Water-Data Report 2013

06402000 FALL RIVER AT HOT SPRINGS, SD

Cheyenne Basin
Middle Cheyenne-Spring Subbasin

LOCATION.--Lat 43°25′50″, long 103°28′33″ referenced to North American Datum of 1927, in NW ¼ NW ¼ sec.24, T.7 S., R.5 E., Fall River County, SD, Hydrologic Unit 10120109, on left retaining wall, about 175 feet downstream from the intersection of River Street and University Avenue in Hot Springs, and 6.0 mi upstream from mouth.

DRAINAGE AREA.--136 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1937 to current year (monthly discharge only for October 1937, published in WSP 1309). Daily discharge November 1937 to current year.

REVISED RECORDS.--WSP 1279: 1938, 1941(M), 1947(M). WSP 1729: 1959(M). WDR SD-10-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3,413.20 ft above NGVD of 1929. Prior to Jun. 2, 1939, nonrecording gage at site 300 ft upstream at datum 3.00 ft higher.

REMARKS.--Records good except those for Jun. 3 to Jul. 8 and Jul. 16 to Aug. 7, which are poor. Flow regulated by dam forming Coldbrook Reservoir, capacity, 7,200 acre-ft, since September 1952, and dam forming Cottonwood Springs Lake, capacity, 8,385 acre-ft since June 1969. Some diversions above station for municipal supply of Hot Springs. Satellite data-collection platform at station. Water temperature and specific conductance measured with each discharge measurement.

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	25	26	27	27	28	29	27	27	28	27	29	26
2	25	26	27	27	28	29	27	27	28	27	28	27
3	25	26	27	27	28	29	27	28	28	26	29	27
4	25	26	27	27	29	28	26	27	28	28	28	29
5	25	26	28	27	29	28	26	28	28	27	29	27
6	25	26	27	28	29	28	26	27	28	28	27	27
7	26	26	27	28	29	28	26	28	28	28	67	26
8	26	26	27	27	29	28	26	28	29	50	29	27
9	25	26	27	27	29	28	27	28	29	27	28	27
10	26	27	27	28	29	28	26	29	29	27	28	27
11	26	26	27	27	29	28	26	28	33	27	28	27
12	26	26	27	27	28	28	26	28	27	26	28	27
13	26	27	27	28	29	28	27	28	27	27	29	28
14	25	27	27	28	28	28	26	28	27	27	29	29
15	25	27	27	28	28	28	26	28	27	28	28	28
16	25	27	27	28	29	28	26	32	28	29	28	28
17	26	27	27	28	29	28	27	26	28	30	28	28
18	26	27	28	28	28	28	26	27	27	31	28	28
19	25	27	27	28	28	28	27	33	27	31	28	28
20	26	27	26	28	28	28	27	27	27	28	28	28
21	26	27	27	28	28	28	29	27	27	29	27	28
22	26	27	27	27	29	28	27	27	32	29	27	28
23	26	27	27	28	28	27	26	27	27	27	27	29
24	27	27	27	28	29	27	26	27	27	28	27	29
25	25	28	27	28	29	27	27	28	26	28	27	29
26	26	27	27	28	29	27	27	28	26	29	27	29
27	26	27	27	28	28	27	26	31	26	28	26	28
28	25	27	27	28	29	27	27	28	26	28	31	28
29	25	28	27	28	---	27	27	28	27	28	26	28
30	26	27	27	28	---	27	28	28	27	28	26	28
31	26	---	27	28	---	27	---	28	---	27	26	---
Total	793	801	838	858	800	862	798	869	832	888	901	833
Mean	25.6	26.7	27.0	27.7	28.6	27.8	26.6	28.0	27.7	28.6	29.1	27.8
Max	27	28	28	28	29	29	29	33	33	50	67	29
Min	25	26	26	27	28	27	26	26	26	26	26	26
Ac-ft	1,570	1,590	1,660	1,700	1,590	1,710	1,580	1,720	1,650	1,760	1,790	1,650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	24.0	24.1	24.5	24.1	24.4	24.8	24.2	24.4	24.4	23.4	23.4	23.5
Max	31.8	31.8	31.1	31.0	32.7	32.6	31.7	34.9	41.3	38.8	33.6	32.4
(WY)	(2000)	(2000)	(2002)	(2002)	(2002)	(2002)	(2000)	(1999)	(1999)	(1999)	(1999)	(1999)
Min	18.8	18.3	19.0	19.4	19.8	20.0	19.5	19.0	17.9	18.0	18.6	17.7
(WY)	(1973)	(1987)	(1987)	(1984)	(1977)	(1982)	(1970)	(1976)	(1981)	(1980)	(1972)	(1983)

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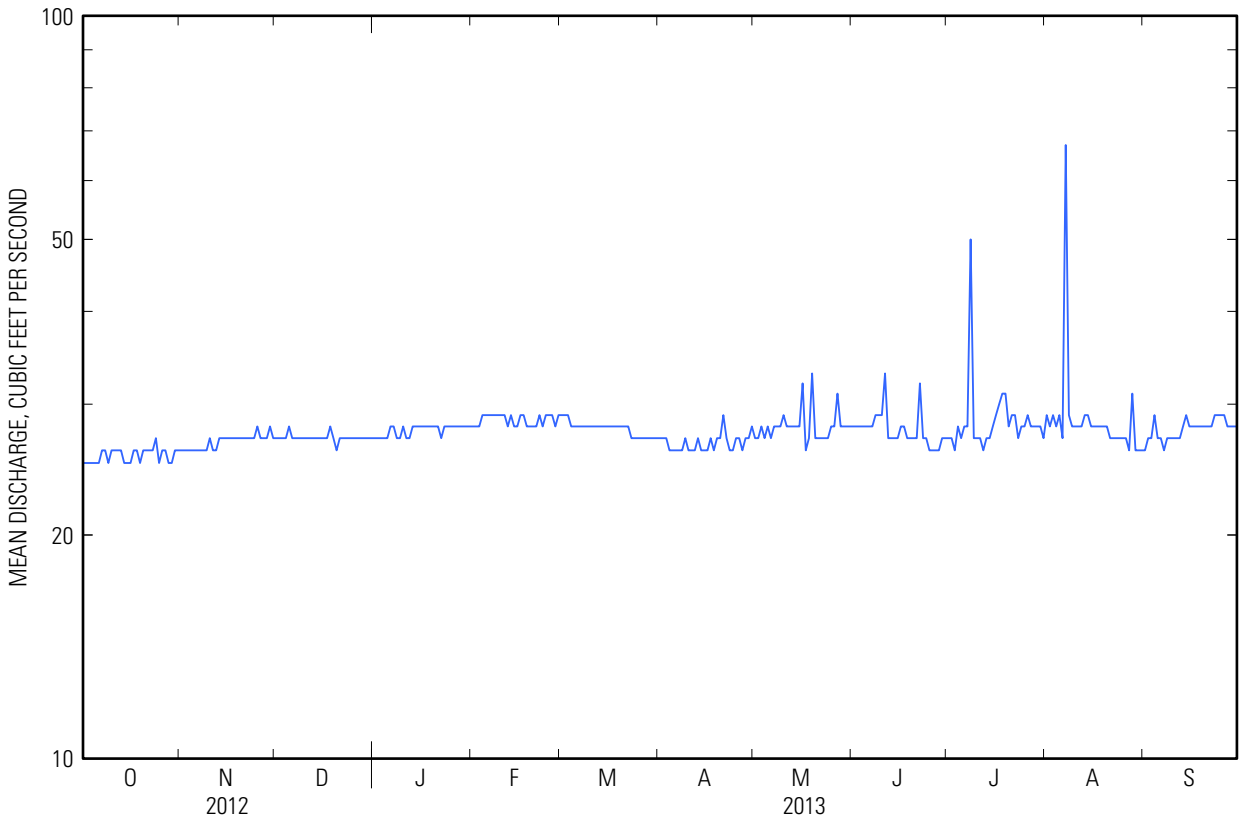
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1970 - 2013*	
Annual total	9,983		10,073			
Annual mean	27.3		27.6		24.1	
Highest annual mean					30.6	1999
Lowest annual mean					20.9	1981
Highest daily mean	34	May 24	67	Aug 7	75	Mar 19, 1978
Lowest daily mean	24	Sep 25	25	Oct 1	[a]14	May 2, 1982
Annual seven-day minimum	24	Sep 22	25	Oct 1	15	Sep 23, 1983
Maximum peak flow			444	Jul 8	1,590	Aug 12, 2005
Maximum peak stage			2.84	Jul 8	4.99	Aug 12, 2005
Annual runoff (ac-ft)	19,800		19,980		17,460	
10 percent exceeds	29		29		29	
50 percent exceeds	27		27		23	
90 percent exceeds	26		26		20	

* Regulated period only (1970-2013). See REMARKS.

[a] For some days in 1982, 1983, and 1985.



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WATER-QUALITY RECORDS

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

[ft^3/s, cubic feet per second; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data]

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)
10-03-2012	**1330**	24	1,260	17.0	25.4
11-16-2012	**1150**	26	1,220	14.0	22.8
01-02-2013	**1345**	28	1,230	.0	21.0
02-15-2013	**1142**	29	1,220	2.0	21.9
03-20-2013	**1635**	29	1,220	10.0	23.3
04-24-2013	**1755**	26	1,250	--	23.2
05-28-2013	**1402**	26	1,250	20.0	27.4
07-10-2013	**1619**	26	1,240	34.0	28.5
08-22-2013	**1302**	26	1,540	28.0	27.2