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## SUPPLEMENTAL INFORMATION

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**Table 17.** Estimated average annual recharge for streams with continuous-record stations using two methods, water years 1950-98

[Shaded cells are used in final total; --, not determined]

Water year	Average annual recharge (cubic feet per second)											
	Battle Creek (basins 8 and 8A)		Boxelder Creek (basins 18 and 18A)		Grace Coolidge Creek (basin 10)		French Creek (basin 7)		Spring Creek (basin 14)			
	Calculated	Estimated recharge stepwise regression	Calculated	Estimated recharge stepwise regression	Calculated	Estimated recharge stepwise regression	Calculated	Estimated recharge stepwise regression	Calculated	Estimated recharge stepwise regression		
1950	--	3.50	--	9.89	--	2.22	--	4.22	--	6.33		
1951	--	3.36	--	8.14	--	2.34	--	3.87	--	5.91		
1952	--	5.01	--	12.70	--	3.97	--	5.05	--	18.95		
1953	--	3.84	--	11.46	--	2.27	--	4.33	--	11.93		
1954	--	3.01	--	7.19	--	1.80	--	3.31	--	2.22		
1955	--	2.87	--	7.28	--	1.71	--	3.53	--	.00		
1956	--	3.06	--	6.60	--	1.98	--	3.21	--	3.74		
1957	--	5.50	--	12.90	--	4.98	--	5.64	--	19.99		
1958	--	3.44	--	7.60	--	2.48	--	3.63	--	6.41		
1959	--	3.01	--	5.39	--	1.93	--	2.64	--	4.74		
1960	--	2.97	--	5.55	--	1.82	--	2.63	--	4.58		
1961	--	2.87	--	4.39	--	1.72	--	2.14	--	4.70		
1962	4.43	5.65	--	16.39	--	4.54	--	6.36	--	16.78		
1963	6.61	4.82	--	13.56	--	4.10	--	6.07	--	4.94		
1964	5.61	3.76	--	11.78	--	2.59	--	5.17	--	4.68		
1965	5.79	6.38	--	21.06	--	5.53	--	8.58	--	7.59		
1966	3.94	3.80	--	12.22	--	2.31	--	4.85	--	9.11		
1967	5.18	6.07	--	18.85	--	4.30	4.33	6.26	11.54	29.01		
1968	3.84	3.57	9.57	9.95	2.97	2.53	2.97	4.60	7.28	4.62		
1969	3.11	3.59	9.18	10.83	2.33	2.49	2.33	4.93	6.21	3.05		
1970	3.89	3.76	16.76	14.73	3.18	2.32	3.18	6.19	9.45	4.89		
1971	5.01	5.53	19.21	18.82	4.21	4.22	4.21	7.30	11.64	8.66		
1972	5.59	5.27	18.18	18.45	4.68	4.56	4.68	8.20	12.08	.00		
1973	5.56	4.27	16.79	17.08	4.63	3.33	4.63	7.80	11.64	1.98		
1974	1.81	3.32	6.58	11.12	1.15	2.28	1.15	5.32	3.76	.00		
1975	3.67	3.51	14.89	11.58	2.95	2.27	2.95	5.10	8.62	4.34		
1976	5.16	4.73	15.18	16.38	4.25	4.12	4.25	7.68	10.65	5.04		

**Table 17.** Estimated average annual recharge for streams with continuous-record stations using two methods, water years 1950-98—Continued  
 [Shaded cells are used in final total; --, not determined]

Water year	Average annual recharge (cubic feet per second)													
	Battle Creek (basins 8 and 8A)		Boxelder Creek (basins 18 and 18A)		Grace Coolidge Creek (basin 10)		French Creek (basin 7)		Spring Creek (basin 14)					
	Calculated	Estimated	Calculated	Estimated	Calculated	Estimated	Calculated	Estimated	Calculated	Estimated				
1977	2.93	3.56	14.73	11.46	1.27	2.31	2.31	2.31	--	5.00	5.00	--	7.60	4.03
1978	4.46	4.81	15.84	16.59	3.90	3.65	3.72	3.72	--	6.14	6.99	--	9.93	7.54
1979	4.13	3.57	8.79	10.31	3.66	3.20	2.68	2.68	--	4.14	5.00	--	7.42	4.01
1980	2.72	3.29	5.94	7.74	1.17	1.92	2.32	2.32	--	2.79	3.80	--	4.76	4.36
1981	3.01	3.35	4.55	7.34	2.45	2.13	2.42	2.42	--	2.54	3.63	--	4.71	6.53
1982	4.14	4.14	10.14	16.85	3.89	3.24	2.57	2.57	--	4.50	6.79	--	7.84	8.79
1983	3.81	3.90	21.64	15.27	2.48	3.23	2.59	2.59	7.05	7.39	6.57	--	10.78	3.45
1984	4.89	4.41	19.63	15.52	3.97	4.11	3.42	3.42	6.86	7.32	6.86	--	11.60	5.03
1985	1.22	3.39	7.17	7.93	.82	.65	2.38	2.38	3.53	2.47	3.75	--	3.16	5.07
1986	4.32	4.28	13.10	13.55	2.03	3.47	2.33	2.33	3.63	5.36	4.52	--	8.94	20.21
1987	6.22	3.87	10.92	11.06	3.49	5.06	2.73	2.73	5.50	5.59	4.80	10.64	10.78	10.76
1988	.76	3.07	5.07	7.16	.61	.21	1.97	1.97	2.11	1.72	3.43	1.80	1.95	2.84
1989	.89	2.93	4.19	6.90	1.20	.30	1.80	1.80	1.02	1.55	3.36	.98	1.86	1.15
1990	5.09	3.47	6.18	7.71	3.40	3.96	2.60	2.60	3.65	3.86	3.81	6.76	7.91	7.80
1991	5.15	5.19	11.21	10.71	4.92	4.14	5.01	5.01	5.63	5.21	5.30	10.92	9.47	10.27
1992	3.72	3.30	7.57	6.52	2.98	2.82	2.34	2.34	4.48	3.64	3.21	7.46	6.53	6.02
1993	6.66	5.84	18.05	14.95	7.12	5.60	5.48	5.48	7.26	7.66	6.68	13.35	13.44	14.30
1994	5.21	4.28	17.53	11.87	3.27	4.34	3.32	3.32	6.02	6.91	5.22	11.63	11.41	13.14
1995	6.17	9.09	21.09	29.00	7.20	5.25	9.45	9.45	8.91	8.25	12.68	13.64	13.70	17.34
1996	8.10	7.48	25.55	26.42	6.45	7.02	6.39	6.39	10.92	10.26	10.16	18.02	17.52	17.36
1997	10.50	9.61	34.08	32.89	9.31	9.29	8.64	8.64	13.07	13.53	12.18	22.15	23.15	21.60
1998	8.26	6.71	28.30	20.18	7.57	7.22	6.69	6.69	12.12	11.05	9.25	18.89	18.53	13.67
Mean 1950-98	--	4.37	--	12.85	--	--	3.34	3.34	--	--	5.54	--	--	8.15
Mean 1967-98	4.54	4.60	14.24	14.24	--	3.68	3.61	3.61	--	5.75	6.14	--	9.56	8.34
Mean 1992-98	6.95	6.62	21.74	20.26	6.27	5.94	6.04	6.04	8.97	8.76	8.48	15.02	14.90	14.78

**Table 17.** Estimated average annual recharge for streams with continuous-record stations using two methods—Continued

[Shaded cells are used in final total; --, not determined]

Water year	Average annual recharge (cubic feet per second)														
	Bear Butte Creek (basins 37, 38, and 39)			Bear Gulch (basin 11)			Beaver Creek (basin 1)			Elk Creek (basins 20 and 21)			Total		
	Calcu- lated	Estimated recharge regres- sion	Estimated stepwise regres- sion	Calcu- lated	Estimated recharge regres- sion	Estimated stepwise regres- sion	Calcu- lated	Estimated recharge regres- sion	Estimated stepwise regres- sion	Calcu- lated	Estimated recharge regres- sion	Estimated stepwise regres- sion	Calcu- lated	Estimated recharge regres- sion	Estimated stepwise regres- sion
1950	--	8.62	0.36	--	--	1.74	--	--	--	--	7.62	--	--	44.50	
1951	--	7.72	.35	--	--	1.22	--	--	--	--	7.06	--	--	39.96	
1952	--	9.61	.33	--	--	.81	--	--	--	--	7.26	--	--	63.67	
1953	--	8.79	.36	--	--	1.81	--	--	--	--	7.72	--	--	52.51	
1954	--	7.47	.35	--	--	1.17	--	--	--	--	6.79	--	--	33.32	
1955	--	7.80	.36	--	--	1.51	--	--	--	--	7.15	--	--	32.21	
1956	--	7.00	.34	--	--	.86	--	--	--	--	6.51	--	--	33.29	
1957	--	10.15	.31	--	--	.39	--	--	--	--	7.19	--	--	67.05	
1958	--	7.48	.33	--	--	.81	--	--	--	--	6.65	--	--	38.83	
1959	--	6.21	.32	--	--	.29	--	--	--	--	5.82	--	--	30.35	
1960	--	6.25	.33	--	--	.40	--	--	--	--	5.90	--	--	30.41	
1961	--	5.56	.31	--	--	.00	--	--	--	--	5.34	--	--	27.04	
1962	--	12.49	.35	--	--	1.64	--	--	--	--	8.47	--	--	72.67	
1963	--	12.21	.35	--	--	1.80	--	--	--	--	8.47	--	--	56.32	
1964	--	10.11	.38	--	--	2.39	--	--	--	--	8.53	--	--	49.39	
1965	--	17.16	.38	--	--	3.07	--	--	--	--	10.53	--	--	80.28	
1966	--	9.59	.38	--	--	2.34	--	--	--	--	8.35	--	--	52.95	
1967	--	11.91	.35	.35	1.72	1.79	--	7.75	8.54	8.54	8.54	67.97	87.20		
1968	--	9.04	.36	.32	.27	1.83	--	6.05	7.85	7.85	7.85	43.57	44.36		
1969	--	7.47	0.37	0.32	0.20	2.23	--	5.12	8.31	8.31	8.31	37.76	45.53		
1970	--	9.14	.41	.35	1.49	3.81	--	6.11	10.07	10.07	10.07	56.50	57.63		
1971	--	11.55	.39	.35	1.90	3.04	--	7.54	9.96	9.96	9.96	68.68	72.79		
1972	--	12.78	.40	.35	1.73	3.67	--	8.26	10.83	10.83	10.83	70.89	69.40		
1973	--	12.73	.43	.35	1.49	4.53	--	8.23	11.33	11.33	11.33	68.29	64.45		
1974	--	4.69	.39	.31	.00	2.89	--	3.48	8.98	8.98	8.98	24.35	44.57		
1975	--	8.67	.38	.34	1.17	2.66	--	5.83	8.71	8.71	8.71	51.69	48.34		
1976	--	11.87	.40	.34	1.22	3.57	--	7.73	10.53	10.53	10.53	62.67	65.85		

**Table 17.** Estimated average annual recharge for streams with continuous-record stations using two methods—Continued

[Shaded cells are used in final total; --, not determined]

Water year	Average annual recharge (cubic feet per second)														
	Bear Butte Creek (basins 37, 38, and 39)			Bear Gulch (basin 11)			Beaver Creek (basin 1)			Elk Creek (basins 20 and 21)			Total		
	Calcu- lated	Esti- mated recharge regres- sion	Esti- mated stepwise regres- sion	Calcu- lated	Esti- mated recharge regres- sion	Esti- mated stepwise regres- sion	Calcu- lated	Esti- mated recharge regres- sion	Esti- mated stepwise regres- sion	Calcu- lated	Esti- mated recharge regres- sion	Esti- mated stepwise regres- sion	Calcu- lated	Esti- mated recharge regres- sion	
1977	--	7.08	9.83	--	.34	.38	--	1.14	2.51	2.51	--	4.89	8.55	46.22	47.64
1978	--	10.37	13.15	--	.34	.39	--	1.33	3.22	3.22	--	6.83	9.96	58.90	66.37
1979	--	9.65	9.31	--	.32	.37	--	.13	2.11	2.11	--	6.41	8.25	44.18	45.61
1980	--	6.65	7.71	--	.31	.34	--	.00	1.16	1.16	--	4.63	6.99	29.73	37.71
1981	--	7.25	7.22	--	.31	.34	--	.00	.86	.86	--	4.99	6.69	29.49	38.37
1982	--	9.69	12.22	--	.32	.42	--	.36	4.22	4.22	--	6.43	10.65	46.67	66.65
1983	--	8.97	12.12	--	.36	.42	--	2.31	3.95	3.95	--	6.01	10.34	64.50	58.61
1984	--	11.28	12.60	--	.36	.40	--	1.97	3.40	3.40	--	7.37	10.04	68.53	61.69
1985	--	3.42	7.80	--	.31	.34	--	.00	1.05	1.05	--	2.73	6.88	21.14	38.60
1986	--	10.07	8.85	--	.33	.36	--	.87	1.94	1.94	--	6.66	7.90	53.14	63.96
1987	--	14.15	8.86	--	.33	.36	--	.50	1.83	1.83	--	9.07	7.94	62.61	52.21
1988	--	2.44	7.43	--	.31	.34	--	.00	1.13	1.13	--	2.15	6.81	14.61	34.19
1989	5.56	2.72	7.42	--	0.30	0.35	--	0.00	1.23	1.23	--	2.31	6.85	14.13	31.99
1990	6.76	11.71	7.33	0.33	.31	.34	--	.00	.88	.88	--	7.63	6.78	46.65	40.70
1991	11.25	11.85	10.43	.29	.33	.30	.23	.55	.00	.00	--	7.71	6.72	55.63	53.92
1992	5.03	8.78	6.86	.32	.32	.33	.33	.00	.49	.49	4.67	5.89	6.22	39.27	35.30
1993	12.76	15.07	12.51	.34	.35	.33	.76	1.71	1.02	1.02	8.36	9.62	8.13	78.15	69.24
1994	14.24	11.98	9.34	.35	.35	.35	1.35	1.62	1.68	1.68	9.15	7.79	8.01	67.14	57.21
1995	21.52	14.03	22.56	.36	.36	.38	2.77	2.22	3.46	3.46	10.04	9.00	12.60	80.07	116.55
1996	18.12	18.17	19.31	.39	.37	.40	3.98	2.98	3.91	3.91	11.52	11.45	11.87	101.43	103.29
1997	25.60	23.30	24.22	.39	.40	.39	3.89	4.42	3.77	3.77	13.91	14.49	12.63	133.17	125.94
1998	15.27	18.50	16.14	.39	.38	.36	3.56	3.44	2.58	2.58	12.25	11.65	10.44	105.05	86.02
Mean 1950-98	--	--	10.81	--	--	0.36	--	--	2.01	2.01	--	--	8.40	--	55.85
Mean 1967-98	--	10.53	11.73	--	0.34	0.37	--	1.15	2.39	2.39	--	6.93	8.95	56.72	60.37
Mean 1992-98	16.08	15.69	15.85	0.36	0.36	0.36	2.38	2.34	2.42	2.42	9.99	9.98	9.99	86.65	84.79