Water-Data Report 2013

05106000 SPRAGUE CREEK NEAR SPRAGUE, MANITOBA

Lower Red Basin
Roseau Subbasin

LOCATION.--Lat 48°59′33″, long 95°39′43″ referenced to North American Datum of 1927, in NE ¼ NE ¼ sec.34, T.164 N., R.39 W., Roseau County, MN, Hydrologic Unit 09020314, on left bank 0.5 mi south of international boundary, 3.5 mi south of Sprague, Manitoba, 8 mi upstream from mouth, and 10.5 mi northeast of Roseau, MN.

DRAINAGE AREA.--176 mi^2, Prior to 1981, 169 mi^2; prior to October 1958, 151 mi^2; changes due to construction of drainage ditches within basin.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1928 to December 1981, October, 1999 to current year.

REVISED RECORDS.--WSP 1055: 1944. WSP 1308: 1931(M). WDR MN-81-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,038.40 ft above sea level, 1928 datum, (levels by Geodetic Survey of Canada). Prior to Mar. 15, 1929, non-recording gage at same site and datum.

REMARKS.--Records good to fair, except those for estimated daily discharges, which are poor.

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 05106000, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/05106000.2013.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	0.74	51	e6.9	e1.2	e1.1	e2.2	e4.4	660	737	48	4.9	4.8
2	0.86	48	e6.9	e1.2	e1.1	e2.4	e4.3	628	759	39	6.1	15
3	0.94	45	e7.0	e1.3	e1.1	e2.8	e4.3	562	702	33	3.4	13
4	1.7	43	e5.8	e1.3	e1.2	e2.7	e4.2	490	600	26	2.8	11
5	2.5	40	e4.5	e1.3	e1.3	e2.6	e4.3	409	501	23	2.7	8.2
6	3.3	44	e3.4	e1.4	e1.3	e2.7	e4.4	364	417	19	3.6	6.5
7	2.5	57	e2.4	e1.4	e1.4	e2.9	e4.4	335	359	18	4.9	5.7
8	1.9	59	e1.8	e1.5	e1.4	e3.3	e4.4	315	382	16	6.9	4.7
9	2.5	60	e1.7	e1.8	e1.5	e4.0	e4.4	297	312	14	5.9	3.6
10	4.1	54	e1.7	e1.9	e1.6	e4.0	e4.4	279	259	13	4.4	3.4
11	4.3	e50	e1.5	e1.9	e1.5	e4.0	e4.4	256	230	15	5.1	3.3
12	3.9	e47	e1.5	e1.8	e1.4	e3.9	e4.3	227	209	14	8.4	4.5
13	3.1	e44	e1.5	e1.7	e1.4	e3.9	e4.1	210	182	13	7.4	4.5
14	3.0	38	e1.6	e1.7	e1.4	e4.0	e4.2	193	158	12	5.5	3.9
15	2.7	32	e1.7	e1.6	e1.5	e4.0	e4.3	182	139	11	4.5	3.1
16	2.9	27	e1.6	e1.6	e1.7	e4.0	e4.5	164	123	9.1	3.7	2.9
17	2.6	24	e1.6	e1.6	e2.0	e3.9	e4.9	151	109	7.6	2.8	2.6
18	7.1	23	e1.7	e1.5	e2.0	e3.8	e5.4	145	98	9.0	2.6	2.4
19	15	e23	e1.7	e1.5	e1.9	e3.8	e6.1	209	89	13	2.2	2.1
20	14	23	e1.6	e1.6	e1.8	e3.7	e8.0	572	82	11	2.1	2.0
21	13	22	e1.6	e1.6	e1.6	e3.7	e12	996	77	7.9	1.8	1.9
22	13	21	e1.4	e1.6	e1.6	e3.7	e18	1,140	72	6.0	1.6	1.7
23	21	18	e1.4	e1.6	e1.7	e3.8	e28	1,050	67	4.5	1.7	1.4
24	60	e16	e1.3	e1.6	e1.7	e3.8	e47	851	71	3.8	1.6	1.2
25	77	e12	e1.2	e1.6	e1.9	e3.8	e75	684	65	3.9	1.8	1.2
26	78	e9.9	e1.3	e1.7	e1.9	e3.9	e130	593	74	5.6	1.8	1.0
27	75	e8.8	e1.3	e1.8	e2.1	e4.0	e245	515	78	5.6	1.9	1.8
28	68	e8.2	e1.2	e1.9	e2.1	e4.1	e438	442	73	5.9	1.6	16
29	60	e7.4	e1.2	e1.7	---	e4.2	536	379	70	5.0	1.9	66
30	55	e7.1	e1.1	e1.6	---	e4.3	535	348	59	4.3	2.3	69
31	53	---	e1.2	e1.3	---	e4.4	---	500	---	3.8	4.7	---
Total	652.64	962.4	72.3	48.8	44.2	112.3	2,157.7	14,146	7,153	420.0	112.6	268.4
Mean	21.1	32.1	2.33	1.57	1.58	3.62	71.9	456	238	13.5	3.63	8.95
Max	78	60	7.0	1.9	2.1	4.4	536	1,140	759	48	8.4	69
Min	0.74	7.1	1.1	1.2	1.1	2.2	4.1	145	59	3.8	1.6	1.0
Ac-ft	1,290	1,910	143	97	88	223	4,280	28,060	14,190	833	223	532
Cfsm	0.12	0.18	0.01	0.01	0.01	0.02	0.41	2.59	1.35	0.08	0.02	0.05
In.	0.14	0.20	0.02	0.01	0.01	0.02	0.46	2.99	1.51	0.09	0.02	0.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	41.0	37.2	6.47	2.74	2.15	20.1	187	180	144	56.2	27.6	43.3
Max	259	460	34.3	13.8	9.10	193	633	709	1,238	320	160	419
(WY)	(1942)	(2001)	(2011)	(2011)	(2006)	(1945)	(1966)	(1950)	(2002)	(2005)	(1968)	(1941)
Min	0.95	1.10	0.20	0.23	0.13	0.53	7.16	2.21	0.11	0.03	0.09	0.39
(WY)	(1953)	(1977)	(1977)	(1977)	(1977)	(1964)	(1981)	(1980)	(1980)	(1980)	(1961)	(1934)

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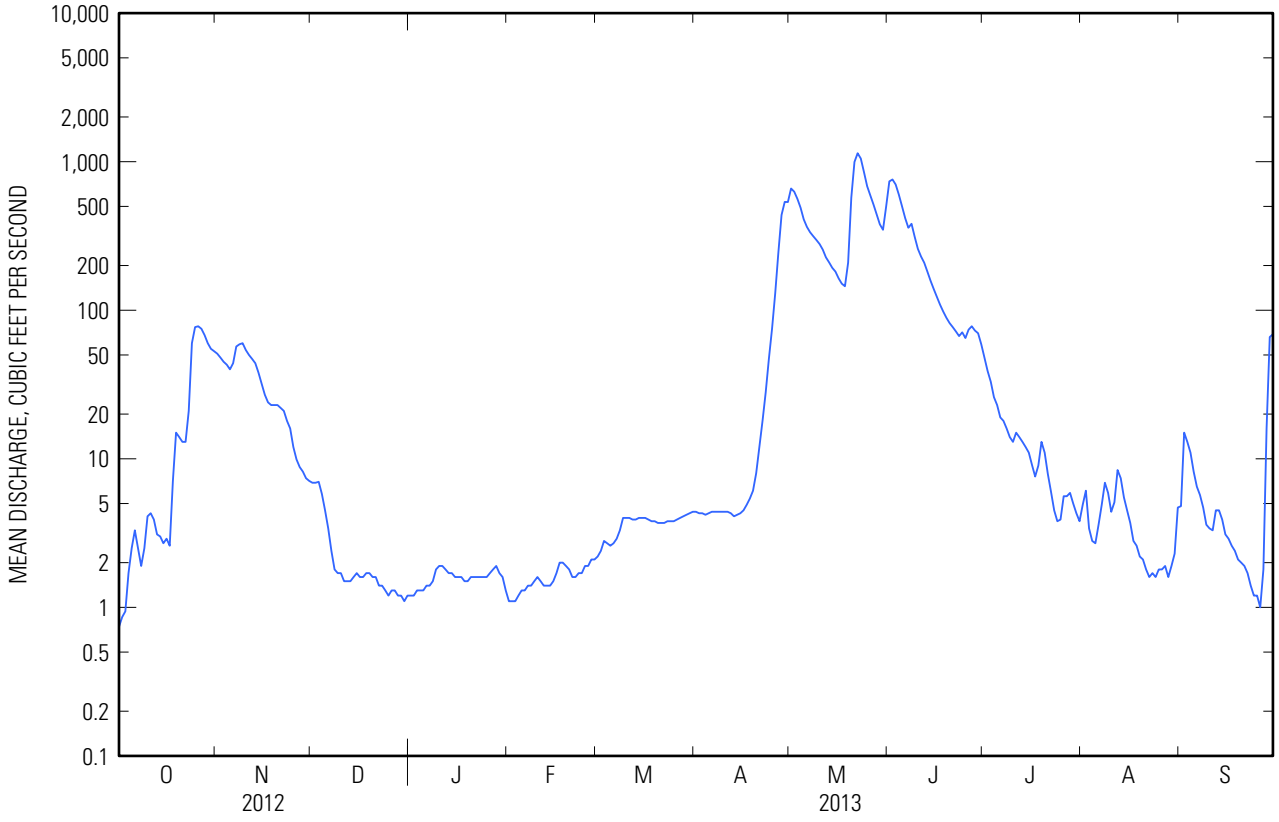
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1929 - 2013	
Annual total	4,453.84		26,150.34			
Annual mean	12.2		71.6		67.0	
Highest annual mean					150	2002
Lowest annual mean					4.07	1980
Highest daily mean	109	Mar 16	1,140	May 22	8,070	Jun 11, 2002
Lowest daily mean	0.43	Sep 9	0.74	Oct 1	[a]0.00	Apr 1, 1930
Annual seven-day minimum	0.54	Sep 7	1.2	Dec 27	0.00	Aug 7, 1936
Maximum peak flow			1,160	May 22	[b]8,440	Jun 11, 2002
Maximum peak stage			12.74	May 22	17.08	Jun 11, 2002
Instantaneous low flow			[c]0.63	Oct 1	[a]0.00	Apr 1, 1930
Annual runoff (ac-ft)	8,830		51,870		48,520	
Annual runoff (cfsm)	0.069		0.407		0.381	
Annual runoff (inches)	0.94		5.53		5.17	
10 percent exceeds	39		249		190	
50 percent exceeds	2.9		4.4		10	
90 percent exceeds	0.83		1.5		1.2	

[a] Many days, several years.
[b] From rating curve extension above 2,560 ft³/s.
[c] Rising stage.