Water-Data Report 2013

06809500 East Nishnabotna River at Red Oak, IA

Missouri-Nishnabotna Basin
East Nishnabotna Subbasin

LOCATION.--Lat 41°00′31″, long 95°14′29″ referenced to North American Datum of 1927, in NW ¼ NW ¼ SE ¼ sec.29, T.72 N., R.38 W., Montgomery County, IA, Hydrologic Unit 10240003, on downstream side of bridge on Coolbaugh Street in Red Oak, 0.2 mi upstream from Red Oak Creek, 38.1 mi upstream from confluence with West Nishnabotna River, and 53.7 mi upstream from mouth of Nishnabotna River.

DRAINAGE AREA.--894 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records from May 1918 to July 1925, May 1936 to current year. May 1918 to July 1925, monthly mean discharge for some periods published in WSP 1310.

REVISED RECORDS.--WSP 1240: 1921, 1922-23 (M), 1924, 1942 (M), 1944 (M), 1946. WSP 1440: Drainage area. WSP 1710: 1957.

GAGE.--Water-stage recorder. Datum of gage is 1,005.45 ft above National Geodetic Vertical Datum of 1929. Prior to July 5, 1925, non-recording gage at same site at datum 4.60 ft higher; May 29, 1936, to November 14, 1952, non-recording gage at site 0.5 mi upstream at datum 5.00 ft higher, with supplementary water-stage recorder in operation above 3.2 ft gage height from March 22, 1951, to November 14, 1952; November 15, 1952, to June 13, 1966, water-stage recorder at site 0.5 mi upstream at datum 5.00 ft higher; June 14, 1966, to September 30, 1969, water-stage recorder at same site at datum 5.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S. Geological Survey data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 7, 1917, reached a stage of 21.7 ft, discharge 23,500 ft^3/s.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 06809500, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/06809500.2013.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	76	99	96	e68	e89	113	199	646	2,810	1,130	355	145
2	75	98	95	e87	e114	112	183	907	2,210	1,040	350	134
3	73	97	95	e72	e137	105	167	2,630	1,870	992	330	132
4	74	96	91	e70	e140	111	159	2,350	1,680	951	311	122
5	73	103	88	e74	e135	112	156	1,950	2,680	901	297	120
6	74	102	88	e72	140	104	155	1,860	1,960	840	289	117
7	75	100	88	e85	140	105	153	1,540	1,660	800	298	113
8	76	98	87	e90	136	112	156	1,330	1,510	761	285	110
9	77	98	88	e98	152	120	157	1,740	2,210	750	266	107
10	78	100	76	e105	156	696	213	3,950	2,850	724	253	104
11	78	119	68	e123	162	437	373	2,400	2,150	679	240	105
12	77	112	84	e94	143	232	433	1,820	1,870	649	231	110
13	109	105	97	e89	140	223	389	1,520	1,640	626	221	104
14	177	103	96	e96	153	219	331	1,350	1,480	608	209	99
15	143	100	102	e109	e108	207	311	1,210	1,850	590	269	122
16	122	98	109	e124	e105	312	302	1,100	2,550	564	290	108
17	108	96	106	e113	123	552	356	1,040	1,680	546	245	143
18	98	95	101	e114	e110	338	870	974	1,470	527	213	142
19	102	95	e90	e123	e84	287	2,040	931	1,340	515	193	236
20	101	94	e73	e113	e79	222	1,300	914	1,240	493	185	298
21	100	94	e69	e109	e112	205	955	898	1,160	476	178	150
22	139	94	e81	e117	e117	194	900	828	1,090	463	171	113
23	107	90	e76	e130	e114	191	1,060	790	1,210	477	167	100
24	101	87	e70	e124	e117	187	1,230	748	4,610	439	169	95
25	109	89	e66	e134	e136	174	993	742	6,230	419	163	93
26	124	92	e65	e127	131	164	869	793	2,870	406	154	95
27	138	86	e72	e135	128	167	797	981	2,070	390	146	91
28	122	84	e70	e136	120	162	743	2,800	1,660	372	134	91
29	108	90	e67	e129	---	163	706	2,590	1,390	361	124	90
30	103	99	e72	e94	---	181	675	5,830	1,250	360	122	88
31	100	---	e91	e85	---	198	---	4,030	---	359	120	---
Total	3,117	2,913	2,617	3,239	3,521	6,705	17,331	53,192	62,250	19,208	6,978	3,677
Mean	101	97.1	84.4	104	126	216	578	1,716	2,075	620	225	123
Max	177	119	109	136	162	696	2,040	5,830	6,230	1,130	355	298
Min	73	84	65	68	79	104	153	646	1,090	359	120	88
Ac-ft	6,180	5,780	5,190	6,420	6,980	13,300	34,380	105,500	123,500	38,100	13,840	7,290
Cfsm	0.11	0.11	0.09	0.12	0.14	0.24	0.65	1.92	2.32	0.69	0.25	0.14
In.	0.13	0.12	0.11	0.13	0.15	0.28	0.72	2.21	2.59	0.80	0.29	0.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	248	220	181	169	358	679	606	823	1,026	598	367	346
Max	2,071	1,335	1,038	1,078	1,438	2,756	2,194	4,161	5,467	6,971	2,821	3,074
(WY)	(2008)	(1973)	(1993)	(1973)	(1973)	(2010)	(1973)	(2007)	(2008)	(1993)	(1993)	(1972)
Min	16.5	19.9	14.6	12.3	17.2	32.3	30.4	35.2	40.5	24.5	17.0	14.9
(WY)	(1938)	(1940)	(1938)	(1940)	(1940)	(1938)	(1956)	(1939)	(1968)	(1936)	(1936)	(1937)

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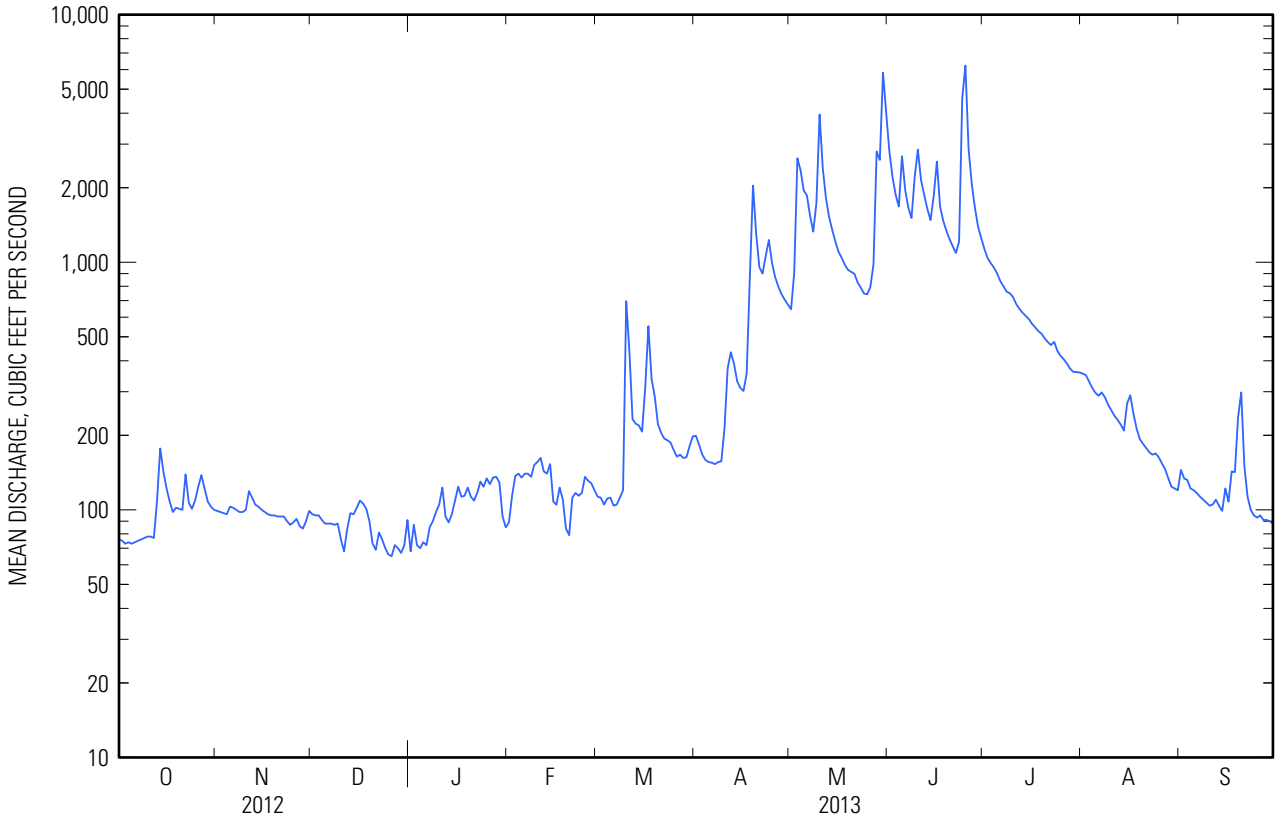
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1919 - 2013	
Annual total	123,090		184,748			
Annual mean	336		506		472	
Highest annual mean					1,842	1993
Lowest annual mean					54.9	1968
Highest daily mean	7,950	Apr 15	6,230	Jun 25	45,100	Jun 15, 1998
Lowest daily mean	65	Dec 26	65	Dec 26	6.0	Aug 18, 1936
Annual seven-day minimum	69	Dec 24	69	Dec 24	8.1	Dec 15, 1937
Maximum peak flow			11,300	Jun 24	60,500	Jun 15, 1998
Maximum peak stage			17.24	Jun 24	29.39	Jun 15, 1998
Instantaneous low flow			59	Nov 28	59	Nov 28, 2012
Annual runoff (ac-ft)	244,100		366,400		342,200	
Annual runoff (cfsm)	0.376		0.566		0.528	
Annual runoff (inches)	5.12		7.69		7.18	
10 percent exceeds	695		1,490		1,030	
50 percent exceeds	171		143		196	
90 percent exceeds	77		86		47