

**Table 18.** Annual precipitation, in inches, and ranks for study area and counties within study area

Water year	Black Hills study area		Butte County		Lawrence County		Meade County		Pennington County		Custer County		Fall River County	
	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank
1931	12.97	63	9.07	67	13.74	66	11.92	66	12.76	63	13.81	57	13.82	52
1932	21.64	17	19.36	15	24.69	24	21.90	20	22.42	17	21.35	11	19.66	13
1933	21.05	19	17.86	27	22.96	31	20.94	24	21.21	21	21.19	13	20.68	8
1934	11.12	67	10.19	65	13.32	67	10.79	67	10.67	67	10.05	68	11.95	63
1935	17.96	34	13.06	52	18.26	59	17.20	47	17.76	41	18.25	31	20.24	9
1936	10.22	68	9.06	68	11.26	68	8.88	68	9.78	68	11.19	66	9.80	67
1937	16.08	52	19.04	18	19.44	54	18.07	41	14.68	57	14.28	55	14.85	39
1938	16.21	50	11.65	60	18.11	60	15.64	54	15.93	53	16.84	40	16.51	34
1939	13.69	61	10.57	64	17.34	62	12.75	64	14.71	56	13.74	59	11.58	66
1940	14.50	57	14.94	43	18.54	57	14.63	56	13.00	62	13.76	58	13.57	54
1941	22.19	13	24.62	6	27.02	18	23.02	14	21.45	20	20.35	20	20.01	10
1942	21.41	18	19.17	17	24.28	25	21.22	23	20.47	24	21.24	12	21.47	7
1943	17.92	36	12.92	54	20.02	50	16.89	49	18.29	37	18.51	30	17.92	27
1944	18.64	32	18.39	21	22.31	35	20.44	26	17.24	49	17.29	35	18.13	25
1945	20.10	25	17.19	29	28.43	14	23.88	9	20.49	22	17.31	34	16.00	36
1946	24.74	5	24.86	4	35.15	2	29.74	1	24.56	8	20.69	17	19.22	15
1947	20.14	24	16.49	33	23.57	29	18.62	32	19.17	31	20.87	15	19.95	11
1948	17.90	37	16.56	32	22.80	32	19.57	30	18.29	36	15.46	49	16.51	35
1949	16.96	43	12.29	56	19.66	53	18.55	35	18.00	38	17.02	38	14.84	41
1950	16.19	51	14.68	45	22.48	33	17.90	42	17.41	45	13.92	56	12.66	58
1951	16.72	45	15.06	41	20.70	42	18.26	39	16.93	50	15.84	46	14.39	42
1952	15.97	53	12.42	55	21.50	39	16.04	52	17.34	46	15.32	50	12.50	60
1953	16.28	49	15.33	38	22.31	34	18.57	34	16.71	51	14.63	53	12.34	61
1954	13.29	62	11.83	59	18.48	58	14.26	58	13.10	61	11.63	64	11.71	65
1955	19.15	31	14.25	50	23.98	27	18.08	40	19.58	30	18.66	28	18.31	22

**Table 18.** Annual precipitation, in inches, and ranks for study area and counties within study area—Continued

Water year	Black Hills study area		Butte County		Lawrence County		Meade County		Pennington County		Custer County		Fall River County	
	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank
1956	15.46	55	12.21	58	19.75	52	15.67	53	16.02	52	15.53	48	12.64	59
1957	20.83	21	16.58	31	25.18	22	21.89	21	21.90	18	20.04	22	18.62	19
1958	17.85	39	14.86	44	21.59	38	17.58	45	17.74	42	17.57	33	16.88	33
1959	15.63	54	10.80	62	16.89	63	14.58	57	17.59	43	16.30	42	14.37	43
1960	12.41	66	10.72	63	19.21	55	13.58	62	13.86	60	10.40	67	8.24	68
1961	12.71	64	10.16	66	15.15	64	12.01	65	12.48	66	12.54	62	12.81	56
1962	24.85	4	22.80	7	32.28	3	29.69	2	26.89	2	21.90	10	18.91	17
1963	23.61	10	19.66	14	28.25	15	22.81	15	24.64	7	22.87	7	22.05	5
1964	19.16	30	16.65	30	29.67	8	20.41	27	20.48	23	16.03	45	14.05	48
1965	23.57	11	18.41	20	30.47	6	22.66	16	25.87	4	22.71	8	19.61	14
1966	16.75	44	14.58	47	19.81	51	18.58	33	17.82	40	15.83	47	14.35	44
1967	21.68	16	17.74	28	25.69	20	23.86	11	22.91	15	20.67	18	19.05	16
1968	19.53	27	15.60	36	24.23	26	19.07	31	19.02	33	19.47	25	18.41	20
1969	16.71	46	14.38	49	20.68	43	16.09	51	19.06	32	16.52	41	12.67	57
1970	19.30	29	18.39	22	28.25	16	20.38	28	20.10	27	17.00	39	14.22	46
1971	22.06	15	17.90	25	28.49	13	23.77	13	23.11	13	20.55	19	18.75	18
1972	22.09	14	22.45	8	29.79	7	23.87	10	24.03	11	20.04	21	15.45	38
1973	19.76	26	18.29	24	24.92	23	19.78	29	19.71	29	18.57	29	17.96	26
1974	14.44	59	14.61	46	20.30	47	14.93	55	13.98	59	12.13	63	13.05	55
1975	17.11	41	15.13	39	21.34	41	18.43	36	17.95	39	16.29	43	14.07	47
1976	22.31	12	20.48	11	29.55	9	23.82	12	22.60	16	20.76	16	18.28	23
1977	19.33	28	16.18	35	23.87	28	18.30	37	19.92	28	19.10	26	17.41	29
1978	20.97	20	19.34	16	26.30	19	21.74	22	21.68	19	20.03	23	17.53	28
1979	17.88	38	15.39	37	21.72	37	18.28	38	20.38	25	17.14	36	14.04	49
1980	14.80	56	12.92	53	17.38	61	13.78	61	15.50	55	14.55	54	13.78	53

**Table 18.** Annual precipitation, in inches, and ranks for study area and counties within study area—Continued

Water year	Black Hills study area		Butte County		Lawrence County		Meade County		Pennington County		Custer County		Fall River County	
	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank	Precipitation	Rank
1981	17.96	35	18.32	23	21.38	40	20.50	25	18.46	35	17.03	37	14.29	45
1982	25.48	3	26.01	2	31.72	4	26.30	6	25.50	5	23.48	5	22.45	2
1983	17.01	42	17.89	26	21.96	36	17.68	43	17.27	48	14.94	52	14.85	40
1984	20.74	22	19.83	13	25.47	21	22.64	17	20.21	26	19.75	24	18.19	24
1985	12.50	65	11.63	61	15.13	65	12.80	63	12.49	65	11.56	65	11.92	64
1986	23.68	9	25.85	3	27.62	17	26.53	5	24.04	10	22.00	9	19.78	12
1987	16.66	47	18.96	19	20.13	49	17.22	46	15.58	54	15.27	51	15.55	37
1988	14.04	60	12.24	57	19.06	56	14.06	59	12.55	64	12.95	61	13.88	51
1989	16.61	48	15.02	42	20.40	46	16.74	50	17.28	47	16.24	44	13.98	50
1990	18.50	33	16.24	34	20.45	45	17.65	44	18.97	34	18.99	27	17.26	30
1991	20.66	23	15.12	40	23.47	30	22.44	18	23.00	14	20.89	14	17.06	31
1992	17.72	40	14.43	48	20.65	44	16.97	48	17.45	44	18.11	32	17.03	32
1993	24.68	6	24.71	5	28.54	12	25.38	7	24.22	9	24.17	3	22.32	4
1994	14.45	58	13.91	51	20.16	48	13.90	60	14.15	58	13.55	60	11.99	62
1995	27.39	1	27.26	1	35.22	1	29.09	3	26.04	3	27.33	1	21.61	6
1996	23.69	8	21.71	9	29.00	10	24.75	8	25.47	6	23.28	6	18.38	21
1997	26.12	2	21.44	10	31.62	5	28.20	4	27.21	1	24.72	2	23.39	1
1998	23.71	7	20.10	12	28.70	11	21.93	19	23.44	12	23.91	4	22.34	3
Count	68		68		68		68		68		68		68	
Maximum	27.39		27.26		35.22		29.74		27.21		27.33		23.39	
Minimum	10.22		9.06		11.26		8.88		9.78		10.05		8.24	
Mean	18.61		16.58		23.11		19.24		18.98		17.73		16.35	

**Table 19.** Annual flow and precipitation data for limestone headwater basins

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow				RE (per-cent)	Flow				RE (per-cent)	Flow				RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches	Precip (inches)		ft <sup>3</sup> /s	acre-ft	inches	Precip (inches)		ft <sup>3</sup> /s	acre-ft	inches	Precip (inches)	
	<b>Beaver Creek at Mallo Camp, near Four Corners, Wyo. (06392900)</b>					<b>Rhoads Fork near Rochford (06408700)</b>					<b>Castle Creek above Deerfield Reservoir, near Hill City (06409000)</b>				
1940	--	--	--	--	--	--	--	--	--	--	--	--	--	13.48	--
1941	--	--	--	--	--	--	--	--	--	--	--	--	--	23.78	--
1942	--	--	--	--	--	--	--	--	--	--	--	--	--	20.74	--
1943	--	--	--	--	--	--	--	--	--	--	--	--	--	20.30	--
1944	--	--	--	--	--	--	--	--	--	--	--	--	--	16.14	--
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	21.99	--
1946	--	--	--	--	--	--	--	--	--	--	--	--	--	26.58	--
1947	--	--	--	--	--	--	--	--	--	--	--	--	--	21.15	--
1948	--	--	--	--	--	--	--	--	--	--	--	--	--	20.61	--
1949	--	--	--	--	--	--	--	--	--	--	9.59	6,940	1.64	16.48	9.97
1950	--	--	--	--	--	--	--	--	--	--	9.17	6,640	1.57	19.56	8.04
1951	--	--	--	--	--	--	--	--	--	--	8.75	6,340	1.50	18.11	8.29
1952	--	--	--	--	--	--	--	--	--	--	11.00	7,990	1.89	19.30	9.80
1953	--	--	--	--	--	--	--	--	--	--	8.99	6,510	1.54	17.35	8.88
1954	--	--	--	--	--	--	--	--	--	--	7.77	5,630	1.33	14.04	9.49
1955	--	--	--	--	--	--	--	--	--	--	8.77	6,350	1.50	21.75	6.91
1956	--	--	--	--	--	--	--	--	--	--	7.60	5,520	1.31	17.04	7.67
1957	--	--	--	--	--	--	--	--	--	--	7.73	5,600	1.33	22.50	5.89
1958	--	--	--	--	--	--	--	--	--	--	7.08	5,120	1.21	20.04	6.05
1959	--	--	--	--	--	--	--	--	--	--	6.84	4,950	1.17	21.25	5.52
1960	--	--	--	16.68	--	--	--	--	--	--	6.45	4,680	1.11	15.17	7.30
1961	--	--	--	14.70	--	--	--	--	--	--	5.13	3,720	.88	15.47	5.69
1962	--	--	--	26.63	--	--	--	--	--	--	6.69	4,840	1.15	25.56	4.48
1963	--	--	--	27.16	--	--	--	--	--	--	10.20	7,400	1.75	27.85	6.29
1964	--	--	--	28.50	--	--	--	--	--	--	11.10	8,020	1.90	27.26	6.96
1965	--	--	--	29.18	--	--	--	--	--	--	16.60	12,030	2.85	29.65	9.60
1966	--	--	--	18.23	--	--	--	--	--	--	14.40	10,430	2.47	18.62	13.26
1967	--	--	--	24.41	--	--	--	--	--	--	14.00	10,110	2.39	23.85	10.03
1968	--	--	--	21.72	--	--	--	--	--	--	11.50	8,360	1.98	20.77	9.53
1969	--	--	--	23.12	--	--	--	--	--	--	11.10	8,050	1.91	23.97	7.95
1970	--	--	--	21.11	--	--	--	--	23.44	--	12.60	9,090	2.15	20.88	10.30
1971	--	--	--	24.27	--	--	--	--	26.14	--	12.80	9,260	2.19	24.27	9.03
1972	--	--	--	25.92	--	--	--	--	25.68	--	12.50	9,100	2.15	24.03	8.97
1973	--	--	--	24.00	--	--	--	--	25.35	--	12.00	8,670	2.05	24.72	8.30
1974	--	--	--	17.89	--	--	--	--	18.68	--	10.10	7,320	1.73	17.17	10.09
1975	2.04	1,480	2.69	20.17	13.36	--	--	--	20.97	--	11.30	8,160	1.93	19.88	9.72
1976	1.32	958	1.74	23.33	7.48	--	--	--	25.12	--	9.85	7,150	1.69	23.63	7.16
1977	.94	682	1.24	23.81	5.21	--	--	--	26.30	--	10.60	7,700	1.82	25.45	7.16
1978	2.02	1,470	2.68	24.91	10.74	--	--	--	26.69	--	13.90	10,100	2.39	25.83	9.26
1979	2.59	1,870	3.40	22.56	15.09	--	--	--	24.91	--	12.70	9,200	2.18	24.40	8.93
1980	2.46	1,790	3.26	17.16	18.99	--	--	--	19.12	--	10.60	7,730	1.83	18.63	9.83
1981	2.04	1,480	2.69	18.93	14.23	--	--	--	20.91	--	8.96	6,480	1.53	19.57	7.84

**Table 19.** Annual flow and precipitation data for limestone headwater basins—Continued

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches		
	<b>Beaver Creek at Mallo Camp, near Four Corners, Wyo. (06392900)—Continued</b>					<b>Rhoads Fork near Rochford (06408700)—Continued</b>					<b>Castle Creek above Deerfield Reservoir, near Hill City (06409000)—Continued</b>				
1982	2.14	1,550	2.82	27.34	10.32	--	--	--	32.11	--	9.78	7,080	1.68	28.42	5.90
1983	--	--	--	18.42	--	5.78	4,180	9.86	18.43	53.48	15.10	10,930	2.59	19.34	13.38
1984	--	--	--	20.97	--	6.95	5,050	11.91	22.56	52.80	16.90	12,270	2.90	20.47	14.19
1985	--	--	--	14.19	--	6.43	4,660	10.99	16.50	66.62	11.10	8,010	1.90	14.43	13.14
1986	--	--	--	23.81	--	5.50	3,980	9.39	22.48	41.76	13.10	9,470	2.24	24.32	9.22
1987	--	--	--	15.83	--	5.09	3,680	8.68	15.43	56.26	11.60	8,370	1.98	15.70	12.62
1988	--	--	--	15.53	--	5.16	3,750	8.84	15.52	57.00	11.00	7,990	1.89	15.13	12.50
1989	--	--	--	19.23	--	4.49	3,250	7.67	18.98	40.39	9.26	6,700	1.59	17.82	8.90
1990	--	--	--	21.34	--	4.02	2,910	6.86	20.93	32.79	9.56	6,920	1.64	19.16	8.55
1991	--	--	--	23.98	--	3.69	2,670	6.30	24.16	26.06	11.00	7,940	1.88	22.88	8.22
1992	1.47	1,060	1.93	21.01	9.18	3.74	2,710	6.39	23.16	27.60	10.30	7,450	1.76	20.21	8.73
1993	1.15	833	1.52	27.11	5.59	3.99	2,890	6.82	28.20	24.17	13.00	9,430	2.23	26.52	8.42
1994	1.75	1,260	2.29	24.17	9.49	4.63	3,350	7.90	22.00	35.91	14.30	10,320	2.44	19.11	12.79
1995	1.92	1,390	2.53	28.91	8.75	5.33	3,860	9.10	29.11	31.27	17.00	12,330	2.92	27.55	10.60
1996	1.96	1,420	2.58	28.45	9.09	6.41	4,650	10.97	29.79	36.82	22.30	16,210	3.84	30.10	12.75
1997	2.30	1,670	3.04	27.53	11.04	7.53	5,450	12.85	32.14	39.99	27.70	20,090	4.76	29.17	16.31
1998	2.15	1,560	2.84	27.54	10.31	8.77	6,350	14.98	32.23	46.47	25.20	18,270	4.33	28.15	15.36
<b>Summary Statistics (applies only to period of streamflow record)</b>															
Max	2.59	1,870	3.40	28.91	18.99	8.77	6,350	14.98	32.23	66.62	27.70	20,090	4.76	30.10	16.31
75th	2.15	1,555	2.83	27.44	12.20	6.42	4,653	10.97	28.43	52.97	12.95	9,388	2.22	24.64	10.08
Median	2.02	1,470	2.68	24.17	10.31	5.25	3,805	8.97	22.52	40.19	11.00	7,990	1.89	20.82	8.95
25th	1.61	1,160	2.11	21.79	8.92	4.37	3,165	7.46	18.84	32.41	9.19	6,655	1.58	18.62	7.71
Min	.94	682	1.24	17.16	5.21	3.69	2,670	6.30	15.43	24.17	5.13	3,720	.88	14.04	4.48
Mean	1.88	1,365	2.48	24.20	10.59	5.47	3,962	9.34	23.23	41.84	11.73	8,499	2.01	21.65	9.32
Std dev	.47	344	.63	3.67	3.63	1.45	1,053	2.48	5.65	12.52	4.37	3,169	.75	4.41	2.63
CV	--	--	.25	--	--	--	--	.27	--	--	--	--	.37	--	--
	<b>Cold Springs Creek at Buckhorn, Wyo. (06429500)</b>					<b>Spearfish Creek near Lead (06430770)</b>					<b>Little Spearfish Creek near Lead (06430850)</b>				
1960	--	--	--	16.68	--	--	--	--	--	--	--	--	--	--	--
1961	--	--	--	14.70	--	--	--	--	--	--	--	--	--	--	--
1962	--	--	--	26.63	--	--	--	--	--	--	--	--	--	--	--
1963	--	--	--	27.16	--	--	--	--	--	--	--	--	--	--	--
1964	--	--	--	28.50	--	--	--	--	--	--	--	--	--	--	--
1965	--	--	--	29.18	--	--	--	--	--	--	--	--	--	--	--
1966	--	--	--	18.23	--	--	--	--	--	--	--	--	--	--	--
1967	--	--	--	24.41	--	--	--	--	--	--	--	--	--	--	--
1968	--	--	--	21.72	--	--	--	--	--	--	--	--	--	--	--
1969	--	--	--	23.12	--	--	--	--	--	--	--	--	--	--	--
1970	--	--	--	21.11	--	--	--	--	--	--	--	--	--	--	--
1971	--	--	--	24.27	--	--	--	--	--	--	--	--	--	--	--
1972	--	--	--	25.92	--	--	--	--	--	--	--	--	--	--	--
1973	--	--	--	24.00	--	--	--	--	--	--	--	--	--	--	--
1974	--	--	--	17.89	--	--	--	--	--	--	--	--	--	--	--

**Table 19.** Annual flow and precipitation data for limestone headwater basins—Continued

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches		
	<b>Cold Springs Creek at Buckhorn, Wyo. (06429500)—Continued</b>					<b>Spearfish Creek near Lead (06430770)—Continued</b>					<b>Little Spearfish Creek near Lead (06430580)—Continued</b>				
1975	3.96	2,870	2.83	20.17	14.04	--	--	--	--	--	--	--	--	--	--
1976	5.37	3,900	3.85	23.33	16.50	--	--	--	--	--	--	--	--	--	--
1977	4.99	3,610	3.56	23.81	14.96	--	--	--	--	--	--	--	--	--	--
1978	4.92	3,560	3.51	24.91	14.10	--	--	--	--	--	--	--	--	--	--
1979	4.66	3,370	3.33	22.56	14.74	--	--	--	--	--	--	--	--	--	--
1980	4.65	3,380	3.34	17.16	19.44	--	--	--	18.38	--	--	--	--	18.36	--
1981	4.57	3,310	3.27	18.93	17.26	--	--	--	21.11	--	--	--	--	21.15	--
1982	4.58	3,320	3.28	27.34	11.98	--	--	--	30.27	--	--	--	--	32.22	--
1983	--	--	--	18.42	--	--	--	--	22.90	--	--	--	--	22.54	--
1984	--	--	--	20.97	--	--	--	--	24.94	--	--	--	--	25.92	--
1985	--	--	--	14.19	--	--	--	--	16.43	--	--	--	--	16.12	--
1986	--	--	--	23.81	--	--	--	--	26.22	--	--	--	--	27.69	--
1987	--	--	--	15.83	--	--	--	--	19.53	--	--	--	--	21.25	--
1988	--	--	--	15.53	--	--	--	--	18.81	--	--	--	--	20.21	--
1989	--	--	--	19.23	--	15.10	10,910	3.22	20.79	15.50	14.00	10,160	7.38	19.30	38.25
1990	--	--	--	21.34	--	14.20	10,280	3.04	22.26	13.64	13.20	9,560	6.95	23.08	30.11
1991	--	--	--	23.98	--	15.20	11,040	3.26	25.95	12.56	13.00	9,420	6.85	26.25	26.08
1992	3.31	2,400	2.37	21.01	11.27	15.10	11,000	3.25	23.78	13.66	12.80	9,270	6.74	23.25	28.98
1993	2.92	2,110	2.08	27.11	7.68	18.10	13,130	3.88	19.14	13.31	12.50	9,030	6.56	28.99	22.64
1994	3.11	2,250	2.22	24.17	9.19	22.80	16,490	4.87	24.05	20.25	14.30	10,360	7.53	24.48	30.75
1995	3.06	2,220	2.19	28.91	7.58	30.30	21,910	6.47	33.13	19.53	19.30	13,960	10.15	35.57	28.52
1996	3.70	2,690	2.65	28.45	9.33	36.00	26,100	7.71	30.37	25.37	21.60	15,690	11.40	30.28	37.65
1997	5.01	3,630	3.58	27.53	13.01	41.60	30,140	8.90	34.16	26.05	22.70	16,450	11.95	31.88	37.50
1998	6.19	4,480	4.42	27.54	16.05	45.90	33,250	9.82	32.68	30.05	22.50	16,310	11.85	31.29	37.88
<b>Summary Statistics (applies only to period of streamflow record)</b>															
Max	6.19	4,480	4.42	28.91	19.44	45.90	33,250	9.82	34.16	30.05	22.70	16,450	11.95	35.57	38.25
75th	4.96	3,585	3.54	27.44	15.51	34.58	25,053	7.40	32.10	24.09	21.03	15,258	11.09	31.04	37.62
Median	4.58	3,320	3.28	24.17	14.04	20.45	14,810	4.37	27.54	17.51	14.15	10,260	7.46	27.62	30.43
25th	3.51	2,545	2.51	21.79	10.30	15.13	11,010	3.25	23.84	13.64	13.05	9,455	6.87	23.56	28.64
Min	2.92	2,110	2.08	17.16	7.58	14.20	10,280	3.04	20.79	12.56	12.50	9,030	6.56	19.30	22.64
Mean	4.33	3,140	3.10	24.20	13.14	25.43	18,425	5.44	27.63	18.99	16.59	12,021	8.74	27.44	31.84
Std dev	.96	692	.68	3.67	3.58	12.11	8,771	2.59	4.88	6.30	4.37	3,176	2.31	4.99	5.63
CV	--	--	.22	--	--	--	--	.48	--	--	--	--	.26	--	--

**Table 20. Annual flow and precipitation data for crystalline core basins**

[Precip, precipitation; RE, runoff efficiency; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Beaver Creek near Pringle (06402430)			French Creek above Fairburn (06403300)			Battle Creek near Keystone (06404000)			Grace Coolidge Creek near Game Lodge, near Custer (06404998)						
	Flow ft <sup>3</sup> /s	Flow acre-ft	Precip (inches)	Flow ft <sup>3</sup> /s	Flow acre-ft	Precip (inches)	Flow ft <sup>3</sup> /s	Flow acre-ft	Precip (inches)	Flow ft <sup>3</sup> /s	Flow acre-ft	Precip (inches)	RE (per- cent)			
1961	--	--	--	--	--	--	--	--	13.40	--	--	--	--			
1962	--	--	--	--	--	--	14.20	10,250	3.31	29.09	11.39	--	--			
1963	--	--	--	--	--	--	15.00	10,830	3.50	27.00	12.97	--	--			
1964	--	--	--	--	--	--	7.90	5,730	1.85	19.05	9.72	--	--			
1965	--	--	--	--	--	--	19.50	14,100	4.56	30.98	14.72	--	--			
1966	--	--	--	--	--	--	3.79	2,740	.89	17.43	5.08	--	--			
1967	--	--	--	--	--	--	15.30	11,100	3.59	22.23	16.14	--	--			
1968	--	--	--	--	--	--	4.01	2,910	.94	19.49	4.83	--	--			
1969	--	--	--	--	--	--	5.80	4,200	1.36	20.23	6.71	--	--			
1970	--	--	--	--	--	--	6.83	4,940	1.60	21.69	7.36	--	--			
1971	--	--	--	--	--	--	15.80	11,420	3.69	26.91	13.72	--	--			
1972	--	--	--	--	--	--	21.10	15,310	4.95	24.65	20.08	--	--			
1973	--	--	--	--	--	--	8.61	6,230	2.01	18.60	10.83	--	--			
1974	--	--	--	--	--	--	1.65	1,190	.38	12.45	3.09	--	--			
1975	--	--	--	--	--	--	4.58	3,320	1.07	17.14	6.26	--	--			
1976	--	--	--	--	--	--	13.20	9,550	3.09	23.39	13.20	--	--			
1977	--	--	--	--	--	--	2.78	2,010	.65	18.25	3.56	--	--			
1978	--	--	--	--	--	--	11.90	8,590	2.78	21.75	12.77	--	--			
1979	--	--	--	--	--	--	6.00	4,350	1.41	21.22	6.63	--	--			
1980	--	--	--	--	--	--	2.48	1,800	.58	15.32	3.80	--	--			
1981	--	--	--	--	--	--	5.79	4,190	1.35	18.20	7.44	--	--			
1982	--	--	--	--	--	26.55	6.38	4,620	1.49	22.60	6.61	--	--			
1983	--	--	--	7.55	5,470	0.98	3.98	2,880	.93	14.83	6.28	--	--			
1984	--	--	--	10.10	7,340	1.31	8.64	6,280	2.03	21.87	9.28	--	--			
1985	--	--	--	3.53	2,560	.46	1.11	803	.26	10.44	2.49	--	--			
1986	--	--	--	3.97	2,870	.51	5.05	3,660	1.18	24.26	4.88	--	--			
1987	--	--	--	7.03	5,090	.91	6.84	4,950	1.60	16.60	9.64	--	--			
1988	--	--	--	3.04	2,210	.39	.69	503	.16	13.13	1.24	--	--			
1989	--	--	--	1.01	734	.13	1.02	736	.24	19.36	1.23	--	--			
												1.40	1,020	.76	19.75	3.84





**Table 20.** Annual flow and precipitation data for crystalline core basins—Continued

[Precip, precipitation; RE, runoff efficiency; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow		Precip (per-cent)		Flow		Precip (per-cent)		Flow		Precip (per-cent)								
	ft <sup>3</sup> /s	acre-ft	inches	(inches)	ft <sup>3</sup> /s	acre-ft	inches	(inches)	ft <sup>3</sup> /s	acre-ft	inches	(inches)							
	Bear Gulch near Hayward—Continued (06405800)				Spring Creek near Keystone—Continued (06407500)				Boxelder Creek near Nemo—Continued (06422500)				Elk Creek near Roubaix—Continued (06424000)						
1977	--	--	--	--	--	--	--	--	18.70	13,530	2.64	22.48	11.75	--	--	--	--		
1978	--	--	--	--	--	--	--	--	22.00	15,950	3.12	25.54	12.20	--	--	--	--		
1979	--	--	--	--	--	--	--	--	7.99	5,790	1.13	22.20	5.09	--	--	--	--		
1980	--	--	--	--	--	--	--	--	5.40	3,920	.77	16.41	4.66	--	--	--	--		
1981	--	--	--	--	--	--	--	--	4.14	2,990	.58	21.22	2.75	--	--	--	--		
1982	--	--	--	--	--	--	--	--	10.80	7,830	1.53	28.95	5.28	--	--	--	--		
1983	--	--	--	--	--	--	--	--	24.50	17,770	3.47	21.20	16.37	--	--	--	--		
1984	--	--	--	--	--	--	--	--	23.20	16,850	3.29	23.12	14.24	--	--	--	--		
1985	--	--	--	--	--	--	--	--	6.61	4,790	.94	13.39	6.99	--	--	--	--		
1986	--	--	--	--	--	--	24.86	--	12.30	8,870	1.73	25.47	6.80	--	--	--	--		
1987	--	--	--	--	12.40	8,960	1.03	17.81	5.79	7,400	1.45	15.91	9.09	--	--	--	--		
1988	--	--	--	--	1.80	1,300	.15	14.72	1.02	4.61	3,340	.65	14.55	4.48	--	--	--		
1989	--	--	--	20.06	.98	712	.08	18.29	.45	3.81	2,760	.54	18.48	2.92	--	--	--		
1990	0.85	617	2.73	22.52	8.69	6,290	.72	20.15	3.59	5.62	4,070	.79	18.36	4.33	--	--	--		
1991	1.35	976	4.33	25.47	28.00	20,260	2.33	24.47	9.52	13.50	9,780	1.91	24.56	7.78	--	--	--		
1992	.43	314	1.39	19.86	7.46	5,410	.62	18.36	3.39	6.88	5,000	.98	18.64	5.24	2.99	2,170	1.89	22.93	8.25
1993	1.83	1,330	5.90	27.22	34.40	24,890	2.86	25.10	11.41	24.00	17,340	3.39	25.79	13.13	8.48	6,140	5.35	30.11	17.79
1994	.35	252	1.12	17.30	13.30	9,610	1.11	13.90	7.95	18.50	13,370	2.61	16.75	15.59	12.20	8,800	7.67	23.60	32.52
1995	2.85	2,060	9.13	32.47	58.30	42,230	4.86	28.30	17.17	51.40	37,200	7.27	31.35	23.18	19.00	13,720	11.97	39.14	30.57
1996	1.40	1,020	4.52	28.79	40.90	29,660	3.41	27.36	12.47	42.90	31,110	6.08	28.40	21.40	15.20	11,060	9.65	31.86	30.27
1997	2.52	1,830	8.11	29.07	59.50	43,070	4.95	27.44	18.06	63.10	45,690	8.92	32.09	27.81	22.50	16,280	14.20	37.13	38.24
1998	1.72	1,240	5.50	25.64	35.00	25,320	2.91	25.38	11.48	34.90	25,240	4.93	28.23	17.46	13.60	9,870	8.61	32.64	26.37
<b>Statistical Summary (applies only to period of streamflow record)</b>																			
Maximum	2.85	2,060	9.13	32.47	59.50	43,070	4.95	28.30	18.06	63.10	45,690	8.92	32.09	27.81	22.50	16,280	14.20	39.14	38.24
75th percentile	1.83	1,330	5.90	28.79	36.48	26,405	3.04	25.87	11.72	24.13	17,448	3.41	26.17	14.66	17.10	12,390	10.81	34.88	31.54
Median	1.40	1,020	4.52	25.64	20.65	14,935	1.72	22.31	8.74	16.55	11,970	2.34	23.03	10.31	13.60	9,870	8.61	31.86	30.27
25th percentile	.85	617	2.73	22.52	8.38	6,070	.70	18.17	3.54	7.71	5,593	1.09	18.60	5.27	10.34	7,470	6.51	26.85	22.08
Minimum	.35	252	1.12	17.30	.98	712	.08	13.90	.45	3.81	2,760	.54	13.39	2.75	2.99	2,170	1.89	22.93	8.25
Mean	1.48	1,071	4.75	25.37	25.06	18,143	2.09	21.77	8.52	19.53	14,146	2.76	22.98	11.07	13.42	9,720	8.48	31.06	26.29
Std dev	.86	624	2.76	4.78	20.74	15,024	1.73	5.14	5.87	15.48	11,215	2.19	4.96	6.79	6.47	4,682	4.08	6.16	10.11
CV	--	--	.58	--	--	--	.83	--	--	--	--	.79	--	--	--	--	.48	--	--

**Table 20. Annual flow and precipitation data for crystalline core basins—Continued**

[Precip, precipitation; RE, runoff efficiency; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow		Precip (inches)		RE (per-cent)	Flow		Precip (inches)		RE (per-cent)	Flow		Precip (inches)		RE (per-cent)					
	ft <sup>3</sup> /s	acre-ft	inches	inches		ft <sup>3</sup> /s	acre-ft	inches	inches		ft <sup>3</sup> /s	acre-ft	inches	inches		ft <sup>3</sup> /s	acre-ft	inches	inches	
	<b>Annie Creek near Lead (06430800)</b>																			
1988	--	--	--	22.18	--	--	--	--	22.98	--	--	--	--	23.63	--	--	21.47	--		
1989	0.68	492	2.60	23.06	11.27	2.09	1,520	4.10	23.67	17.32	2.56	1,850	5.64	25.79	21.87	2.74	1,980	2.24	23.79	9.40
1990	.87	628	3.32	23.43	14.16	2.02	1,460	3.94	22.60	17.43	2.42	1,750	5.34	24.03	22.20	3.29	2,380	2.69	22.82	11.78
1991	.88	637	3.36	25.51	13.19	2.15	1,560	4.21	24.12	17.45	2.47	1,780	5.43	25.20	21.54	7.12	5,160	5.83	27.87	20.91
1992	.39	279	1.47	24.61	5.99	.99	718	1.94	22.50	8.61	1.71	1,240	3.78	24.24	15.60	2.29	1,660	1.88	22.68	8.27
1993	1.23	888	4.69	31.39	14.94	3.14	2,280	6.15	32.31	19.04	3.47	2,510	7.65	34.22	22.36	7.61	5,510	6.22	31.08	20.02
1994	1.79	1,290	6.81	25.60	26.62	3.91	2,830	7.63	23.89	31.96	4.05	2,930	8.93	27.07	33.00	8.79	6,370	7.20	23.70	30.36
1995	4.04	2,920	15.42	38.90	39.65	8.44	6,110	16.48	41.65	39.58	8.13	5,880	17.93	43.09	41.60	14.70	10,640	12.02	41.34	29.07
1996	2.22	1,610	8.50	31.74	26.79	5.51	4,000	10.79	31.89	33.83	6.53	4,740	14.45	34.52	41.87	11.40	8,290	9.36	32.93	28.43
1997	3.07	2,220	11.73	36.84	31.83	5.97	4,320	11.65	35.61	32.73	8.64	6,260	19.09	38.34	49.78	17.10	12,400	14.01	37.22	37.63
1998	1.98	1,430	7.55	33.47	22.57	3.35	2,420	6.53	31.99	20.41	7.91	5,730	17.47	35.40	49.35	8.49	6,150	6.95	32.72	21.23
	<b>Whitetail Creek at Lead (06436156)</b>																			
	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<b>Squaw Creek near Spearfish (06430898)</b>																			
	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<b>Bear Butte Creek near Deadwood (06437020)</b>																			
	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<b>Statistical Summary (applies only to period of streamflow record)</b>																			
Maximum	4.04	2,920	15.42	38.90	39.65	8.44	6,110	16.48	41.65	39.58	8.64	6,260	19.09	43.09	49.78	17.10	12,400	14.01	41.34	37.63
75th percentile	2.16	1,565	8.27	33.04	26.75	5.11	3,708	10.00	32.23	32.53	7.57	5,483	16.71	35.18	41.80	4.25	3,075	3.47	23.72	13.84
Median	1.51	1,089	5.75	28.50	18.75	3.25	2,350	6.34	28.01	19.72	3.76	2,720	8.29	30.64	27.68	8.05	5,830	6.59	29.47	21.07
25th percentile	.87	630	3.33	24.84	13.43	2.11	1,530	4.13	23.73	17.44	2.49	1,798	5.48	25.35	21.95	4.25	3,075	3.47	23.72	13.84
Minimum	.39	279	1.47	23.06	5.99	.99	718	1.94	22.50	8.61	1.71	1,240	3.78	24.03	15.60	2.29	1,660	1.88	22.68	8.27
Mean	1.72	1,239	6.55	29.46	20.70	3.76	2,722	7.34	29.02	23.84	4.79	3,467	10.57	31.19	31.92	8.35	6,054	6.84	29.62	21.71
Std dev	1.16	837	4.42	5.77	10.52	2.27	1,645	4.44	6.61	9.91	2.72	1,970	6.01	6.77	12.81	4.97	3,604	4.07	6.54	9.79
CV	--	--	.67	--	--	--	--	.60	--	--	--	--	.57	--	--	--	--	.60	--	--

**Table 21.** Annual flow and precipitation data for loss zone basins[Precip, precipitation; RE, runoff efficiency; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; --, no data]

Water year	Spring Creek near Hermosa (06408500)					Boxelder Creek near Rapid City (06423010)				
	Flow			Precip (inches)	RE (percent)	Flow			Precip (inches)	RE (percent)
	ft <sup>3</sup> /s	acre-feet	inches			ft <sup>3</sup> /s	acre-feet	inches		
1950	1.21	875	0.08	16.91	0.49	--	--	--	--	--
1951	.19	140	.01	16.31	.08	--	--	--	--	--
1952	8.13	5,900	.56	17.60	3.16	--	--	--	--	--
1953	1.48	1,070	.10	16.13	.62	--	--	--	--	--
1954	.63	456	.04	12.47	.34	--	--	--	--	--
1955	.11	82	.01	19.09	.04	--	--	--	--	--
1956	.02	18	.00	16.04	.01	--	--	--	--	--
1957	11.20	8,090	.76	21.79	3.50	--	--	--	--	--
1958	1.52	1,100	.10	16.64	.62	--	--	--	--	--
1959	.30	215	.02	17.81	.11	--	--	--	--	--
1960	.03	24	.00	13.49	.02	--	--	--	--	--
1961	.00	1	.00	13.08	.00	--	--	--	--	--
1962	14.80	10,730	1.01	27.58	3.67	--	--	--	--	--
1963	13.50	9,750	.92	24.15	3.80	--	--	--	--	--
1964	3.01	2,190	.21	18.19	1.13	--	--	--	--	--
1965	25.10	18,170	1.71	27.15	6.30	--	--	--	--	--
1966	1.59	1,150	.11	16.98	.64	--	--	--	--	--
1967	12.10	8,770	.83	21.48	3.85	--	--	--	--	--
1968	1.87	1,360	.13	18.08	.71	--	--	--	--	--
1969	2.56	1,850	.17	19.07	.91	--	--	--	--	--
1970	.32	230	.02	18.99	.11	--	--	--	--	--
1971	17.50	12,630	1.19	24.27	4.90	--	--	--	--	--
1972	27.50	19,930	1.88	24.50	7.67	--	--	--	--	--
1973	3.68	2,670	.25	19.69	1.28	--	--	--	--	--
1974	1.16	842	.08	13.18	.60	--	--	--	--	--
1975	.31	227	.02	16.91	.13	--	--	--	--	--
1976	7.06	5,130	.48	23.02	2.10	--	--	--	--	--
1977	1.55	1,120	.11	18.83	.56	--	--	--	--	--
1978	9.16	6,630	.62	20.97	2.98	--	--	--	--	--
1979	.88	639	.06	21.22	.28	0.00	0	0.00	21.59	0.00

**Table 21.** Annual flow and precipitation data for loss zone basins—Continued[Precip, precipitation; RE, runoff efficiency; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; --, no data]

Water year	Spring Creek near Hermosa (06408500)					Boxelder Creek near Rapid City (06423010)				
	Flow			Precip (inches)	RE (percent)	Flow			Precip (inches)	RE (percent)
	ft <sup>3</sup> /s	acre-feet	inches			ft <sup>3</sup> /s	acre-feet	inches		
1980	0.60	436	0.04	15.55	0.26	0.00	0	0.00	15.56	0.00
1981	.05	33	.00	18.37	.02	.00	0	.00	20.77	.00
1982	.65	468	.04	24.62	.18	.10	70	.01	28.21	.04
1983	1.96	1,420	.13	17.28	.77	3.76	2,720	.40	20.17	1.97
1984	6.08	4,420	.42	21.69	1.92	4.06	2,950	.43	22.60	1.91
1985	1.68	1,220	.11	12.38	.93	.00	0	.00	13.05	.00
1986	.69	502	.05	24.63	.19	.00	0	.00	25.33	.00
1987	.51	370	.03	17.22	.20	.00	0	.00	15.41	.00
1988	.36	260	.02	13.77	.18	.00	0	.00	13.27	.00
1989	.01	4	.00	18.12	.00	.00	0	.00	17.68	.00
1990	.00	0	.00	19.63	.00	.00	0	.00	17.56	.00
1991	15.30	11,050	1.04	24.18	4.31	2.29	1,660	.24	24.27	1.00
1992	1.09	791	.07	17.71	.42	.00	0	.00	17.74	.00
1993	16.90	12,270	1.16	24.77	4.67	3.50	2,530	.37	24.75	1.50
1994	2.42	1,750	.16	13.21	1.25	1.40	1,010	.15	15.20	.97
1995	38.80	28,070	2.64	27.03	9.78	28.90	20,910	3.06	29.73	10.30
1996	27.50	20,000	1.88	26.02	7.24	21.20	15,380	2.25	27.25	8.27
1997	46.60	33,760	3.18	26.56	11.98	42.30	30,650	4.49	31.02	14.48
1998	20.70	15,000	1.41	24.04	5.88	10.10	7,310	1.07	26.45	4.05
<b>Statistical Summary</b>										
Maximum	46.60	33,760	3.18	27.58	11.98	42.30	30,650	4.49	31.02	14.48
75th percentile	11.20	8,090	.76	24.04	3.50	3.84	2,778	.41	25.61	1.93
Median	1.59	1,150	.11	18.83	.64	.05	35	.01	21.18	.02
25th percentile	.51	370	.03	16.91	.18	.00	0	.00	17.06	.00
Minimum	.00	0	.00	12.38	.00	.00	0	.00	13.05	.00
Mean	7.15	5,180	.49	19.56	2.06	5.88	4,260	.62	21.38	2.22
Std dev	10.74	7,782	.73	4.31	2.79	11.55	8,367	1.23	5.58	4.06
CV	--	--	1.49	--	--	--	--	1.98	--	--

**Table 22.** Annual flow and precipitation data for artesian spring basins

[Precip, precipitation; Max, maximum; min, minimum; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow				Precip (inches)	Flow				Precip (inches)	Flow				Precip (inches)				
	ft <sup>3</sup> /s	acre-ft	inches	(inches)		ft <sup>3</sup> /s	acre-ft	inches	(inches)		ft <sup>3</sup> /s	acre-ft	inches	(inches)					
	<b>Stockade Beaver Creek near Newcastle, Wyo. (06392950)</b>					<b>Cascade Springs near Hot Springs (06400497)</b>					<b>Fall River at Hot Springs (06402000)</b>					<b>Beaver Creek above Buffalo Gap (06402470)</b>			
1931	--	--	--	--	--	--	--	--	--	--	--	--	14.32	--	--	--	--		
1932	--	--	--	--	--	--	--	--	--	--	--	--	21.81	--	--	--	--		
1933	--	--	--	--	--	--	--	--	--	--	--	--	22.46	--	--	--	--		
1934	--	--	--	--	--	--	--	--	--	--	--	--	10.73	--	--	--	--		
1935	--	--	--	--	--	--	--	--	--	--	--	--	20.73	--	--	--	--		
1936	--	--	--	--	--	--	--	--	--	--	--	--	10.35	--	--	--	--		
1937	--	--	--	--	--	--	--	--	--	--	--	--	16.16	--	--	--	--		
1938	--	--	--	--	--	--	--	--	--	--	--	--	17.25	--	--	--	--		
1939	--	--	--	--	--	--	--	--	--	28.50	20,630	2.82	12.19	--	--	--	--		
1940	--	--	--	--	--	--	--	--	--	30.70	22,310	3.05	13.88	--	--	--	--		
1941	--	--	--	--	--	--	--	--	--	31.60	22,900	3.13	20.82	--	--	--	--		
1942	--	--	--	--	--	--	--	--	--	29.20	21,150	2.89	21.11	--	--	--	--		
1943	--	--	--	--	--	--	--	--	--	29.00	21,010	2.88	18.70	--	--	--	--		
1944	--	--	--	--	--	--	--	--	--	29.60	21,470	2.94	18.77	--	--	--	--		
1945	--	--	--	--	--	--	--	--	--	31.50	22,780	3.12	16.64	--	--	--	--		
1946	--	--	--	--	--	--	--	--	--	27.60	20,010	2.74	20.62	--	--	--	--		
1947	--	--	--	--	--	--	--	--	--	--	--	--	21.49	--	--	--	--		
1948	--	--	--	--	--	--	--	--	--	29.10	21,150	2.89	16.87	--	--	--	--		
1949	--	--	--	--	--	--	--	--	--	28.70	20,760	2.84	17.00	--	--	--	--		
1950	--	--	--	18.42	--	--	--	13.92	26.10	18,900	2.59	13.76	--	--	--	14.55			
1951	--	--	--	19.19	--	--	--	15.84	27.20	19,680	2.69	16.08	--	--	--	15.53			
1952	--	--	--	18.77	--	--	--	15.32	27.00	19,620	2.69	12.83	--	--	--	14.51			
1953	--	--	--	17.63	--	--	--	14.63	25.50	18,490	2.53	13.66	--	--	--	14.53			
1954	--	--	--	13.74	--	--	--	11.63	25.00	18,080	2.47	11.99	--	--	--	12.36			
1955	--	--	--	20.56	--	--	--	18.66	24.20	17,530	2.40	19.34	--	--	--	19.27			
1956	--	--	--	16.47	--	--	--	15.53	23.80	17,250	2.36	14.00	--	--	--	14.87			
1957	--	--	--	21.40	--	--	--	20.04	22.60	16,390	2.24	20.76	--	--	--	20.84			
1958	--	--	--	19.55	--	--	--	17.57	24.20	17,480	2.39	18.03	--	--	--	18.25			
1959	--	--	--	19.08	--	--	--	16.30	23.60	17,080	2.34	15.17	--	--	--	16.62			
1960	--	--	--	15.19	--	--	--	10.40	23.80	17,250	2.36	8.12	--	--	--	9.87			
1961	--	--	--	13.78	--	--	--	12.54	24.40	17,680	2.42	13.20	--	--	--	13.10			
1962	--	--	--	25.00	--	--	--	21.90	23.50	17,020	2.33	19.79	--	--	--	21.56			
1963	--	--	--	25.22	--	--	--	22.87	23.80	17,230	2.36	23.02	--	--	--	24.49			
1964	--	--	--	26.15	--	--	--	16.03	24.00	17,430	2.39	14.11	--	--	--	15.54			
1965	--	--	--	27.70	--	--	--	22.71	24.10	17,470	2.39	20.33	--	--	--	22.17			
1966	--	--	--	17.41	--	--	--	15.83	23.30	16,870	2.31	14.66	--	--	--	15.81			
1967	--	--	--	23.35	--	--	--	20.67	23.40	16,970	2.32	18.88	--	--	--	19.86			
1968	--	--	--	20.26	--	--	--	19.47	24.20	17,600	2.41	18.63	--	--	--	19.99			
1969	--	--	--	22.37	--	--	--	16.52	22.90	16,610	2.27	13.95	--	--	--	15.90			

**Table 22.** Annual flow and precipitation data for artesian spring basins—Continued

[Precip, precipitation; Max, maximum; min, minimum; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	Flow			Precip (inches)	Flow			Precip (inches)	Flow			Precip (inches)
	ft <sup>3</sup> /s	acre-ft	inches		ft <sup>3</sup> /s	acre-ft	inches		ft <sup>3</sup> /s	acre-ft	inches		ft <sup>3</sup> /s	acre-ft	inches	
	<b>Stockade Beaver Creek near Newcastle, Wyo. (06392950)—Continued</b>				<b>Cascade Springs near Hot Springs (06400497)—Continued</b>				<b>Fall River at Hot Springs (06402000)—Continued</b>				<b>Beaver Creek above Buffalo Gap (06402470)—Continued</b>			
1970	--	--	--	19.22	--	--	--	17.00	21.20	15,350	2.10	15.31	--	--	--	16.78
1971	--	--	--	22.66	--	--	--	20.55	22.00	15,940	2.18	19.47	--	--	--	20.94
1972	--	--	--	25.03	--	--	--	20.04	21.70	15,780	2.16	16.56	--	--	--	18.77
1973	--	--	--	22.64	--	--	--	18.57	21.90	15,880	2.17	18.43	--	--	--	18.76
1974	--	--	--	16.75	--	--	--	12.13	20.90	15,150	2.07	13.03	--	--	--	12.24
1975	12.80	9,300	1.63	19.40	--	--	--	16.29	21.50	15,590	2.13	15.61	--	--	--	16.35
1976	12.70	9,220	1.62	22.11	--	--	--	20.76	21.00	15,250	2.09	19.51	--	--	--	20.83
1977	12.50	9,020	1.58	22.30	19.50	14,100	562.50	19.10	21.50	15,580	2.13	18.92	--	--	--	19.59
1978	12.80	9,280	1.63	23.87	21.20	15,360	612.77	20.03	22.80	16,480	2.26	19.20	--	--	--	19.84
1979	13.00	9,390	1.65	21.59	19.50	14,130	563.70	17.14	22.30	16,160	2.21	15.43	--	--	--	17.14
1980	11.40	8,270	1.45	16.36	20.40	14,790	590.03	14.55	21.20	15,360	2.10	13.27	--	--	--	14.23
1981	10.20	7,410	1.30	17.94	18.60	13,490	538.16	17.03	20.90	15,130	2.07	16.36	--	--	--	17.27
1982	10.20	7,380	1.29	25.49	19.90	14,440	576.06	23.48	21.40	15,520	2.12	23.29	--	--	--	23.87
1983	--	--	--	17.41	21.10	15,300	610.37	14.94	21.00	15,170	2.08	14.25	--	--	--	14.70
1984	--	--	--	20.01	21.40	15,510	618.75	19.75	21.50	15,610	2.14	19.25	--	--	--	20.32
1985	--	--	--	13.21	20.60	14,910	594.81	11.56	21.60	15,620	2.14	11.69	--	--	--	11.79
1986	--	--	--	23.40	20.90	15,110	602.79	22.00	22.20	16,090	2.20	19.87	--	--	--	22.30
1987	--	--	--	15.09	21.30	15,420	615.16	15.27	21.80	15,810	2.16	15.13	--	--	--	15.74
1988	--	--	--	14.86	19.60	14,230	567.69	12.95	21.30	15,470	2.12	13.29	--	--	--	13.07
1989	--	--	--	18.30	18.30	13,250	528.59	16.24	21.50	15,550	2.13	14.68	--	--	--	16.61
1990	--	--	--	20.30	18.80	13,620	543.35	18.99	21.90	15,880	2.17	17.95	--	--	--	19.17
1991	--	--	--	23.59	18.40	13,310	530.98	20.89	21.20	15,380	2.10	18.26	8.19	5,930	1.00	20.35
1992	9.80	7,110	1.25	20.17	17.80	12,940	516.22	18.11	21.70	15,730	2.15	19.00	8.12	5,900	1.00	20.35
1993	10.40	7,510	1.32	26.58	16.30	11,790	470.35	24.17	22.30	16,120	2.21	25.06	9.17	6,640	1.12	25.86
1994	10.40	7,530	1.32	21.84	18.40	13,290	530.19	13.55	21.80	15,800	2.16	13.42	9.68	7,010	1.18	14.73
1995	12.20	8,810	1.54	27.85	19.00	13,760	548.94	27.33	23.70	17,150	2.35	27.78	13.70	9,910	1.67	31.97
1996	13.40	9,730	1.71	27.66	--	--	--	23.28	24.50	17,780	2.43	20.15	11.30	8,220	1.39	22.38
1997	14.30	10,360	1.82	25.98	--	--	--	24.72	25.50	18,450	2.53	25.92	11.30	8,160	1.38	27.21
1998	16.20	11,720	2.05	26.78	--	--	--	23.91	26.20	19,000	2.60	23.72	--	--	--	24.76
<b>Summary Statistics (applies only to period of streamflow record)</b>																
Max	16.20	11,720	2.05	27.85	21.40	15,510	618.75	27.33	31.60	22,900	3.13	27.78	13.70	9,910	1.67	31.97
75th	12.90	9,345	1.64	26.28	20.75	15,010	598.80	20.46	25.38	18,358	2.51	19.83	11.30	8,190	1.38	26.53
Median	12.50	9,020	1.58	22.30	19.50	14,130	563.70	18.11	23.45	16,995	2.33	18.26	9.68	7,010	1.18	22.38
25th	10.40	7,520	1.32	20.88	18.50	13,400	534.57	15.11	21.70	15,743	2.15	14.67	8.68	6,285	1.06	20.35
Min	9.80	7,110	1.25	16.36	16.30	11,790	470.35	11.56	20.90	15,130	2.07	8.12	8.12	5,900	1.00	14.73
Mean	12.15	8,803	1.54	23.06	19.53	14,145	564.28	18.27	23.61	17,105	2.34	17.48	10.21	7,396	1.25	23.26
Std dev	1.78	1,288	.23	3.62	1.39	1,011	40.34	4.13	2.53	1,833	.25	4.16	2.02	1,454	.25	5.61
CV	--	--	.15	--	--	--	.07	--	--	--	.11	--	--	--	.20	--

**Table 22.** Annual flow and precipitation data for artesian spring basins—Continued

[Precip, precipitation; Max, maximum; Min, minimum; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	Flow			Precip (inches)	Flow			Precip (inches)
	ft <sup>3</sup> /s	acre-ft	inches		ft <sup>3</sup> /s	acre-ft	inches		ft <sup>3</sup> /s	acre-ft	inches	
	Sand Creek near Ranch A, near Beulah, Wyo. (06429905)				Crow Creek near Beulah, Wyo. (06430532)				Cox Lake outlet near Beulah, Wyo. (06430540)			
1950	--	--	--	19.62	--	--	--	20.53	--	--	--	22.48
1951	--	--	--	19.32	--	--	--	20.07	--	--	--	20.70
1952	--	--	--	18.10	--	--	--	16.97	--	--	--	21.50
1953	--	--	--	18.58	--	--	--	17.71	--	--	--	22.31
1954	--	--	--	14.88	--	--	--	14.72	--	--	--	18.48
1955	--	--	--	21.24	--	--	--	19.55	--	--	--	23.98
1956	--	--	--	17.05	--	--	--	17.17	--	--	--	19.75
1957	--	--	--	21.44	--	--	--	21.40	--	--	--	25.18
1958	--	--	--	18.64	--	--	--	17.64	--	--	--	21.59
1959	--	--	--	16.17	--	--	--	12.84	--	--	--	16.89
1960	--	--	--	16.33	--	--	--	15.10	--	--	--	19.21
1961	--	--	--	13.67	--	--	--	12.79	--	--	--	15.15
1962	--	--	--	28.06	--	--	--	29.10	--	--	--	32.28
1963	--	--	--	24.81	--	--	--	23.58	--	--	--	28.25
1964	--	--	--	26.99	--	--	--	25.22	--	--	--	29.67
1965	--	--	--	27.98	--	--	--	28.73	--	--	--	30.47
1966	--	--	--	18.44	--	--	--	20.01	--	--	--	19.81
1967	--	--	--	24.16	--	--	--	24.50	--	--	--	25.69
1968	--	--	--	21.81	--	--	--	22.49	--	--	--	24.23
1969	--	--	--	19.88	--	--	--	19.27	--	--	--	20.68
1970	--	--	--	23.99	--	--	--	28.66	--	--	--	28.25
1971	--	--	--	24.74	--	--	--	26.79	--	--	--	28.49
1972	--	--	--	26.74	--	--	--	29.22	--	--	--	29.79
1973	--	--	--	23.39	--	--	--	24.53	--	--	--	24.92
1974	--	--	--	18.12	--	--	--	20.31	--	--	--	20.30
1976	--	--	--	25.34	--	--	--	28.90	--	--	--	29.55
1977	28.10	20,380	1.43	22.17	--	--	--	22.17	--	--	--	23.87
1978	29.50	21,330	1.50	24.10	--	--	--	24.92	--	--	--	26.30
1979	24.50	17,770	1.25	20.72	--	--	--	20.08	--	--	--	21.72
1980	21.80	15,820	1.11	16.62	--	--	--	16.43	--	--	--	17.38
1981	18.30	13,240	.93	19.70	--	--	--	20.90	--	--	--	21.38
1982	22.20	16,040	1.13	28.32	--	--	--	31.84	--	--	--	31.72
1983	24.60	17,810	1.25	19.27	--	--	--	19.37	--	--	--	21.96
1984	--	--	--	23.13	--	--	--	25.45	--	--	--	25.47
1985	--	--	--	14.54	--	--	--	14.54	--	--	--	15.13
1986	--	--	--	25.96	--	--	--	28.15	--	--	--	27.62
1987	--	--	--	18.74	--	--	--	20.65	--	--	--	20.13
1988	--	--	--	17.02	--	--	--	18.74	--	--	--	19.06

**Table 22.** Annual flow and precipitation data for artesian spring basins—Continued

[Precip, precipitation; Max, maximum; Min, minimum; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	Flow			Precip (inches)	Flow			Precip (inches)
	ft <sup>3</sup> /s	acre-ft	inches		ft <sup>3</sup> /s	acre-ft	inches		ft <sup>3</sup> /s	acre-ft	inches	
	<b>Sand Creek near Ranch A, near Beulah, Wyo. (06429905)—Continued</b>				<b>Crow Creek near Beulah, Wyo. (06430532)—Continued</b>				<b>Cox Lake outlet near Beulah, Wyo. (06430540)—Continued</b>			
1989	--	--	--	18.72	--	--	--	18.97	--	--	--	20.40
1990	--	--	--	20.46	--	--	--	20.09	--	--	--	20.45
1991	--	--	--	22.41	--	--	--	21.77	4.26	3,090	827.68	23.47
1992	15.70	11,410	.80	19.52	--	--	--	18.56	4.18	3,030	811.61	20.65
1993	16.40	11,890	.83	26.30	37.40	27,100	12.45	25.68	4.21	3,040	814.29	28.54
1994	17.20	12,470	.88	21.53	37.80	27,400	12.59	18.68	4.19	3,030	811.61	20.16
1995	23.30	16,880	1.19	31.21	42.90	31,080	14.28	30.95	4.28	3,100	830.36	35.22
1996	24.30	17,650	1.24	28.50	44.50	32,290	14.84	26.86	--	--	--	29.00
1997	25.60	18,550	1.30	26.13	43.80	31,680	14.56	25.56	--	--	--	31.62
1998	24.60	17,820	1.25	24.83	37.70	27,290	12.54	23.42	--	--	--	28.70
<b>Summary Statistics (applies only to period of streamflow record)</b>												
Max	29.50	21,330	1.50	31.21	44.50	32,290	14.84	30.95	4.28	3,100	830.36	35.22
75th	24.60	17,818	1.25	26.25	44.15	31,985	14.70	28.90	4.26	3,090	827.68	28.54
Median	23.80	17,265	1.21	23.14	40.35	29,240	13.44	25.62	4.21	3,040	814.29	23.47
25th	19.18	13,885	.98	19.95	37.73	27,318	12.55	23.95	4.19	3,030	811.61	20.65
Min	15.70	11,410	.80	16.62	37.40	27,100	12.45	18.68	4.18	3,030	811.61	20.16
Mean	22.58	16,361	1.15	23.49	40.68	29,473	13.54	25.19	4.22	3,058	819.11	25.61
Std dev	4.26	3,083	.22	4.24	3.38	2,453	1.13	4.05	.04	34	9.16	6.32
CV	--	--	.19	--	--	--	.08	--	--	--	.01	--



**Table 23.** Annual flow and precipitation data for exterior basins

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches		
	Hat Creek near Edgemont (06400000)					Horsehead Creek at Oelrichs (06400875)					Elk Creek subbasin (06425500-06425100)				
1950	--	--	--	13.79	--	--	--	--	--	--	--	--	--	--	--
1951	30.50	22,070	0.40	13.29	2.98	--	--	--	--	--	--	--	--	--	--
1952	23.30	16,920	.30	12.45	2.44	--	--	--	--	--	--	--	--	--	--
1953	12.30	8,880	.16	10.51	1.52	--	--	--	--	--	--	--	--	--	--
1954	13.30	9,600	.17	11.19	1.54	--	--	--	--	--	--	--	--	--	--
1955	30.50	22,070	.40	17.54	2.26	--	--	--	--	--	--	--	--	--	--
1956	7.86	5,710	.10	12.21	.84	--	--	--	--	--	--	--	--	--	--
1957	54.70	39,580	.71	17.73	4.01	--	--	--	--	--	--	--	--	--	--
1958	15.40	11,160	.20	16.32	1.23	--	--	--	--	--	--	--	--	--	--
1959	9.89	7,160	.13	14.26	.90	--	--	--	--	--	--	--	--	--	--
1960	2.77	2,010	.04	8.71	.41	--	--	--	--	--	--	--	--	--	--
1961	1.31	949	.02	13.10	.13	--	--	--	--	--	--	--	--	--	--
1962	21.90	15,860	.28	18.22	1.56	--	--	--	--	--	--	--	--	--	--
1963	11.70	8,480	.15	20.02	.76	--	--	--	--	--	--	--	--	--	--
1964	5.78	4,190	.08	14.42	.52	--	--	--	--	--	--	--	--	--	--
1965	18.40	13,340	.24	19.52	1.23	--	--	--	--	--	--	--	--	--	--
1966	15.40	11,180	.20	14.32	1.40	--	--	--	--	--	--	--	--	--	--
1967	112.00	81,420	1.46	20.34	7.19	--	--	--	--	--	--	--	--	--	--
1968	51.30	37,220	.67	19.17	3.49	--	--	--	--	--	--	--	--	--	--
1969	8.82	6,390	.11	11.82	.97	--	--	--	--	--	--	--	--	--	--
1970	3.00	2,170	.04	13.39	.29	--	--	--	--	--	--	--	--	--	--
1971	31.40	22,770	.41	19.12	2.14	--	--	--	--	--	--	--	--	--	--
1972	3.18	2,310	.04	15.26	.27	--	--	--	--	--	--	--	--	--	--
1973	13.70	9,910	.18	18.64	.95	--	--	--	--	--	--	--	--	--	--
1974	12.10	8,770	.16	12.61	1.25	--	--	--	--	--	--	--	--	--	--
1975	1.27	918	.02	12.85	.13	--	--	--	--	--	--	--	--	--	--
1976	6.02	4,370	.08	18.20	.43	--	--	--	--	--	--	--	--	--	--
1978	16.60	11,980	.22	17.12	1.26	--	--	--	--	--	--	--	--	--	--
1979	2.78	2,020	.04	14.60	.25	--	--	--	--	--	--	--	18.83	--	--
1980	6.35	4,610	.08	13.46	.62	--	--	--	--	--	0.00	0	0.00	14.14	0.00
1981	.30	215	.00	13.50	.03	--	--	--	--	--	.00	0	.00	20.28	.00
1982	25.00	18,090	.32	22.17	1.47	--	--	--	--	--	37.81	27,340	1.46	26.73	5.48
1983	9.22	6,670	.12	15.13	.79	--	--	--	18.16	--	19.25	13,930	.75	18.23	4.09

**Table 23.** Annual flow and precipitation data for exterior basins—Continued

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow		Precip (inches)	RE (percent)	Flow		Precip (inches)	RE (percent)	Flow		Precip (inches)	RE (percent)			
	ft <sup>3</sup> /s	acre-ft			ft <sup>3</sup> /s	acre-ft			ft <sup>3</sup> /s	acre-ft					
	<b>Hat Creek near Edgemont (06400000)—Continued</b>					<b>Horsehead Creek at Oelrichs (06400875)—Continued</b>					<b>Elk Creek subbasin (06425500-06425100)—Continued</b>				
1984	22.60	16,420	0.29	17.38	1.70	6.42	4,660	0.47	15.65	2.99	9.30	6,760	0.36	22.21	1.63
1985	1.48	1,070	.02	12.82	.15	.02	11	.00	11.46	.01	.24	170	.01	12.68	.07
1986	40.10	29,010	.52	20.17	2.58	29.30	21,210	2.13	23.79	8.94	56.10	40,620	2.18	25.99	8.37
1987	12.80	9,270	.17	15.11	1.10	5.75	4,160	.42	14.61	2.85	14.17	10,250	.55	16.13	3.40
1988	1.64	1,190	.02	13.93	.15	.14	99	.01	14.89	.07	.78	570	.03	12.89	.24
1989	.16	117	.00	14.60	.01	.00	1	.00	13.69	.00	.00	0	.00	16.98	.00
1990	.29	206	.00	17.13	.02	.00	0	.00	13.89	.00	.24	175	.01	17.62	.05
1991	43.10	31,230	.56	16.27	3.45	26.30	19,080	1.91	21.46	8.91	2.57	1,860	.10	23.25	.43
1992	.66	477	.01	17.03	.05	.21	155	.02	17.55	.09	.27	198	.01	16.75	.06
1993	34.30	24,800	.45	21.80	2.04	11.30	8,170	.82	19.97	4.10	22.24	16,100	.86	24.65	3.50
1994	6.16	4,460	.08	12.55	.64	2.87	2,080	.21	11.51	1.81	18.35	13,290	.71	14.00	5.09
1995	11.40	8,290	.15	20.27	.73	3.62	2,620	.26	21.72	1.21	20.70	15,030	.81	28.55	2.82
1996	11.10	8,080	.15	17.18	.84	1.27	923	.09	17.17	.54	39.70	28,880	1.55	24.92	6.21
1997	28.50	20,660	.37	24.05	1.54	13.80	10,010	1.00	23.25	4.32	57.90	41,620	2.23	29.63	7.52
1998	4.51	3,260	.06	20.78	.28	.20	146	.01	19.07	.08	7.40	5,360	.29	22.40	1.28
<b>Statistical Summary (applies only to period of streamflow record)</b>															
Max	112.00	81,420	1.46	24.05	7.19	29.30	21,210	2.13	23.79	8.94	57.90	41,620	2.23	29.63	8.37
75th	22.78	16,545	.30	18.33	1.55	8.86	6,415	.64	20.72	3.54	21.47	15,565	.83	24.78	4.59
Median	11.55	8,385	.15	15.49	.93	2.87	2,080	.21	17.17	1.21	9.30	6,760	.36	20.28	1.63
25th	3.14	2,275	.04	13.37	.29	.17	123	.01	14.25	.07	.26	186	.01	16.44	.07
Min	.16	117	.00	8.71	.01	.00	0	.00	11.46	.00	.00	0	.00	12.68	.00
Mean	16.61	12,041	.22	16.00	1.26	6.75	4,888	.49	17.31	2.39	16.16	11,692	.63	20.42	2.65
Std dev	19.69	14,290	.26	3.39	1.32	9.57	6,936	.70	4.08	3.06	19.04	13,755	.74	5.42	2.80
CV	--	--	1.18	--	--	--	--	1.43	--	--	--	--	1.17	--	--
	<b>Hay Creek at Belle Fourche (06433500)</b>					<b>Indian Creek near Arpan (06436700)</b>					<b>Bear Butte Creek near Sturgis (06437500)</b>				
1945	--	--	--	--	--	--	--	--	--	--	--	--	--	29.53	--
1946	--	--	--	--	--	--	--	--	--	--	64.90	47,000	4.59	37.23	12.33
1947	--	--	--	--	--	--	--	--	--	--	38.70	28,050	2.74	24.16	11.34
1948	--	--	--	--	--	--	--	--	--	--	8.26	6,000	.59	23.21	2.52
1949	--	--	--	--	--	--	--	--	--	--	9.40	6,800	.66	20.66	3.21
1950	--	--	--	--	--	--	--	--	--	--	8.68	6,290	.61	21.85	2.81
1951	--	--	--	--	--	--	--	--	--	--	3.61	2,610	.25	21.36	1.19
1952	--	--	--	--	--	--	--	--	--	--	10.60	7,710	.75	20.55	3.66

**Table 23.** Annual flow and precipitation data for exterior basins—Continued

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches		
	Hay Creek at Belle Fourche (06433500)—Continued					Indian Creek near Arpan (06436700)—Continued					Bear Butte Creek near Sturgis (06437500)—Continued				
1953	--	--	--	15.31	--	--	--	--	--	--	10.70	7,710	0.75	22.15	3.40
1954	0.48	345	0.05	10.97	0.49	--	--	--	--	--	3.64	2,630	.26	18.00	1.43
1955	.38	275	.04	14.99	.28	--	--	--	--	--	2.72	1,970	.19	22.87	.84
1956	.16	117	.02	13.18	.14	--	--	--	--	--	.72	520	.05	19.43	.26
1957	1.01	731	.11	17.88	.63	--	--	--	--	--	5.10	3,690	.36	25.25	1.43
1958	.58	419	.06	14.54	.45	--	--	--	--	--	.81	586	.06	21.49	.27
1959	.11	77	.01	10.29	.12	--	--	--	--	--	.60	434	.04	16.43	.26
1960	.20	146	.02	11.86	.19	--	--	--	--	--	1.10	796	.08	17.58	.44
1961	.01	9	.00	10.33	.01	--	--	--	8.96	--	.00	0	.00	15.34	.00
1962	3.11	2,250	.35	23.70	1.47	30.90	22,360	1.33	22.37	5.95	30.10	21,800	2.13	34.11	6.24
1963	.60	435	.07	20.42	.33	18.80	13,600	.81	19.36	4.18	19.10	13,830	1.35	27.02	5.00
1964	1.64	1,190	.18	18.34	1.01	12.20	8,870	.53	15.14	3.49	14.40	10,470	1.02	28.77	3.55
1965	1.58	1,150	.18	18.78	.95	16.30	11,780	.70	18.34	3.82	24.60	17,780	1.74	29.16	5.95
1966	.57	410	.06	16.36	.39	3.28	2,380	.14	12.80	1.11	8.72	6,310	.62	19.95	3.09
1967	1.22	884	.14	18.66	.73	46.60	33,710	2.01	17.24	11.64	23.00	16,640	1.63	26.27	6.19
1968	.45	326	.05	17.41	.29	.27	196	.01	12.57	.09	4.38	3,180	.31	23.27	1.33
1969	.44	320	.05	15.95	.31	6.14	4,440	.26	11.36	2.33	9.94	7,200	.70	19.01	3.70
1970	1.65	1,190	.18	22.65	.81	7.79	5,640	.34	13.84	2.43	17.20	12,450	1.22	25.97	4.68
1971	3.03	2,190	.34	20.46	1.66	37.70	27,310	1.63	14.16	11.48	25.30	18,300	1.79	29.80	6.00
1972	5.50	3,990	.62	24.84	2.49	55.20	40,110	2.39	19.44	12.28	29.90	21,690	2.12	28.54	7.42
1973	3.35	2,420	.38	19.96	1.88	2.47	1,790	.11	14.65	.73	--	--	--	24.94	--
1974	1.89	1,370	.21	16.57	1.28	1.98	1,430	.09	13.40	.64	--	--	--	19.20	--
1975	1.34	971	.15	15.75	.96	25.50	18,440	1.10	14.12	7.77	--	--	--	21.45	--
1976	3.45	2,500	.39	23.66	1.64	29.00	21,070	1.25	15.78	7.95	--	--	--	29.62	--
1977	.28	204	.03	17.40	.18	8.79	6,360	.38	13.58	2.79	--	--	--	23.08	--
1979	.95	687	.11	16.93	.63	11.30	8,210	.49	12.37	3.95	--	--	--	21.04	--
1980	.27	197	.03	14.06	.22	.39	285	.02	10.85	.16	--	--	--	16.53	--
1981	.69	500	.08	19.45	.40	5.01	3,630	.22	15.88	1.36	--	--	--	22.63	--
1982	4.88	3,530	.55	27.44	1.99	--	--	--	23.92	--	--	--	--	29.65	--
1983	2.29	1,660	.26	19.23	1.34	--	--	--	14.77	--	--	--	--	22.18	--
1984	2.71	1,970	.31	21.60	1.41	--	--	--	16.25	--	--	--	--	26.01	--
1985	.32	228	.04	13.34	.26	--	--	--	8.46	--	--	--	--	14.58	--
1986	1.09	789	.12	28.44	.43	--	--	--	21.44	--	--	--	--	28.79	--

**Table 23.** Annual flow and precipitation data for exterior basins—Continued

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev, standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches		
	Hay Creek at Belle Fourche (06433500)—Continued					Indian Creek near Arpan (06436700)—Continued					Bear Butte Creek near Sturgis (06437500)—Continued				
1987	1.50	1,090	0.17	19.38	0.87	--	--	--	17.83	--	--	--	20.50	--	
1988	.32	233	.04	13.26	.27	--	--	--	9.81	--	--	--	19.88	--	
1989	.57	413	.06	17.16	.37	--	--	--	10.91	--	--	--	20.74	--	
1990	.55	395	.06	16.67	.37	--	--	--	15.55	--	--	--	20.65	--	
1991	.44	315	.05	16.77	.29	--	--	--	11.92	--	--	--	25.72	--	
1992	.11	77	.01	14.79	.08	--	--	--	13.01	--	--	--	20.96	--	
1993	2.31	1,670	.26	25.69	1.01	--	--	--	20.88	--	--	--	30.54	--	
1994	1.64	1,190	.18	15.24	1.21	--	--	--	11.18	--	--	--	20.04	--	
1995	8.08	5,850	.91	28.45	3.19	--	--	--	19.89	--	--	--	37.97	--	
1996	8.80	6,390	.99	22.51	4.40	--	--	--	18.85	--	--	--	30.63	--	
1997	--	--	--	22.34	--	--	--	--	16.00	--	--	--	33.36	--	
1998	--	--	--	20.53	--	--	--	--	17.83	--	--	--	27.86	--	
<b>Statistical Summary (applies only to period of streamflow record)</b>															
Max	8.80	6,390	0.99	28.45	4.40	80.00	57,950	3.45	22.37	20.59	64.90	47,000	4.59	37.23	12.33
75th	2.30	1,665	.26	20.60	1.31	29.48	21,393	1.27	16.87	7.82	21.05	15,235	1.49	26.64	5.48
Median	1.01	731	.11	17.41	.63	11.75	8,540	.51	14.41	3.66	9.40	6,800	.66	22.87	3.21
25th	.44	318	.05	15.12	.29	4.58	3,318	.20	13.25	1.30	3.63	2,620	.26	20.25	1.26
Min	.01	9	.00	10.29	.01	.27	196	.01	10.85	.09	.00	0	.00	15.34	.00
Mean	1.74	1,264	.20	18.28	.93	19.98	14,478	.86	15.20	5.24	13.93	10,091	.99	23.68	3.65
Std dev	2.02	1,467	.23	4.65	.91	21.30	15,436	.92	2.98	5.31	14.71	10,654	1.04	5.25	3.19
CV	--	--	1.15	--	--	--	--	1.07	--	--	--	--	1.05	--	--

**Table 24.** Annual flow and precipitation data for combination basins

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev; standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches		
	<b>Beaver Creek near Buffalo Gap (06402500)</b>					<b>Battle Creek at Hermosa (06406000)</b>					<b>Rapid Creek above Pactola Reservoir (06410500)</b>				
1938	--	--	--	17.26	--	--	--	--	--	--	--	--	--	--	--
1939	5.78	4,180	0.60	13.02	4.63	--	--	--	--	--	--	--	--	--	--
1940	5.02	3,650	.53	14.05	3.75	--	--	--	--	--	--	--	--	--	--
1941	8.66	6,270	.90	20.63	4.38	--	--	--	--	--	--	--	--	--	--
1942	8.84	6,400	.92	21.63	4.27	--	--	--	--	--	--	--	--	--	--
1943	10.30	7,490	1.08	19.02	5.68	--	--	--	--	--	--	--	--	--	--
1944	7.79	5,650	.81	18.11	4.50	--	--	--	--	--	--	--	--	--	--
1945	7.59	5,500	.79	16.84	4.71	--	--	--	--	--	--	--	--	--	--
1946	6.40	4,630	.67	20.86	3.20	--	--	--	--	--	--	--	--	--	--
1947	11.10	8,060	1.16	21.95	5.30	--	--	--	--	--	--	--	--	--	--
1948	7.38	5,360	.77	16.26	4.76	--	--	--	--	--	--	--	--	--	--
1949	5.81	4,210	.61	16.74	3.63	--	--	--	18.70	--	--	--	--	--	--
1950	5.59	4,050	.58	14.40	4.06	4.35	3,150	0.33	14.72	2.25	--	--	--	--	--
1951	6.81	4,930	.71	15.51	4.58	5.20	3,760	.40	16.23	2.44	--	--	--	--	--
1952	5.58	4,050	.58	14.44	4.05	16.10	11,660	1.23	17.45	7.04	--	--	--	--	--
1953	4.86	3,520	.51	14.29	3.55	4.72	3,420	.36	16.08	2.24	--	--	--	18.70	--
1954	5.52	4,000	.58	12.54	4.60	1.58	1,140	.12	11.48	1.05	22.11	16,000	1.03	15.13	6.79
1955	7.17	5,190	.75	19.52	3.84	.99	718	.08	18.23	.41	31.26	22,650	1.45	22.50	6.46
1956	5.93	4,310	.62	14.70	4.23	2.78	2,020	.21	17.20	1.24	26.11	18,980	1.22	17.47	6.98
1957	7.78	5,630	.81	20.67	3.93	22.80	16,490	1.74	21.55	8.06	33.64	24,330	1.56	23.39	6.68
1958	8.80	6,370	.92	18.58	4.94	6.10	4,410	.46	17.47	2.66	24.81	18,000	1.16	19.38	5.97
1959	5.30	3,840	.55	16.50	3.36	2.46	1,780	.19	17.07	1.10	24.19	17,500	1.12	19.97	5.63
1960	4.78	3,470	.50	9.91	5.05	1.69	1,220	.13	12.12	1.06	21.61	15,680	1.01	17.41	5.78
1961	3.78	2,730	.39	12.91	3.05	1.04	750	.08	12.63	.63	15.53	11,210	.72	14.88	4.84
1962	6.56	4,750	.69	21.48	3.19	19.90	14,400	1.52	26.65	5.69	42.22	30,580	1.96	28.20	6.96
1963	9.67	7,000	1.01	24.94	4.05	16.90	12,230	1.29	24.58	5.24	66.96	48,450	3.11	27.65	11.25
1964	6.42	4,660	.67	15.50	4.34	6.85	4,970	.52	18.34	2.85	55.67	40,380	2.59	27.17	9.54
1965	8.11	5,870	.85	21.98	3.85	26.50	19,150	2.02	27.41	7.36	93.03	67,370	4.33	29.07	14.88
1966	7.61	5,510	.79	15.74	5.05	4.97	3,590	.38	17.48	2.16	40.96	29,640	1.90	18.06	10.54
1967	7.63	5,520	.80	19.61	4.06	18.30	13,240	1.39	22.47	6.21	58.19	42,120	2.70	24.18	11.19
1968	6.76	4,910	.71	19.83	3.57	6.47	4,700	.50	19.65	2.52	33.86	24,590	1.58	21.46	7.36
1969	5.69	4,120	.59	15.54	3.82	6.20	4,490	.47	18.59	2.54	34.14	24,730	1.59	22.52	7.05
1970	6.53	4,730	.68	16.77	4.07	5.06	3,660	.39	20.42	1.89	53.75	38,890	2.50	22.29	11.20
1971	8.60	6,230	.90	20.77	4.33	17.70	12,830	1.35	24.08	5.61	59.27	42,880	2.75	25.24	10.91
1972	7.83	5,680	.82	18.63	4.40	20.00	14,510	1.53	23.29	6.56	45.12	32,736	2.10	26.12	8.05
1973	6.59	4,770	.69	18.56	3.71	11.80	8,540	.90	18.50	4.86	43.79	31,701	2.04	23.26	8.75
1974	5.46	3,950	.57	12.30	4.63	4.76	3,450	.36	11.72	3.10	24.87	18,002	1.16	17.15	6.74

**Table 24.** Annual flow and precipitation data for combination basins—Continued

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev; standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow				Precip (inches)	RE (per-cent)	Flow				Precip (inches)	RE (per-cent)	Flow				Precip (inches)	RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches				ft <sup>3</sup> /s	acre-ft	inches				ft <sup>3</sup> /s	acre-ft	inches			
	<b>Beaver Creek near Buffalo Gap (06402500)—Continued</b>					<b>Battle Creek at Hermosa (06406000)—Continued</b>					<b>Rapid Creek above Pactola Reservoir (06410500)—Continued</b>							
1975	7.14	5,170	0.75	16.44	4.54	4.68	3,390	0.36	16.71	2.14	38.75	28,015	1.80	19.91	9.04			
1976	6.26	4,540	.65	20.83	3.14	17.00	12,370	1.30	22.74	5.73	40.93	29,700	1.91	24.89	7.66			
1977	6.10	4,420	.64	19.71	3.23	4.99	3,610	.38	18.76	2.03	39.63	28,674	1.84	23.73	7.76			
1978	7.57	5,480	.79	19.59	4.03	14.40	10,410	1.10	21.12	5.19	59.03	42,742	2.74	25.05	10.96			
1979	7.90	5,720	.83	17.00	4.85	7.44	5,390	.57	19.35	2.93	38.90	28,136	1.81	23.68	7.63			
1980	5.90	4,290	.62	14.11	4.39	5.06	3,670	.39	15.15	2.55	29.40	21,374	1.37	17.83	7.70			
1981	6.49	4,700	.68	17.30	3.92	5.71	4,130	.44	18.31	2.38	22.16	16,030	1.03	20.17	5.10			
1982	8.88	6,430	.93	23.67	3.92	6.71	4,860	.51	22.99	2.23	34.26	24,796	1.59	28.45	5.60			
1983	6.14	4,440	.64	14.61	4.38	6.86	4,970	.52	14.82	3.53	60.46	43,795	2.81	19.68	14.29			
1984	8.74	6,340	.91	20.12	4.55	12.40	9,010	.95	20.56	4.62	58.96	42,769	2.75	21.41	12.83			
1985	6.40	4,630	.67	11.84	5.64	5.46	3,950	.42	10.72	3.88	28.95	20,989	1.35	14.64	9.20			
1986	8.70	6,300	.91	22.35	4.07	5.13	3,720	.39	23.38	1.68	37.42	27,080	1.74	24.34	7.15			
1987	8.53	6,180	.89	16.02	5.56	7.79	5,640	.59	15.83	3.75	36.29	26,295	1.69	15.88	10.63			
1988	5.94	4,310	.62	13.18	4.72	2.70	1,960	.21	12.19	1.69	25.52	18,535	1.19	14.81	8.04			
1989	5.99	4,340	.63	16.41	3.81	1.59	1,150	.12	18.87	.64	21.06	15,260	.98	18.87	5.19			
1990	5.94	4,300	.62	18.86	3.29	6.88	4,980	.52	22.78	2.30	26.42	19,121	1.23	19.63	6.26			
1991	7.01	5,070	.73	20.17	3.63	23.00	16,630	1.75	25.40	6.90	45.09	32,630	2.10	23.32	8.98			
1992	7.49	5,440	.78	20.33	3.86	5.19	3,770	.40	19.02	2.09	27.38	19,910	1.28	20.41	6.26			
1993	8.07	5,840	.84	25.53	3.30	26.10	18,900	1.99	26.35	7.56	60.39	43,690	2.81	26.27	10.68			
1994	5.95	4,310	.62	14.57	4.27	11.70	8,490	.89	15.61	5.73	50.22	36,340	2.33	18.55	12.58			
1995	12.50	9,080	1.31	31.03	4.22	52.60	38,100	4.01	31.73	12.65	86.56	62,670	4.02	28.26	14.24			
1996	9.69	7,040	1.02	22.08	4.60	32.20	23,370	2.46	27.02	9.11	92.20	66,960	4.30	29.64	14.50			
1997	10.50	7,620	1.10	27.59	3.98	47.20	34,190	3.60	28.48	12.65	133.76	96,970	6.23	30.48	20.43			
1998	10.70	7,760	1.12	24.99	4.48	34.20	24,770	2.61	23.62	11.05	119.72	86,420	5.55	29.26	18.97			
<b>Statistical Summary (applies only to period of streamflow record)</b>																		
Max	12.50	9,080	1.31	31.03	5.68	52.60	38,100	4.01	31.73	12.65	133.76	96,970	6.23	30.48	20.43			
75th	8.22	5,948	.86	20.69	4.59	17.00	12,370	1.30	22.99	5.73	58.19	42,120	2.70	25.24	10.96			
Median	6.91	5,000	.72	18.33	4.14	6.71	4,860	.51	18.76	2.85	38.90	28,136	1.81	22.50	8.04			
25th	5.94	4,310	.62	15.30	3.82	4.97	3,590	.38	16.23	2.14	27.38	19,910	1.28	18.87	6.74			
Min	3.78	2,730	.39	9.91	3.05	.99	718	.08	10.72	.41	15.53	11,210	.72	14.64	4.84			
Mean	7.24	5,249	.76	18.22	4.19	11.88	8,606	.91	19.53	4.12	45.88	33,229	2.13	22.26	9.23			
Std dev	1.73	1,255	.18	4.10	.62	11.56	8,371	.88	4.87	3.02	25.57	18,507	1.19	4.49	3.56			
CV	--	--	.24	--	--	--	--	.97	--	--	--	--	.56	--	--			
	<b>Lime Creek at mouth, at Rapid City (06413650)</b>					<b>Elk Creek near Rapid City (06425100)</b>					<b>Elk Creek near Elm Springs (06425500)</b>							
1949	--	--	--	--	--	--	--	--	--	--	--	--	--	20.68	--			
1950	--	--	--	--	--	--	--	--	--	--	19.70	14,240	.49	18.96	2.61			
1951	--	--	--	--	--	--	--	--	--	--	4.47	3,240	.11	18.75	.60			

**Table 24.** Annual flow and precipitation data for combination basins—Continued

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev; standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches		
	Lime Creek at mouth, at Rapid City (06413650)—Continued					Elk Creek near Rapid City (06425100)—Continued					Elk Creek near Elm Springs (06425500)—Continued				
1952	--	--	--	--	--	--	--	--	--	--	40.10	29,130	1.01	17.26	5.86
1953	--	--	--	--	--	--	--	--	--	--	40.10	29,050	1.01	19.62	5.14
1954	--	--	--	--	--	--	--	--	--	--	6.12	4,430	.15	14.96	1.03
1955	--	--	--	--	--	--	--	--	--	--	.53	386	.01	19.86	.07
1956	--	--	--	--	--	--	--	--	--	--	.87	630	.02	16.49	.13
1957	--	--	--	--	--	--	--	--	--	--	27.10	19,660	.68	23.12	2.95
1958	--	--	--	--	--	--	--	--	--	--	3.87	2,800	.10	18.33	.53
1959	--	--	--	--	--	--	--	--	--	--	.01	7	.00	15.73	.00
1960	--	--	--	--	--	--	--	--	--	--	2.46	1,790	.06	14.96	.42
1961	--	--	--	--	--	--	--	--	--	--	.00	0	.00	12.16	.00
1962	--	--	--	--	--	--	--	--	--	--	56.80	41,100	1.43	30.46	4.69
1963	--	--	--	--	--	--	--	--	--	--	21.80	15,750	.55	24.28	2.25
1964	--	--	--	--	--	--	--	--	--	--	19.90	14,440	.50	21.45	2.34
1965	--	--	--	--	--	--	--	--	--	--	60.70	43,910	1.52	23.81	6.40
1966	--	--	--	--	--	--	--	--	--	--	35.90	25,980	.90	19.28	4.68
1967	--	--	--	--	--	--	--	--	--	--	96.40	69,800	2.42	24.76	9.79
1968	--	--	--	--	--	--	--	--	--	--	9.55	6,930	.24	20.31	1.19
1969	--	--	--	--	--	--	--	--	--	--	12.60	9,150	.32	17.02	1.87
1970	--	--	--	--	--	--	--	--	--	--	32.30	23,390	.81	22.01	3.69
1971	--	--	--	--	--	--	--	--	--	--	63.60	46,040	1.60	24.64	6.49
1972	--	--	--	--	--	--	--	--	--	--	31.00	22,480	.78	25.01	3.12
1973	--	--	--	--	--	--	--	--	--	--	20.00	14,460	.50	19.86	2.53
1974	--	--	--	--	--	--	--	--	--	--	4.63	3,360	.12	15.51	.75
1975	--	--	--	--	--	--	--	--	--	--	18.30	13,240	.46	19.29	2.38
1976	--	--	--	--	--	--	--	--	--	--	14.70	10,670	.37	24.83	1.49
1977	--	--	--	--	--	--	--	--	--	--	19.50	14,120	.49	18.88	2.60
1978	--	--	--	--	--	--	--	--	--	--	38.40	27,810	.97	22.30	4.33
1979	--	--	--	--	--	--	--	--	19.70	--	2.90	2,100	.07	18.83	.39
1980	--	--	--	--	--	1.12	810	0.08	14.56	0.55	.57	417	.01	14.14	.10
1981	--	--	--	--	--	.10	73	.01	21.11	.03	.05	33	.00	20.28	.01
1982	--	--	--	--	--	8.49	6,150	.61	27.41	2.21	46.30	33,490	1.16	26.73	4.35
1983	--	--	--	--	--	9.95	7,210	.71	19.06	3.73	29.20	21,140	.73	18.23	4.03
1984	--	--	--	--	--	16.30	11,830	1.17	23.11	5.05	25.60	18,590	.65	22.21	2.91
1985	--	--	--	--	--	4.67	3,380	.33	13.00	2.57	4.91	3,550	.12	12.68	.97
1986	--	--	--	--	--	10.30	7,420	.73	26.44	2.77	66.40	48,040	1.67	25.99	6.42
1987	--	--	--	15.11	--	6.63	4,800	.47	16.53	2.87	20.80	15,050	.52	16.13	3.24
1988	1.65	1,200	2.25	9.13	24.64	1.67	1,210	.12	14.25	.84	2.45	1,780	.06	12.89	.48
1989	.99	719	1.35	15.96	8.45	.20	144	.01	17.80	.08	.17	124	.00	16.98	.03

**Table 24.** Annual flow and precipitation data for combination basins—Continued

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev; standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches		
	<b>Lime Creek at mouth, at Rapid City (06413650)—Continued</b>					<b>Elk Creek near Rapid City (06425100)—Continued</b>					<b>Elk Creek near Elm Springs (06425500)—Continued</b>				
1990	1.02	735	1.38	16.68	8.26	0.01	6	0.00	17.97	0.00	0.25	180	0.01	17.62	0.04
1991	1.11	801	1.50	21.97	6.84	2.01	1,460	.14	24.29	.59	4.58	3,320	.12	23.25	.50
1992	.62	449	.84	14.35	5.87	.00	0	.00	17.62	.00	.27	198	.01	16.75	.04
1993	1.48	1,070	2.01	21.23	9.45	4.56	3,300	.33	25.93	1.26	26.80	19,400	.67	24.65	2.73
1994	1.56	1,130	2.12	10.44	20.30	2.75	1,990	.20	15.46	1.27	21.10	15,280	.53	14.00	3.79
1995	2.54	1,840	3.45	23.22	14.86	41.30	29,880	2.95	30.81	9.57	62.00	44,910	1.56	28.55	5.46
1996	3.70	2,690	5.04	20.55	24.54	54.90	39,830	3.93	26.52	14.82	94.60	68,710	2.39	24.92	9.57
1997	4.69	3,390	6.36	26.87	23.66	77.10	55,790	5.51	30.53	18.03	135.00	97,410	3.38	29.63	11.41
1998	3.55	2,570	4.82	18.99	25.38	21.70	15,710	1.55	24.01	6.46	29.10	21,070	.73	22.40	3.27
<b>Statistical Summary (applies only to period of streamflow record)</b>															
Max	4.69	3,390	6.36	26.87	25.38	77.10	55,790	5.51	30.81	18.03	135.00	97,410	3.38	30.46	11.41
75th	3.05	2,205	4.13	21.60	24.10	13.30	9,625	.95	26.19	4.39	35.90	25,980	.90	23.81	4.33
Median	1.56	1,130	2.12	18.99	14.86	4.67	3,380	.33	21.11	2.21	19.90	14,440	.50	19.62	2.53
25th	1.07	768	1.44	15.16	8.36	1.40	1,010	.10	17.08	.57	3.87	2,800	.10	16.98	.50
Min	.62	449	.84	9.13	5.87	.00	0	.00	13.00	.00	.00	0	.00	12.16	.00
Mean	2.08	1,509	2.83	18.13	15.66	13.88	10,052	.99	21.39	3.83	26.01	18,832	.65	20.22	2.85
Std dev	1.34	972	1.82	5.43	8.12	21.24	15,379	1.52	5.63	5.12	28.99	20,973	.73	4.51	2.75
CV	--	--	.64	--	--	--	--	1.54	--	--	--	--	1.12	--	--
	<b>Spearfish Creek at Spearfish (06431500)</b>					<b>Redwater River above Belle Fourche (06433000)</b>					<b>Whitewood Creek at Deadwood (06436170)</b>				
1945	--	--	--	--	--	--	--	--	28.05	--	--	--	--	--	--
1946	--	--	--	35.51	--	227.00	164,600	3.35	34.51	9.72	--	--	--	--	--
1947	56.80	41,150	4.59	24.63	18.64	218.00	158,000	3.22	22.62	14.23	--	--	--	--	--
1948	50.50	36,630	4.09	23.55	17.36	148.00	107,200	2.18	21.99	9.94	--	--	--	--	--
1949	47.30	34,270	3.82	20.33	18.81	132.00	95,910	1.95	18.90	10.34	--	--	--	--	--
1950	42.90	31,030	3.46	23.58	14.69	115.00	82,950	1.69	21.96	7.70	--	--	--	--	--
1951	37.50	27,150	3.03	21.47	14.12	100.00	72,700	1.48	20.20	7.33	--	--	--	--	--
1952	48.10	34,940	3.90	23.63	16.50	105.00	76,460	1.56	20.12	7.75	--	--	--	--	--
1953	46.20	33,430	3.73	24.16	15.44	117.00	84,700	1.73	20.94	8.24	--	--	--	--	--
1954	39.60	28,680	3.20	19.98	16.02	93.50	67,730	1.38	17.32	7.97	--	--	--	--	--
1955	45.50	32,950	3.68	26.28	13.99	103.00	74,220	1.51	22.31	6.78	--	--	--	--	--
1956	38.20	27,720	3.09	21.24	14.56	86.40	62,700	1.28	18.94	6.75	--	--	--	--	--
1957	40.80	29,530	3.30	26.59	12.39	104.00	74,950	1.53	24.01	6.36	--	--	--	--	--
1958	39.30	28,420	3.17	23.13	13.71	89.90	65,100	1.33	20.52	6.47	--	--	--	--	--
1959	34.60	25,040	2.79	18.56	15.06	69.00	49,940	1.02	15.46	6.58	--	--	--	--	--
1960	31.30	22,700	2.53	21.28	11.90	71.00	51,520	1.05	17.91	5.86	--	--	--	--	--
1961	27.10	19,650	2.19	15.92	13.77	57.10	41,300	.84	14.52	5.80	--	--	--	--	--



**Table 24.** Annual flow and precipitation data for combination basins—Continued[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev; standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches		
	<b>Spearfish Creek at Spearfish (06431500)—Continued</b>					<b>Redwater River above Belle Fourche (06433000)—Continued</b>					<b>Whitewood Creek at Deadwood (06436170)—Continued</b>				
1962	39.20	28,390	3.17	33.20	9.54	136.00	98,380	2.01	30.65	6.54	--	--	--	--	--
1963	53.70	38,900	4.34	29.90	14.52	136.00	98,420	2.01	27.13	7.39	--	--	--	--	--
1964	60.50	43,910	4.90	32.49	15.08	138.00	99,840	2.03	27.90	7.29	--	--	--	--	--
1965	79.50	57,550	6.42	32.23	19.93	188.00	136,100	2.77	29.26	9.48	--	--	--	--	--
1966	58.30	42,230	4.71	19.82	23.78	133.00	96,250	1.96	19.69	9.96	--	--	--	--	--
1967	56.30	40,790	4.55	26.61	17.11	138.00	99,750	2.03	24.73	8.22	--	--	--	--	--
1968	50.60	36,730	4.10	25.69	15.95	120.00	87,390	1.78	23.29	7.65	--	--	--	--	--
1969	52.40	37,940	4.23	22.10	19.16	132.00	95,420	1.94	20.25	9.60	--	--	--	--	--
1970	70.10	50,770	5.67	28.86	19.63	176.00	127,700	2.60	28.25	9.21	--	--	--	--	--
1971	63.10	45,690	5.10	29.33	17.39	173.00	125,600	2.56	27.36	9.36	--	--	--	--	--
1972	71.80	52,100	5.81	30.57	19.02	196.00	141,900	2.89	29.30	9.87	--	--	--	--	--
1973	74.60	54,010	6.03	25.47	23.66	208.00	150,600	3.07	24.54	12.51	--	--	--	--	--
1974	59.20	42,860	4.78	21.03	22.75	149.00	107,800	2.20	20.28	10.84	--	--	--	--	--
1975	54.80	39,640	4.42	22.44	19.72	142.00	102,900	2.10	20.29	10.34	--	--	--	--	--
1976	62.20	45,170	5.04	29.72	16.96	188.00	136,400	2.78	28.97	9.60	--	--	--	--	--
1977	57.30	41,450	4.63	25.03	18.48	138.00	99,930	2.04	23.12	8.81	--	--	--	--	--
1978	64.60	46,750	5.22	27.01	19.32	174.00	125,700	2.56	25.60	10.01	--	--	--	--	--
1979	55.40	40,090	4.47	22.61	19.79	130.00	94,330	1.92	20.98	9.16	--	--	--	--	--
1980	47.80	34,700	3.87	18.29	21.17	98.50	71,540	1.46	17.00	8.58	--	--	--	--	--
1981	41.70	30,170	3.37	21.37	15.76	90.90	65,800	1.34	21.08	6.36	--	--	--	22.21	--
1982	84.50	61,210	6.83	32.00	21.35	191.00	138,200	2.82	31.93	8.82	40.00	28,990	13.39	33.90	39.50
1983	65.10	47,130	5.26	23.12	22.75	183.00	132,600	2.70	20.82	12.98	43.80	31,730	14.65	29.44	49.77
1984	67.80	49,240	5.50	26.13	21.03	176.00	127,400	2.60	25.48	10.19	42.00	30,480	14.08	28.93	48.66
1985	46.60	33,720	3.76	16.27	23.13	95.80	69,390	1.41	15.13	9.35	12.50	9,090	4.20	17.47	24.03
1986	48.50	35,100	3.92	27.63	14.18	122.00	88,070	1.79	27.99	6.41	23.50	17,010	7.86	30.17	26.03
1987	39.50	28,630	3.20	20.99	15.22	123.00	88,710	1.81	20.61	8.77	19.20	13,880	6.41	24.47	26.19
1988	40.60	29,450	3.29	20.26	16.22	93.90	68,190	1.39	18.90	7.35	19.10	13,840	6.39	23.33	27.39
1989	41.60	30,140	3.36	20.93	16.07	95.10	68,880	1.40	19.80	7.09	19.50	14,100	6.51	25.43	25.61
1990	41.80	30,240	3.38	22.32	15.12	93.30	67,510	1.38	20.07	6.86	18.00	13,020	6.01	23.53	25.55
1991	40.70	29,450	3.29	25.26	13.01	91.80	66,450	1.35	21.99	6.16	20.20	14,620	6.75	25.24	26.75
1992	39.00	28,280	3.16	23.12	13.65	79.10	57,440	1.17	19.94	5.87	13.30	9,690	4.48	24.08	18.58
1993	44.20	31,990	3.57	29.55	12.08	127.00	92,140	1.88	27.91	6.73	28.10	20,360	9.40	33.47	28.09
1994	54.90	39,720	4.43	23.63	18.76	124.00	89,920	1.83	19.68	9.31	29.20	21,150	9.77	26.31	37.13
1995	82.10	59,420	6.63	35.62	18.62	240.00	173,900	3.54	33.98	10.43	49.70	35,950	16.60	42.84	38.76
1996	79.90	58,030	6.48	30.41	21.29	222.00	160,900	3.28	27.81	11.79	--	--	--	33.88	.00
1997	97.20	70,370	7.85	33.50	23.44	241.00	174,400	3.55	29.15	12.19	--	--	--	38.16	.00
1998	88.30	63,900	7.13	31.45	22.68	186.00	134,400	2.74	27.07	10.12	--	--	--	34.61	.00

**Table 24.** Annual flow and precipitation data for combination basins—Continued

[Precip, precipitation; RE, runoff efficiency; Max, maximum; Min, minimum; Std dev; standard deviation; CV, coefficient of variation; ft<sup>3</sup>/s, cubic feet per second; acre-ft, acre-feet; --, no data]

Water year	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)	Flow			Precip (inches)	RE (per-cent)
	ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches			ft <sup>3</sup> /s	acre-ft	inches		
	<b>Spearfish Creek at Spearfish (06431500)—Continued</b>					<b>Redwater River above Belle Fourche (06433000)—Continued</b>					<b>Whitewood Creek at Deadwood (06436170)—Continued</b>				
<b>Statistical Summary (applies only to period of streamflow record)</b>															
Max	97.20	70,370	7.85	35.62	23.78	241.00	174,400	3.55	34.51	14.23	49.70	35,950	16.60	42.84	49.77
75th	62.43	45,300	5.06	28.98	19.73	176.00	127,400	2.60	27.36	9.94	37.30	27,030	12.48	29.99	38.35
Median	50.55	36,680	4.09	23.90	17.04	132.00	95,420	1.94	21.99	8.77	21.85	15,815	7.30	25.87	27.07
25th	41.40	29,988	3.35	21.35	14.66	98.50	71,540	1.46	20.07	6.86	19.13	13,850	6.40	24.18	25.71
Min	27.10	19,650	2.19	15.92	9.54	57.10	41,300	.84	14.52	5.80	12.50	9,090	4.20	17.47	18.58
Mean	53.87	39,022	4.36	25.01	17.39	137.82	99,816	2.03	23.21	8.66	27.01	19,565	9.04	27.76	31.58
Std dev	15.69	11,367	1.27	4.69	3.51	47.09	34,105	.70	4.79	1.98	12.14	8,786	4.06	6.13	9.52
CV	--	--	.29	--	--	--	--	.34	--	--	--	--	.45	--	--
<b>Whitewood Creek above Vale (06436198)</b>															
1983	--	--	--	24.89	--										
1984	45.30	32,890	6.05	26.82	22.54										
1985	11.70	8,500	1.56	15.78	9.90										
1986	30.40	22,010	4.05	29.07	13.92										
1987	27.60	20,000	3.68	22.77	16.15										
1988	19.00	13,830	2.54	21.28	11.95										
1989	19.30	13,970	2.57	22.11	11.62										
1990	19.50	14,110	2.59	21.23	12.22										
1991	22.40	16,240	2.99	23.40	12.76										
1992	12.80	9,290	1.71	21.46	7.96										
1993	33.40	24,190	4.45	31.33	14.19										
1994	31.20	22,580	4.15	21.56	19.25										
1995	64.10	46,420	8.53	40.03	21.32										
1996	50.60	36,770	6.76	30.10	22.46										
1997	60.10	43,540	8.00	33.37	23.98										
1998	35.90	25,970	4.77	29.83	16.00										
<b>Statistical Summary (applies only to period of streamflow record)</b>															
Max	64.10	46,420	8.53	40.03	23.98										
75th	40.60	29,430	5.41	29.96	20.28										
Median	30.40	22,010	4.05	23.40	14.19										
25th	19.40	14,040	2.58	21.51	12.08										
Min	11.70	8,500	1.56	15.78	7.96										
Mean	32.22	23,354	4.29	26.01	15.75										
Std dev	16.35	11,847	2.18	6.23	5.04										
CV	--	--	.51	--	--										

**Table 25. Monthly flow and precipitation data for Battle Creek near Keystone (06404000)**

[Flow data in cubic feet per second and arbitrarily carried to two decimal places; precipitation data in inches. Precip, precipitation; --, no data]

Water year	October		November		December		January		February		March		April		May		June		July		August		September	
	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip
1961	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.52
1962	0.00	1.07	0.06	0.21	0.03	0.14	0.00	0.38	0.02	1.24	0.46	0.68	2.17	0.46	36.60	10.09	65.00	5.97	46.30	7.00	14.70	0.62	3.59	1.24
1963	5.20	1.64	3.09	.41	2.11	.05	1.25	.53	2.11	.33	7.11	1.73	19.40	4.92	22.90	2.06	85.50	7.67	21.30	3.27	3.90	1.44	6.11	2.95
1964	2.93	.91	3.00	.07	2.24	.32	1.94	.35	3.03	.41	2.57	.67	5.82	1.31	12.50	3.48	29.10	6.37	25.70	3.09	4.16	1.03	1.81	1.04
1965	1.25	.13	1.32	.33	1.32	1.76	1.29	.87	1.01	.20	1.13	.75	4.64	1.72	67.60	8.79	91.10	6.80	44.30	4.68	13.00	2.65	4.87	2.29
1966	4.70	.17	3.56	.21	3.13	.39	1.88	.22	1.40	.89	4.39	.66	11.30	3.73	6.20	.08	1.93	.88	1.35	4.20	2.90	3.77	2.64	2.24
1967	4.14	.89	2.55	.50	1.64	.86	1.76	.27	1.73	.47	2.54	.65	4.22	2.68	9.37	3.85	131.00	7.55	19.10	1.59	4.02	1.59	2.74	1.34
1968	2.12	.35	2.50	.41	1.85	.60	2.07	.63	2.42	.24	3.40	.50	3.14	1.22	2.93	2.60	16.50	6.12	5.84	2.15	3.26	3.24	2.26	1.43
1969	1.10	.10	1.34	.40	1.34	.65	1.05	.38	.74	1.18	1.35	.57	4.38	1.56	3.06	2.34	7.83	4.22	41.90	6.80	4.25	1.00	.56	1.02
1970	1.48	1.47	1.72	.24	.93	.20	.16	.26	.33	.33	1.03	1.60	9.78	3.62	17.80	4.86	40.90	3.44	3.35	1.97	3.36	2.01	1.37	1.69
1971	2.18	1.16	1.20	.69	.63	.57	.83	1.11	1.19	.76	3.46	1.71	38.80	5.56	71.20	6.68	59.80	2.60	6.77	1.80	1.64	1.44	1.46	2.81
1972	2.25	1.50	2.18	1.00	1.68	.38	.66	.39	.66	.32	3.54	.72	4.93	1.84	13.40	3.15	199.00	8.97	15.80	2.91	7.61	2.93	3.78	.53
1973	2.73	.89	2.89	.24	1.65	.41	1.64	.10	1.20	.24	4.83	2.87	37.60	3.59	24.50	1.29	13.40	2.09	5.89	3.73	4.80	1.39	2.13	1.74
1974	1.89	.55	2.47	.91	1.04	.67	.87	.55	1.20	.18	2.62	.20	3.61	.94	3.05	1.63	1.74	1.43	1.08	2.92	.10	1.41	.11	1.07
1975	.32	2.13	.86	.19	.13	.11	.00	.73	.37	.70	1.44	1.17	13.00	2.69	10.50	2.41	21.10	4.66	5.21	1.23	2.14	1.01	.00	.12
1976	.07	.40	.45	.39	1.48	.77	1.35	.16	1.85	1.15	1.77	.44	5.24	3.96	49.80	3.73	72.30	5.71	13.90	3.60	7.95	2.18	1.94	.88
1977	1.84	.14	1.53	.28	1.54	.19	.72	.31	1.43	.25	3.58	1.65	11.60	1.67	3.91	1.44	1.61	3.01	1.43	4.69	2.84	2.62	1.40	2.00
1978	1.89	.87	1.77	.60	1.47	.76	.69	.38	.96	.80	4.25	.26	5.20	2.35	89.80	7.41	25.40	1.58	5.45	4.33	3.07	1.76	.86	.66
1979	.95	.40	1.21	.69	1.02	.65	.53	.33	.80	.39	2.50	.39	5.05	.99	2.78	1.62	4.72	4.46	33.00	8.24	15.60	2.90	3.08	.17
1980	1.40	.65	2.77	.24	2.01	.13	.43	.25	.96	.30	3.29	.84	7.49	1.37	5.19	2.34	3.87	2.73	1.28	2.75	.97	3.07	.15	.65
1981	1.85	1.96	1.32	.32	2.28	.44	.95	.05	.65	.11	1.44	.20	1.49	.67	44.70	6.79	6.16	1.26	4.02	4.40	3.43	1.60	.25	.40
1982	1.38	2.36	1.05	.07	.76	.80	.50	.57	1.38	.37	2.96	1.01	3.68	.87	20.10	5.44	31.90	4.19	8.50	2.49	2.48	2.15	1.84	2.29

**Table 25. Monthly flow and precipitation data for Battle Creek near Keystone (06404000)—Continued**

[Flow data in cubic feet per second and arbitrarily carried to two decimal places; precipitation data in inches. Precip, precipitation; --, no data]

Water year	October		November		December		January		February		March		April		May		June		July		August		September	
	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip	Flow	Precip
1983	4.85	1.60	2.64	0.35	1.83	0.60	1.27	0.17	1.45	0.08	2.65	1.48	5.57	0.74	16.90	3.23	8.20	2.90	1.78	0.88	0.39	2.38	0.00	0.42
1984	.75	2.45	1.32	1.19	1.15	.53	1.80	.10	1.73	.22	1.96	.43	5.19	2.95	22.70	2.02	51.40	5.69	12.90	3.98	2.68	1.36	.47	.95
1985	1.46	.66	1.22	.49	.69	.31	.75	.25	.04	.03	3.78	.96	3.71	.67	1.24	.86	.22	1.10	.07	1.92	.01	.70	.04	2.49
1986	.25	.55	.48	1.82	.63	.68	1.46	.10	1.67	.98	3.03	.73	11.60	3.39	16.60	1.65	14.60	5.53	4.51	1.20	1.05	1.92	4.70	5.71
1987	12.70	1.77	5.24	.68	4.25	.01	2.64	.05	2.91	1.61	12.80	2.03	12.70	.09	18.10	4.86	8.50	.76	1.77	1.59	.09	2.53	.00	.62
1988	.21	.71	.75	.13	.42	.37	.12	.29	.28	.27	1.47	.42	1.90	.82	2.25	1.94	.65	3.57	.22	2.06	.03	2.24	.00	.32
1989	.00	.54	.00	1.26	.00	.31	.00	.05	.00	.75	1.95	.99	1.77	1.78	1.64	1.94	.64	2.42	.04	1.80	.00	2.40	6.20	5.13
1990	2.57	1.27	1.82	.45	1.14	.71	.69	.05	1.51	.80	3.83	1.64	6.46	2.17	33.40	6.41	23.80	1.96	17.00	5.35	5.45	1.29	1.45	1.28
1991	1.04	.71	1.68	.75	.98	.65	.62	.24	1.55	.71	2.65	.66	9.22	4.61	73.60	7.48	92.80	6.03	10.30	2.49	3.92	1.33	1.60	1.30
1992	2.16	1.24	2.47	1.28	1.78	.02	2.17	.14	2.72	.34	4.90	2.22	3.37	.99	2.71	2.88	6.20	3.92	9.86	3.91	2.95	1.53	.66	.57
1993	.59	.85	1.61	.61	1.66	.84	1.45	.93	1.05	1.11	4.75	1.06	12.30	3.64	58.00	5.62	68.00	5.56	17.30	3.51	10.10	1.99	4.16	1.15
1994	5.89	1.77	4.62	.57	5.69	.48	4.54	.43	5.64	.85	9.99	.73	5.34	1.43	12.60	2.40	4.53	1.66	.80	1.28	.45	3.22	.17	1.00
1995	7.09	5.19	4.04	.53	3.21	.57	2.06	.10	3.29	.90	4.40	1.40	6.06	3.14	153.00	9.87	115.00	5.40	21.40	3.63	6.94	1.05	3.68	1.55
1996	4.59	3.12	4.74	.40	3.64	.19	4.66	1.06	9.57	.17	6.35	1.67	10.60	2.52	66.70	7.49	39.20	2.26	8.20	2.38	8.63	5.11	5.90	2.36
1997	7.56	5.07	22.70	.53	9.21	1.22	12.70	.25	6.63	.95	8.97	.52	19.90	3.35	112.00	6.09	48.30	2.36	15.40	4.86	12.30	2.15	7.20	2.59
1998	3.59	1.01	3.60	.10	3.72	.29	3.96	.70	4.39	1.22	7.35	2.68	14.70	.97	13.60	3.38	55.70	5.88	20.30	3.26	19.10	3.55	5.29	2.40

**Table 26. Detailed budget for Cheyenne River**

[All values given in cubic feet per second and arbitrarily carried to one decimal place]

Water year	Outflows				Change in storage				Inflows				Estimates		
	Beaver Creek at Mallo Camp (06392900)	Cheyenne River near Wasta (06423500)	Elk Creek near Elm Springs (06425500)	Sum	Angostura Reservoir	Deerfield Reservoir	Pactola Reservoir	Sum	Cheyenne River at Edgemont (06395000)	Hat Creek (06400000)	Horsehead Creek (06400875)	Sum	All tributaries <sup>1</sup>	Tributary flows generated outside study area <sup>2</sup>	Black Hills tributaries <sup>3</sup>
1950	4 <sup>1.8</sup>	184.0	19.7	205.5	3.7	-1.2	0.0	2.5	38.2	<sup>5</sup> 12.6	<sup>6</sup> 5.6	56.4	151.6	70.9	80.7
1951	4 <sup>1.7</sup>	141.0	4.5	147.2	131.5	1.4	.0	132.9	95.2	30.5	<sup>6</sup> 16.1	141.8	138.3	33.4	104.9
1952	4 <sup>1.8</sup>	327.0	40.1	368.9	23.1	-1.6	.0	21.5	101.0	23.3	<sup>6</sup> 11.9	136.2	254.2	123.2	131.0
1953	4 <sup>1.7</sup>	314.0	40.1	355.8	-48.6	1.6	.0	-47.0	58.1	12.3	<sup>6</sup> 5.4	75.8	233.0	82.7	150.3
1954	4 <sup>1.7</sup>	83.5	6.1	91.3	-5.3	-6.1	.0	-11.4	20.5	13.3	<sup>6</sup> 6.0	39.8	40.1	20.1	20.0
1955	4 <sup>1.7</sup>	255.0	.5	257.2	83.6	-1.0	.0	82.6	144.0	30.5	<sup>6</sup> 16.1	190.6	149.2	33.2	116.0
1956	4 <sup>1.7</sup>	182.0	.9	184.6	-89.7	-1.0	.6	-90.1	43.7	7.9	<sup>6</sup> 2.8	54.4	40.1	21.0	19.1
1957	4 <sup>1.7</sup>	453.0	27.1	481.8	51.6	3.0	16.9	71.5	109.0	54.7	<sup>6</sup> 30.2	193.9	359.4	51.5	307.9
1958	4 <sup>1.7</sup>	266.0	3.9	271.6	-2.2	-2.1	8.6	4.3	102.0	15.4	<sup>6</sup> 7.2	124.6	151.3	27.7	123.6
1959	4 <sup>1.7</sup>	142.0	.0	143.7	-66.0	-11.7	6.7	-71.0	24.3	9.9	<sup>6</sup> 4.0	38.2	34.5	13.2	21.3
1960	4 <sup>1.7</sup>	106.0	2.5	110.2	-18.9	3.6	-9.3	-24.6	16.4	2.8	<sup>6</sup> 0.0	19.2	66.4	35.4	31.0
1961	4 <sup>1.7</sup>	76.8	.0	78.5	2.5	.4	-17.6	-14.7	12.9	1.3	<sup>6</sup> 0.0	14.2	49.6	12.4	37.2
1962	4 <sup>1.7</sup>	677.0	56.8	735.5	94.2	4.8	28.0	127.0	434.0	21.9	<sup>6</sup> 11.0	466.9	395.6	81.1	314.5
1963	4 <sup>1.8</sup>	365.0	21.8	388.6	-3.0	9.0	41.6	47.6	99.7	11.7	<sup>6</sup> 5.1	116.5	319.7	23.8	295.9
1964	4 <sup>1.8</sup>	275.0	19.9	296.7	-20.5	.2	-0.3	-20.6	55.3	5.8	<sup>6</sup> 1.6	62.7	213.4	32.8	180.6
1965	4 <sup>1.9</sup>	599.0	60.7	661.6	28.0	1.3	1.8	31.1	141.0	18.4	<sup>6</sup> 9.0	168.4	524.3	36.9	487.4
1966	4 <sup>1.9</sup>	273.0	35.9	310.8	4.0	-2.2	-3.9	-2.1	64.0	15.4	<sup>6</sup> 7.2	86.6	222.1	54.1	168.0
1967	4 <sup>1.9</sup>	735.0	96.4	833.3	-26.1	.4	1.0	-24.7	118.0	112.0	<sup>6</sup> 63.8	293.8	514.8	95.5	419.3
1968	4 <sup>1.8</sup>	252.0	9.6	263.4	6.9	1.6	-1.5	7.0	49.5	51.3	<sup>6</sup> 28.3	129.1	141.3	36.8	104.5
1969	4 <sup>1.8</sup>	228.0	12.6	242.4	-7.2	-2.4	-3.5	-13.1	104.0	8.8	<sup>6</sup> 3.4	116.2	113.1	29.0	84.1
1970	4 <sup>1.8</sup>	284.0	32.3	318.1	-25.0	.3	.2	-24.5	30.7	3.0	<sup>6</sup> 0.0	33.7	259.9	24.4	235.5
1971	4 <sup>1.8</sup>	577.0	63.6	642.4	9.4	1.6	-0.1	10.9	212.0	31.4	<sup>6</sup> 16.6	260.0	393.3	70.5	322.8

**Table 26.** Detailed budget for Cheyenne River—Continued

[All values given in cubic feet per second and arbitrarily carried to one decimal place]

Water year	Outflows					Change in storage					Inflows				Estimates		
	Beaver Creek at Mallo Camp (06392900)	Cheyenne River near Wasta (06423500)	Elk Creek near Elm Springs (06425500)	Sum	Angostura Reservoir	Deerfield Reservoir	Pactola Reservoir	Sum	Cheyenne River at Edgemont (06395000)	Hat Creek (06400000)	Horsehead Creek (06400875)	Sum	All tributaries <sup>1</sup>	Tributary flows generated outside study area <sup>2</sup>	Black Hills tributaries <sup>3</sup>		
1972	4 <sup>1</sup> .8	312.0	31.0	344.8	2.5	-0.6	2.8	4.7	41.4	3.2	6 <sup>0</sup> .1	44.7	304.8	37.2	267.6		
1973	4 <sup>1</sup> .8	244.0	20.0	265.8	21.4	-2	-3.7	17.5	80.1	13.7	6 <sup>6</sup> .2	100.0	183.3	22.2	161.1		
1974	4 <sup>1</sup> .8	223.0	4.6	229.4	-43.4	1.0	-10.1	-52.5	29.0	12.1	6 <sup>5</sup> .3	46.4	130.5	11.3	119.2		
1975	2.0	180.0	18.3	200.3	-1.1	.0	8.1	7.0	39.0	1.3	6 <sup>0</sup> .0	40.3	167.0	41.1	125.9		
1976	1.3	204.0	14.7	220.0	.1	.7	4.4	5.2	37.7	6.0	6 <sup>1</sup> .7	45.4	179.8	11.8	168.0		
1977	.9	224.0	19.5	244.4	-20.2	-1.1	-5.5	-26.8	27.2	.6	6 <sup>0</sup> .0	27.8	189.8	27.1	162.7		
1978	2.0	481.0	38.4	521.4	76.0	.3	9.6	85.9	309.0	16.6	6 <sup>7</sup> .9	333.5	273.8	88.0	185.8		
1979	2.6	233.0	2.9	238.5	-0.2	-0.2	-0.7	-1.1	85.2	2.8	6 <sup>0</sup> .0	88.0	149.4	20.7	128.7		
1980	2.5	133.0	.6	136.1	-44.8	.5	-10.9	-55.2	45.4	6.4	6 <sup>1</sup> .9	53.7	27.2	9.6	17.6		
1981	2.0	131.0	.0	133.0	-28.6	-1.2	-7.2	-37.0	38.5	.3	6 <sup>0</sup> .0	38.8	57.2	10.4	46.8		
1982	2.1	359.0	46.3	407.4	55.3	-17.8	20.0	57.5	86.7	25.0	6 <sup>1</sup> 2.8	124.5	340.4	80.4	260.0		
1983	4 <sup>1</sup> .9	299.0	29.2	330.1	-18.1	9.2	-4.3	-13.2	54.9	9.2	6 <sup>3</sup> .6	67.7	249.2	34.8	214.4		
1984	4 <sup>1</sup> .9	366.0	25.6	393.5	-6.8	8.8	2.3	4.3	103.0	22.6	6.4	132.0	265.8	43.1	222.7		
1985	4 <sup>1</sup> .8	131.0	4.9	137.7	-37.1	.2	-16.4	-53.3	17.7	1.5	.0	19.2	65.2	13.2	52.0		
1986	4 <sup>1</sup> .8	416.0	66.4	484.2	61.9	1.9	16.1	79.9	101.0	40.1	29.3	170.4	393.7	101.5	292.2		
1987	4 <sup>1</sup> .8	368.0	20.8	390.6	-25.7	-1.3	-6.9	-33.9	88.8	12.8	5.8	107.4	249.3	59.5	189.8		
1988	4 <sup>1</sup> .8	132.0	2.5	136.3	-39.0	-0.3	-18.4	-57.7	12.0	1.6	.1	13.7	64.9	11.8	53.1		
1989	4 <sup>1</sup> .8	81.0	.2	83.0	-6.4	.0	-14.6	-21.0	23.6	.2	.0	23.8	38.2	9.8	28.4		
1990	4 <sup>1</sup> .8	129.0	.3	131.1	.9	-0.2	-0.8	-0.1	31.6	.3	.0	31.9	99.1	10.9	88.2		
1991	4 <sup>1</sup> .8	473.0	4.6	479.4	54.4	-0.4	27.2	81.2	184.0	43.1	26.3	253.4	307.2	42.2	265.0		
1992	1.5	151.0	.3	152.8	-25.2	.3	-5.2	-30.1	13.0	.7	.2	13.9	108.8	12.5	96.3		
1993	1.2	412.0	26.8	440.0	51.0	-0.4	18.8	69.4	94.2	34.3	11.3	139.8	369.6	80.6	289.0		

**Table 26. Detailed budget for Cheyenne River—Continued**

[All values given in cubic feet per second and arbitrarily carried to one decimal place]

Water year	Outflows				Change in storage				Inflows				Estimates		
	Beaver Creek at Mallo Camp (06392900)	Cheyenne River near Wasta (06423500)	Elk Creek near Elm Springs (06425500)	Sum	Angostura Reservoir	Deerfield Reservoir	Pactola Reservoir	Sum	Cheyenne River at Edgemont (06395000)	Hat Creek (06400000)	Horsehead Creek (06400875)	Sum	All tributaries <sup>1</sup>	Tributary flows generated outside study area <sup>2</sup>	Black Hills tributaries <sup>3</sup>
1994	1.8	332.0	21.1	354.9	-46.4	-0.3	-9.0	-55.7	63.0	6.2	2.9	72.1	227.1	46.4	180.7
1995	1.9	623.0	62.0	686.9	10.9	1.7	5.7	18.3	59.9	11.4	3.6	74.9	630.3	83.9	546.4
1996	2.0	551.0	94.6	647.6	-1.0	2.2	4.1	5.3	71.8	11.1	1.3	84.2	568.7	89.0	479.7
1997	2.3	1,143.0	135.0	1,280.3	33.3	-1.2	-1.8	30.3	95.5	28.5	13.8	137.8	1,172.8	189.4	983.4
1998	2.2	570.0	29.1	601.3	-2.5	-3	.1	-2.7	74.9	4.5	.2	79.6	519.0	41.4	477.6
Maximum	2.6	1,143.0	135.0	1,280.3	131.5	9.2	41.6	132.9	434.0	112.0	63.8	466.9	1,172.8	189.4	983.4
75 percentile	1.9	412.0	35.9	440.0	21.4	1.4	4.4	21.5	101.0	22.6	11.0	136.2	319.7	70.5	267.6
Median	1.8	273.0	19.9	296.7	-1.1	.0	.0	-0.1	63.0	11.7	5.1	79.6	213.4	35.4	162.7
25 percentile	1.7	180.0	3.9	184.6	-25.0	-1.0	-4.3	-24.7	37.7	3.2	.2	40.3	113.1	20.7	88.2
Minimum	.9	76.8	.0	78.5	-89.7	-17.8	-18.4	-90.1	12.0	.2	.0	13.7	27.2	9.6	17.6
Mean	1.8	320.3	26.0	348.1	3.0	.0	1.5	4.5	81.3	16.5	8.0	105.8	246.8	45.7	201.1

<sup>1</sup> Calculated as outflows + change in storage - inflows.

<sup>2</sup> Estimated based on average yield for five streamflow gages (see table 28), applied to area of 1,220 square miles.

<sup>3</sup> Calculated as all tributaries - tributary flows generated outside study area.

<sup>4</sup> Estimated based on regression with flow at station 06409000. Equation given in table 13.

<sup>5</sup> Estimated based on regression with flow at station 06395000. Equation given in table 13.

<sup>6</sup> Estimated based on regression with flow at station 06400000. Equation given in table 13.

**Table 27. Detailed budget for Belle Fourche River**

[All values given in cubic feet per second and arbitrarily carried to one decimal place]

Water year	Outflows				Change in storage	Inflows						Estimates		
	Cold Springs Creek (06429500)	Belle Fourche River near Sturgis (06437000)	Bear Butte Creek near Sturgis (06437500)	Sum		Belle Fourche Reservoir	Belle Fourche River at State line (06428500)	Redwater Creek + Murray Ditch (06430500)	Hay Creek (06433500)	Indian Creek (06436700)	Horse Creek (06436500)	Sum	All tributaries <sup>1</sup>	Tributary flows generated outside study area <sup>2</sup>
1950	44.2	266.0	8.7	278.9	20.0	99.8	733.0	61.8	816.1	92.1	152.8	146.1	48.8	97.3
1951	44.1	105.0	3.6	112.7	-4.8	27.4	730.6	60.0	89.1	90.7	67.8	40.1	7.1	33.0
1952	44.2	212.0	10.6	226.8	-34.7	59.6	731.4	61.2	825.6	93.8	121.6	70.5	56.7	13.8
1953	44.1	220.0	10.7	234.8	79.4	84.7	733.3	61.3	825.6	93.8	148.7	165.5	39.2	126.3
1954	44.1	152.0	3.6	159.7	-64.3	18.7	729.6	.5	89.8	90.9	59.5	35.9	20.2	15.7
1955	44.1	120.0	2.7	126.8	6.2	99.3	33.8	.4	87.2	90.4	141.1	-8.1	4.4	-12.5
1956	44.1	112.0	.7	116.8	-44.9	48.2	30.1	.2	87.4	90.4	86.3	-14.4	11.9	-26.3
1957	44.1	95.7	5.1	104.9	39.9	44.4	30.6	1.0	819.6	92.7	98.3	46.5	13.3	33.2
1958	44.1	132.0	.8	136.9	-32.0	40.2	29.8	.6	88.8	90.7	80.1	24.8	16.6	8.2
1959	44.1	71.2	.6	75.9	-9.7	43.5	26.1	.1	87.0	90.3	77.0	-10.8	.0	-10.8
1960	44.1	73.0	1.1	78.2	1.9	44.5	25.6	.2	88.1	90.6	79.0	1.1	4.9	-3.8
1961	44.0	27.4	.0	31.4	-2.9	7.7	21.9	.0	87.0	90.3	36.9	-8.4	.4	-8.8
1962	44.1	394.0	30.1	428.2	156.5	180.0	34.9	3.1	30.9	95.3	254.2	330.5	130.4	200.1
1963	44.2	304.0	19.1	327.3	-13.0	98.2	37.3	.6	18.8	1.0	155.9	158.4	27.0	131.4
1964	44.2	235.0	14.4	253.6	-19.6	81.6	37.2	1.6	12.2	3.3	135.9	98.1	50.8	47.3
1965	44.4	399.0	24.6	428.0	46.1	100.0	43.9	1.6	16.3	13.4	175.2	298.9	42.6	256.3
1966	44.3	214.0	8.7	227.0	-102.1	53.6	33.5	.6	3.3	.5	91.5	33.4	17.9	15.5
1967	44.3	324.0	23.0	351.3	32.3	103.0	35.3	1.2	46.6	5.1	191.2	192.4	68.1	124.3
1968	44.2	127.0	4.4	135.6	-11.1	50.4	34.0	.5	.3	.3	85.5	39.0	4.5	34.5
1969	44.2	227.0	9.9	241.1	-24.3	94.1	38.0	.4	6.1	1.2	139.8	77.0	8.4	68.6
1970	44.3	291.0	17.2	312.5	4.2	98.5	47.8	1.7	7.8	93.1	158.9	157.8	26.7	131.1
1971	44.3	444.0	25.3	473.6	8.9	158.0	49.5	3.0	37.7	95.9	254.1	228.4	70.8	157.6



**Table 27. Detailed budget for Belle Fourche River—Continued**  
 [All values given in cubic feet per second and arbitrarily carried to one decimal place]

Water year	Outflows				Change in storage	Inflows						Estimates		
	Cold Springs Creek (06429500)	Belle Fourche River near Sturgis (06437000)	Bear Butte Creek near Sturgis (06437500)	Sum		Belle Fourche Reservoir	Belle Fourche River at State line (06428500)	Redwater Creek (06430500) + Murray Ditch (06429997)	Hay Creek (06433500)	Indian Creek (06436700)	Horse Creek (06436500)	Sum	All tributaries <sup>1</sup>	Tributary flows generated outside study area <sup>2</sup>
1972	4.3	565.0	29.9	599.2	63.3	194.0	51.2	5.5	55.2	93.0	308.9	353.6	26.2	327.4
1973	4.2	378.0	519.8	402.0	-36.1	113.0	59.1	3.4	2.5	92.1	180.1	185.8	15.9	169.9
1974	4.2	216.0	59.8	230.0	-52.3	84.7	47.0	1.9	2.0	90.7	136.3	41.4	4.4	37.0
1975	4.0	303.0	515.1	322.1	13.9	107.0	43.0	1.3	25.5	91.9	178.7	157.3	50.8	106.5
1976	5.4	412.0	521.8	439.2	-53.5	91.1	48.8	3.5	29.0	91.6	174.0	211.7	16.8	194.9
1977	5.0	176.0	57.4	188.4	24.8	80.5	42.2	.3	8.8	92.0	133.8	79.4	11.3	68.1
1978	4.9	566.0	531.3	602.2	72.8	229.0	48.8	4.5	80.0	93.7	366.0	309.0	45.0	264.0
1979	4.7	201.0	58.9	214.6	-42.3	60.8	38.2	1.0	11.3	90.6	111.9	60.4	8.3	52.1
1980	4.7	99.2	52.6	106.5	-34.8	53.6	32.3	.3	.4	90.4	87.0	-15.3	3.9	-19.2
1981	4.6	122.0	54.0	130.6	16.3	92.4	26.5	.7	5.0	90.3	124.9	22.0	10.5	11.5
1982	4.6	489.0	526.6	520.2	93.0	76.5	37.7	4.9	828.5	94.4	152.0	461.2	24.2	437.0
1983	4.4	370.0	519.3	393.7	-48.9	85.8	40.3	2.3	820.5	92.9	151.8	193.0	15.4	177.6
1984	4.4	387.0	520.3	411.7	9.6	140.0	40.3	2.7	818.9	92.6	204.5	216.8	38.9	177.9
1985	4.2	157.0	56.2	167.4	-78.7	48.6	29.6	.3	89.3	90.8	88.6	.1	.0	.1
1986	4.3	316.0	515.9	336.2	96.0	76.0	31.0	1.1	837.8	96.1	152.0	280.2	75.0	205.2
1987	4.2	258.0	512.4	274.6	23.8	82.4	36.5	1.5	816.6	92.1	139.1	159.3	28.2	131.1
1988	4.2	133.0	54.7	141.9	-101.2	52.7	31.3	.3	88.1	90.6	93.0	-52.3	4.9	-57.2
1989	4.2	107.0	53.1	114.3	-22.3	51.2	28.4	.6	87.1	90.4	87.7	4.3	.0	4.3
1990	4.2	94.7	52.4	101.3	11.7	52.0	26.1	.6	87.1	90.4	86.2	26.8	.0	26.8
1991	4.2	93.4	52.3	99.9	-2.9	46.7	27.6	.4	89.1	90.7	84.5	12.5	14.2	-1.7
1992	3.3	71.5	50.9	75.7	-14.9	23.5	23.4	.1	87.1	90.4	54.5	6.3	.0	6.3
1993	2.9	353.0	518.2	374.1	143.5	85.4	24.6	2.3	819.4	92.7	134.4	383.2	58.3	324.9

**Table 27. Detailed budget for Belle Fourche River—Continued**

[All values given in cubic feet per second and arbitrarily carried to one decimal place]

Water year	Outflows				Change in storage	Inflows						Estimates		
	Cold Springs Creek (06429500)	Belle Fourche River near Sturgis (06437000)	Bear Butte Creek near Sturgis (06437500)	Sum		Belle Fourche Reservoir	Belle Fourche River at State line (06428500)	Redwater Creek (06430500) + Murray Ditch (06429997)	Hay Creek (06433500)	Indian Creek (06436700)	Horse Creek (06436500)	Sum	All tributaries <sup>1</sup>	Tributary flows generated outside study area <sup>2</sup>
1994	3.1	261.0	<sup>5</sup> 12.6	276.7	-53.3	93.9	28.8	1.6	<sup>8</sup> 16.8	<sup>9</sup> 2.2	143.3	80.1	42.8	37.3
1995	3.1	551.0	<sup>5</sup> 30.4	584.5	48.8	147.0	42.6	8.1	<sup>8</sup> 35.8	<sup>9</sup> 5.7	239.2	394.1	108.3	285.8
1996	3.7	773.0	<sup>5</sup> 44.0	820.7	-4.7	193.0	45.3	8.8	<sup>8</sup> 50.9	<sup>9</sup> 8.6	306.6	509.4	104.1	405.3
1997	5.0	622.0	<sup>5</sup> 34.7	661.7	14.0	182.0	47.1	5.7	<sup>8</sup> 69.6	<sup>9</sup> 12.1	316.5	359.2	124.7	234.5
1998	6.2	352.0	<sup>5</sup> 18.2	376.4	13.8	80.0	40.3	2.7	<sup>8</sup> 20.5	<sup>9</sup> 2.9	146.4	243.8	26.9	216.9
Maximum	6.2	773.0	44.0	820.7	156.5	229.0	59.1	8.8	80.0	13.4	366.0	509.4	130.4	437.0
75 percentile	4.3	370.0	19.8	393.7	23.8	99.8	42.2	2.3	25.6	3.3	174.0	216.8	45.0	177.9
Median	4.2	227.0	10.6	241.1	-2.9	82.4	34.0	1.2	12.2	2.0	139.1	80.1	17.9	68.1
25 percentile	4.1	122.0	3.6	130.6	-34.7	51.2	29.8	.4	7.2	.6	87.7	24.8	7.1	11.5
Minimum	2.9	27.4	.0	31.4	-102.1	7.7	21.9	.0	.3	.3	36.9	-52.3	.0	-57.2
Mean	4.2	264.7	13.2	282.1	2.7	86.9	36.0	1.8	19.1	2.6	146.4	138.4	31.2	107.2

<sup>1</sup>Calculated as outflows + change in storage - inflows.

<sup>2</sup>Estimated based on average yield for intervening area between gaging stations 06437000 and 06438000, applied to area of 530 square miles.

<sup>3</sup>Calculated as all tributaries - tributary flows generated outside study area.

<sup>4</sup>Estimated based on regression with flow at station 06409000. Equation given in table 13.

<sup>5</sup>Estimated based on regression with flow at station 06437000. Equation given in table 13.

<sup>6</sup>Estimated based on regression with flow at station 06437000. Equation given in table 13.

<sup>7</sup>Estimated based on regression with flow at station 06433000. Equation given in table 13.

<sup>8</sup>Estimated based on regression with flow at station 06425500. Equation given in table 13.

<sup>9</sup>Estimated based on regression with flow at station 06425500. Equation given in table 13.

**Table 28.** Annual yield, in inches, for gages used in estimating tributary flows for areas treated as being outside of the study area boundary

Water year	Cheyenne River and Elk Creek drainages							Belle Fourche River drainage		
	Cheyenne River at Edgemont (06395000)	Hat Creek near Edgemont (06400000)	Cherry Creek near Plainview (06439000)	Bad River near Fort Pierre (06441500)	White River near Kadoka (06447000)	Average	Belle Fourche River near Sturgis (06437000)	Belle Fourche River near Elm Springs (06438000)	Difference <sup>1</sup>	
1950	0.07	0.16	1.22	1.89	0.59	0.79	0.62	0.73	1.25	
1951	.18	.40	.05	.49	.74	.37	.24	.23	.18	
1952	.19	.30	2.20	3.30	.87	1.37	.49	.67	1.46	
1953	.11	.16	1.40	1.89	1.04	.92	.51	.60	1.00	
1954	.04	.17	.32	.19	.40	.22	.35	.38	.52	
1955	.27	.40	.04	.36	.78	.37	.28	.25	.11	
1956	.08	.10	.19	.34	.46	.23	.26	.27	.30	
1957	.21	.71	.08	.68	1.19	.57	.22	.24	.34	
1958	.19	.20	.18	.28	.68	.31	.30	.33	.42	
1959	.05	.13	.02	.07	.47	.15	.16	.13	.00	
1960	.03	.04	.15	1.24	.52	.40	.17	.16	.13	
1961	.02	.02	.00	.41	.24	.14	.06	.05	.01	
1962	.83	.28	1.21	.86	1.32	.90	.91	1.36	3.34	
1963	.19	.15	.19	.21	.59	.26	.70	.70	.69	
1964	.11	.08	.49	.43	.72	.37	.55	.69	1.31	
1965	.27	.24	.34	.31	.90	.41	.92	.95	1.09	
1966	.12	.20	.62	1.19	.87	.60	.50	.49	.46	
1967	.22	1.46	.96	1.32	1.35	1.06	.75	.93	1.74	
1968	.09	.67	.03	.46	.79	.41	.30	.26	.12	
1969	.20	.11	.44	.37	.50	.32	.53	.47	.21	
1970	.06	.04	.25	.43	.58	.27	.67	.68	.68	
1971	.40	.41	1.18	1.05	.89	.78	1.03	1.17	1.81	
1972	.08	.04	.66	.72	.58	.42	1.31	1.19	.67	
1973	.15	.18	.13	.18	.60	.25	.88	.79	.41	
1974	.06	.16	.00	.07	.35	.13	.50	.43	.11	
1975	.07	.02	1.11	.47	.61	.46	.70	.81	1.30	
1976	.07	.08	.05	.06	.40	.13	.96	.86	.43	
1977	.05	.01	.06	.56	.83	.30	.41	.38	.29	

**Table 28.** Annual yield, in inches, for gages used in estimating tributary flows for areas treated as being outside of the study area boundary—Continued

Water year	Cheyenne River and Elk Creek drainages						Belle Fourche River drainage		
	Cheyenne River at Edgemont (06395000)	Hat Creek near Edgemont (06400000)	Cherry Creek near Plainview (06439000)	Bad River near Fort Pierre (06441500)	White River near Kadoka (06447000)	Average	Belle Fourche River near Sturgis (06437000)	Belle Fourche River near Elm Springs (06438000)	Difference <sup>1</sup>
1978	.059	.022	1.44	1.75	0.90	0.98	1.31	1.28	1.15
1979	.16	.04	.20	.16	.60	.23	.46	.42	.21
1980	.09	.08	.01	.03	.33	.11	.23	.21	.10
1981	.07	.00	.09	.04	.37	.12	.28	.28	.27
1982	.16	.32	1.56	1.10	1.32	.89	1.13	1.04	.62
1983	.10	.12	.15	.62	.94	.39	.86	.77	.39
1984	.20	.29	.65	.67	.59	.48	.90	.92	1.00
1985	.03	.02	.24	.18	.26	.15	.36	.29	.00
1986	.19	.52	1.35	2.47	1.12	1.13	.73	.95	1.92
1987	.17	.17	.92	1.30	.76	.66	.60	.62	.72
1988	.02	.02	.13	.04	.45	.13	.31	.27	.13
1989	.04	.00	.14	.09	.27	.11	.25	.19	.00
1990	.06	.00	.10	.10	.35	.12	.22	.17	.00
1991	.35	.56	.07	.61	.76	.47	.22	.24	.36
1992	.02	.01	.06	.19	.42	.14	.17	.12	.00
1993	.18	.45	2.10	.70	1.06	.90	.82	.94	1.49
1994	.12	.08	.77	.88	.73	.52	.60	.69	1.10
1995	.11	.15	1.06	2.52	.83	.93	1.27	1.55	2.77
1996	.14	.15	2.20	1.72	.76	.99	1.79	1.96	2.67
1997	.18	.37	3.07	5.26	1.66	2.11	1.44	1.76	3.19
1998	.14	.06	.34	.92	.84	.46	.81	.79	.69
Maximum	.83	1.46	3.07	5.26	1.66	2.11	1.79	1.96	3.34
75th percentile	.19	.29	1.06	1.10	.87	.78	.86	.92	1.15
Median	.12	.15	.25	.49	.72	.40	.57	.67	.49
25th percentile	.07	.04	.09	.19	.47	.23	.28	.27	.18
Minimum	.02	.00	.00	.03	.24	.11	.06	.05	.00
Mean	.15	.22	.62	.84	.72	.51	.64	.67	.82

<sup>1</sup>Difference in flow, in cubic feet per second, between stations 06438000 and 06437000, converted to inches.

**Table 29.** Annual flows for water years 1983-98 for measured tributaries to the Cheyenne River  
 [All values in cubic feet per second and arbitrarily carried to two decimal places]

Water year	Streamflow										Sum of measured tributaries	All tributaries <sup>2</sup>	Difference <sup>3</sup>	Estimated tributaries outside study area <sup>2</sup>	Estimated tributaries inside study area <sup>2</sup>
	Beaver Creek at Mallo Camp (06392900)	Cascade Springs (06400497)	Fall River (06402000)	Beaver Creek near Buffalo Gap (06402500)	French Creek above Fairburn (06403300) <sup>1</sup>	Battle Creek at Hermosa (06406000)	Spring Creek near Hermosa (06408500)	Rapid Creek below Sewage Plant (06418900)	Boxelder Creek near Rapid City (06423010)	Elk Creek near Rapid City (06425100)					
1983	41.90	21.10	21.00	6.14	2.55	6.86	1.96	81.50	3.76	9.95	156.72	249.13	92.41	34.77	214.36
1984	41.94	21.40	21.50	8.74	5.10	12.40	6.08	75.80	4.06	16.30	173.32	265.80	92.48	43.05	222.75
1985	41.80	20.60	21.60	6.40	.00	5.46	1.68	49.80	.00	4.67	112.01	65.15	-46.86	13.22	51.93
1986	41.85	20.90	22.20	8.70	.00	5.13	.69	48.50	.00	10.30	118.27	393.74	275.47	101.49	292.25
1987	41.81	21.30	21.80	8.53	2.03	7.79	.51	61.90	.00	6.63	132.30	249.44	117.14	59.51	189.93
1988	41.80	19.60	21.30	5.94	.00	2.70	.36	37.50	.00	1.67	90.87	64.80	-26.07	11.85	52.95
1989	41.76	18.30	21.50	5.99	.00	1.59	.01	35.50	.00	.20	84.85	38.12	-46.73	9.76	28.36
1990	41.76	18.80	21.90	5.94	.00	6.88	.00	39.20	.00	.01	94.49	99.05	4.56	10.92	88.13
1991	41.80	18.40	21.20	7.01	8.70	23.00	15.30	43.70	2.29	2.01	143.41	307.20	163.79	42.23	264.97
1992	1.47	17.80	21.70	7.49	.00	5.19	1.09	42.20	.00	.00	96.94	108.71	11.77	12.48	96.23
1993	1.15	16.30	22.30	8.07	7.00	26.10	16.90	89.70	3.50	4.56	195.58	369.50	173.92	80.63	288.87
1994	1.75	18.40	21.80	5.95	2.06	11.70	2.42	78.50	1.40	2.75	146.73	227.15	80.42	46.35	180.80
1995	1.92	19.00	23.70	12.50	29.70	52.60	38.80	127.00	28.90	41.30	375.42	630.23	254.81	83.94	546.29
1996	1.96	<sup>5</sup> 20.00	24.50	9.69	12.60	32.20	27.50	146.00	21.20	54.90	350.55	568.76	218.21	88.95	479.81
1997	2.30	<sup>5</sup> 20.00	25.50	10.50	19.70	47.20	46.60	239.00	42.30	77.10	530.20	1,172.75	642.55	189.38	983.37
1998	2.15	<sup>5</sup> 20.00	26.20	10.70	14.50	34.20	20.70	164.00	10.10	21.70	324.25	519.01	194.76	41.38	477.63
Maximum	2.30	21.40	26.20	12.50	29.70	52.60	46.60	239.00	42.30	77.10	530.20	1,172.75	642.55	189.38	983.37
Median	1.81	19.80	21.80	7.78	2.31	9.75	2.19	68.85	1.85	5.65	145.07	257.62	104.81	42.64	218.56
Minimum	1.15	16.30	21.00	5.94	.00	1.59	.00	35.50	.00	.00	84.85	38.12	-46.86	9.76	28.36
Mean	1.82	19.49	22.48	8.02	6.50	17.56	11.29	84.99	7.34	15.88	195.37	333.03	137.66	54.37	278.66

<sup>1</sup>Streamflow has been adjusted by subtracting 5 cubic feet per second to account for streamflow losses that occur downstream from gage.

<sup>2</sup>Values taken from table 26; minor differences result from use of unrounded values.

<sup>3</sup>Difference between "All tributaries" and "Sum of measured tributaries."

<sup>4</sup>Estimated from linear regression with streamflow at Castle Creek above Deerfield, near Hill City (06409000). Equation given in table 13.

<sup>5</sup>Estimated.

**Table 30.** Calculated consumptive irrigation withdrawals for Rapid Creek, using various estimates of tributary inflow

[All values in cubic feet per second and arbitrarily carried to one decimal place]

Water year	Measured flows of Rapid Creek		Discharge of sewage treatment plant	Flow of Elk Creek near Elm Springs (06425500)	Consumptive irrigation withdrawals, using various estimates of tributary inflow <sup>1</sup>		
	at Rapid City (06414000)	near Farmingdale (06421500)			0.3 times Elk Creek flow	0.4 times Elk Creek flow	0.5 times Elk Creek flow
1950	60.4	53.1	<sup>2</sup> 5.5	19.7	18.7	20.7	22.7
1951	45.5	38.3	<sup>2</sup> 5.9	4.5	14.5	14.9	15.4
1952	75.6	64.1	<sup>2</sup> 6.2	40.1	29.7	33.7	37.8
1953	52.4	49.4	<sup>2</sup> 6.6	40.1	21.6	25.6	29.7
1954	39.4	25.9	<sup>2</sup> 6.9	6.1	22.2	22.8	23.5
1955	41.8	24.5	<sup>2</sup> 7.2	.5	24.7	24.7	24.8
1956	36.1	28.7	<sup>2</sup> 7.6	.9	15.3	15.4	15.5
1957	32.8	47.6	<sup>2</sup> 7.9	27.1	1.2	3.9	6.7
1958	30.2	30.4	<sup>2</sup> 8.3	3.9	9.3	9.7	10.1
1959	33.1	23.3	<sup>2</sup> 8.6	.0	18.4	18.4	18.4
1960	29.3	17.8	<sup>2</sup> 9.0	2.5	21.3	21.5	21.8
1961	30.7	12.5	<sup>2</sup> 9.3	.0	27.5	27.5	27.5
1962	35.1	51.7	<sup>2</sup> 9.7	56.8	10.1	15.8	21.5
1963	43.9	47.3	<sup>2</sup> 10.0	21.8	13.1	15.3	17.5
1964	65.5	54.8	<sup>2</sup> 10.4	19.9	27.1	29.1	31.1
1965	124.0	127.0	<sup>2</sup> 10.7	60.7	25.9	32.0	38.1
1966	61.4	61.1	<sup>2</sup> 11.0	35.9	22.1	25.7	29.3
1967	82.5	115.0	<sup>2</sup> 11.4	96.4	7.8	17.5	27.1
1968	45.5	54.4	<sup>2</sup> 11.7	9.6	5.7	6.6	7.6
1969	43.5	39.1	<sup>2</sup> 12.1	12.6	20.3	21.5	22.8
1970	60.7	67.8	<sup>2</sup> 12.4	32.3	15.0	18.2	21.5
1971	81.6	93.2	<sup>2</sup> 12.4	63.6	19.9	26.2	32.6
1972	95.5	97.4	<sup>2</sup> 12.4	31.0	19.8	22.9	26.0
1973	66.6	65.5	<sup>2</sup> 12.4	20.0	19.5	21.5	23.5
1974	43.3	34.6	<sup>2</sup> 12.4	4.6	22.5	22.9	23.4
1975	40.7	42.8	<sup>2</sup> 12.4	18.3	15.8	17.6	19.5
1976	54.6	56.0	<sup>3</sup> 13.6	14.7	16.6	18.1	19.6
1977	56.4	58.7	<sup>3</sup> 11.4	19.5	15.0	16.9	18.9
1978	68.4	77.8	<sup>3</sup> 10.8	38.4	12.9	16.8	20.6
1979	52.6	46.1	<sup>3</sup> 11.2	2.9	18.6	18.9	19.2
1980	46.7	39.2	<sup>3</sup> 12.4	.6	20.1	20.1	20.2

**Table 30.** Calculated consumptive irrigation withdrawals for Rapid Creek, using various estimates of tributary inflow—Continued

[All values in cubic feet per second and arbitrarily carried to one decimal place]

Water year	Measured flows of Rapid Creek		Discharge of sewage treatment plant	Flow of Elk Creek near Elm Springs (06425500)	Consumptive irrigation withdrawals, using various estimates of tributary inflow <sup>1</sup>		
	at Rapid City (06414000)	near Farmingdale (06421500)			0.3 times Elk Creek flow	0.4 times Elk Creek flow	0.5 times Elk Creek flow
1981	39.4	31.2	<sup>3</sup> 11.7	0.0	19.9	19.9	19.9
1982	53.7	69.3	<sup>3</sup> 12.1	46.3	10.4	15.0	19.7
1983	70.5	86.4	<sup>3</sup> 14.5	29.2	7.4	10.3	13.2
1984	70.4	79.8	<sup>3</sup> 13.9	25.6	12.2	14.7	17.3
1985	55.0	50.0	<sup>3</sup> 14.4	4.9	20.9	21.4	21.9
1986	37.5	68.4	<sup>3</sup> 15.3	66.4	4.3	11.0	17.6
1987	56.0	68.6	<sup>3</sup> 15.8	20.8	9.4	11.5	13.6
1988	42.3	32.1	<sup>3</sup> 12.6	2.5	23.6	23.8	24.1
1989	36.9	24.8	<sup>3</sup> 11.8	.2	24.0	24.0	24.0
1990	31.5	31.1	<sup>3</sup> 11.8	.3	12.3	12.3	12.4
1991	36.2	41.2	<sup>3</sup> 14.4	4.6	10.8	11.2	11.7
1992	38.5	38.0	<sup>3</sup> 12.8	.3	13.4	13.4	13.5
1993	69.8	82.2	<sup>3</sup> 13.5	26.8	9.1	11.8	14.5
1994	73.4	72.2	<sup>3</sup> 14.4	21.1	21.9	24.0	26.2
1995	115.0	134.0	<sup>3</sup> 15.5	62.0	15.1	21.3	27.5
1996	127.0	160.0	<sup>3</sup> 16.6	94.6	12.0	21.4	30.9
1997	200.0	269.0	<sup>3</sup> 19.0	135.0	-9.5	4.0	17.5
1998	149.0	161.0	<sup>3</sup> 15.7	29.1	12.4	15.3	18.3
Maximum	200.0	269.0	19.0	135.0	29.7	33.7	38.1
75th percentile	69.8	72.2	13.5	35.9	21.3	22.9	24.8
Median	52.6	53.1	11.8	19.9	15.8	18.4	20.6
25th percentile	39.4	38.0	9.7	3.9	12.0	14.9	17.5
Minimum	29.3	12.5	5.5	.0	-9.5	3.9	6.7
Mean	60.8	64.2	11.5	26.0	15.9	18.6	21.2

<sup>1</sup>Consumptive withdrawals calculated as upstream flow (06414000) plus treatment plant plus estimated tributary inflow minus downstream flow (06421500). Calculations performed using three different estimates of tributary inflow, based on stated coefficient times flow of Elk Creek near Elm Springs (06425500). Coefficient of 0.4 selected as best estimate.

<sup>2</sup>Estimates based on linear interpolation between estimated annual volumes of 4,000 acre-feet for 1950; 9,000 acre-feet for 1970 through 1975.

<sup>3</sup>Measured values from treatment plant records (Robert C. Druckrey, City of Rapid City, written commun., 2001).

**Table 31.** Estimated consumptive irrigation withdrawals derived from water budget for Belle Fourche Project

[ft<sup>3</sup>/s, cubic feet per second; Precip, precipitation]

Water year	Belle Fourche River near Fruitdale (06436000)				Whitewood Creek above Vale (06436198)		Horse Creek (06436500)		Indian Creek (06436700)		Ungaged tributaries outside study area <sup>2</sup>		Tributary flows generated inside study area <sup>3</sup>		Belle Fourche Reservoir		Belle Fourche River Sturgis (06437000)		Consumptive use <sup>4</sup> (ft <sup>3</sup> /s)
	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Precip (inches)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Sum of inflows (ft <sup>3</sup> /s)	Change in storage (ft <sup>3</sup> /s)	Outflow (ft <sup>3</sup> /s)					
1950	183.0	54.1	525.0	22.92	62.1	716.1	39.6	31.3	351.2	20.0	266.0	65.2							
1951	129.0	8.0	520.5	20.97	6.7	79.1	5.8	4.6	177.7	-4.8	105.0	77.5							
1952	183.0	12.8	523.1	22.10	63.8	725.6	46.0	36.3	330.6	-34.7	212.0	153.3							
1953	208.0	27.4	525.8	23.27	63.8	725.6	31.8	25.1	347.5	79.4	220.0	48.1							
1954	118.0	6.6	518.4	20.09	6.9	79.8	16.4	13.0	183.1	-64.3	152.0	95.4							
1955	204.0	9.4	530.2	25.13	6.4	77.2	3.6	2.8	257.6	6.2	120.0	131.4							
1956	139.0	7.2	519.6	20.61	6.4	77.4	9.6	7.6	190.8	-44.9	112.0	123.7							
1957	166.0	6.6	532.4	26.10	62.7	719.6	10.8	8.5	246.6	40.0	95.7	110.9							
1958	144.0	6.3	526.7	23.65	6.7	78.8	13.4	10.6	210.5	-32.0	132.0	110.5							
1959	120.0	4.8	511.7	17.23	6.3	77.0	.0	.0	143.8	-9.7	71.2	82.3							
1960	122.0	6.4	515.9	19.04	6.6	78.1	4.0	3.1	160.1	1.9	73.0	85.2							
1961	69.7	3.0	58.7	15.92	6.3	77.0	.3	.3	89.3	-2.9	27.4	64.8							
1962	240.0	145.0	552.0	34.45	65.3	30.9	105.8	83.7	662.7	156.5	394.0	112.2							
1963	154.0	105.0	539.3	29.03	.99	18.8	21.9	17.3	357.3	-13.0	304.0	66.3							
1964	191.0	53.5	545.3	31.59	3.30	12.2	41.2	32.6	379.1	-19.6	235.0	163.7							
1965	149.0	169.0	546.6	32.15	13.4	16.3	34.6	27.3	456.2	46.1	399.0	11.1							
1966	115.0	81.3	519.2	20.45	.5	3.3	14.5	11.5	245.3	-102.1	214.0	133.4							
1967	203.0	63.0	532.1	25.97	5.1	46.6	55.2	43.7	448.7	32.3	324.0	92.4							
1968	175.0	5.27	529.5	24.83	.3	.3	3.7	2.9	217.0	-11.1	127.0	101.1							
1969	179.0	47.1	517.5	19.73	1.2	6.1	6.8	5.4	263.1	-24.3	227.0	60.4							
1970	194.0	118.0	538.9	28.85	63.2	7.8	21.6	17.1	400.5	4.2	291.0	105.3							
1971	177.0	195.0	542.2	30.27	65.9	37.7	57.4	45.4	560.6	8.9	444.0	107.7							



**Table 31.** Estimated consumptive irrigation withdrawals derived from water budget for Belle Fourche Project—Continued  
[ft<sup>3</sup>/s, cubic feet per second; Precip, precipitation]

Water year	Belle Fourche Inlet Canal <sup>1</sup> (06434505)		Belle Fourche River near Fruitdale (06436000)		Whitewood Creek above Vale (06436198)		Horse Creek (06436500)		Indian Creek (06436700)		Ungaged tributaries outside study area <sup>2</sup> (ft <sup>3</sup> /s)		Tributary flows generated inside study area <sup>3</sup> (ft <sup>3</sup> /s)		Sum of inflows (ft <sup>3</sup> /s)		Belle Fourche Reservoir		Belle Fourche River Sturgis (06437000)		Consumptive use <sup>4</sup> (ft <sup>3</sup> /s)
	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Precip (inches)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Change in storage (ft <sup>3</sup> /s)	Outflow (ft <sup>3</sup> /s)							
1972	180.0	263.0	<sup>5</sup> 41.8	30.09	<sup>6</sup> 3.0	55.2	21.3	16.8	581.1	63.3	565.0	-47.2									
1973	163.0	177.0	<sup>5</sup> 33.1	26.40	<sup>6</sup> 2.1	2.5	12.9	10.2	400.8	-36.1	378.0	58.9									
1974	171.0	85.5	<sup>5</sup> 19.9	20.72	<sup>6</sup> .8	2.0	3.5	2.8	285.4	-52.3	216.0	121.7									
1975	204.0	75.6	<sup>5</sup> 23.9	22.45	<sup>6</sup> 1.9	25.5	41.2	32.6	404.7	13.9	303.0	87.8									
1976	180.0	122.0	<sup>5</sup> 43.0	30.62	<sup>6</sup> 1.6	29.0	13.7	10.8	400.1	-53.5	412.0	41.6									
1977	225.0	6.0	<sup>5</sup> 30.3	25.20	<sup>6</sup> 2.0	8.8	9.1	7.2	288.4	24.8	176.0	87.6									
1978	240.0	211.0	<sup>5</sup> 35.1	27.24	<sup>6</sup> 3.7	80.0	36.5	28.8	635.1	72.8	566.0	-3.7									
1979	182.0	17.7	<sup>5</sup> 22.0	21.63	<sup>6</sup> .6	11.3	6.7	5.3	245.6	-42.3	201.0	86.9									
1980	159.0	4.8	<sup>5</sup> 13.2	17.86	<sup>6</sup> .4	.4	3.2	2.5	183.5	-34.8	99.2	119.1									
1981	178.0	8.2	<sup>5</sup> 22.0	21.64	<sup>6</sup> .4	5.0	8.5	6.7	228.7	16.3	122.0	90.4									
1982	192.0	101.0	<sup>5</sup> 47.4	32.51	<sup>6</sup> 4.4	<sup>7</sup> 28.5	19.6	15.5	408.4	93.0	489.0	-173.6									
1983	146.0	135.0	<sup>5</sup> 29.6	24.89	<sup>6</sup> 2.9	<sup>7</sup> 20.5	12.5	9.8	356.3	-48.9	370.0	35.2									
1984	212.0	111.0	45.3	26.82	<sup>6</sup> 2.6	<sup>7</sup> 18.9	31.6	25.0	446.4	9.6	387.0	49.8									
1985	151.0	5.1	11.7	15.78	<sup>6</sup> .8	<sup>7</sup> 9.3	.0	.0	177.9	-78.7	157.0	99.6									
1986	211.0	8.8	30.4	29.07	<sup>6</sup> 6.1	<sup>7</sup> 37.8	60.8	48.1	403.0	96.0	316.0	-9.0									
1987	187.0	46.4	27.6	22.77	<sup>6</sup> 2.2	<sup>7</sup> 16.6	22.9	18.1	320.7	23.8	258.0	38.9									
1988	133.0	10.6	19.0	21.28	<sup>6</sup> .6	<sup>7</sup> 8.1	4.0	3.2	178.5	-101.2	133.0	146.7									
1989	149.0	4.9	19.3	22.11	<sup>6</sup> .4	<sup>7</sup> 7.1	.0	.0	180.7	-22.4	107.0	96.1									
1990	145.0	7.0	19.5	21.23	<sup>6</sup> .4	<sup>7</sup> 7.1	.0	.0	179.0	11.7	94.7	72.6									
1991	130.0	10.0	22.4	23.40	<sup>6</sup> .7	<sup>7</sup> 9.1	11.6	9.1	192.9	-2.9	93.4	102.4									
1992	93.0	8.0	12.8	21.46	<sup>6</sup> .4	<sup>7</sup> 7.1	.0	.0	121.3	-14.9	71.5	64.7									
1993	174.0	85.2	33.4	31.33	<sup>6</sup> 2.7	<sup>7</sup> 19.4	47.3	37.4	399.4	143.5	353.0	-97.1									

**Table 31.** Estimated consumptive irrigation withdrawals derived from water budget for Belle Fourche Project—Continued  
[ft<sup>3</sup>/s, cubic feet per second; Precip, precipitation]

Water year	Inlet Canal <sup>1</sup> (06434505)		Belle Fourche River near Fruitdale (06436000)		Whitewood Creek above Vale (06436198)		Horse Creek (06436500)	Indian Creek (06436700)	Ungaged tributaries outside study area <sup>2</sup> (ft <sup>3</sup> /s)	Tributary flows generated inside study area <sup>3</sup> (ft <sup>3</sup> /s)	Sum of inflows (ft <sup>3</sup> /s)	Belle Fourche Reservoir	Belle Fourche River Sturgis (06437000)	Consumptive use <sup>4</sup> (ft <sup>3</sup> /s)
	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Precip (inches)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Flow (ft <sup>3</sup> /s)	Change in storage (ft <sup>3</sup> /s)	Outflow (ft <sup>3</sup> /s)				
1994	127.0	109.0	31.2	21.56	62.2	716.8	34.7	27.4	348.3	-53.3	261.0	140.6		
1995	177.0	256.0	64.1	40.03	65.7	735.8	87.9	69.5	696.0	48.8	551.0	96.2		
1996	132.0	318.0	50.6	30.10	68.6	750.9	84.4	66.8	711.3	-4.7	773.0	-57.0		
1997	153.0	311.0	60.1	33.37	612.1	769.6	101.2	80.0	787.0	14.0	622.0	151.0		
1998	164.0	126.0	35.9	29.83	62.9	720.5	21.8	17.3	388.4	13.8	352.0	22.6		
Maximum	240.0	318.0	64.1	40.03	13.4	80.0	105.8	83.7	787.0	156.5	773.0	163.7		
75th percentile	187.0	118.0	38.9	29.07	3.3	25.6	36.5	28.8	403.0	23.8	370.0	110.5		
Median	171.0	47.1	29.5	23.65	2.0	12.2	14.5	11.5	330.6	-2.9	227.0	87.6		
25th percentile	144.0	7.2	19.6	21.28	.6	7.2	5.8	4.6	192.9	-34.7	122.0	49.8		
Minimum	69.7	3.0	8.7	15.78	.3	.3	.0	.0	89.3	-102.1	27.4	-173.6		
Mean	166.0	76.7	29.9	25.01	2.6	19.1	25.3	20.0	339.3	2.7	264.7	71.9		

<sup>1</sup>Includes flow records for 1950-94 for station 06434500, which was located about 5 miles upstream.

<sup>2</sup>Flow estimate based on annual yield for intervening area between gaging stations 06437000 and 06438000, applied to a drainage area of 430 square miles.

<sup>3</sup>Flow estimate based on annual yield for intervening area between gaging stations 06437000 and 06438000, applied to a drainage area of 340 square miles.

<sup>4</sup>Use computed as sum of inflows minus change in storage minus outflow.

<sup>5</sup>Flow estimate based on regression with precipitation:  $Q = -28.56 + 2.337 * \text{Precipitation}$ .

<sup>6</sup>Flow estimate based on regression with flow at station 06425500. Equation given in table 13.

<sup>7</sup>Flow estimate based on regression with flow at station 06425500. Equation given in table 13.