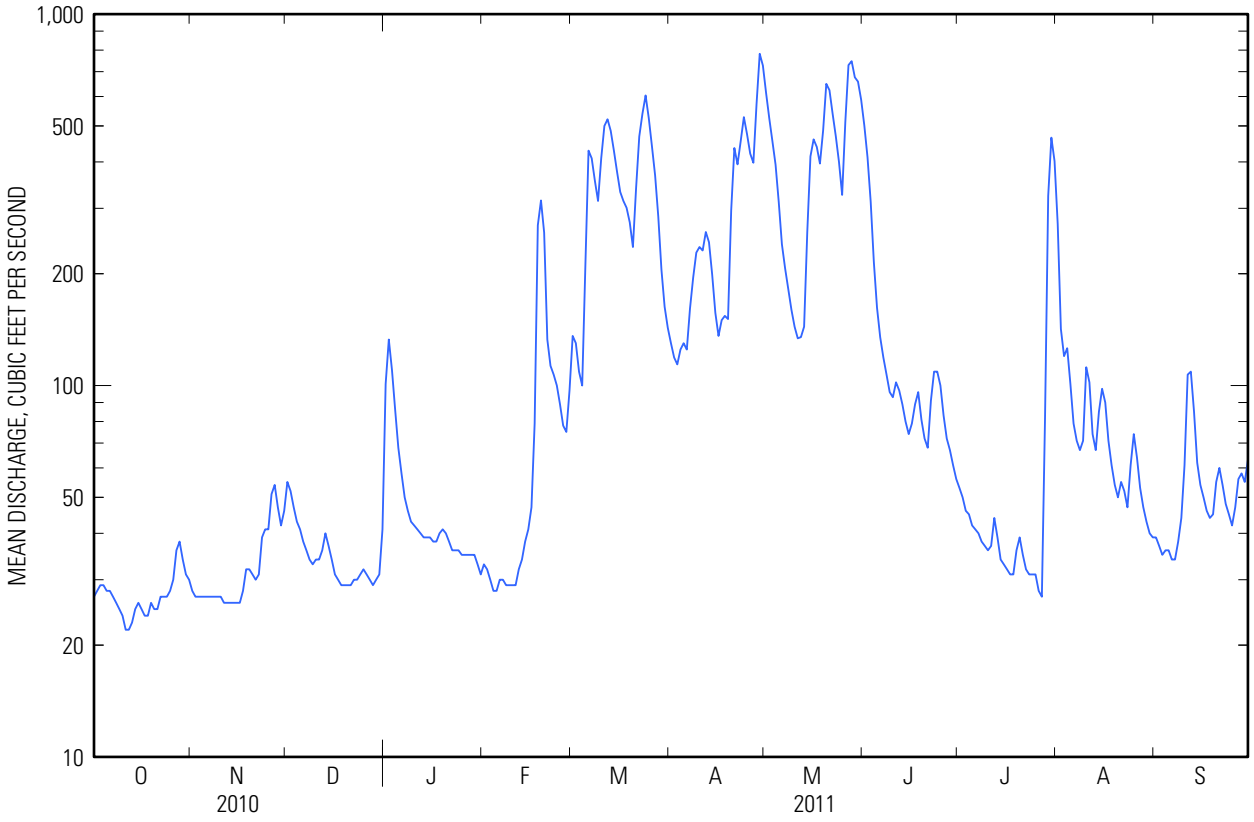
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1975 - 2011	
Annual total	34,256		49,017			
Annual mean	93.9		134		113	
Highest annual mean					197	2009
Lowest annual mean					56.3	2003
Highest daily mean	742	Mar 13	782	Apr 29	1,700	Feb 26, 1985
Lowest daily mean	18	Aug 31	22	Oct 11	4.4	Jul 14, 1988
Annual seven-day minimum	20	Aug 26	24	Oct 8	5.7	Jul 9, 1988
Maximum peak flow			797	Apr 29	1,790	Feb 26, 1985
Maximum peak stage			7.08	Apr 29	9.07	Feb 26, 1985
Instantaneous low flow					2.2	Jul 13, 1988 [a]
Annual runoff (cfsm)	0.576		0.824		0.693	
Annual runoff (inches)	7.82		11.19		9.41	
10 percent exceeds	237		417		284	
50 percent exceeds	53		53		61	
90 percent exceeds	25		28		19	

[a] Also occurred July 14, 1988.