

Water-Data Report 2013

**06438500 CHEYENNE RIVER NEAR PLAINVIEW, SD**

Cheyenne Basin  
Lower Cheyenne Subbasin

LOCATION.--Lat 44°31'46", long 101°55'47" referenced to North American Datum of 1927, in NW ¼ NW ¼ NE ¼ sec.34, T.7 N., R.18 E., Ziebach County, SD, Hydrologic Unit 10120112, on SD Highway 34 and 73 bridge, 10.5 mi south of Howes.

DRAINAGE AREA.--21,425 mi<sup>2</sup> of which 11 mi<sup>2</sup> probably is noncontributing.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 1950 to September 1981, October 1994 to current year.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,868 ft above NGVD of 1929, from topographic map. Prior to October 1994 at site 3 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flows regulated by: Angostura Dam, 167 mi upstream on the Cheyenne River (see station 06401000) since October 1949 significantly affect peak flows; Pactola Reservoir, 25.4 mi upstream from Rapid City (see station 06411000) since June 1963; Keyhole Reservoir (see station 06427000) near Moorcroft, WY, since Oct. 25, 1952; and Belle Fourche Reservoir near Belle Fourche (see station 06435000) since May 1910. Flow also affected by diversions for irrigation of about 70,000 acres and return flow from irrigated areas. Satellite data-collection platform at station. Water temperature and specific conductance measured with each discharge measurement.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood late in May 1920 reached a stage of about 17.5 ft, previous datum, and flood in May 1927 reached a stage of about 14 ft, previous datum, from information by local residents.

## 06438500 CHEYENNE RIVER NEAR PLAINVIEW, SD—Continued

**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	e210	153	e153	e115	e160	e274	159	371	7,070	473	310	265
2	e200	153	e238	e130	e158	e271	140	303	8,360	380	310	339
3	e185	150	e224	e145	e143	e282	129	257	6,890	306	259	338
4	171	150	e169	e150	e156	e336	119	240	5,560	265	699	299
5	162	153	e148	e145	e172	e152	114	224	4,250	270	842	345
6	149	152	e145	e140	e184	e183	109	207	2,830	260	488	314
7	136	148	e139	e135	e225	e325	106	191	1,920	228	1,200	335
8	132	148	e133	e140	e325	e320	106	175	1,330	214	703	360
9	134	146	e85	e105	e310	254	100	161	874	238	766	378
10	137	149	e65	e117	e300	215	54	156	667	569	886	408
11	135	73	e70	e109	e290	185	87	141	565	528	1,510	410
12	137	104	e75	e102	e280	174	111	119	518	427	721	476
13	143	128	e72	e95	e260	161	232	109	548	393	517	440
14	129	137	e85	e87	e242	158	309	100	539	326	542	416
15	132	180	e115	e85	e227	153	820	92	438	322	727	386
16	131	203	e150	e84	e230	148	1,100	92	420	283	1,280	400
17	126	257	e178	e89	e244	160	761	92	386	246	930	410
18	127	216	e185	e107	e234	135	503	91	355	304	821	415
19	136	189	e165	e110	e248	156	429	137	298	299	693	397
20	143	181	e150	e112	e256	204	638	368	262	255	587	389
21	142	170	e142	e118	e245	174	834	455	260	269	543	386
22	133	162	e132	e122	e233	164	1,500	705	546	267	508	359
23	131	147	e125	e121	e218	155	1,630	1,380	967	303	418	382
24	141	141	e118	e124	e213	147	1,120	1,290	554	325	378	436
25	151	166	e116	e122	e216	221	1,140	1,020	745	382	334	1,080
26	157	150	e106	e122	e242	172	841	664	1,790	378	320	631
27	182	e145	e100	e137	e263	212	790	567	1,460	342	326	477
28	198	e140	e93	e149	e253	191	627	918	1,100	414	316	424
29	175	e130	e81	e160	---	266	519	571	875	395	304	419
30	163	e121	e92	e159	---	267	434	1,740	709	385	281	402
31	153	---	e102	e162	---	197	---	11,500	---	349	278	---
<b>Total</b>	4,681	4,642	3,951	3,798	6,527	6,412	15,561	24,436	53,086	10,395	18,797	12,516
<b>Mean</b>	151	155	127	123	233	207	519	788	1,770	335	606	417
<b>Max</b>	210	257	238	162	325	336	1,630	11,500	8,360	569	1,510	1,080
<b>Min</b>	126	73	65	84	143	135	54	91	260	214	259	265
<b>Ac-ft</b>	9,280	9,210	7,840	7,530	12,950	12,720	30,870	48,470	105,300	20,620	37,280	24,830

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2013, BY WATER YEAR (WY) \***

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	318	269	185	170	465	1,073	1,235	1,954	2,054	707	502	385
<b>Max</b>	2,927	3,016	907	954	4,980	4,808	10,670	9,277	8,981	2,585	1,949	1,110
<b>(WY)</b>	(1999)	(1999)	(1999)	(1997)	(1997)	(2011)	(2009)	(2011)	(1967)	(1962)	(1997)	(1955)
<b>Min</b>	39.2	91.6	28.6	10.0	42.1	124	71.3	83.3	138	61.8	48.0	16.2
<b>(WY)</b>	(1962)	(2008)	(1962)	(1962)	(1979)	(1981)	(1961)	(1961)	(2006)	(1960)	(1961)	(1961)

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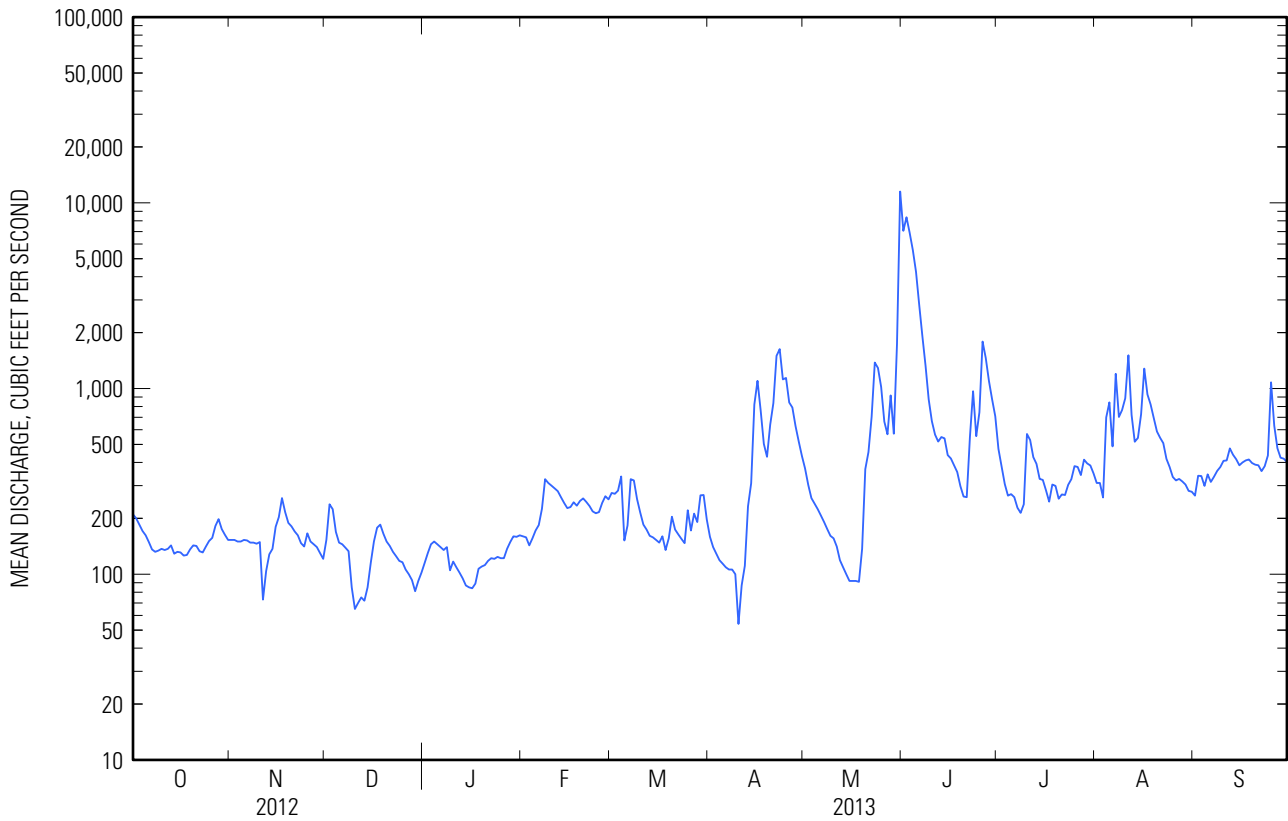
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1951 - 2013*	
<b>Annual total</b>	117,418		164,802			
<b>Annual mean</b>	321		452		a776	
<b>Highest annual mean</b>					2,417	1997
<b>Lowest annual mean</b>					97.2	1961
<b>Highest daily mean</b>	905	May 7	11,500	May 31	61,200	May 28, 1996
<b>Lowest daily mean</b>	65	Dec 10	54	Apr 10	b0.00 Dec 14, 1961	
<b>Annual seven-day minimum</b>	81	Dec 9	81	Dec 9	1.0	Jan 17, 1962
<b>Maximum peak flow</b>			16,700	May 31	73,200	Jun 7, 2008
<b>Maximum peak stage</b>			15.85	May 31	22.63	Jun 7, 2008
<b>Annual runoff (ac-ft)</b>	232,900		326,900		562,500	
<b>10 percent exceeds</b>	600		802		1,520	
<b>50 percent exceeds</b>	250		228		274	
<b>90 percent exceeds</b>	137		111		87	

\* See PERIOD OF RECORD.

a Median of annual mean discharges, 630 ft<sup>3</sup>/s.

b Also Dec. 19-21, 1961.



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## WATER-QUALITY RECORDS

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

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

Date	Sample start time	Discharge, instantaneous, ft <sup>3</sup> /s (00061)	Specific conductance, water, unfiltered, μS/cm at 25°C (00095)	Temperature, air, °C (00020)	Temperature, water, °C (00010)
10-02-2012	1200	207	2,320	30.0	15.8
11-28-2012	1236	138	2,400	5.0	0.0
12-20-2012	1212	141	2,520	-2.5	0.0
01-10-2013	1138	128	2,400	8.5	0.0
02-01-2013	1245	162	2,190	4.0	0.0
03-08-2013	1122	314	1,690	5.0	0.5
04-19-2013	1044	360	1,310	10.4	3.8
06-13-2013	1050	526	1,740	24.5	20.0
07-09-2013	1050	246	2,090	30.0	24.2
08-15-2013	1105	740	1,660	28.0	21.2