06425500 ELK CREEK NEAR ELM SPRINGS, SD

Cheyenne Basin
Middle Cheyenne-Elk Subbasin

LOCATION.--Lat 44°14′54″, long 102°30′10″ referenced to North American Datum of 1927, in SW ¼ NW ¼ sec.1, T.3 N., R.13 E., Meade County, SD, Hydrologic Unit 10120111, on left bank near downstream end of county highway bridge, 1.4 mi downstream from Hay Draw, 5.0 mi southeast of Elm Springs, and 7.0 mi upstream from mouth.

DRAINAGE AREA.--540 mi^2, approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1949 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,304.49 ft above NGVD of 1929. Prior to Nov. 2, 1976, nonrecording gage, and prior to Feb. 1, 1967, at site 350 ft downstream at present datum.

REMARKS.--Records fair except for periods of flow and estiamted days which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured with each discharge measurement.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 17 ft, at former site, in May 1920, from information by local residents.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	0.00	0.00	e0.00	e0.00	0.00	0.03	0.91	134	45	19	2.7
2	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.95	116	43	17	2.7
3	0.00	0.00	0.00	e0.01	0.00	0.00	0.00	0.73	134	41	16	2.7
4	0.00	0.00	e0.01	e0.03	0.00	e0.00	0.00	0.00	272	38	46	2.7
5	0.00	0.00	0.00	e0.06	0.00	0.00	0.00	1.1	1,900	37	17	2.6
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	5,360	36	17	2.6
7	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.90	2,750	37	15	2.5
8	0.00	0.00	0.00	0.00	e0.00	0.00	0.24	5.4	943	33	14	2.5
9	0.00	0.00	0.00	0.00	e0.00	0.00	0.33	8.5	550	32	14	2.8
10	0.00	0.00	0.00	0.00	e0.00	0.00	1.2	13	385	43	16	3.0
11	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	17	293	38	16	3.3
12	0.00	0.00	0.00	0.00	e0.00	0.00	0.01	23	246	33	14	3.5
13	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	41	221	29	12	3.6
14	e0.00	0.00	0.00	0.00	e0.00	0.00	0.00	30	186	27	12	3.3
15	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	18	159	24	14	3.0
16	0.00	0.00	0.00	0.00	e0.00	e0.09	0.00	9.6	131	22	11	2.7
17	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	5.8	117	20	10	2.8
18	e0.00	0.00	0.00	0.00	e0.00	0.00	0.00	3.9	107	21	9.4	2.8
19	0.00	0.00	e0.01	0.00	e0.00	0.00	0.00	2.6	101	30	8.9	2.5
20	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	1.6	90	24	8.1	2.3
21	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	1.0	89	50	7.4	2.1
22	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	1.7	89	60	6.1	1.9
23	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	308	88	47	5.4	1.8
24	0.00	0.00	e0.00	0.00	e0.00	0.00	0.00	991	78	37	5.1	1.6
25	0.00	0.00	e0.00	0.00	e0.00	0.00	0.00	1,670	74	31	5.0	1.5
26	0.00	0.00	e0.00	0.00	e0.00	0.00	0.00	1,060	73	30	4.7	1.4
27	0.00	0.00	e0.00	e0.00	e0.00	0.00	0.00	453	67	30	4.0	1.2
28	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.00	461	58	28	3.6	1.0
29	0.00	0.00	e0.00	e0.00	e0.00	0.00	0.00	434	53	27	3.3	0.88
30	0.00	0.00	e0.00	e0.00	---	0.00	0.00	299	48	24	3.1	0.73
31	0.00	---	e0.00	e0.00	---	0.00	---	190	---	21	2.8	---
Total	0.00	0.00	0.02	0.10	0.00	0.09	2.12	6,053.30	14,912	1,038	356.9	70.71
Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.07	195	497	33.5	11.5	2.36
Max	0.00	0.00	0.01	0.06	0.00	0.09	1.2	1,670	5,360	60	46	3.6
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48	20	2.8	0.73
Ac-ft	0.00	0.00	0.04	0.2	0.00	0.2	4.2	12,010	29,580	2,060	708	140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	9.10	4.32	2.38	3.92	15.3	38.3	55.0	94.5	70.5	12.1	4.11	1.92
Max	295	87.2	23.7	103	334	327	493	519	708	88.8	40.4	26.8
(WY)	(1999)	(1999)	(1999)	(1997)	(1997)	(1978)	(2000)	(1995)	(1967)	(1996)	(1997)	(1951)
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	(1950)	(1950)	(1950)	(1950)	(1950)	(1957)	(1959)	(1955)	(1955)	(1950)	(1952)	(1950)

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SUMMARY STATISTICS

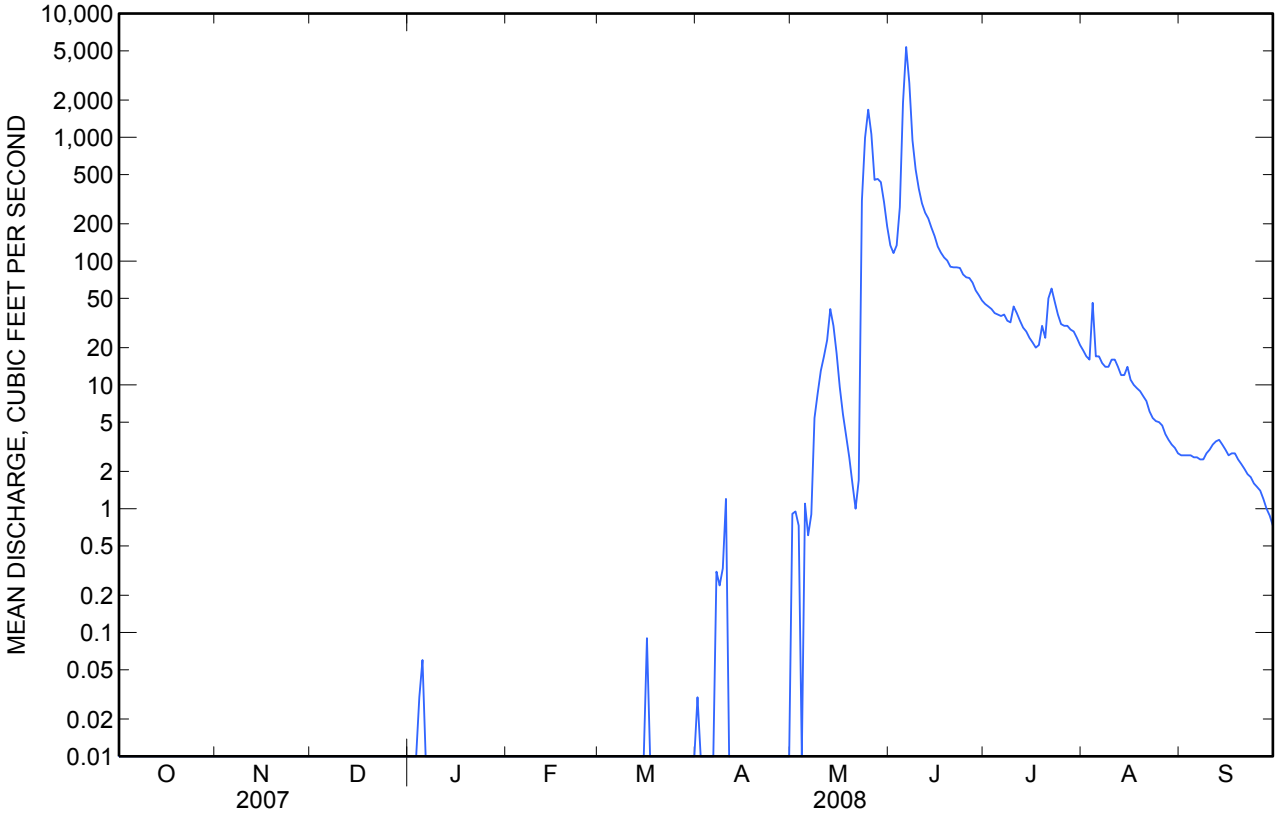
	Calendar Year 2007		Water Year 2008		Water Years 1950 - 2008	
Annual total	0.32		22,433.24			
Annual mean	0.00		61.3		25.9	
Highest annual mean					135	1997
Lowest annual mean					[a]0.00	1961
Highest daily mean	0.12	Aug 24	5,360	Jun 6	5,360	Jun 6, 2008
Lowest daily mean	0.00	Jan 1	0.00	Oct 1	[b]0.00	Oct 1, 1949
Annual seven-day minimum	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1, 1949
Maximum peak flow			7,000	Jun 6	[c]8,540	Mar 29, 1952
Maximum peak stage			14.00	Jun 6	[d]16.22	Feb 18, 1997
Annual runoff (ac-ft)	0.6		44,500		18,800	
10 percent exceeds	0.00		62		34	
50 percent exceeds	0.00		0.00		0.00	
90 percent exceeds	0.00		0.00		0.00	

[a] Also 2008.

[b] No flow for long periods in most years.

[c] Gage height, 10.61 ft, from floodmarks, site and datum then in use, from rating curve extended above 5,100ft³/s.

[d] Backwater from ice; from floodmark.



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WATER-QUALITY RECORDS

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
May					
05...	0950	.70	2,350	16.0	12.0
08...	0900	5.3	256	9.0	12.5
11...	1130	17	931	17.5	11.5
13...	0915	41	857	14.0	11.0
23...	1047	474	661	9.5	9.9
Jun					
06...	1950	5,290	491	17.0	17.4
26...	1330	74	1,080	36.0	25.6
Jul					
09...	1250	--	1,320	30.0	26.8
Aug					
18...	1130	9.5	1,580	32.0	22.3