Water-Data Report 2012

06422500 BOXELDER CREEK NEAR NEMO, SD

Cheyenne Basin
Middle Cheyenne-Elk Subbasin

LOCATION.--Lat 44°08'39.65", long 103°27'14.66" referenced to North American Datum of 1927, in SE ¼ SE ¼ sec.12, T.2 N., R.5 E., Lawrence County, SD, Hydrologic Unit 10120111, on right bank at ranch 0.2 mi upstream from county line, 0.9 mi downstream from Jim Creek, and 4.5 mi southeast of Nemo.

DRAINAGE AREA.--94.4 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1945 to July 1947, May 1966 to current year.

REVISED RECORDS.--WDR SD-10-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4,320.27 ft above NGVD of 1929. July 1945 to July 1947 nonrecording gage at site 100 ft upstream at different datum. May 17, 1966, to Jun. 9, 1972, water-stage recorder (destroyed by flood) and Jun. 10, 1972, to Aug. 8, 1972, nonrecording gage, both at site 100 ft upstream at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured with each discharge measurement.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on Jun. 12, 1907 (previously reported as 1911) reached a stage of about 16 ft, present datum with an estimated discharge of 16,000 ft^3/s.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 06422500, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/06422500.2012.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	11	11	e9.0	e8.0	e6.5	e10	12	9.3	7.7	3.8	3.7	2.2
2	11	11	e8.7	e7.7	e6.5	e9.5	12	9.0	7.2	3.8	3.6	2.2
3	11	e9.8	e8.5	e8.0	e6.4	e10	11	8.7	7.2	3.7	3.9	2.1
4	11	e13	e8.4	e9.5	e6.4	e11	11	8.6	7.0	3.4	3.9	2.1
5	10	e12	e8.0	e9.0	e6.6	e13	11	14	6.2	3.4	3.5	2.2
6	11	e11	e8.0	e8.0	e6.3	13	11	15	5.8	3.9	3.2	2.1
7	12	e9.7	e8.0	e8.0	e6.0	11	12	11	7.4	4.2	2.9	2.1
8	12	e9.5	e8.0	e7.5	e6.8	15	11	9.3	8.9	4.1	2.7	2.2
9	13	e9.2	e8.0	e7.5	e7.0	12	10	8.9	7.2	3.8	2.6	2.2
10	13	e10	e8.0	e7.5	e6.8	13	10	8.9	7.1	3.6	3.0	2.1
11	12	e12	e8.5	e7.0	e6.6	15	10	8.2	6.6	3.4	6.9	2.0
12	12	e11	e8.9	e6.5	e7.5	16	9.8	8.0	6.4	3.6	8.2	1.9
13	12	e11	e9.0	e6.5	e7.8	19	9.7	7.8	6.1	3.2	5.4	2.0
14	11	e10	e9.0	e7.0	e8.0	24	11	7.5	5.7	2.8	4.3	2.0
15	12	e9.9	e9.0	e7.0	e7.9	24	17	7.3	5.7	2.5	3.8	2.1
16	11	e9.5	e9.0	e6.8	e7.8	23	14	7.0	6.2	2.4	3.7	2.1
17	12	e9.7	e9.4	e6.5	e7.8	24	14	6.7	5.6	2.9	3.7	2.1
18	12	e9.6	e9.6	e6.3	e8.4	20	17	6.9	5.1	7.0	3.5	2.2
19	12	e9.1	e9.6	e6.3	e8.5	19	17	21	4.9	5.9	3.3	2.2
20	11	e9.4	e9.0	e6.4	e8.5	15	14	13	5.4	4.2	3.2	2.2
21	11	e9.4	e8.5	e7.0	e8.5	13	12	9.3	5.4	4.2	3.2	2.3
22	11	e9.4	e8.0	e6.8	e8.0	13	11	8.6	5.1	5.5	3.0	2.3
23	11	e10	e7.7	e6.5	e7.8	13	11	8.5	5.1	4.8	2.9	2.3
24	11	e10	e7.5	e6.5	e7.5	13	10	9.9	5.0	4.1	2.9	2.3
25	11	e9.9	e7.5	e7.2	e8.0	13	9.7	11	4.9	4.8	2.7	2.4
26	11	e9.5	e7.5	e7.0	e7.8	13	9.3	12	4.6	4.7	2.7	2.4
27	11	e9.2	e7.5	e6.6	e9.0	13	10	12	4.3	3.9	2.6	2.5
28	11	e9.2	e8.0	e6.5	e10	13	11	9.9	4.0	3.7	2.6	2.5
29	11	e9.2	e8.5	e7.0	e10	12	10	8.4	3.9	3.4	2.5	2.5
30	11	e9.3	e8.5	e6.9	---	12	9.7	7.9	3.8	3.3	2.3	2.5
31	11	---	e8.4	e6.6	---	12	---	7.9	---	4.1	2.2	---
Total	353	302.5	261.2	221.6	220.7	456.5	348.2	301.5	175.5	122.1	108.6	66.3
Mean	11.4	10.1	8.43	7.15	7.61	14.7	11.6	9.73	5.85	3.94	3.50	2.21
Max	13	13	9.6	9.5	10	24	17	21	8.9	7.0	8.2	2.5
Min	10	9.1	7.5	6.3	6.0	9.5	9.3	6.7	3.8	2.4	2.2	1.9
Ac-ft	700	600	518	440	438	905	691	598	348	242	215	132

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2012, BY WATER YEAR (WY)*

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	10.0	9.23	6.64	5.69	5.97	12.1	30.8	51.3	58.3	22.8	13.8	9.15
Max	71.1	64.1	37.7	26.4	18.2	44.5	149	275	489	114	62.0	40.0
(WY)	(1999)	(1999)	(1999)	(1999)	(1997)	(1997)	(1997)	(1995)	(1972)	(2008)	(2008)	(1997)
Min	1.68	1.66	1.62	1.42	1.36	2.50	3.03	4.51	3.44	1.70	0.76	1.15
(WY)	(2005)	(1989)	(2006)	(1982)	(1989)	(2008)	(1981)	(2004)	(2004)	(1988)	(1989)	(2004)

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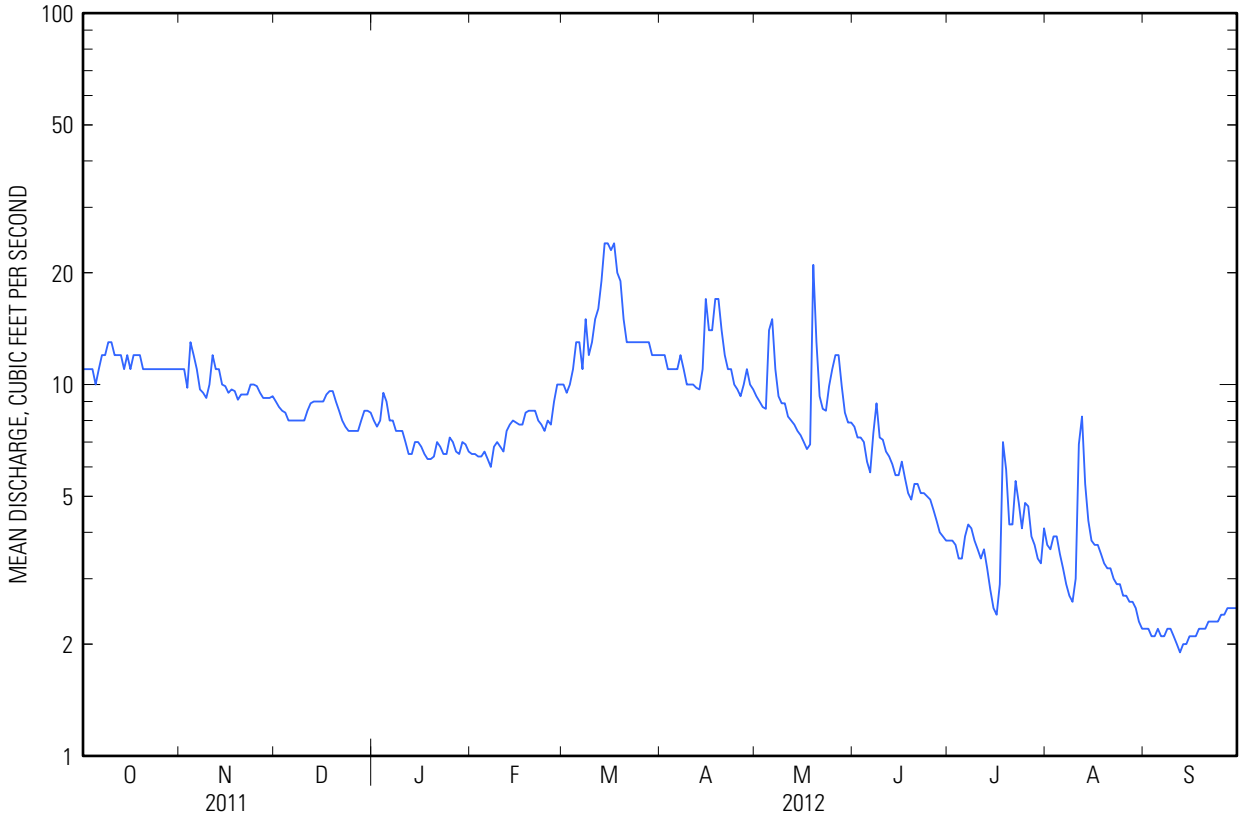
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1967 - 2012*	
Annual total	10,818.1		2,937.7			
Annual mean	29.6		8.03		19.7	
Highest annual mean					63.1	1997
Lowest annual mean					3.46	2005
Highest daily mean	295	May 30	24	Mar 14	6,700	Jun 10, 1972
Lowest daily mean	5.7	Feb 8	1.9	Sep 12	0.10	Aug 8, 1989
Annual seven-day minimum	6.1	Feb 4	2.0	Sep 10	0.14	Aug 4, 1989
Maximum peak flow			[a]30	May 19	[b]30,100	Jun 9, 1972
Maximum peak stage			[c]2.42	Feb 11	[d]20.40	Jun 9, 1972
Annual runoff (ac-ft)	21,460		5,830		14,250	
10 percent exceeds	59		12		45	
50 percent exceeds	14		8.0		8.4	
90 percent exceeds	7.1		2.6		2.4	

* Also includes 1946 water year.
[a] Gage height, 2.13 ft.
[b] From rating curve extended above 600 ft³/s on basis of slope-area measurement of peak flow.
[c] Backwater from ice.
[d] Site and datum then in use (22.0 ft, present site and datum, from floodmarks).



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WATER-QUALITY RECORDS

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

[ft^3/s, cubic feet per second; °C, degrees Celsius; µS/cm, microsiemens per centimeter]

Date	Sample start time	Discharge, instantaneous, ft^3/s (00061)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, air, °C (00020)	Temperature, water, °C (00010)
10-05-2011	**1415**	10	337	28.0	15.1
11-18-2011	**0900**	10	205	3.0	0.1
01-03-2012	**0857**	8.0	194	3.0	0.2
02-08-2012	**0930**	6.7	202	2.0	0.0
03-12-2012	**1005**	18	162	9.0	2.4
03-30-2012	**1122**	12	209	16.5	10.1
05-11-2012	**0710**	8.3	230	7.5	10.2
06-22-2012	**0839**	5.1	274	15.0	16.1
07-26-2012	**1216**	4.9	320	31.0	24.6
08-24-2012	**1030**	2.9	325	24.0	19.1