

Table 6. Water-quality data for synoptic samples collected in the Daisy Creek and Stillwater River drainage, Montana, August 26, 1999

[Site number indicates distance downstream from tracer-injection site, in feet. Abbreviations: ANC, acid-neutralizing capacity determined on unfiltered samples, formerly referred to as alkalinity; µg/L, micrograms per liter; µS/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter. Symbols: <, less than minimum reporting level; --, no data]

Site number (fig. 2)	Time	Water tempera- ture (degrees Celsius)	Specific conduct- ance, field (µS/cm)	pH, field (stan- dard units)	Hard- ness, total (mg/L as CaCO3)	Calcium, dissolved (mg/L as Ca)	Mag- nesium, dis-solved (mg/L as Mg)	Sodium, dissolved (mg/L as Na)	Potas- sium, dis- solved (mg/L as K)	Chloride, dissolved (mg/ as Cl)	ANC (mg/L as CaCO3)	Sulfate, dissolved (mg/L as SO ₄)	Aluminum, dissolved (µg/L as Al)
DAISY CREEK AND STILLWATER RIVER													
0	1513	9.3	219	7.28	110	34.6	4.67	0.82	0.35	0.21	58.6	46.3	5.2
104	1505	10.9	646	7.24	120	39.6	4.72	72.4	.52	116	49.3	71.1	42.9
177	1437	12.2	636	7.19	130	44.2	5.91	67.7	.65	106	40.6	90.8	43.1
270	1430	12.7	626	7.03	130	43.3	5.83	64.5	.61	101	41.1	89.6	47.9
360	1416	13.7	697	5.36	160	49.1	9.36	62.2	.79	94.8	1.2	183	579
425	1400	16.1	774	4.49	180	51.8	11.9	57.2	.80	86.2	<1	249	7,030
460	1356	16.6	762	4.54	180	50.9	11.9	53.2	.86	82.2	<1	244	6,010
611	1346	19.1	611	3.37	220	60.6	15.7	36.3	1.05	56.0	<1	405	16,700
819	1310	19.2	1,000	3.42	210	58.5	15.2	33.8	1.20	52.1	<1	392	16,400
819 ¹	1310	--	1,000	3.38	190	54.6	14.2	31.7	1.04	52.4	<1	399	16,400
1,082	1255	18.1	729	3.81	190	52.7	14.9	23.9	.90	36.1	<1	307	13,100
1,340	1244	18.1	727	3.75	190	51.9	14.5	22.0	.88	33.0	<1	306	12,700
1,695	1220	16.8	734	3.70	190	53.4	14.8	21.9	.86	32.4	<1	308	13,100
2,334	1200	15.8	713	3.87	200	54.6	14.4	19.5	.84	29.1	<1	306	12,600
2,658	1148	14.9	705	3.87	190	54.5	14.3	18.2	.83	27.7	<1	304	12,100
3,523	1125	13.1	704	3.97	200	55.0	14.2	18.0	.81	27.5	<1	304	12,400
4,283	1116	10.6	691	4.21	200	55.8	14.3	17.5	.83	25.8	<1	302	12,300
5,475	1104	8.3	674	4.14	200	55.9	14.1	16.7	.79	25.2	<1	297	11,600
5,661	1047	8.1	523	4.78	180	51.1	13.3	13.2	.74	18.8	<1	230	5,900
5,839	1040	8.1	386	6.21	150	42.8	10.9	8.81	.59	12.5	5.2	149	92.5
7,324	1026	9.4	374	6.49	150	42.9	10.6	8.25	.66	12.1	6.0	147	10.3
7,829	1011	8.2	370	7.72	150	42.6	10.5	7.87	.59	11.8	9.8	140	10.0
9,925	0947	8.5	369	7.94	150	43.5	10.3	7.22	.64	11.0	14.1	137	17.9
11,549	0930	9.4	367	7.59	150	44.8	10.4	6.89	.64	10.5	16.9	136	19.3
11,890	0920	6.0	190	8.06	86	24.5	5.96	3.10	.25	2.13	60.9	30.5	50.9
12,410	0905	5.2	193	7.36	89	25.7	6.02	2.97	.26	2.05	65.2	29.3	37.2
SURFACE-INFLOW SITES													
74	1509	9.8	275	6.97	130	42.4	4.85	.90	.59	.42	45.8	83.1	56.4
114	1455	4.5	538	4.57	220	65.0	13.6	2.25	1.27	<.29	<1	266	4,890
129	1446	15.5	155	7.59	77	25.1	3.47	.64	.20	.15	56.6	20.8	5.9
161	1442	25.1	732	4.17	270	73.5	21.4	2.28	1.19	.55	<1	424	20,500
292	1427	25.9	1,910	2.96	510	114	54.1	3.58	1.32	2.59	<1	1,190	78,600
348	1423	24.7	2,500	2.75	600	126	68.4	3.91	.91	<.29	<1	1,580	103,000
401	1404	26.4	2,620	2.70	590	123	68.7	4.00	.33	<.29	<1	1,620	101,000
402	1412	16.1	154	7.59	77	21.7	5.49	.56	.31	.23	65.2	13.2	68.8
432	1358	22.8	173	7.68	87	25.0	6.05	.53	.26	.21	69.6	18.2	83.7

Site number (fig. 2)	Aluminum, total recoverable (µg/L as Al)	Cadmium, dissolved (µg/L as Cd)	Cadmium, total recoverable (µg/L as Cd)	Copper, dissolved (µg/L as Cu)	Copper, total recoverable (µg/L as Cu)	Iron, dissolved (µg/L as Fe)	Iron, total recoverable (µg/L as Fe)	Lead, dissolved (µg/L as Pb)	Lead, total recoverable (µg/L as Pb)	Manganese, dissolved (µg/L as Mn)	Manganese, total recoverable (µg/L as Mn)	Zinc, dissolved (µg/L as Zn)	Zinc, total recoverable (µg/L as Zn)
DAISY CREEK AND STILLWATER RIVER--Continued													
0	<28	<1	<1	2.0	1.3	<10	14.4	<1	<1	3.9	4.5	5.5	<40
104	317	<1	<1	77.2	171	<10	208	<1	2.6	149	156	118	160
177	739	1.9	2.2	238	464	<10	74.3	<1	<1	476	470	245	290
270	737	1.8	2.1	180	475	<10	114	<1	<1	461	463	221	276
360	5,800	3.2	3.2	1,440	1,720	5,650	7,070	<1	<1	1,120	1,090	411	430
425	10,100	3.9	4.0	2,650	2,570	6,530	10,500	<1	1.3	1,530	1,510	502	519
460	9,780	3.8	4.0	2,540	2,460	7,780	11,300	<1	1.4	1,500	1,480	505	521
611	18,400	5.8	5.9	5,790	5,690	20,400	23,900	3.5	3.1	2,460	2,330	848	781
819	17,900	5.6	5.4	5,380	5,230	17,000	22,000	3.7	3.5	2,380	2,240	736	756
819 ¹	18,100	5.6	5.6	5,450	5,900	17,100	22,300	3.6	3.5	2,390	2,260	817	764
1,082	13,300	4.2	4.3	4,040	3,890	6,940	15,600	2.2	3.1	1,700	1,650	556	534
1,340	12,900	4.1	4.1	3,960	3,810	6,670	14,800	2.6	3.1	1,690	1,610	542	535
1,695	13,300	4.1	4.2	4,020	3,880	6,430	14,600	2.9	3.7	1,730	1,630	552	531
2,334	12,900	4.0	4.2	3,950	3,750	5,590	13,400	3.4	4.2	1,720	1,590	537	530
2,658	12,900	4.0	4.0	3,750	3,710	5,210	13,100	3.4	4.1	1,660	1,580	524	524
3,523	12,600	3.9	4.2	3,830	3,670	4,750	12,400	3.8	4.4	1,670	1,570	518	520
4,283	12,400	4.0	4.0	3,750	3,610	4,250	11,900	3.8	4.5	1,650	1,570	514	515
5,475	11,800	3.8	4.0	3,570	3,450	3,370	10,400	3.8	4.5	1,620	1,520	506	508
5,661	9,430	3.0	3.1	2,670	2,650	2,280	8,260	1.7	4.5	1,250	1,190	398	396
5,839	6,030	1.9	2.1	1,190	1,720	1,370	5,380	<1	3.0	825	774	258	262
7,324	6,290	1.7	2.0	228	1,610	117	5,850	<1	5.4	762	730	207	258
7,829	5,010	1.6	1.8	139	1,460	16	4,340	<1	2.3	697	658	186	227
9,925	4,330	1.3	1.5	42.2	1,300	<10	3,700	<1	1.4	598	564	109	198
11,549	3,990	1.2	1.4	35.7	1,200	<10	3,410	<1	1.8	556	527	91.0	191
11,890	792	<1	<1	17.3	242	<10	676	<1	<1	110	106	6.4	40.3
12,410	609	<1	<1	17.4	176	<10	495	<1	<1	91.9	88.2	7.3	<40
SURFACE-INFLOW SITES													
74	183	1.1	1.31	126	175	<10	<14	<1	<1	208	194	172	185
114	5,270	11.7	10.7	3,230	2,980	<10	<14	<1	<1	3,090	2,700	1,520	1,380
129	<28	<1	<1	4.5	1.4	<10	20.3	<1	<1	<1	<3	3.2	<40
161	20,400	13.1	13.4	10,300	8,900	77.6	120	11.3	11.4	5,740	5,500	1,770	1,740
292	74,000	19.5	18.8	22,300	19,400	17,500	14,600	11.2	9.2	10,300	8,620	2,820	2,420
348	98,700	20.6	18.8	26,200	24,100	66,600	54,900	1.6	1.4	11,900	10,000	3,000	2,530
401	101,000	9.8	19.2	26,900	24,800	80,900	70,300	<1	1.7	11,700	1,040	2,720	2,480
402	108	<1	<1	11.5	23.9	34.6	382	<1	<1	32.2	32.1	2.4	<40
432	79.3	<1	<1	20.4	21.7	51.5	124	<1	<1	14.2	10.8	2.4	<40

Site number (fig. 2)	Time	Water tempera- ture (degrees Celsius)	Specific conduct- ance, field (µS/cm)	pH, field (stand- ard units)	Hard- ness, total (mg/L as CaCO3)	Calcium, dissolved (mg/L as Ca)	Mag- nesium, dissolved (mg/L as Mg)	Sodium, dis- solved (mg/L as Na)	Potas- sium, dis- solved (mg/L as K)	Chloride, dissolved (mg/ as Cl)	ANC (mg/L as CaCO3)	Sulfate, dissolved (mg/L as SO ₄)	Aluminum, dissolved (µg/L as Al)
SURFACE-INFLOW SITES--Continued													
481	1352	22.4	2,000	2.85	310	80.7	25.4	3.16	1.50	1.37	<1	816	38,600
686	1335	23.4	229	8.10	120	37.0	7.03	.56	.17	.13	121	4.45	10.9
691	1340	24.8	609	3.28	110	33.2	5.45	2.80	1.96	.60	<1	237	10,300
761	1329	14.1	435	3.57	86	27.1	4.38	2.37	1.40	.44	<1	168	6,890
804	1322	17.5	325	3.85	76	23.7	3.99	2.12	1.09	.75	<1	134	5,290
824	1220	13.5	--	8.21	120	32.0	10.0	.43	.32	<.1	93.0	30.3	7.2
928	1307	14.2	341	7.98	170	42.7	15.5	.56	.55	.28	93.5	77.7	5.9
1,010	1301	20.5	241	8.02	120	38.1	5.26	.36	.33	.26	93.2	31.0	9.9
1,189	1248	24.1	208	4.23	64	19.3	3.74	1.77	.78	.11	<1	85.7	1,390
1,545	1235	--	191	7.96	94	33.1	2.73	.64	.51	<.1	85.5	11.4	28.1
1,700	1219	14.0	342	3.98	110	32.7	6.79	1.49	.85	<.1	<1	161	6,460
1,865	1225	15.7	206	6.87	85	27.7	3.84	1.02	.60	.43	17.7	69.0	28.3
1,865 ¹	1225	--	--	--	84	27.3	3.77	.99	.66	.41	45.5	68.0	25.9
1,915	1210	12.3	143	6.94	58	19.7	2.17	1.14	.53	.10	20.0	42.3	8.9
2,360	1154	14.9	145	7.18	64	19.9	3.35	.84	.44	.10	48.4	21.0	7.0
5,519	1055	7.9	226	8.18	110	27.9	10.8	.91	.49	.30	103	17.3	14.6
5,671	1045	7.2	177	7.59	89	26.7	5.37	.56	.25	.18	75.7	16.2	9.5
7,529	1018	8.9	164	8.09	82	23.5	5.59	.60	.44	.16	77.6	8.67	5.8
9,688	0954	11.8	328	7.96	170	58.3	5.38	.47	.36	<.1	164	11.6	5.3
11,560	0927	5.8	146	7.95	73	20.9	5.01	1.60	.15	.18	75.2	3.52	4.6
11,644	0925	4.8	125	7.90	58	15.8	4.45	3.31	.18	.14	64.3	3.44	3.4
field blank	1205	21.2	1.0	5.96	--	<.02	<.12	<.09	<.1	<.1	1.6	<.1	3.1
field blank	1630	--	--	--	--	<.02	<.12	<.09	<.1	<.1	1.7	<.1	2.3

¹Duplicate sample.

Site number (fig. 2)	Aluminum, total recoverable (µg/L as Al)	Cadmium, dissolved (µg/L as Cd)	Cadmium, total recoverable (µg/L as Cd)	Copper, dissolved (µg/L as Cu)	Copper, total recoverable (µg/L as Cu)	Iron, dissolved (µg/L as Fe)	Iron, total recoverable (µg/L as Fe)	Lead, dissolved (µg/L as Pb)	Lead, total recoverable (µg/L as Pb)	Manganese, dissolved (µg/L as Mn)	Manganese, total recoverable (µg/L as Mn)	Zinc, dissolved (µg/L as Zn)	Zinc, total recoverable (µg/L as Zn)
SURFACE-INFLOW SITES--Continued													
481	38,400	10.5	10.7	14,500	13,400	60,700	57,900	6.6	5.8	4,390	4,140	1,600	1,460
686	<28	<1	<1	2.5	1.1	<10	90.1	<1	<1	6.1	13.0	<1	<40
691	11,100	1.0	1.0	1,360	1,300	1,810	1,760	6.4	6.3	517	506	111	114
761	7,430	<1	<1	795	757	213	227	3.7	3.7	396	392	83.6	94.2
804	5,760	<1	<1	539	509	120	113	2.2	2.4	326	331	78.9	93.9
824	<28	<1	<1	<1	<1	<10	38.0	<1	<1	3.7	6.7	<1	<40
928	<28	<1	<1	<1	1.0	<10	<14	<1	<1	1.2	<3	<1	<40
1,010	<28	<1	<1	<1	<1	<10	27.2	<1	<1	<1	<3	<1	<40
1,189	1,610	<1	<1	271	274	33.6	37.7	9.5	8.8	243	241	59.6	58.7
1,545	--	<1	--	1.7	--	<10	--	<1	--	2.8	--	<1	--
1,700	6,570	1.8	1.9	1,110	1,070	289	296	76.4	69.0	1,050	1,030	190	183
1,865	30.6	1.3	1.3	16.4	19.2	<10	<14	<1	<1	2.0	<3	103	104
1,865 ¹	34.3	1.2	1.3	16.0	19.0	<10	<14	<1	<1	2.0	<3	103	106
1,915	<28	<1	<1	3.0	4.0	<10	35.8	<1	<1	2.8	<3	<1	<40
2,360	106	<1	<1	1.8	4.0	<10	199	<1	<1	<1	4.0	<1	<40
5,519	1,280	4.0	<1	1.7	15.1	<10	1,230	4.5	3.5	13.1	35.6	<1	<40
5,671	<28	<1	<1	2.6	<1	<10	<14	<1	<1	<1	<3	<1	<40
7,529	<28	<1	<1	2.9	1.5	<10	29.6	<1	<1	<1	<3	<1	<40
9,688	<28	<1	<1	1.9	1.1	<10	<14	<1	<1	<1	<3	<1	<40
11,560	<28	<1	<1	<1	<1	<10	<14	<1	<1	<1	<3	<1	<40
11,644	<28	<1	<1	<1	<1	<10	<14	<1	<1	<1	<3	<1	<40
field blank	<28	<1	<1	<1	<1	<10	<14	<1	<1	<1	<3	<1	<40
field blank	<28	<1	<1	3.8	<1	<10	<14	<1	<1	<1	<3	<1	<40