COLORADO RIVER MAIN STEM

09010500 COLORADO RIVER BELOW BAKER GULCH, NEAR GRAND LAKE, CO

LOCATION.--Lat 40°19'33", long 105°51'22", in NE¼NW¼ sec.12, T.4 N., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 500 ft downstream from Baker Gulch, 1.0 mi upstream from Bowen Gulch, and 5.5 mi northwest of town of Grand Lake.

DRAINAGE AREA.--53.4 mi^2.

PERIOD OF RECORD.--May 1953 to current year. Daily record for water temperature available, October 1996 to September 1998. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09010500

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,750 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Transmountain diversion upstream from station by Grand River ditch (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	e8.0	e4.5	e4.0	e3.4	e4.0	e4.5	e45	e778	371	40	33
2	14	e7.5	e4.5	e4.0	e3.6	e3.7	e4.8	e45	e623	350	31	28
3	16	e8.0	e4.5	e4.0	e3.8	e3.5	e5.0	e50	e567	349	31	28
4	17	e8.0	e4.5	e4.0	e3.8	e3.5	e5.0	e52	e551	333	43	27
5	17	e8.0	e4.5	e4.0	e3.8	e3.6	e5.0	e58	e478	314	33	24
6	16	e7.5	e4.5	e4.0	e3.8	e3.7	e5.2	e60	437	291	31	23
7	16	e7.0	e4.5	e4.0	e3.8	e4.0	e5.4	e60	397	253	30	25
8	16	e6.8	e4.5	e4.0	e3.8	e4.1	e6.0	e56	349	238	29	31
9	15	e6.5	e4.5	e3.8	e4.0	e3.7	e6.6	e58	368	238	30	30
10	15	e6.0	e4.5	e3.5	e4.0	e3.6	e6.8	e60	433	219	29	29
11	15	e6.0	e5.0	e3.5	e4.0	e3.5	e7.0	e60	465	202	27	31
12	14	e6.0	e5.2	e3.5	e4.0	e3.5	e8.0	e68	469	192	27	32
13	13	e6.0	e5.0	e3.5	e4.0	e3.7	e15	e70	458	185	33	31
14	13	e6.0	e4.8	e3.5	e3.5	e3.8	e25	e80	484	174	30	28
15	13	e6.0	e4.6	e3.5	e3.2	e3.8	e32	e90	508	169	24	26
16	13	e6.5	e4.4	e3.5	e3.0	e3.9	e33	e100	511	160	24	26
17	12	e6.5	e4.2	e3.5	e3.2	e3.9	e36	e110	486	180	68	26
18	13	e6.5	e4.0	e3.2	e3.5	e3.9	e40	e98	513	230	75	26
19	13	e6.5	e4.0	e3.2	e3.5	e4.0	e30	e100	518	202	51	28
20	12	e6.0	e4.0	e3.2	e3.5	e4.0	e28	e130	487	208	43	26
21	12	e5.0	e4.0	e3.2	e3.5	e4.1	e27	e180	468	192	37	24
22	e11	e5.0	e4.0	e3.2	e3.5	e4.1	e29	215	454	163	32	23
23	e10	e5.0	e4.0	e3.2	e3.5	e4.2	e32	249	452	151	34	22
24	e9.5	e5.0	e4.0	e3.2	e3.5	e4.2	e40	305	460	132	40	21
25	e9.0	e5.0	e4.0	e3.2	e3.5	e4.2	e42	e366	428	125	34	20
26	e8.0	e5.0	e4.0	e3.2	e3.8	e4.4	e50	e383	369	121	34	19
27	e7.5	e5.0	e4.0	e3.2	e4.0	e4.2	e40	e458	358	112	31	19
28	e7.0	e5.0	e4.0	e3.2	e4.2	e4.0	e40	e549	377	90	31	18
29	e7.0	e4.5	e4.0	e3.2	---	e3.8	e41	e633	384	52	28	18
30	e7.5	e4.5	e4.0	e3.2	---	e4.0	e43	e706	384	46	31	18
31	e8.0	---	e4.0	e3.2	---	e4.2	---	e800	---	42	40	---
TOTAL	382.5	184.3	134.2	108.6	102.7	120.8	692.3	6,294	14,014	6,084	1,101	760
MEAN	12.3	6.14	4.33	3.50	3.67	3.90	23.1	203	467	196	35.5	25.3
MAX	17	8.0	5.2	4.0	4.2	4.4	50	800	778	371	75	33
MIN	7.0	4.5	4.0	3.2	3.0	3.5	4.5	45	349	42	24	18
AC-FT	759	366	266	215	204	240	1,370	12,480	27,800	12,070	2,180	1,510

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003, BY WATER YEAR (WY)

MEAN	23.7	15.2	9.89	7.96	7.15	7.69	27.5	171	313	112	33.9	26.8
MAX	83.7	37.2	20.2	12.8	10.6	12.1	74.5	329	596	425	104	78.1
(WY)	(1962)	(1962)	(1998)	(1985)	(1984)	(1999)	(1962)	(1996)	(1997)	(1983)	(1983)	(1997)
MIN	9.25	6.14	4.33	3.50	3.67	3.90	9.11	65.7	69.8	24.4	11.1	11.8
(WY)	(1957)	(2003)	(2003)	(2003)	(2003)	(2003)	(1991)	(1995)	(1954)	(2002)	(1954)	(1956)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1953 - 2003	
ANNUAL TOTAL	9,106.7		29,978.4			
ANNUAL MEAN	24.9		82.1		63.3	
HIGHEST ANNUAL MEAN					109	1983
LOWEST ANNUAL MEAN					26.3	1954
HIGHEST DAILY MEAN	191	Jun 2	e800	May 31	916	Jun 30, 1957
LOWEST DAILY MEAN	e4.0	Dec 18	e3.0	Feb 16	a3.0	Jan 13, 1963
ANNUAL SEVEN-DAY MINIMUM	e4.0	Dec 18	e3.2	Jan 18	3.2	Jan 18, 2003
MAXIMUM PEAK FLOW			Not determined		976	Jun 30, 1957
MAXIMUM PEAK STAGE			7.44	Jun 1	b7.19	Jun 30, 1957
ANNUAL RUNOFF (AC-FT)	18,060		59,460		45,870	
10 PERCENT EXCEEDS	64		361		190	
50 PERCENT EXCEEDS	12		13		18	
90 PERCENT EXCEEDS	5.0		3.5		6.5	

e Estimated.
a Also occurred Feb. 16, 2003.
b Maximum gage height, 7.44 ft, Jun 1, 2003, backwater from debris.

09018500 LAKE GRANBY NEAR GRANBY, CO

LOCATION.--Lat 40°10'55", long 105°52'14", in NW¼NE¼, sec.35, T.3 N., R.76 W., Grand County, Hydrologic Unit 14010001, in Granby pumping plant at north shore of lake, 2.5 mi north of Granby Dam on Colorado River and 7.5 mi northeast of Granby.

DRAINAGE AREA.--312 mi^2.

RESERVOIR ELEVATIONS AND CONTENTS RECORDS

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1955, published as Granby Reservoir near Granby. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09018500

REVISED RECORDS.--WSP2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is above NGVD of 1929, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929. Prior to Apr. 9, 1951, nonrecording gage at dam at present datum.

REMARKS.--Lake is formed by earthfill dam and dikes. Regulation began Sept. 13, 1949, and usable storage began June 14, 1950, while dam was under construction. Usable capacity, 465,600 acre-ft, between elevations 8,186.00 ft, trash rack sill at outlet, and 8,280.00 ft, top of radial spillway gates. Dead storage, 74,190 acre-ft. Figures given represent usable contents. Lake is used to store water for pumping to Shadow Mountain Lake for transmoutain diversion through Alva B. Adams tunnel for power and irrigation in South Platte River basin. Water-quality data for this site is included under the Three Lakes Water-Quality Study section of this report.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 465,900 acre-ft, July 13, 1962, elevation, 8,280.05 ft; minimum since appreciable storage was attained, 13,070 acre-ft, Apr. 16, 1978, elevation, 8,190.93 ft.

EXTREMES (AT 0800) FOR CURRENT YEAR.--Maximum contents, 328,800 acre-ft, July 30, elevation, 8,259.88 ft; minimum, 14,720 acre-ft, Mar. 17, elevation, 8,191.52 ft.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	8,216.64	102,500	-
Oct. 31	8,217.39	105,600	+3,110
Nov. 30	8,212.29	84,910	-20,700
Dec. 31	8,205.52	59,460	-25,450
CAL YR 2002	-	-	-183,800
Jan. 31	8,198.33	35,130	-24,330
Feb. 28	8,194.34	22,860	-12,280
Mar. 31	8,192.00	16,060	-6,800
Apr. 30	8,199.04	37,410	+21,350
May 31	8,228.74	156,300	+118,900
June 30	8,256.56	308,100	+151,800
July 31	8,259.75	328,000	+19,810
Aug. 31	8,256.95	310,500	-17,420
Sept. 30	8,254.87	297,800	-12,690
WTR YR 2003	-	-	+195,300

09019500 COLORADO RIVER NEAR GRANBY, CO

LOCATION.--Lat 40°07'15", long 105°54'00", in SW¼NW¼ sec.22, T.2 N., R.76 W., Grand County, Hydrologic Unit 14010001, on right bank 0.3 mi upstream from bridge on U.S. Highway 34, 1.3 mi upstream from Willow Creek, and 3.2 mi northeast of Granby.

DRAINAGE AREA.--323 mi^2.

PERIOD OF RECORD.--October 1907 to September 1911 (published as Grand River near Granby), October 1933 to September 1953. May 1961 to current year (irrigation season only). Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09019500

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,960 ft above NGVD of 1929, from topographic map. June 10, 1908 to Sept. 30, 1911, and May 12 to June 10, 1934, nonrecording gage, at site 300 ft upstream at different datums. June 11, 1934 to Sept. 30, 1953, water-stage recorder at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Lake Granby (station 09018500) since Sept. 13, 1949. Several diversions for irrigation of hay meadows upstream from station. Transmountain diversions upstream from station by Eureka and Grand River ditches and Alva B. Adams tunnel (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF SEASONAL RECORD.--Maximum discharge, 2,520 ft^3/s, June 22, 1996, 5.76 ft; minimum daily, 9.6 ft^3/s, Sept. 21, 1981.

EXTREMES FOR PERIOD OF CONTINUOUS RECORD.--Maximum discharge observed, 4,100 ft^3/s, June 20, 1909, gage height 5.5 ft site and datum then in use; minimum daily, 6.6 ft^3/s, Jan. 29, 1950; minimum observed prior to starting construction of Shadow Mountain Lake, 20 ft^3/s, Apr. 6, 1936 (discharge measurement).

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 115 ft^3/s, June 12, gage height, 1.37 ft; minimum daily, 16 ft^3/s, Oct. 3, Nov. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	---	---	---	---	---	e90	81	82	42	27
2	18	17	---	---	---	---	---	e90	81	78	38	23
3	16	16	---	---	---	---	---	e90	82	76	37	23
4	18	16	---	---	---	---	---	e90	79	78	39	23
5	23	17	---	---	---	---	---	e90	75	78	38	24
6	22	18	---	---	---	---	---	e89	82	79	39	25
7	24	18	---	---	---	---	---	e89	78	79	40	24
8	18	---	---	---	---	---	---	e89	78	77	39	24
9	18	---	---	---	---	---	---	e87	78	72	37	24
10	18	---	---	---	---	---	---	e86	78	76	35	23
11	18	---	---	---	---	---	---	e85	80	75	36	22
12	18	---	---	---	---	---	---	e85	93	72	36	22
13	18	---	---	---	---	---	---	e85	85	73	39	20
14	18	---	---	---	---	---	---	e82	81	74	43	22
15	18	---	---	---	---	---	---	e82	77	71	43	21
16	19	---	---	---	---	---	---	e82	84	73	43	22
17	19	---	---	---	---	---	---	e80	84	72	44	22
18	19	---	---	---	---	---	---	e80	81	72	42	22
19	19	---	---	---	---	---	---	e80	81	72	39	22
20	19	---	---	---	---	---	---	79	84	73	39	22
21	18	---	---	---	---	---	---	77	79	73	42	21
22	18	---	---	---	---	---	---	78	77	72	41	21
23	19	---	---	---	---	---	---	80	80	73	42	21
24	18	---	---	---	---	---	---	75	78	72	42	21
25	18	---	---	---	---	---	---	76	77	72	42	21
26	18	---	---	---	---	---	---	78	82	73	41	21
27	18	---	---	---	---	---	---	71	80	71	40	22
28	18	---	---	---	---	---	---	73	79	71	40	22
29	18	---	---	---	---	---	---	73	80	75	40	22
30	17	---	---	---	---	---	---	78	80	73	44	22
31	17	---	---	---	---	---	---	81	---	71	45	---
TOTAL	575	---	---	---	---	---	---	2,550	2,414	2,298	1,247	671
MEAN	18.5	---	---	---	---	---	---	82.3	80.5	74.1	40.2	22.4
MAX	24	---	---	---	---	---	---	90	93	82	45	27
MIN	16	---	---	---	---	---	---	71	75	71	35	20
AC-FT	1,140	---	---	---	---	---	---	5,060	4,790	4,560	2,470	1,330

e Estimated.

09022000 FRASER RIVER AT UPPER STATION, NEAR WINTER PARK, CO

LOCATION.--Lat 39°50'45", long 105°45'05", in sec.26, T.2 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank 0.8 mi upstream from Parsenn Creek, 2.5 mi south of Winter Park, and 7.8 mi southeast of Fraser.

DRAINAGE AREA.--10.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to September 1908, July to November 1909 (published as "at upper station near Fraser"), October 1968 to September 1973, August 1984 to current year. January to September 1911, gage heights only (published as "near Fraser"). Records for August to December 1910, published in WSP 289 as "near Fraser" are unreliable and should not be used. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09022000

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 9,520 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1968, nonrecording gage at site 0.9 mi upstream at different datum. Since Oct. 1, 1968, supplementary water-stage recorder and Parshall flume on Berthoud Pass ditch.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station through Berthoud Pass ditch to West Fork Clear Creek basin.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	e2.5	e2.5	e2.1	e2.1	e2.3	e2.6	e5.4	e220	45	16	10
2	3.8	e2.6	e2.6	e2.1	e2.1	e2.4	e2.7	e5.2	e125	42	15	10
3	4.0	e2.7	e2.6	e2.1	e2.2	e2.3	e2.7	e5.4	117	41	15	12
4	3.5	e2.6	e2.6	e2.1	e2.2	e2.3	e2.9	e5.5	111	39	e16	11
5	3.5	e2.5	e2.6	e2.1	e2.2	e2.3	e3.1	e5.2	95	37	e17	12
6	3.5	e2.6	e2.6	e2.1	e2.2	e2.3	e3.1	e5.0	81	35	e16	14
7	3.6	e2.5	e2.7	e2.1	e2.2	e2.2	e3.1	e5.1	72	33	e15	16
8	3.5	e2.4	e2.8	e2.2	e2.2	e2.2	e3.2	5.0	66	32	14	16
9	3.3	e2.5	e2.8	e2.2	e2.3	e2.2	e3.3	5.0	67	30	13	21
10	3.2	e2.5	e2.9	e2.1	e2.3	e2.2	e3.6	4.9	77	29	12	18
11	3.1	e2.5	e2.9	e2.0	e2.3	e2.1	e3.7	4.7	86	27	12	17
12	3.1	e2.5	e2.9	e2.0	e2.3	e2.1	e4.0	5.7	88	26	12	17
13	e2.7	e2.5	e2.9	e2.0	e2.3	e2.1	e4.2	7.5	85	24	13	16
14	e2.5	e2.5	e2.8	e2.0	e2.2	e2.2	e4.4	9.8	83	23	13	16
15	e2.3	e2.5	e2.7	e2.0	e2.1	e2.2	e4.6	11	85	22	12	15
16	e2.2	e2.5	e2.6	e2.0	e2.1	e2.2	e4.5	16	82	21	14	14
17	e2.0	e2.5	e2.6	e2.0	e2.1	e2.2	e4.4	20	77	21	15	14
18	e2.0	e2.5	e2.5	e2.1	e2.1	e2.4	e4.3	21	76	21	16	14
19	e2.0	e2.5	e2.5	e2.1	e2.1	e2.4	e3.9	22	73	23	13	13
20	e1.9	e2.5	e2.5	e2.1	e2.1	e2.5	e3.7	25	69	29	12	13
21	e1.8	e2.4	e2.5	e2.1	e2.1	e2.6	e3.8	28	65	22	12	12
22	e1.8	e2.4	e2.5	e2.1	e2.0	e2.6	e3.8	35	63	20	11	12
23	e1.9	e2.4	e2.4	e2.1	e2.0	e2.7	e4.2	38	65	20	10	12
24	e2.0	e2.4	e2.3	e2.1	e2.1	e2.7	e4.5	46	64	19	11	12
25	e2.0	e2.4	e2.3	e2.1	e2.1	e2.7	e4.7	55	57	25	13	12
26	e2.1	e2.4	e2.2	e2.1	e2.1	e2.7	e5.1	60	53	21	11	11
27	e2.1	e2.5	e2.2	e2.1	e2.1	e2.7	e5.4	74	e50	19	10	11
28	e2.3	e2.5	e2.2	e2.1	e2.1	e2.7	e5.7	e144	e49	18	10	11
29	e2.5	e2.5	e2.1	e2.1	---	e2.7	e5.9	e184	e48	18	9.9	10
30	e3.0	e2.5	e2.1	e2.1	---	e2.6	e5.7	e188	e47	17	12	10
31	e2.8	---	e2.1	e2.1	---	e2.6	---	e213	---	16	11	---
TOTAL	83.4	74.8	78.5	64.6	60.3	74.4	120.8	1,259.4	2,396	815	401.9	402
MEAN	2.69	2.49	2.53	2.08	2.15	2.40	4.03	40.6	79.9	26.3	13.0	13.4
MAX	4.0	2.7	2.9	2.2	2.3	2.7	5.9	213	220	45	17	21
MIN	1.8	2.4	2.1	2.0	2.0	2.1	2.6	4.7	47	16	9.9	10
AC-FT	165	148	156	128	120	148	240	2,500	4,750	1,620	797	797

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

MEAN	5.66	4.01	3.02	2.36	2.05	2.13	4.38	27.8	68.5	27.9	12.0	8.03
MAX	9.66	5.75	5.11	2.97	2.67	2.73	6.45	50.6	124	74.6	21.3	13.4
(WY)	(1985)	(2000)	(1998)	(1998)	(2000)	(1997)	(1971)	(2000)	(1997)	(1995)	(1999)	(2003)
MIN	2.69	2.49	1.62	1.63	1.45	1.41	2.12	8.10	17.5	6.99	3.70	2.80
(WY)	(2003)	(2003)	(1995)	(1987)	(1987)	(1987)	(1973)	(1995)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1969 - 2003	
ANNUAL TOTAL	1,986.3		5,831.1			
ANNUAL MEAN	5.44		16.0		14.0	
HIGHEST ANNUAL MEAN					19.2	1997
LOWEST ANNUAL MEAN					5.83	2002
HIGHEST DAILY MEAN	30	Jun 3	e220	Jun 1	a220	Jun 7, 1997
LOWEST DAILY MEAN	e1.7	Feb 21	e1.8	Oct 21	1.2	Feb 26, 1989
ANNUAL SEVEN-DAY MINIMUM	e1.8	Feb 20	e1.9	Oct 17	1.4	Feb 20, 1989
MAXIMUM PEAK FLOW			not determined		b291	Jun 8, 1997
MAXIMUM PEAK STAGE			not determined		c2.08	Jun 8, 1997
ANNUAL RUNOFF (AC-FT)	3,940		11,570		10,130	
10 PERCENT EXCEEDS	13		47		41	
50 PERCENT EXCEEDS	2.8		3.3		4.8	
90 PERCENT EXCEEDS	2.0		2.1		2.0	

e Estimated.
a Also occurred June 1, 2003.
b From rating curve extended above 140 ft^3/s.
c Maximum gage height 2.26 ft, Jun 4, 1997, backwater from debris.

09022000 FRASER RIVER AT UPPER STATION NEAR WINTER PARK, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1994 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09022000

REMARKS.--Nutrient analysis based on low-level methods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
17...	1300	2.7	10.3	7.9	110	2.5	32	6.89	3.50	11.8	<10	<0.015	0.126
NOV													
04...	1400	2.7	10.1	7.9	113	0.0	35	7.64	3.77	13.5	<10	<0.015	0.148
DEC													
13...	1015	2.9	11.4	8.0	105	0.0	28	7.34	2.45	17.1	<10	<0.015	0.182
MAY													
07...	1030	5.1	10.1	8.3	385	2.0	77	19.6	6.77	97.3	<10	<0.015	0.156
JUL													
10...	1330	28	9.9	7.8	73	8.5	25	5.76	2.66	8.66	<10	<0.015	0.037
SEP													
08...	1000	15	9.5	8.6	99	5.0	32	7.41	3.30	12.1	<10	<0.015	0.160

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT				
17...	<0.002	<0.007	E.002	E.002
NOV				
04...	<0.002	<0.007	<0.004	0.007
DEC				
13...	<0.002	<0.007	E.003	<0.004
MAY				
07...	<0.002	<0.007	E.004	0.005
JUL				
10...	<0.002	<0.007	E.003	E.004
SEP				
08...	<0.002	<0.007	<0.004	0.004

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

09023750 FRASER RIVER BELOW BUCK CREEK AT WINTER PARK, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 39°53'33", long 105°45'49", T.2 S., R.75 W., Grand County, Hydrologic Unit 14010001 on left bank approximately 400 ft upstream from the confluence of Cub Creek and the Fraser River.

DRAINAGE AREA.--25.6 mi^2.

PERIOD OF RECORD.--August 1990 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09023750

REMARKS.--Nutrient analysis based on low-level methods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
17...	1210	6.8	10.0	8.4	119	4.0	37	9.37	3.29	11.2	<10	<0.015	0.040
NOV													
07...	1000	3.0	10.2	8.4	137	1.5	39	9.97	3.37	12.9	<10	<0.015	0.085
DEC													
13...	1400	7.1	11.5	7.8	118	1.0	35	8.88	3.21	11.8	<10	<0.015	0.096
JAN													
09...	1230	9.3	11.1	8.0	125	0.0	39	9.47	3.65	13.6	<10	<0.015	0.106
FEB													
11...	1400	5.9	10.9	8.1	123	1.0	38	9.52	3.55	11.9	<10	<0.015	0.094
MAR													
26...	1300	11	11.3	7.8	220	2.5	48	12.0	4.40	43.0	53	<0.015	0.109
APR													
17...	1000	10	9.4	7.8	312	2.0	63	16.0	5.61	70.5	12	<0.015	0.179
MAY													
06...	1145	10	10.7	8.5	272	4.0	56	14.8	4.61	57.1	<10	<0.015	0.104
JUN													
24...	1430	89	8.4	8.0	62	8.5	20	4.81	2.02	6.98	<10	<0.015	0.091
JUL													
10...	1230	12	9.2	8.2	102	10.5	29	7.47	2.50	13.7	<10	<0.015	<0.022
AUG													
05...	1415	11	7.8	7.8	105	11.5	24	6.32	2.11	12.4	<10	<0.015	0.035
SEP													
08...	1050	11	8.8	8.6	110	7.5	35	8.70	3.17	12.6	<10	<0.015	0.089

09023750 FRASER RIVER BELOW BUCK CREEK AT WINTER PARK, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)
OCT				
17...	E.002	<0.007	E.003	0.011
NOV				
07...	<0.002	<0.007	E.003	0.014
DEC				
13...	<0.002	<0.007	E.003	0.017
JAN				
09...	<0.002	<0.007	<0.004	0.014
FEB				
11...	<0.002	<0.007	E.003	0.014
MAR				
26...	E.002	<0.007	E.003	0.059
APR				
17...	<0.002	<0.007	0.004	0.020
MAY				
06...	E.002	<0.007	E.003	0.019
JUN				
24...	<0.002	<0.007	E.004	0.009
JUL				
10...	<0.002	<0.007	0.006	0.007
AUG				
05...	<0.002	<0.007	0.005	0.013
SEP				
08...	<0.002	<0.007	0.005	0.010

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

09024000 FRASER RIVER AT WINTER PARK, CO

LOCATION.--Lat 39°54'00", long 105°46'34", in SE¼ sec.4, T.2 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank 500 ft downstream from bridge on U.S. Highway 40, 1.4 mi south of Winter Park, 2.0 mi upstream from Vasquez Creek, 3.5 mi downstream from point of diversion for Moffat water tunnel, and 3.9 mi southeast of Fraser.

DRAINAGE AREA.--27.6 mi^2.

PERIOD OF RECORD.--September 1910 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Arrow" 1910-23, as "near West Portal" 1924-39, and as "near Winter Park" 1990-1992. Records since June 9, 1936, equivalent to earlier records if transmountain diversions are added to flow past station. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09024000

REVISED RECORDS.--WSP 929: Drainage area. WDR CO-89-2: 1988 (M).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,906.23 ft above NGVD of 1929, Colorado State Highway Datum (levels by U.S. Geological Survey). Sept. 23, 1910 to May 12, 1916, nonrecording gage at trail bridge 0.6 mi upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Transmountain diversions upstream from station through Berthoud Pass ditch (see elsewhere in this report) and to Moffat water tunnel (not known since 1968). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	4.2	3.5	6.0	5.2	e4.7	7.6	17	230	40	12	12
2	4.5	3.9	3.7	6.8	5.2	e4.8	7.9	e16	131	30	12	13
3	5.4	5.0	3.7	6.0	5.5	e4.8	7.7	e17	81	14	12	11
4	4.7	e6.0	3.6	6.1	e5.0	e4.9	6.9	e16	55	13	12	11
5	4.6	4.0	3.6	6.3	e4.8	e4.9	6.9	e15	e54	12	12	12
6	4.6	e3.9	3.5	6.2	e4.8	e5.0	6.4	e14	48	12	12	12
7	4.2	e3.8	e3.7	e6.2	e4.7	5.0	6.5	e14	47	13	12	14
8	4.0	3.7	e3.8	e6.2	e4.7	5.1	7.8	e13	40	12	12	13
9	3.8	3.9	e4.0	e6.3	e4.7	4.9	7.8	e12	37	12	12	14
10	3.7	e3.8	e4.1	e6.4	e4.6	5.1	9.1	e11	35	12	12	13
11	3.9	e3.7	4.2	6.5	4.6	5.3	9.9	e12	53	12	13	12
12	4.0	e3.6	e4.5	6.3	4.8	5.7	10	e12	90	12	12	12
13	3.9	e3.5	e4.8	6.5	4.6	5.9	12	e13	e76	11	12	11
14	3.9	3.5	e5.0	6.5	4.6	6.3	13	e14	e75	10	12	11
15	4.0	3.4	e5.5	6.4	4.4	6.7	12	e15	71	12	12	9.2
16	4.1	e3.6	e6.0	e6.4	4.2	6.5	9.8	e16	55	11	12	7.1
17	4.2	e3.6	5.9	6.4	4.4	6.4	9.7	e17	34	12	13	6.7
18	4.2	3.7	5.8	e6.5	4.4	e6.3	10	e18	31	13	14	5.9
19	4.1	e3.7	5.7	e6.5	4.4	e6.3	8.9	e21	30	13	12	5.6
20	4.1	3.7	6.1	e6.5	5.2	e6.3	8.9	e24	61	20	12	5.2
21	3.8	3.7	5.8	e6.5	4.5	e6.2	9.3	24	79	14	12	5.0
22	3.7	4.1	5.8	6.4	4.6	6.2	9.9	26	77	12	12	5.0
23	3.5	3.8	5.7	6.3	4.6	6.7	9.7	27	78	12	12	5.1
24	3.5	3.7	5.8	6.2	4.7	6.7	13	29	78	11	12	5.0
25	3.4	3.7	5.7	5.9	4.8	6.8	10	31	67	13	13	4.8
26	3.2	e3.6	5.7	5.9	4.7	6.7	12	31	54	12	12	4.8
27	3.3	e3.6	5.8	5.8	4.7	6.6	14	46	50	12	11	5.0
28	e3.3	3.6	6.0	5.4	e4.7	e6.4	15	125	48	12	12	4.4
29	3.3	3.5	6.0	5.4	---	e6.2	17	169	47	13	12	4.7
30	e3.3	3.4	5.9	5.4	---	6.0	17	175	43	12	13	4.6
31	4.0	---	6.3	5.5	---	6.7	---	221	---	11	12	---
TOTAL	123.0	114.9	155.2	191.7	132.1	182.1	305.7	1,211	1,955	430	377	259.1
MEAN	3.97	3.83	5.01	6.18	4.72	5.87	10.2	39.1	65.2	13.9	12.2	8.64
MAX	5.4	6.0	6.3	6.8	5.5	6.8	17	221	230	40	14	14
MIN	3.2	3.4	3.5	5.4	4.2	4.7	6.4	11	30	10	11	4.4
AC-FT	244	228	308	380	262	361	606	2,400	3,880	853	748	514

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2003, BY WATER YEAR (WY)

MEAN	10.7	9.39	7.53	6.61	6.18	6.61	12.6	48.2	112	47.8	19.4	12.9
MAX	31.0	20.4	21.1	12.1	9.88	13.6	31.5	163	354	209	72.2	46.0
(WY)	(1914)	(1928)	(1928)	(1928)	(1938)	(1918)	(1925)	(1928)	(1918)	(1957)	(1929)	(1925)
MIN	2.93	2.72	2.83	2.92	3.11	3.58	5.05	7.42	5.76	4.92	3.37	2.57
(WY)	(1957)	(1965)	(1965)	(1967)	(1933)	(1990)	(1970)	(1954)	(1954)	(1954)	(1954)	(1966)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1911 - 2003	
ANNUAL TOTAL	2,327.6		5,436.8			
ANNUAL MEAN	a6.38		a14.9		a25.0	
HIGHEST ANNUAL MEAN					60.9	1914
LOWEST ANNUAL MEAN					5.93	1954
HIGHEST DAILY MEAN	14	May 25	230	Jun 1	622	Jun 14, 1918
LOWEST DAILY MEAN	3.2	Oct 26	3.2	Oct 26	b2.0	Mar 29, 1912
ANNUAL SEVEN-DAY MINIMUM	3.3	Oct 24	3.3	Oct 24	2.1	Oct 5, 1956
MAXIMUM PEAK FLOW			294	May 31	820	Jun 13, 1918
MAXIMUM PEAK STAGE			2.56	May 31	c2.90	Jun 13, 1918
ANNUAL RUNOFF (AC-FT)	a4,620		a10,780		a18,120	
10 PERCENT EXCEEDS	10		31		56	
50 PERCENT EXCEEDS	5.0		6.5		8.8	
90 PERCENT EXCEEDS	3.8		3.8		4.2	

e Estimated.
a Significantly affected by upstream diversions into the Moffat water tunnel.
b Also occurred Mar 30, Apr 9, 1912, and Jan 23, 1915.
c Maximum gage height, 2.95 ft, Jun 9, 1997.

09025000 VASQUEZ CREEK AT WINTER PARK, CO

LOCATION.--Lat 39°55'13", long 105°47'05", in NE¼NW¼ sec.33. T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 30 ft downstream from bridge on U.S. Highway 40, 0.2 mi upstream from mouth, 2.5 mi southeast of Fraser, and 4.5 mi downstream from Moffat water tunnel diversion.

DRAINAGE AREA.--27.8 mi^2.

PERIOD OF RECORD.--June to August 1907, July to November 1909, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1313. Records for June to October 1908, published in WSP 269, are unreliable and should not be used. Published as Vasquez River at lower station, near Fraser 1907-09, as "near West Portal" 1934-39, and as "near Winter Park" 1940-87. Records for May 26, 1937 to September 1959, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09025000

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8,768.48 ft above NGVD of 1929. June 1, 1907 to Oct. 31, 1909, nonrecording gage at site 0.8 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel not known since 1959. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	e6.2	e7.5	5.4	e4.8	e3.8	e3.7	e8.0	e100	43	12	11
2	5.1	e6.4	e7.5	5.4	e4.6	e3.8	e3.7	e8.0	e50	32	13	11
3	5.4	e6.4	e7.4	5.4	e4.4	e3.8	e3.7	e7.8	e30	15	12	11
4	5.5	e6.4	e7.3	5.6	e4.2	e3.8	e3.7	e8.0	e28	15	12	11
5	5.2	e6.4	e7.2	5.8	e4.2	e3.8	e3.7	e7.2	e27	15	12	11
6	5.3	e6.4	e7.4	5.7	e4.2	e3.8	e3.7	e7.2	e23	15	12	11
7	6.5	e6.4	e7.6	5.4	e4.2	e3.8	e3.7	e7.2	e22	14	12	11
8	5.5	e6.4	e7.8	5.4	e4.2	e3.8	e3.2	e8.2	e19	14	12	11
9	4.4	e6.4	e8.0	6.0	e4.2	e3.8	e4.0	e9.2	20	14	12	12
10	4.6	e6.4	e8.0	7.2	e4.2	e3.6	e4.8	e10	26	14	12	11
11	4.8	e6.4	e8.5	7.6	e4.2	e3.6	e5.2	e9.0	37	13	12	11
12	4.8	e6.4	e8.6	7.2	e4.2	e3.6	e5.6	e8.8	66	13	12	11
13	4.8	e6.4	e8.4	6.2	e4.2	e3.6	e6.0	e11	95	13	12	11
14	4.8	e6.4	e8.2	6.0	e4.2	e3.6	e6.8	e13	98	13	12	11
15	4.7	e6.4	e8.0	6.1	e4.2	e3.6	e7.0	16	94	13	12	11
16	4.4	e6.4	e7.8	6.1	e4.0	e3.8	e6.8	24	61	13	12	7.2
17	4.4	e6.4	e7.4	5.9	e4.0	e3.7	e6.4	26	18	14	22	6.3
18	4.3	e6.4	e7.0	5.8	e3.9	e3.7	e6.0	27	17	14	14	6.2
19	4.2	e6.4	e6.8	5.8	e3.9	e3.7	e6.0	29	40	13	11	6.2
20	4.3	e6.4	e6.6	5.8	e3.8	e3.7	e6.4	e32	88	15	11	6.1
21	4.8	e6.4	e6.4	5.8	e3.8	e3.7	e6.0	e28	122	13	11	6.1
22	5.0	e6.4	e6.2	5.8	e3.8	e3.7	e5.5	e23	115	13	11	5.8
23	e4.8	e6.4	e6.0	5.8	e3.7	e3.7	e6.0	e19	112	13	11	5.7
24	e5.4	e6.4	e6.0	5.8	e3.6	e3.7	e6.5	e32	109	13	11	5.4
25	e5.6	e6.4	e5.8	5.8	e3.6	e3.7	e7.0	e40	99	13	11	5.6
26	e5.8	e6.6	e5.5	5.7	e3.7	e3.7	e7.2	e54	91	13	11	5.7
27	e6.0	e6.8	e5.4	5.4	e3.8	e3.7	e7.5	e75	73	13	11	5.6
28	e6.2	e6.9	e5.4	5.4	e3.7	e3.7	e7.8	e100	51	12	11	5.5
29	e6.5	e7.0	e5.4	5.4	---	e3.8	e7.8	e110	47	12	11	5.5
30	e6.8	e7.0	e5.5	e5.0	---	e3.8	e8.0	e100	44	13	12	12
31	e7.0	---	5.6	e4.8	---	e3.8	---	e105	---	12	11	---
TOTAL	162.0	194.1	216.2	180.5	113.5	115.4	169.4	962.6	1,822	465	373	260.9
MEAN	5.23	6.47	6.97	5.82	4.05	3.72	5.65	31.1	60.7	15.0	12.0	8.70
MAX	7.0	7.0	8.6	7.6	4.8	3.8	8.0	110	122	43	22	12
MIN	4.2	6.2	5.4	4.8	3.6	3.6	3.2	7.2	17	12	11	5.4
AC-FT	321	385	429	358	225	229	336	1,910	3,610	922	740	517

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

MEAN	6.08	6.64	5.61	4.99	4.66	4.79	7.63	26.7	66.3	22.5	8.23	6.89
MAX	35.1	21.9	13.4	10.0	9.99	9.14	19.8	119	234	177	41.2	27.0
(WY)	(1962)	(1962)	(1962)	(1958)	(1958)	(1995)	(1943)	(1958)	(1942)	(1983)	(1936)	(1995)
MIN	0.66	1.84	1.30	1.28	0.80	1.02	2.41	2.81	0.14	0.34	0.39	0.20
(WY)	(1965)	(1963)	(1965)	(1965)	(1960)	(1965)	(1965)	(1954)	(1940)	(1956)	(1960)	(1944)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1934 - 2003	
ANNUAL TOTAL	2,398.0		5,034.6			
ANNUAL MEAN	a6.57		a13.8		a14.2	
HIGHEST ANNUAL MEAN					39.6	1936
LOWEST ANNUAL MEAN					2.30	1963
HIGHEST DAILY MEAN	9.2	Jun 15	122	Jun 21	417	Jun 25, 1983
LOWEST DAILY MEAN	2.9	Aug 15	e3.2	Apr 8	b0.00	Sep 9, 1944
ANNUAL SEVEN-DAY MINIMUM	2.9	Aug 14	e3.6	Mar 9	0.00	Sep 9, 1944
MAXIMUM PEAK FLOW			not determined		c526	Jun 27, 1983
MAXIMUM PEAK STAGE			not determined		4.14	Jun 27, 1983
ANNUAL RUNOFF (AC-FT)	a4,760		a9,990		a10,300	
10 PERCENT EXCEEDS	8.2		27		21	
50 PERCENT EXCEEDS	6.5		6.4		6.0	
90 PERCENT EXCEEDS	4.5		3.8		1.6	

e Estimated.
a Significantly affected by upstream diversions into the Moffat water tunnel.
b Also no flow at times in 1946, 1956, 1960, and 1966.
c From rating curve extended above 286 ft^3/s.

09025010 FRASER RIVER BELOW VASQUEZ CREEK AT WINTER PARK, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 39°55'40", long 105°47'08", SW¼SE¼ sec.28, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank approximately 1,500 ft downstream from the confluence of Vasquez Creek and the Fraser River.

DRAINAGE AREA.--59 mi^2.

PERIOD OF RECORD.--August 1990 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09025010

REMARKS.--Nutrient analysis based on low-level methods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
17...	1115	11	10.7	8.0	96	2.0	32	8.59	2.56	7.76	<10	<0.015	0.040
NOV													
04...	1215	11	10.4	8.2	103	0.0	32	8.49	2.58	8.07	<10	<0.015	0.124
DEC													
13...	1245	16	12.2	8.2	105	0.0	34	8.14	3.31	7.67	<10	0.017	0.277
JAN													
09...	1100	14	11.1	8.0	116	0.0	38	8.75	3.97	8.81	<10	E.012	1.10
FEB													
11...	1300	13	10.2	8.1	106	0.0	34	8.35	3.14	7.49	<10	<0.015	0.870
MAR													
26...	1130	18	11.4	8.2	185	1.0	44	10.5	4.23	30.7	<10	E.008	1.31
APR													
17...	1100	20	9.2	8.0	208	2.0	50	12.8	4.41	39.3	10	<0.015	0.430
MAY													
06...	1015	20	10.9	8.2	181	3.0	45	11.9	3.73	31.9	<10	<0.015	0.179
JUN													
24...	1330	348	8.9	8.0	47	8.5	16	4.29	1.35	3.96	<10	<0.015	0.064
JUL													
10...	1030	22	10.3	8.8	78	10.0	26	6.80	2.11	7.78	<10	<0.015	<0.022
AUG													
05...	1315	24	7.8	7.8	80	14.0	25	6.59	2.17	7.09	<10	<0.015	0.160
SEP													
08...	1130	24	8.8	8.0	87	9.0	30	8.32	2.35	7.80	<10	<0.015	0.082

09025010 FRASER RIVER BELOW VASQUEZ CREEK AT WINTER PARK, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)
OCT				
17...	E.002	0.011	0.016	0.025
NOV				
04...	<0.002	0.009	0.014	0.038
DEC				
13...	0.006	0.020	0.025	0.049
JAN				
09...	0.005	0.086	0.092	0.124
FEB				
11...	0.003	0.053	0.064	0.088
MAR				
26...	0.004	0.093	0.101	0.180
APR				
17...	E.002	0.014	0.021	0.062
MAY				
06...	0.003	E.004	0.010	0.042
JUN				
24...	<0.002	<0.007	0.007	0.015
JUL				
10...	<0.002	E.005	0.009	0.018
AUG				
05...	E.002	0.016	0.025	0.037
SEP				
08...	<0.002	0.008	0.015	0.026

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

09025300 ELK CREEK AT UPPER STATION NEAR FRASER, CO

LOCATION.--Lat 39°53'22", long 105°49'55", (unsurveyed), T.2 S., R.76 W., Grand County, Hydrologic Unit 14010001, on right bank 150 ft downstream from Main Elk dam on the St. Louis collection system, 1,100 ft upstream from aqueduct, and 4.0 mi south of Fraser.

DRAINAGE AREA.--1.67 mi^2.

PERIOD OF RECORD.--October 1996 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09025300

GAGE.--Water-stage recorder. Elevation of gage is 9,400 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.61	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.3	e13	8.9	1.7	1.5
2	0.62	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.1	e14	7.7	1.7	1.4
3	0.64	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.1	e15	5.9	1.9	1.4
4	0.62	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.0	e11	5.6	1.9	1.4
5	0.64	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.0	e9.0	5.0	1.7	1.3
6	0.67	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e2.9	e6.4	4.7	1.6	1.4
7	0.67	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.4	e6.3	4.3	1.6	1.8
8	0.65	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.6	e6.2	4.0	1.5	1.6
9	0.62	e0.00	e0.00	e0.00	e0.00	e0.00	e1.0	e3.8	e6.1	3.8	1.4	2.0
10	0.61	e0.00	e0.00	e0.00	e0.00	e0.00	e1.3	e3.9	e7.0	3.9	1.4	1.7
11	0.61	e0.00	e0.00	e0.00	e0.00	e0.00	e1.5	e3.5	e8.0	3.9	1.4	1.6
12	0.60	e0.00	e0.00	e0.00	e0.00	e0.00	e1.7	e3.0	e9.0	4.0	1.4	1.5
13	e0.57	e0.00	e0.00	e0.00	e0.00	e0.00	e1.8	e2.8	e11	4.0	1.4	1.3
14	e0.59	e0.00	e0.00	e0.00	e0.00	e0.00	e2.0	e3.5	17	3.8	1.3	1.2
15	e0.65	e0.00	e0.00	e0.00	e0.00	e0.00	e2.2	e4.2	18	3.7	1.3	1.2
16	e0.57	e0.00	e0.00	e0.00	e0.00	e0.00	e2.4	e5.0	12	3.6	2.1	1.2
17	e0.58	e0.00	e0.00	e0.00	e0.00	e0.00	e2.4	e6.0	6.1	3.4	2.1	1.2
18	e0.58	e0.00	e0.00	e0.00	e0.00	e0.00	e2.3	e6.8	6.5	3.3	2.4	1.2
19	e0.58	e0.00	e0.00	e0.00	e0.00	e0.00	e2.2	e7.8	13	3.1	1.6	1.2
20	e0.55	e0.00	e0.00	e0.00	e0.00	e0.00	e2.1	e8.5	18	3.4	1.5	1.2
21	e0.48	e0.00	e0.00	e0.00	e0.00	e0.00	e2.3	e9.2	18	2.9	1.4	1.2
22	e0.39	e0.00	e0.00	e0.00	e0.00	e0.00	e2.2	e8.0	17	2.7	1.4	1.1
23	e0.38	e0.00	e0.00	e0.00	e0.00	e0.00	e2.1	e7.0	16	2.5	1.5	1.1
24	e0.39	e0.00	e0.00	e0.00	e0.00	e0.00	e2.2	e6.0	15	2.4	1.7	1.1
25	e0.40	e0.00	e0.00	e0.00	e0.00	e0.00	e2.4	e8.5	14	2.4	2.1	0.98
26	e0.41	e0.00	e0.00	e0.00	e0.00	e0.00	e2.5	e9.5	12	2.3	1.8	0.97
27	e0.38	e0.00	e0.00	e0.00	e0.00	e0.00	e2.6	e12	11	2.2	1.5	0.96
28	e0.37	e0.00	e0.00	e0.00	e0.00	e0.00	e2.8	e15	11	2.1	1.5	0.97
29	e0.37	e0.00	e0.00	e0.00	---	e0.00	e2.9	e20	10	2.1	1.4	0.97
30	e0.40	e0.00	e0.00	e0.00	---	e0.00	e3.0	e14	9.2	2.0	1.7	0.89
31	e0.45	---	e0.00	e0.00	---	e0.00	---	e15	---	1.9	1.6	---
TOTAL	16.65	0.00	0.00	0.00	0.00	0.00	47.90	208.4	345.8	115.5	50.5	38.54
MEAN	0.54	0.000	0.000	0.000	0.000	0.000	1.60	6.72	11.5	3.73	1.63	1.28
MAX	0.67	0.00	0.00	0.00	0.00	0.00	3.0	20	18	8.9	2.4	2.0
MIN	0.37	0.00	0.00	0.00	0.00	0.00	0.00	2.8	6.1	1.9	1.3	0.89
AC-FT	33	0.00	0.00	0.00	0.00	0.00	95	413	686	229	100	76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

MEAN	0.50	0.10	0.096	0.091	0.066	0.060	0.33	1.83	7.41	2.52	1.31	0.91
MAX	0.77	0.68	0.67	0.64	0.47	0.41	1.60	6.72	16.3	3.73	2.03	1.28
(WY)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(2003)	(2003)	(1997)	(2003)	(1999)	(2003)
MIN	0.22	0.000	0.000	0.000	0.000	0.000	0.000	0.17	2.27	0.92	0.62	0.57
(WY)	(2002)	(1998)	(1998)	(1998)	(1998)	(1999)	(1999)	(1997)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003	
ANNUAL TOTAL	201.95		823.29			
ANNUAL MEAN	a0.55		a2.26		a1.27	
HIGHEST ANNUAL MEAN					2.26	2003
LOWEST ANNUAL MEAN					0.53	2002
HIGHEST DAILY MEAN	3.3	Jun 3	e20	May 29	b20	Jun 10, 1997
LOWEST DAILY MEAN	e0.00	Jan 1	c,e0.00	Nov 1	d0.00	May 7, 1997
ANNUAL SEVEN-DAY MINIMUM	e0.00	Jan 1	e0.00	Nov 1	0.00	May 7, 1997
MAXIMUM PEAK FLOW			not determined		22	Jun 10, 1997
MAXIMUM PEAK STAGE			not determined		5.69	Jun 10, 1997
ANNUAL RUNOFF (AC-FT)	a401		a1,630		a918	
10 PERCENT EXCEEDS	1.7		7.3		2.9	
50 PERCENT EXCEEDS	0.45		0.62		0.43	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated.
a Significantly affected by upstream diversions into the Moffat water tunnel.
b Also occurred May 29, 2003.
c No flow many days. Many values estimated.
d No flow many days each year.

09026500 ST. LOUIS CREEK NEAR FRASER, CO

LOCATION.--Lat 39°54'36", long 105°52'40", in SE¼SW¼ sec.34, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 300 ft downstream from West St. Louis Creek, and 4.1 mi southwest of Fraser.

DRAINAGE AREA.--32.9 mi^2.

PERIOD OF RECORD.--October 1933 to current year. Prior to August 1934, monthly discharge only, published in WSP 1313. Records for May 1956 to September 1959, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09026500

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,980.17 ft above NGVD of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel not known since 1959. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	e4.4	e3.6	e2.8	e2.3	e2.5	e2.9	e3.7	260	120	19	11
2	5.4	e4.4	e3.6	e2.8	e2.3	e2.5	e3.0	e4.1	192	47	18	10
3	5.8	e4.3	e3.5	e2.7	e2.3	e2.5	e3.0	e4.4	106	27	21	11
4	6.0	e4.3	e3.5	e2.7	e2.3	e2.5	e3.1	e4.4	55	27	22	11
5	5.6	e4.2	e3.4	e2.7	e2.3	e2.5	e3.2	e4.5	53	26	19	10
6	5.4	e4.2	e3.4	e2.7	e2.4	e2.5	e3.3	e4.7	48	27	17	10
7	5.4	e4.2	e3.4	e2.7	e2.4	e2.5	e3.3	e4.8	48	27	17	12
8	5.4	e4.1	e3.4	e2.6	e2.4	e2.5	e3.3	e4.8	45	26	18	12
9	5.4	e4.1	e3.3	e2.6	e2.4	e2.5	e3.4	e4.8	44	25	18	20
10	5.4	e4.1	e3.3	e2.6	e2.4	e2.5	e3.5	e5.0	60	26	18	12
11	5.4	e4.0	e3.3	e2.6	e2.5	e2.5	e3.6	e5.3	89	26	18	9.6
12	5.3	e4.0	e3.2	e2.6	e2.4	e2.5	e3.7	e7.0	145	27	17	9.9
13	5.1	e4.0	e3.2	e2.6	e2.4	e2.5	e3.7	e10	191	26	17	8.8
14	5.5	e3.9	e3.2	e2.5	e2.5	e2.5	e3.7	14	217	26	17	8.1
15	5.8	e3.9	e3.2	e2.5	e2.4	e2.5	e3.8	18	229	27	16	7.6
16	5.3	e3.9	e3.2	e2.5	e2.4	e2.5	e3.9	25	145	26	25	6.7
17	5.3	e3.9	e3.1	e2.4	e2.4	e2.5	e3.9	35	52	26	39	8.2
18	5.2	e3.9	e3.1	e2.4	e2.5	e2.5	e3.9	38	55	25	28	8.3
19	5.4	e3.9	e3.1	e2.4	e2.5	e2.5	e3.8	35	136	26	17	8.6
20	5.6	e3.8	e3.1	e2.3	e2.5	e2.5	e3.8	33	221	26	15	8.3
21	5.2	e3.8	e3.0	e2.3	e2.5	e2.5	e3.8	38	228	24	14	8.3
22	4.9	e3.8	e3.0	e2.2	e2.5	e2.5	e3.8	41	223	22	14	8.3
23	4.7	e3.8	e3.0	e2.2	e2.5	e2.5	e3.7	36	224	22	15	8.3
24	4.6	e3.7	e3.0	e2.2	e2.5	e2.5	e3.7	35	214	21	16	8.5
25	4.6	e3.7	e2.9	e2.2	e2.5	e2.5	e3.7	36	202	22	19	8.8
26	4.7	e3.7	e2.9	e2.2	e2.5	e2.5	e3.7	37	187	18	18	8.7
27	4.6	e3.7	e2.9	e2.3	e2.5	e2.5	e3.7	40	182	18	13	8.7
28	4.5	e3.6	e2.9	e2.3	e2.5	e2.5	e3.7	63	180	18	12	8.7
29	e4.5	e3.6	e2.8	e2.3	---	e2.6	e3.7	107	179	20	12	8.8
30	e4.5	e3.6	e2.8	e2.3	---	e2.7	e3.7	142	174	20	13	13
31	e4.5	---	e2.8	e2.3	---	e2.8	---	167	---	19	13	---
TOTAL	160.4	118.5	98.1	76.5	68.0	78.1	107.0	1,007.5	4,384	863	555	293.2
MEAN	5.17	3.95	3.16	2.47	2.43	2.52	3.57	32.5	146	27.8	17.9	9.77
MAX	6.0	4.4	3.6	2.8	2.5	2.8	3.9	167	260	120	39	20
MIN	4.5	3.6	2.8	2.2	2.3	2.5	2.9	3.7	44	18	12	6.7
AC-FT	318	235	195	152	135	155	212	2,000	8,700	1,710	1,100	582

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

MEAN	11.7	9.13	7.44	6.69	6.18	6.29	9.29	36.8	114	63.4	23.6	14.3
MAX	31.4	19.7	14.3	12.0	11.0	12.0	26.2	102	263	250	70.1	34.1
(WY)	(1962)	(1996)	(1946)	(1946)	(1946)	(1946)	(1960)	(1936)	(1997)	(1995)	(1945)	(1938)
MIN	2.63	2.90	2.28	2.00	2.07	2.35	3.41	8.62	14.5	11.6	6.38	4.39
(WY)	(1965)	(1967)	(1968)	(1961)	(1968)	(1968)	(1970)	(1968)	(2002)	(2002)	(2002)	(1963)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1934 - 2003	
ANNUAL TOTAL	2,614.7		7,809.3			
ANNUAL MEAN	a7.16		a21.4		a25.8	
HIGHEST ANNUAL MEAN					48.9	1995
LOWEST ANNUAL MEAN					7.84	2002
HIGHEST DAILY MEAN	21	May 20	260	Jun 1	418	Jun 18, 1995
LOWEST DAILY MEAN	e2.8	Dec 29	e2.2	Jan 22	b1.8	Jan 25, 1968
ANNUAL SEVEN-DAY MINIMUM	e2.9	Dec 25	e2.2	Jan 20	1.8	Jan 24, 1968
MAXIMUM PEAK FLOW			289	Jun 1	558	Jun 17, 1995
MAXIMUM PEAK STAGE			2.34	Jun 1	c2.80	Jun 17, 1995
ANNUAL RUNOFF (AC-FT)	a5,190		a15,490		a18,680	
10 PERCENT EXCEEDS	14		42		60	
50 PERCENT EXCEEDS	5.2		4.4		10	
90 PERCENT EXCEEDS	3.7		2.5		4.7	

e Estimated.
a Significantly affected by upstream diversions into the Moffat water tunnel up.
b Also occurred Jan 26-30, Feb 1-2, and Feb 14, 1968.
c Maximum gage height, 3.21 ft, Jun 10, 1952, backwater from log on control.

09027100 FRASER RIVER AT TABERNASH, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 39°59'25", long 105°49'44", SW¼NW¼ sec.6, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank approximately 100 ft upstream from the county road bridge over the Fraser River.

DRAINAGE AREA.--119 mi^2.

PERIOD OF RECORD.--August 1990 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09027100

REVISED RECORDS.--WDR CO-93-2: Drainage area.

REMARKS.--Nutrient analysis based on low-level methods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
17...	1015	11	11.9	8.7	138	3.0	51	15.1	3.12	7.41	<10	<0.015	0.231
NOV													
04...	1125	11	11.5	8.2	129	1.0	46	13.6	2.99	7.79	<10	<0.015	0.358
DEC													
13...	1115	12	9.2	7.2	135	0.0	47	13.2	3.34	8.89	<10	0.089	0.740
JAN													
09...	0900	22	8.8	7.4	143	0.0	46	12.4	3.54	8.89	<10	0.428	1.25
FEB													
11...	0930	18	9.5	8.1	140	0.0	43	11.5	3.40	9.28	<10	0.463	1.27
MAR													
26...	1000	23	10.4	7.7	178	0.0	47	12.7	3.65	21.7	<10	0.593	1.25
APR													
17...	1200	37	8.4	8.2	175	5.5	50	14.0	3.59	3.32	<10	E.010	0.349
MAY													
07...	1215	50	11.2	9.0	146	6.5	43	12.3	3.04	19.5	<10	<0.015	0.310
JUN													
24...	1130	381	9.3	8.2	50	8.5	20	5.93	1.28	2.53	<10	<0.015	0.047
JUL													
10...	1130	24	9.6	8.6	104	16.0	37	10.9	2.41	8.08	<10	0.033	0.073
AUG													
05...	1115	44	9.0	9.1	99	16.0	30	8.71	2.05	6.48	<10	0.023	0.289
SEP													
08...	1215	49	8.5	8.8	100	13.5	39	11.5	2.49	6.56	<10	0.040	0.228

09027100 FRASER RIVER AT TABERNASH, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)
OCT				
17...	0.005	0.029	0.040	0.075
NOV				
04...	0.005	0.031	0.043	0.070
DEC				
13...	0.008	0.041	0.053	0.085
JAN				
09...	0.012	0.125	0.137	0.180
FEB				
11...	0.011	0.140	0.165	0.18
MAR				
26...	0.011	0.136	0.150	0.22
APR				
17...	0.005	0.009	0.019	0.049
MAY				
07...	0.011	0.026	0.041	0.108
JUN				
24...	<0.002	E.005	0.011	0.024
JUL				
10...	0.019	0.054	0.075	0.094
AUG				
05...	0.034	0.074	0.096	0.126
SEP				
08...	0.017	0.063	0.080	0.122

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

09032000 RANCH CREEK NEAR FRASER, CO

LOCATION.--Lat 39°57'00", long 105°45'54", in NW¼NE¼ sec.22. T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank 650 ft downstream from Middle Fork, and 2.7 mi east of Fraser.

DRAINAGE AREA.--19.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1934 to current year. Records for May 26, 1937, to September 1959, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09032000

REVISED RECORDS.--WSP 1243: 1935.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,660 ft above NGVD of 1929, from topographic map. Prior to Oct. 5, 1995, at site 200 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of hay meadows along Fraser River. Transmountain diversions upstream from station to Moffat water tunnel not known since 1959.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.1	2.2	2.5	2.7	2.6	3.2	4.9	e270	e20	4.5	7.8
2	1.7	1.9	2.1	2.5	2.8	2.7	3.3	5.0	e250	e10	4.4	7.4
3	1.8	1.8	2.1	2.5	2.5	2.9	3.2	5.5	e160	e8.5	4.5	7.8
4	1.8	2.1	2.1	2.5	2.6	3.1	2.8	5.6	e100	7.6	4.7	7.9
5	1.9	1.8	2.0	2.5	2.6	2.9	2.9	5.1	68	7.2	4.9	7.8
6	1.9	1.9	2.1	2.5	2.5	2.8	2.7	4.9	50	7.0	5.2	8.3
7	1.8	2.0	2.1	2.5	2.5	2.8	2.4	5.1	29	6.8	5.2	11
8	1.8	2.0	2.1	2.6	3.2	2.7	2.4	5.2	23	6.0	5.1	9.4
9	1.7	2.0	2.1	2.7	3.3	2.7	2.7	5.2	24	4.9	5.2	8.7
10	1.7	1.9	2.3	2.7	3.1	2.8	3.1	6.6	34	5.1	5.1	8.2
11	1.7	1.9	2.5	2.7	2.9	2.9	3.5	4.6	55	5.2	5.7	7.9
12	1.6	1.8	2.4	2.6	2.9	2.8	3.7	5.6	87	5.2	6.3	7.9
13	1.7	1.9	2.4	2.5	3.2	2.8	4.1	7.5	114	5.0	6.2	7.5
14	1.7	1.9	2.3	2.5	3.0	2.9	4.6	9.8	116	4.7	6.0	6.9
15	1.7	1.8	2.3	2.5	2.7	3.0	4.8	13	124	4.3	6.1	6.8
16	1.7	1.9	2.3	2.5	2.8	3.0	3.8	e30	94	4.5	7.4	6.6
17	1.7	1.9	2.2	2.7	2.8	3.0	3.9	e70	61	4.5	9.4	6.3
18	1.7	1.9	2.2	2.7	2.9	e3.1	3.8	e100	67	4.5	9.9	5.9
19	1.7	1.9	2.2	2.6	2.7	e3.2	3.3	e110	88	4.5	8.0	5.8
20	1.8	1.9	2.2	2.8	2.8	e3.3	3.2	e90	103	6.9	7.4	5.7
21	1.8	1.9	2.2	2.8	2.9	e3.4	3.5	e70	102	5.7	7.1	5.6
22	1.6	1.9	2.2	2.6	3.0	3.4	3.9	53	93	4.8	7.0	5.5
23	1.8	1.9	2.3	2.6	2.8	3.3	4.4	88	93	4.7	7.2	5.5
24	1.8	1.9	2.3	2.7	2.7	3.3	e4.8	e130	93	4.7	7.4	5.4
25	1.8	1.9	2.3	2.6	2.8	2.9	5.0	e150	77	4.7	8.0	5.3
26	1.8	2.0	2.3	2.4	2.9	3.2	5.2	e170	66	4.7	7.6	5.4
27	1.9	2.1	2.3	2.6	2.8	2.9	5.2	e200	62	4.7	7.4	5.4
28	1.8	2.1	2.4	2.6	2.8	2.6	5.0	e230	61	4.6	7.2	5.4
29	1.8	2.2	2.5	2.4	---	2.6	5.1	e280	60	4.7	7.1	5.4
30	2.3	2.2	2.4	2.5	---	2.6	5.2	e250	e40	4.7	9.6	5.6
31	2.0	---	2.5	2.4	---	2.9	---	e260	---	4.6	8.9	---
TOTAL	55.2	58.4	69.9	79.8	79.2	91.1	114.7	2,374.6	2,664	185.0	205.7	206.1
MEAN	1.78	1.95	2.25	2.57	2.83	2.94	3.82	76.6	88.8	5.97	6.64	6.87
MAX	2.3	2.2	2.5	2.8	3.3	3.4	5.2	280	270	20	9.9	11
MIN	1.6	1.8	2.0	2.4	2.5	2.6	2.4	4.6	23	4.3	4.4	5.3
AC-FT	109	116	139	158	157	181	228	4,710	5,280	367	408	409

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

MEAN	4.73	4.11	3.39	3.01	2.70	2.63	5.25	30.9	75.7	24.2	7.32	4.95
MAX	19.6	14.6	8.11	5.63	4.65	5.34	17.4	99.4	206	136	27.3	13.8
(WY)	(1962)	(1962)	(1962)	(1962)	(1966)	(1950)	(1946)	(1936)	(1997)	(1995)	(1945)	(1945)
MIN	0.98	1.09	0.87	0.89	0.74	0.65	1.61	3.69	2.68	1.86	1.20	0.98
(WY)	(1969)	(1965)	(1965)	(1964)	(1964)	(1964)	(1961)	(1954)	(1966)	(2002)	(2002)	(1960)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1935 - 2003	
ANNUAL TOTAL	901.56		6,183.7			
ANNUAL MEAN	a2.47		a16.9		a14.1	
HIGHEST ANNUAL MEAN					31.4	1983
LOWEST ANNUAL MEAN					2.55	1964
HIGHEST DAILY MEAN	6.2	May 24	e280	May 29	402	Jun 7, 1997
LOWEST DAILY MEAN	0.72	Aug 13	1.6	Oct 12	b0.40	Sep 21, 1960
ANNUAL SEVEN-DAY MINIMUM	0.92	Aug 9	1.7	Oct 9	0.42	Sep 21, 1988
MAXIMUM PEAK FLOW			not determined		548	Jun 4, 1997
MAXIMUM PEAK STAGE			not determined		6.71	Jun 4, 1997
ANNUAL RUNOFF (AC-FT)	a1,790		a12,270		a10,190	
10 PERCENT EXCEEDS	4.3		60		29	
50 PERCENT EXCEEDS	2.1		3.2		4.0	
90 PERCENT EXCEEDS	1.3		1.9		1.8	

e Estimated.
a Significantly affected by upstream diversions into the Moffat water tunnel.
b Also occurred Oct 6, 1960, and Sep 24-26, 1988.

09032000 RANCH CREEK NEAR FRASER, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1997 to September 2001. January to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09032000

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
JAN													
07...	1530	5.5	12.1	8.1	58	0.0	0.45	<10	<0.015	0.102	<0.002	<0.007	E.004
FEB													
10...	1030	2.9	10.7	8.4	58	0.0	0.56	<10	<0.015	0.102	<0.002	E.004	0.005
MAR													
24...	1100	3.4	10.8	8.2	61	0.0	0.55	<10	<0.015	0.081	<0.002	<0.007	0.006
APR													
25...	1130	4.9	11.2	8.4	59	0.0	0.69	<10	<0.015	0.072	<0.002	<0.007	0.008
MAY													
07...	1315	5.5	11.7	8.0	56	2.5	0.87	<10	<0.015	0.028	<0.002	<0.007	0.007
JUN													
24...	1230	66	9.3	8.3	25	6.5	E.19	<10	<0.015	0.050	<0.002	<0.007	E.003
JUL													
08...	1530	5.3	8.6	8.0	37	13.5	E.19	<10	<0.015	<0.022	<0.002	<0.007	0.004
AUG													
05...	1215	5.3	8.6	7.8	40	10.0	E.17	<10	<0.015	<0.022	<0.002	<0.007	0.005
SEP													
08...	1500	8.8	8.2	7.9	47	9.5	0.27	<10	<0.015	0.027	<0.002	<0.007	0.006

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
JAN		
07...	0.009	<1
FEB		
10...	0.009	<1
MAR		
24...	0.011	<1
APR		
25...	0.030	<1
MAY		
07...	0.017	<1
JUN		
24...	0.007	E1
JUL		
08...	0.004	<1
AUG		
05...	0.005	<1
SEP		
08...	0.011	<1

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT					DEC				
21...	1445	2.0	57	0.0	11...	0945	2.5	46	--

09032100 CABIN CREEK NEAR FRASER, CO

LOCATION.--Lat 39°59'09", long 105°44'40", in NW¼SE¼ sec.2. T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank 200 ft downstream from concrete diversion dam, 2.7 mi upstream from mouth, and 4.6 mi northeast of Fraser.

DRAINAGE AREA.--4.87 mi^2.

PERIOD OF RECORD.--October 1983 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09032100

GAGE.--Water-stage recorder. Elevation of gage is 9,560 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel, amount unknown. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	e3.2	e1.3	e1.2	e1.0	e1.1	e1.1	e2.9	77	8.6	6.8	6.8
2	2.4	e3.0	e1.3	e1.2	e1.0	e1.1	e1.2	e3.1	50	8.8	6.5	6.8
3	2.6	e2.9	e1.3	e1.2	e1.0	e1.1	e1.3	e3.5	36	9.2	6.8	6.8
4	2.5	e2.8	e1.3	e1.2	e1.1	e1.0	e1.4	e3.8	28	8.8	7.1	6.7
5	2.6	e2.8	e1.3	e1.2	e1.2	e0.95	e1.3	e4.1	28	8.1	6.4	6.5
6	2.8	e2.8	e1.3	e1.2	e1.2	e0.90	e1.2	e3.8	27	8.9	6.2	6.7
7	3.1	e2.8	e1.3	e1.2	e1.2	e0.90	e1.2	e4.0	24	9.5	6.4	11
8	3.2	e2.2	e1.3	e1.2	e1.2	e0.90	e1.1	e4.2	22	8.0	6.0	9.8
9	2.9	e2.1	e1.3	e1.2	e1.2	e0.90	e1.0	e4.3	23	6.2	6.0	9.5
10	2.6	e2.0	e1.5	e1.2	e1.2	e0.90	e1.0	e4.5	20	6.5	5.7	9.6
11	2.5	e1.8	e1.6	e1.2	e1.2	e0.90	e1.3	e4.8	15	7.0	5.2	9.4
12	2.3	e1.5	e1.6	e1.2	e1.2	e0.90	e1.4	e5.2	11	7.1	6.1	8.7
13	2.2	e1.4	e1.4	e1.1	e1.2	e0.90	e1.5	e5.8	10	6.6	5.5	8.2
14	2.2	e1.4	e1.4	e1.0	e1.2	e0.90	e1.4	e6.0	9.3	6.7	5.0	7.8
15	2.1	e1.4	e1.4	e1.0	e1.2	e0.90	e1.4	e7.0	9.6	7.2	4.7	4.8
16	2.0	e1.4	e1.4	e1.0	e1.1	e0.90	e1.3	e8.0	8.6	7.3	7.0	2.5
17	1.9	e1.4	e1.4	e1.0	e1.0	e0.90	e1.3	e10	11	7.3	9.6	2.5
18	2.0	e1.4	e1.4	e1.0	e1.0	e0.90	e1.3	e23	19	7.1	9.6	2.4
19	1.9	e1.4	e1.4	e1.0	e1.0	e0.90	e1.2	e21	18	7.0	7.0	2.0
20	2.0	e1.4	e1.4	e1.0	e1.0	e0.90	e1.2	e20	8.8	7.3	6.4	1.9
21	e2.9	e1.4	e1.4	e1.0	e1.0	e0.90	e1.3	e30	8.2	7.0	6.3	1.7
22	e2.6	e1.4	e1.4	e1.0	e1.0	e0.90	e1.4	e33	7.9	6.9	6.1	1.6
23	e2.5	e1.4	e1.4	e1.0	e1.0	e0.90	e1.5	e32	7.6	6.9	6.6	1.7
24	e2.5	e1.4	e1.4	e1.0	e1.0	e0.90	e1.6	e31	7.7	7.0	6.5	1.5
25	e2.6	e1.4	e1.4	e1.0	e1.0	e0.90	e1.7	e33	7.6	6.9	7.2	1.5
26	e2.7	e1.4	e1.4	e1.0	e1.0	e0.90	e1.7	e35	7.4	6.7	6.4	1.6
27	e2.4	e1.4	e1.4	e1.0	e1.0	e0.90	e1.7	e37	7.6	6.8	5.6	1.6
28	e2.3	e1.4	e1.4	e1.0	e1.0	e0.90	e1.8	e40	7.7	6.9	5.3	1.6
29	e2.5	e1.4	e1.4	e1.0	---	e0.88	e2.0	e45	7.3	8.2	5.4	1.6
30	e3.0	e1.3	e1.3	e1.0	---	e0.90	e2.5	e80	7.8	7.2	11	1.5
31	e3.1	---	e1.2	e1.0	---	e1.0	---	76	---	7.0	7.7	---
TOTAL	77.3	55.0	42.7	33.5	30.4	28.73	42.3	621.0	532.1	230.7	204.1	146.3
MEAN	2.49	1.83	1.38	1.08	1.09	0.93	1.41	20.0	17.7	7.44	6.58	4.88
MAX	3.2	3.2	1.6	1.2	1.2	1.1	2.5	80	77	9.5	11	11
MIN	1.9	1.3	1.2	1.0	1.0	0.88	1.0	2.9	7.3	6.2	4.7	1.5
AC-FT	153	109	85	66	60	57	84	1,230	1,060	458	405	290

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

MEAN	2.76	2.19	1.59	1.31	1.10	1.13	1.97	10.7	29.4	12.2	4.77	3.22
MAX	6.11	3.49	2.40	2.33	1.67	1.60	3.83	25.5	70.3	46.6	8.05	5.12
(WY)	(1997)	(1997)	(2000)	(2000)	(2000)	(1997)	(2002)	(1996)	(1997)	(1995)	(1984)	(1984)
MIN	1.67	0.48	0.47	0.59	0.30	0.12	0.079	1.60	3.34	2.85	1.91	1.48
(WY)	(1990)	(1985)	(1985)	(1985)	(1985)	(1985)	(1985)	(1985)	(2002)	(2002)	(1994)	(1994)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	778.96		2,044.13			
ANNUAL MEAN	a2.13		a5.60		a6.03	
HIGHEST ANNUAL MEAN					11.2	1997
LOWEST ANNUAL MEAN					2.18	2002
HIGHEST DAILY MEAN	5.9	Jun 25	80	May 30	112	Jun 7, 1997
LOWEST DAILY MEAN	e0.76	Feb 21	e0.88	Mar 29	0.04	May 7, 1985
ANNUAL SEVEN-DAY MINIMUM	e0.84	Feb 16	e0.90	Mar 23	0.07	Apr 12, 1985
MAXIMUM PEAK FLOW			145	May 31	162	Jun 8, 1997
MAXIMUM PEAK STAGE			2.33	May 31	b2.38	Jun 8, 1997
ANNUAL RUNOFF (AC-FT)	a1,550		a4,050		a4,370	
10 PERCENT EXCEEDS	3.5		9.6		12	
50 PERCENT EXCEEDS	2.1		2.0		2.2	
90 PERCENT EXCEEDS	0.93		1.0		1.0	

e Estimated.
a Significantly affected by upstream diversions into the Moffat water tunnel.
b Maximum gage height, 2.39 ft, Jun 17, 1995.

395840105472700 RANCH CREEK BELOW CABIN CREEK NEAR TABERNASH, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 39°58'40", long 105°47'27", NW¼NW¼ sec. 9, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, 25 ft upstream from bridge to Devils Thumb Ranch, over Ranch Creek, and 5.3 mi east-southeast of Tabernash.

PERIOD OF RECORD.--November 1998 to September 1999. January to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=395840105472700

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
JAN													
08...	0900	4.0	10.0	8.3	79	0.0	0.97	<10	E.008	0.093	<0.002	E.004	0.006
FEB													
10...	1200	4.6	10.0	8.3	79	0.0	0.93	<10	<0.015	0.093	<0.002	<0.007	0.007
MAR													
24...	1230	5.9	10.0	7.8	80	0.0	1.14	<10	0.139	0.100	E.002	<0.007	0.008
APR													
25...	1000	17	11.3	7.6	81	0.5	0.90	<10	<0.015	0.210	0.003	E.004	0.013
MAY													
09...	1030	23	10.7	8.3	74	3.5	2.36	<10	<0.015	0.138	0.004	E.005	0.016
JUN													
24...	1030	110	9.6	8.4	35	8.0	0.25	<10	<0.015	<0.022	<0.002	<0.007	0.005
JUL													
08...	1345	10	7.9	8.0	70	19.0	0.74	<10	<0.015	<0.022	<0.002	0.009	0.018
AUG													
05...	1015	9.6	7.1	8.0	87	12.5	0.42	<10	<0.015	<0.022	<0.002	0.012	0.024
SEP													
08...	1315	17	7.5	8.4	68	15.5	0.55	<10	<0.015	<0.022	<0.002	E.006	0.016

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
JAN		
08...	0.015	<1
FEB		
10...	0.014	<1
MAR		
24...	0.024	<1
APR		
25...	0.050	<1
MAY		
09...	0.044	<1
JUN		
24...	0.013	E2
JUL		
08...	0.026	18
AUG		
05...	0.041	35
SEP		
08...	0.029	28

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

09033100 RANCH CREEK BELOW MEADOW CREEK NEAR TABERNASH, CO

LOCATION.--Lat 39°59'57", long 105°49'37", in NW¼NW¼ sec.6. T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank about 400 ft downstream from Meadow Creek, 0.75 mi northeast of Tabernash, and 0.85 mi above mouth.

DRAINAGE AREA.--65.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1997 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09033100

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,350 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of hay meadows in Fraser River Valley. Transmountain diversion upstream from station to Moffat Water Tunnel not known since 1959.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	e6.8	e6.6	e6.8	e5.8	e6.8	e14	55	545	56	12	e16
2	6.6	e7.4	e6.6	e6.6	e5.8	e7.0	e24	54	448	30	12	e15
3	6.6	e8.6	e6.6	e6.6	e5.8	e6.4	e45	65	350	25	12	e15
4	7.4	e9.0	e6.6	e6.6	e5.8	e6.0	52	68	268	22	14	e16
5	7.4	e8.0	e6.6	e6.6	e5.8	e5.6	51	56	217	21	12	e15
6	7.3	e8.1	e6.6	e6.6	e6.2	e5.2	45	56	186	20	11	e17
7	6.7	e8.2	e6.6	e6.6	e6.4	e5.0	39	61	153	20	11	e18
8	6.7	e7.8	e6.6	e6.6	e6.6	e4.8	33	62	119	19	11	e24
9	6.5	e7.4	e6.6	e6.6	e6.6	e4.6	25	63	121	17	10	e26
10	5.8	e7.0	e7.0	e6.6	e6.6	e4.4	32	62	126	16	9.9	e20
11	5.7	e7.0	e7.4	e6.6	e6.6	e4.0	43	57	140	16	9.5	e15
12	5.9	e7.0	e7.5	e6.6	e6.6	e4.0	43	70	172	16	11	e15
13	6.0	e7.0	e7.4	e6.6	e6.6	e4.0	49	107	224	16	11	e13
14	6.1	e7.0	e7.2	e6.2	e6.2	e4.0	53	135	200	15	10	e12
15	6.0	e7.4	e7.0	e6.2	e5.8	e4.0	48	153	205	15	10	e11
16	6.1	e7.0	e6.8	e6.2	e5.8	e4.0	38	177	180	15	14	e11
17	5.8	e7.0	e6.8	e6.2	e5.8	e4.0	33	199	121	15	32	e14
18	6.0	e7.0	e6.8	e6.2	e5.9	e4.0	29	213	148	14	e26	e14
19	5.9	e7.0	e6.8	e6.2	e5.9	e4.0	24	218	166	14	e22	e14
20	5.5	e7.0	e6.8	e6.2	e5.9	e4.0	24	216	175	18	e19	e14
21	5.9	e7.0	e6.8	e6.2	e5.6	e4.0	27	198	168	17	e17	e14
22	e5.2	e7.0	e6.8	e6.2	e6.0	e4.0	31	201	146	15	e16	e14
23	e5.4	e7.0	e6.8	e6.2	e6.0	e4.0	31	220	143	14	e17	e14
24	e5.2	e7.0	e6.8	e6.2	e6.0	e4.0	27	247	137	14	e20	e14
25	e5.2	e7.0	e6.8	e6.2	e6.1	e4.0	38	266	112	14	e22	e15
26	e5.2	e7.0	e6.8	e6.0	e6.2	e4.0	42	269	92	15	e21	e14
27	e5.3	e7.0	e6.8	e6.0	e6.3	e3.9	58	285	84	16	e18	e14
28	e5.4	e7.0	e6.8	e6.0	e6.4	e3.8	63	381	77	14	e15	e15
29	e5.8	e7.0	e6.8	e6.0	---	e4.0	66	485	75	15	e15	e15
30	e6.2	e6.6	e6.8	e6.0	---	e5.0	61	557	71	15	e16	e15
31	e7.0	---	e6.8	e6.0	---	e8.0	---	513	---	13	e18	---
TOTAL	188.5	218.3	211.7	196.4	171.1	144.5	1,188	5,769	5,369	562	474.4	459
MEAN	6.08	7.28	6.83	6.34	6.11	4.66	39.6	186	179	18.1	15.3	15.3
MAX	7.4	9.0	7.5	6.8	6.6	8.0	66	557	545	56	32	26
MIN	5.2	6.6	6.6	6.0	5.6	3.8	14	54	71	13	9.5	11
AC-FT	374	433	420	390	339	287	2,360	11,440	10,650	1,110	941	910

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

MEAN	10.7	9.95	10.5	9.63	8.39	9.04	28.7	112	146	22.9	13.8	12.0
MAX	16.0	13.8	15.8	13.3	11.0	11.9	39.6	187	429	56.2	23.9	25.9
(WY)	(2000)	(1999)	(1999)	(1999)	(2000)	(1998)	(2003)	(1997)	(1997)	(1997)	(1999)	(1999)
MIN	6.08	7.28	6.83	5.84	6.11	4.66	18.8	17.4	9.02	4.56	3.11	5.02
(WY)	(2003)	(2003)	(2003)	(2002)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003	
ANNUAL TOTAL	3,038.8		14,951.9			
ANNUAL MEAN	a8.33		a41.0		a27.3	
HIGHEST ANNUAL MEAN					41.0	2003
LOWEST ANNUAL MEAN					8.68	2002
HIGHEST DAILY MEAN	e26	Apr 15	557	May 30	718	Jun 7, 1997
LOWEST DAILY MEAN	2.0	Sep 3	e3.8	Mar 28	2.0	Sep 3, 2002
ANNUAL SEVEN-DAY MINIMUM	2.2	Sep 1	e4.0	Mar 22	2.2	Sep 1, 2002
MAXIMUM PEAK FLOW			621	May 30	763	Jun 9, 1997
MAXIMUM PEAK STAGE			6.88	May 30	7.18	Jun 9, 1997
ANNUAL RUNOFF (AC-FT)	a6,030		a29,660		a19,780	
10 PERCENT EXCEEDS	17		138		62	
50 PERCENT EXCEEDS	6.8		9.5		12	
90 PERCENT EXCEEDS	3.4		5.8		6.1	

e Estimated.
a Significantly affected by upstream diversions into the Moffat water tunnel.

09033100 RANCH CREEK BELOW MEADOW CREEK NEAR TABERNASH, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1997 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09033100

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV													
04...	1050	9.1	9.5	7.6	109	0.0	1.18	<10	<0.015	<0.022	<0.002	0.007	0.013
JAN													
08...	1020	6.7	9.3	8.5	96	0.0	0.91	<10	E.014	0.069	<0.002	0.007	0.010
MAR													
24...	1330	4.0	9.7	8.4	99	0.0	1.25	<10	0.021	0.082	E.002	E.004	0.009
MAY													
07...	1145	54	10.7	8.1	71	3.0	1.75	<10	<0.015	0.106	0.003	<0.007	0.011
JUL													
08...	1430	14	7.1	8.0	80	19.5	0.79	<10	<0.015	<0.022	<0.002	0.009	0.017
SEP													
08...	1415	24	7.5	8.1	67	15.5	0.66	<10	<0.015	<0.022	<0.002	0.008	0.017

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
NOV		
04...	0.022	<1
JAN		
08...	0.018	<1
MAR		
24...	0.021	<1
MAY		
07...	0.046	<1
JUL		
08...	0.023	E2
SEP		
08...	0.030	32

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT					APR				
21...	1235	5.3	124	2.0	15...	1310	64	125	3.0
FEB									
26...	1150	6.1	65	--					

395634105532401 CROOKED CREEK BELOW TIPPERARY CREEK NEAR TABERNASH, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 39°56'34", long 105°53'24", NE¼SE¼ sec.21, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 0.5 mi below the confluence with Tipperary Creek, and 4 mi west of Fraser.

PERIOD OF RECORD.--June 1997 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=395634105532401

REMARKS.--Nutrient analysis based on low-level methods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
OCT 16...	1200	1.0	10.0	7.8	195	5.5	0.39	<10	<0.015	<0.022	<0.002	E.005	0.009
NOV 05...	1115	1.2	10.2	7.9	181	1.5	0.41	<10	<0.015	<0.022	<0.002	E.006	0.009
DEC 12...	1045	1.1	11.5	8.3	187	0.0	0.23	<10	E.009	<0.022	<0.002	E.004	0.007
JAN 07...	1015	1.1	11.1	8.4	182	0.0	<0.20	<10	E.013	E.015	<0.002	E.004	0.007
FEB 11...	1115	1.0	10.4	7.8	185	0.0	0.29	<10	E.013	0.022	<0.002	<0.007	0.005
MAR 25...	1130	1.5	11.9	8.1	182	0.5	0.47	<10	E.010	0.031	<0.002	<0.007	0.005
APR 18...	1000	5.9	9.2	8.1	164	0.5	1.09	<10	E.008	0.351	0.003	<0.007	0.009
MAY 14...	1000	16	11.7	8.4	110	3.0	0.72	10	<0.015	0.248	0.003	<0.007	0.008
JUN 25...	1030	23	9.1	8.3	102	7.5	E.18	<10	0.031	<0.022	<0.002	<0.007	0.006
JUL 08...	1000	10	8.6	8.0	120	11.0	0.20	<10	<0.015	<0.022	<0.002	E.005	0.011
AUG 06...	1230	2.6	6.9	7.9	163	16.5	0.40	<10	<0.015	<0.022	<0.002	0.009	0.016
SEP 09...	1200	4.0	7.7	8.2	166	12.0	0.34	<10	<0.015	<0.022	<0.002	0.008	0.013

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
OCT 16...	0.028	<1
NOV 05...	0.029	E1
DEC 12...	0.020	<1
JAN 07...	0.019	<1
FEB 11...	0.023	<1
MAR 25...	0.019	<1
APR 18...	0.031	E1
MAY 14...	0.039	E2
JUN 25...	0.020	E3
JUL 08...	0.016	E4
AUG 06...	0.032	<1
SEP 09...	0.026	E5

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

395927105505700 CROOKED CREEK ABOVE POLE CREEK AT TABERNASH, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 39°59'27", long 105°50'57", SW¼NW¼ sec.1, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 0.25 mi above the confluence with Pole Creek, and 4.5 mi west of Fraser.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1999 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=395927105505700

REMARKS:--Nutrient analysis based on low-level methods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
OCT 16...	1300	2.4	8.8	8.0	266	6.0	5.28	<10	<0.015	<0.022	<0.002	0.015	0.024
NOV 05...	1015	2.5	10.4	8.1	278	1.0	3.39	<10	<0.015	<0.022	<0.002	0.016	0.025
DEC 12...	1245	0.89	9.6	8.1	292	0.0	3.55	<10	E.013	<0.022	<0.002	0.011	0.016
JAN 07...	1115	2.2	10.7	7.6	263	0.0	2.61	<10	0.016	0.045	E.002	0.009	0.014
FEB 10...	1530	2.7	9.5	7.9	257	0.0	3.17	<10	0.020	0.053	<0.002	0.008	0.013
MAR 25...	1415	4.0	11.2	7.8	255	0.0	4.22	<10	E.013	0.054	E.002	0.009	0.015
APR 18...	1200	15	9.1	8.0	216	1.0	--	<10	0.379	0.787	0.014	0.058	0.074
MAY 14...	1200	35	9.8	8.3	114	7.0	1.44	25	<0.015	0.090	0.003	0.011	0.018
JUN 25...	1330	20	7.9	8.2	140	14.0	0.73	<10	<0.015	<0.022	<0.002	0.015	0.023
JUL 08...	1100	10	7.8	7.9	191	14.5	1.82	<10	<0.015	<0.022	<0.002	0.020	0.033
AUG 06...	1415	3.6	6.7	8.0	248	19.5	3.67	<10	<0.015	<0.022	<0.002	0.023	0.038
SEP 10...	1215	5.3	7.2	8.3	239	11.5	3.93	<10	<0.015	<0.022	<0.002	0.022	0.034

395927105505700 CROOKED CREEK ABOVE POLE CREEK AT TABERNASH, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos-phorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
OCT		
16...	0.098	<1
NOV		
05...	0.057	E1
DEC		
12...	0.046	<1
JAN		
07...	0.039	<1
FEB		
10...	0.036	<1
MAR		
25...	0.042	<1
APR		
18...	0.179	E1
MAY		
14...	0.063	E2
JUN		
25...	0.050	29
JUL		
08...	0.064	E14
AUG		
06...	0.096	67
SEP		
10...	0.070	37

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

395901105550800 POLE CREEK AT UPPER STATION NEAR TABERNASH, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 39°59'01", long 105°55'08", SE¼SW¼ sec.6, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 5 mi upstream from confluence with the Fraser River, and 4 mi west of Tabernash.

PERIOD OF RECORD.--February 1997 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=395901105550800

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
OCT													
16...	1100	0.15	9.2	8.0	261	3.5	1.29	--	<0.015	<0.022	<0.002	E.005	0.011
NOV													
05...	1200	0.83	9.7	8.4	138	0.5	0.54	<10	<0.015	<0.022	<0.002	0.025	0.034
DEC													
12...	1400	0.20	8.5	8.0	135	0.0	0.24	<10	<0.015	<0.022	<0.002	0.025	0.030
JAN													
07...	1300	0.38	10.4	8.1	131	0.0	0.30	<10	E.009	<0.022	<0.002	0.026	0.029
FEB													
10...	1330	0.16	8.4	7.8	142	0.5	1.18	12	0.016	E.016	<0.002	0.029	0.033
MAR													
25...	1500	1.5	10.1	7.8	139	0.0	0.87	<10	E.009	0.022	<0.002	0.015	0.020
APR													
18...	1300	2.9	9.1	7.8	123	0.0	1.00	<10	<0.015	0.233	0.003	0.007	0.015
MAY													
14...	1300	13	9.7	7.8	111	4.5	0.45	14	<0.015	0.146	0.003	0.009	0.015
JUN													
25...	1140	5.3	8.2	7.8	74	11.0	0.26	<10	<0.015	<0.022	<0.002	0.019	0.031
JUL													
08...	1200	2.0	7.8	8.2	100	14.5	0.62	<10	E.009	<0.022	<0.002	0.025	0.041
AUG													
06...	1130	0.46	6.8	8.0	137	16.0	0.40	<10	<0.015	<0.022	<0.002	0.036	0.053
SEP													
10...	1030	0.87	7.2	8.2	192	9.0	0.59	<10	<0.015	<0.022	<0.002	0.019	0.028

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
OCT		
16...	--	<1
NOV		
05...	0.073	E1
DEC		
12...	0.087	E1
JAN		
07...	0.080	<1
FEB		
10...	0.100	<1
MAR		
25...	0.057	<1
APR		
18...	0.062	<1
MAY		
14...	0.058	E5
JUN		
25...	0.057	<1
JUL		
08...	0.072	E8
AUG		
06...	0.104	E2
SEP		
10...	0.078	E10

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

395930105510700 POLE CREEK AT MOUTH NEAR TABERNASH, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 39°59'30", long 105°51'07", SE¼NE¼ sec.2, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 0.25 mi upstream from the confluence with Crooked Creek, and 0.5 mi west of Tabernash.

PERIOD OF RECORD.--February 1997 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=395930105510700

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV 05...	1215	1.1	10.4	8.1	311	1.5	3.30	<10	<0.015	<0.022	<0.002	0.008	0.016
DEC 12...	1145	0.65	9.9	7.8	336	0.0	4.09	<10	0.027	0.066	<0.002	0.007	0.012
JAN 07...	1200	1.8	10.3	8.0	302	0.5	4.14	<10	0.070	0.147	0.004	E.005	0.010
FEB 10...	1430	1.6	8.9	8.0	327	0.0	4.75	<10	0.080	0.166	0.004	E.004	0.010
MAR 25...	1315	2.3	10.4	8.1	301	0.0	6.46	<10	0.021	0.158	E.002	E.006	0.014
APR 18...	1100	6.4	8.8	8.1	245	1.0	3.84	<10	0.019	0.486	0.006	0.015	0.033
MAY 14...	1100	26	10.6	8.0	143	6.0	2.27	10	<0.015	0.153	0.003	0.015	0.023
JUN 25...	1240	6.2	7.3	8.0	206	14.0	1.35	<10	0.021	0.037	<0.002	0.030	0.043
JUL 08...	1300	2.7	7.1	8.1	333	18.5	2.73	<10	E.010	E.016	<0.002	0.025	0.040
AUG 06...	1330	1.0	6.4	8.0	338	16.5	3.03	<10	E.010	<0.022	<0.002	0.027	0.044
SEP 10...	1130	1.0	7.2	8.2	335	11.0	3.48	13	E.008	<0.022	<0.002	0.022	0.033

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
NOV 05...	0.050	<1
DEC 12...	0.044	<1
JAN 07...	0.042	<1
FEB 10...	0.040	<1
MAR 25...	0.050	<1
APR 18...	0.074	<1
MAY 14...	0.066	<1
JUN 25...	0.098	11
JUL 08...	0.111	<1
AUG 06...	0.117	40
SEP 10...	0.089	10

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

09033300 FRASER RIVER BELOW CROOKED CREEK AT TABERNASH, CO

LOCATION.--Lat 40°00'21", long 105°50'52", in SE¼NE¼ sec.36, T.1 N., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 600 ft downstream from Crooked Creek, and 1 mi north of Tabernash.

DRAINAGE AREA.--224 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1998 to September 2002. October 2002 to September 2003 (seasonal records only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09033300

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,270 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel, amount unknown.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1550 ft^3/s, May 30, 2003, gage height, 6.01 ft; minimum daily, 16 ft^3/s, August 28, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 1550 ft^3/s, May 30, gage height, 6.01 ft; minimum daily, 33 ft^3/s, Sept. 29.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e65	185	1,460	259	59	59
2	---	---	---	---	---	---	e65	177	1,160	154	58	55
3	---	---	---	---	---	---	e65	203	849	81	61	54
4	---	---	---	---	---	---	e65	209	597	68	73	54
5	---	---	---	---	---	---	e70	175	475	60	62	51
6	---	---	---	---	---	---	e60	e156	399	57	57	57
7	---	---	---	---	---	---	e60	e196	374	58	56	85
8	---	---	---	---	---	---	e55	e177	297	55	58	87
9	---	---	---	---	---	---	e70	e160	279	50	54	99
10	---	---	---	---	---	---	e70	e140	285	50	53	82
11	---	---	---	---	---	---	e80	e155	329	50	52	77
12	---	---	---	---	---	---	e75	e157	492	49	54	69
13	---	---	---	---	---	---	e85	e221	643	47	52	63
14	---	---	---	---	---	---	e145	e200	610	47	48	59
15	---	---	---	---	---	---	e160	313	631	46	44	57
16	---	---	---	---	---	---	145	352	545	47	50	47
17	---	---	---	---	---	---	136	421	276	48	112	42
18	---	---	---	---	---	---	132	449	284	48	107	43
19	---	---	---	---	---	---	110	469	346	48	72	42
20	---	---	---	---	---	---	111	471	531	77	59	41
21	---	---	---	---	---	---	134	455	620	61	54	39
22	---	---	---	---	---	---	153	476	573	52	52	38
23	---	---	---	---	---	---	145	514	553	50	56	39
24	---	---	---	---	---	---	106	567	541	52	61	37
25	---	---	---	---	---	---	146	605	480	48	74	35
26	---	---	---	---	---	---	191	619	412	59	72	35
27	---	---	---	---	---	---	220	638	373	58	59	35
28	---	---	---	---	---	---	219	889	335	52	56	34
29	---	---	---	---	---	---	227	1,180	324	56	53	33
30	---	---	---	---	---	---	206	1,390	304	63	75	34
31	---	---	---	---	---	---	---	1,360	---	60	71	---
TOTAL	---	---	---	---	---	---	3,571	13,679	15,377	2,010	1,924	1,582
MEAN	---	---	---	---	---	---	119	441	513	64.8	62.1	52.7
MAX	---	---	---	---	---	---	227	1,390	1,460	259	112	99
MIN	---	---	---	---	---	---	55	140	276	46	44	33
AC-FT	---	---	---	---	---	---	7,080	27,130	30,500	3,990	3,820	3,140

e Estimated.

09033300 FRASER RIVER BELOW CROOKED CREEK AT TABERNASH, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1990 to September 1994, published as site number 400009105504600. September 1998 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09033300

REMARKS.--Nutrient samples based on low-level methods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
NOV													
05...	1400	38	12.4	8.8	138	1.5	56	18.0	2.70	5.18	--	<0.015	0.131
JAN													
08...	1500	31	10.1	8.2	150	0.0	56	17.4	3.06	6.28	<10	0.246	0.770
APR													
03...	1300	64	11.0	8.1	171	1.5	58	18.1	3.11	10.5	14	0.226	0.481
15...	1100	199	12.2	8.3	165	2.0	65	21.1	2.99	7.86	37	0.100	0.507
MAY													
09...	1130	146	10.1	8.1	142	6.0	57	18.6	2.50	7.98	<10	<0.015	0.101
JUL													
01...	1100	304	9.0	8.6	78	11.5	34	11.0	1.68	2.17	<10	<0.015	<0.022
09...	1100	49	8.5	8.6	144	15.0	63	21.1	2.56	3.78	<10	<0.015	E.016
AUG													
06...	1030	58	8.2	8.4	129	16.0	52	16.9	2.39	5.15	<10	E.014	0.218
SEP													
10...	1245	82	8.8	8.3	167	11.0	74	24.8	3.01	4.71	<10	<0.015	0.072

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
NOV					
05...	0.003	0.014	0.024	0.054	E5
JAN					
08...	0.008	0.057	0.065	0.097	<1
APR					
03...	0.005	0.036	0.045	0.144	--
15...	0.007	0.022	0.033	0.137	<1
MAY					
09...	0.004	0.012	0.022	0.059	<1
JUL					
01...	<0.002	0.008	0.015	0.031	18
09...	<0.002	0.026	0.040	0.062	E1
AUG					
06...	0.021	0.038	0.054	0.093	67
SEP					
10...	0.005	0.025	0.040	0.079	37

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

400453105554200 FRASER RIVER AT HIGHWAY 40 AT GRANBY, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°04'53", long 105°55'42", SW¼NW¼ sec.6, T.1 N., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 3 mi above the confluence with the Colorado River, and 0.6 mi southeast of Granby.

PERIOD OF RECORD.--November 1999 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400453105554200

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV 06...	1000	14	11.1	8.4	158	0.5	5.35	<10	<0.015	<0.022	<0.002	0.009	0.015
JAN 08...	1300	38	12.2	7.9	151	0.0	5.35	<10	0.125	0.655	0.007	0.016	0.022
MAR 25...	1000	55	11.2	8.1	178	0.5	12.4	10	0.142	0.660	0.005	0.032	0.042
MAY 15...	1130	384	10.4	8.2	98	5.5	4.65	37	<0.015	0.104	0.004	0.009	0.017
JUL 09...	0930	62	7.3	8.0	139	13.5	4.24	<10	<0.015	<0.022	<0.002	0.015	0.030
SEP 09...	1000	110	8.4	8.1	125	11.5	4.48	17	<0.015	0.036	0.004	0.014	0.028

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
NOV 06...	0.024	<1
JAN 08...	0.041	<1
MAR 25...	0.107	<1
MAY 15...	0.125	<1
JUL 09...	0.047	10
SEP 09...	0.083	27

< -- Actual value is known to be less than the value shown.

400207105565900 TENMILE CREEK ABOVE POND ABOVE EIGHTMILE CREEK NEAR GRANBY, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°02'07", long 105°56'59", SE¼NE¼ sec. 19, T.1 N., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 0.5 mi above the confluence with Eightmile Creek, and 3.5 mi southeast of Granby.

PERIOD OF RECORD.--November 1999 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400207105565900

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV 05...	1530	1.2	10.4	8.2	288	2.0	3.34	<10	<0.015	E.012	<0.002	0.026	0.036
JAN 08...	1130	1.5	9.6	7.7	281	0.0	3.63	<10	0.060	0.155	E.002	0.029	0.032
MAR 26...	0900	2.1	11.7	8.4	397	0.0	20.7	10	0.039	0.163	E.002	0.020	0.025
MAY 15...	1330	31	7.8	8.3	171	9.5	3.54	22	<0.015	0.183	0.004	0.029	0.039
JUL 09...	1200	1.9	7.2	8.3	391	15.0	4.68	<10	E.012	0.022	<0.002	0.052	0.068
SEP 09...	1115	3.1	8.4	8.2	291	11.0	4.04	<10	<0.015	<0.022	<0.002	0.041	0.054

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
NOV 05...	0.072	16
JAN 08...	0.066	<1
MAR 26...	0.072	<1
MAY 15...	0.102	<1
JUL 09...	0.092	17
SEP 09...	0.098	65

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

400352105550700 TENMILE CREEK NEAR GRANBY, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°03'52", long 105°55'07", NE¼SE¼ sec. 8, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 3 mi below the confluence with Ninemile Creek, and 1 mi east of Granby.

PERIOD OF RECORD.--November 1998 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400352105550700

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, cfs (00061)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Chlor-ide, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)
NOV													
06...	1100	1.2	9.3	8.1	378	1.5	5.94	<10	<0.015	<0.022	<0.002	0.014	0.025
JAN													
07...	1430	1.6	8.8	8.1	340	0.5	3.97	16	0.139	0.105	0.004	0.022	0.030
MAR													
24...	1500	4.7	9.5	8.4	441	1.5	13.8	<10	0.215	0.271	0.005	0.012	0.023
MAY													
15...	1215	102	8.8	8.2	190	11.0	2.95	40	E.011	0.081	0.005	0.028	0.048
JUL													
09...	1500	1.4	6.6	8.1	406	20.0	4.71	10	<0.015	<0.022	<0.002	0.039	0.060
SEP													
09...	1040	4.0	6.4	8.3	333	13.5	5.17	13	<0.015	0.022	0.003	0.026	0.042

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos-phorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
NOV		
06...	0.053	<1
JAN		
07...	0.146	<1
MAR		
24...	0.093	<1
MAY		
15...	0.153	<1
JUL		
09...	0.094	<1
SEP		
09...	0.082	E10

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

400433105560600 TENMILE CREEK ABOVE MOUTH NEAR GRANBY, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°04'33", long 105°56'06", NE¼NW¼ sec. 1, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, 200 ft upstream from confluence with the Fraser River, and 1 mi southwest of Granby.

PERIOD OF RECORD.--August 2001 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400433105560600

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV													
06...	0830	4.3	9.1	8.0	340	1.0	5.72	10	<0.015	<0.022	<0.002	0.008	0.017
JAN													
08...	1200	2.8	8.6	7.7	338	0.0	5.28	<10	0.059	0.084	0.003	E.004	0.008
MAR													
25...	0900	6.6	9.4	7.9	387	0.5	12.0	<10	0.076	0.198	0.004	0.012	0.024
MAY													
15...	1000	81	8.2	8.2	207	11.0	3.37	29	<0.015	0.023	0.003	0.027	0.042
JUL													
09...	0830	4.0	5.5	7.8	292	14.5	4.47	15	E.010	<0.022	<0.002	0.030	0.046
SEP													
09...	0900	2.6	4.9	8.1	319	11.0	6.05	<10	<0.015	<0.022	<0.002	0.024	0.036

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
NOV		
06...	0.095	E3
JAN		
08...	0.047	<1
MAR		
25...	0.083	<1
MAY		
15...	0.137	<1
JUL		
09...	0.118	E7
SEP		
09...	0.118	35

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

09034250 COLORADO RIVER AT WINDY GAP NEAR GRANBY, CO

LOCATION.--Lat 40°06'30", long 106°00'13" in NW¼ sec.27, T.2 N., R.77 W., Grand County, Hydrologic Unit 14010001, on right bank 300 ft downstream from county highway bridge, 1.1 mi downstream from Windy Gap diversion dam, 2.4 mi downstream from mouth of Fraser River, and 3.8 mi northwest of Granby.

DRAINAGE AREA.--789 mi^2.

WATER-DISCHARGERECORDS

PERIOD OF RECORD.--October 1981 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09034250

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,790 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, and diversions for irrigation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	102	e67	e63	e65	e66	e106	100	1,780	369	281	134
2	56	90	e63	e63	e64	e68	e107	101	1,460	456	243	99
3	58	79	e58	e63	e64	e71	e105	102	837	361	242	94
4	60	70	e62	e63	e64	e69	e117	105	406	331	259	93
5	70	77	e71	e63	e63	e68	e94	103	168	316	201	91
6	75	68	e75	e63	e57	e71	e84	100	107	318	212	92
7	65	60	e73	e57	e60	e71	e117	103	115	319	214	102
8	62	102	e73	e66	e60	e67	e111	202	107	330	211	150
9	51	95	e58	e63	e60	e77	e99	435	102	317	208	143
10	58	75	e62	e64	e60	e73	e160	358	98	317	168	155
11	50	96	e62	e58	e60	e77	e145	189	98	319	126	140
12	49	78	e52	e58	e60	e83	e117	106	110	322	118	121
13	54	76	e66	e62	e60	e84	e120	110	125	312	118	108
14	46	82	e41	e64	e60	e84	e120	115	203	301	126	101
15	52	93	e77	e63	e66	e94	e118	209	186	318	115	96
16	69	90	e65	e63	e68	e117	e118	134	191	341	110	93
17	50	98	e69	e63	e61	e114	e115	120	117	345	192	76
18	53	82	e77	e63	e62	e113	118	157	167	335	288	70
19	53	e70	e73	e63	e62	e76	101	203	177	346	238	77
20	62	e66	e58	e61	e63	e71	99	232	187	417	149	79
21	58	e66	e58	e57	e66	e74	122	199	195	394	128	77
22	64	e66	e55	e58	e68	e88	167	201	213	360	121	74
23	62	e66	e58	e60	e65	e89	136	237	220	342	122	66
24	83	e66	e64	e60	e64	e104	94	351	217	358	134	69
25	85	e73	e64	e60	e71	e113	98	703	219	338	149	67
26	76	e78	e63	e60	e73	e92	145	724	220	305	168	58
27	62	e72	e63	e63	e59	e78	307	647	231	323	158	68
28	75	e67	e63	e65	e68	e71	235	907	231	332	152	67
29	68	e67	e63	e65	---	e72	119	1,440	226	335	105	64
30	68	e67	e63	e65	---	e85	107	1,740	217	343	122	62
31	64	---	e63	e65	---	e103	---	1,780	---	326	163	---
TOTAL	1,911	2,337	1,979	1,924	1,773	2,583	3,801	12,213	8,930	10,546	5,341	2,786
MEAN	61.6	77.9	63.8	62.1	63.3	83.3	127	394	298	340	172	92.9
MAX	85	102	77	66	73	117	307	1,780	1,780	456	288	155
MIN	46	60	41	57	57	66	84	100	98	301	105	58
AC-FT	3,790	4,640	3,930	3,820	3,520	5,120	7,540	24,220	17,710	20,920	10,590	5,530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)

MEAN	110	101	80.0	77.8	77.9	112	288	632	891	505	178	112
MAX	341	188	120	110	110	260	881	2,326	2,997	2,096	509	384
(WY)	(2000)	(1986)	(1985)	(1985)	(1985)	(1984)	(1996)	(1984)	(1984)	(1983)	(1997)	(1999)
MIN	59.9	73.8	63.8	59.0	63.3	75.8	120	123	180	120	74.3	54.4
(WY)	(1982)	(2002)	(2003)	(1989)	(2003)	(1983)	(2002)	(2001)	(2001)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1982 - 2003	
ANNUAL TOTAL	34,467		56,124			
ANNUAL MEAN	94.4		154		264	
HIGHEST ANNUAL MEAN					726	1984
LOWEST ANNUAL MEAN					96.7	2002
HIGHEST DAILY MEAN	290	Jun 5	1,780	May 31	4,930	May 25, 1984
LOWEST DAILY MEAN	29	Aug 27	e41	Dec 14	29	Aug 27, 2002
ANNUAL SEVEN-DAY MINIMUM	40	Sep 3	51	Oct 9	40	Sep 3, 2002
MAXIMUM PEAK FLOW			1,980	May 30	5,260	May 25, 1984
MAXIMUM PEAK STAGE			5.25	May 30	7.34	May 25, 1984
ANNUAL RUNOFF (AC-FT)	68,370		111,300		191,400	
10 PERCENT EXCEEDS	167		319		579	
50 PERCENT EXCEEDS	73		90		107	
90 PERCENT EXCEEDS	56		60		68	

e Estimated.

09034250 COLORADO RIVER AT WINDY GAP NEAR GRANBY, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1994 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09034250

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
08...	1400	59	11.1	9.5	138	13.0	55	17.0	2.95	1.43	0.4	6.39	E63
MAR													
12...	1230	99	10.2	8.3	161	0.5	58	18.0	3.27	--	0.5	8.72	60
AUG													
20...	1300	161	7.4	8.3	145	16.5	54	16.7	2.93	--	0.4	6.12	62

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
OCT													
08...	3.25	0.21	7.9	4.5	<10	0.23	0.29	<0.04	<0.06	<0.008	--	E.02	E.03
MAR													
12...	8.10	--	11.5	7.0	<10	0.35	1.9	0.13	0.54	E.007	0.22	0.05	0.07
AUG													
20...	3.94	--	11.8	4.8	<10	0.34	0.45	0.05	0.07	E.005	0.30	0.03	0.05

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)
OCT													
08...	E.04	<0.30	<2	<2	11.1	<0.5	<0.2	<0.2	<0.8	<0.8	0.7	<0.6	137
MAR													
12...	0.10	<0.30	<2	<2	19.2	<0.5	<0.2	<0.2	<0.8	<0.8	0.9	1.3	72
AUG													
20...	0.09	<0.30	<2	E1	17.4	<0.4	<0.2	<0.2	E.6	<0.8	1.3	1.7	203

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recoverable, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)
OCT													
08...	<0.08	0.09	20.8	<0.02	<0.02	0.36	0.95	<0.5	<0.5	<0.2	<0.16	M	E1
MAR													
12...	<0.08	0.16	85.6	<0.02	<0.02	1.24	0.86	<0.5	<0.5	E.2	<0.16	2	3
AUG													
20...	0.11	0.28	79.2	<0.02	<0.02	1.06	1.26	<0.5	E.3	<0.2	<0.16	2	4

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.
M -- Presence of material verified but not quantified.

09034250 COLORADO RIVER AT WINDY GAP NEAR GRANBY, CO—Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
FEB					APR				
26...	1000	72	115	4.0	17...	1350	121	204	7.0

09034900 BOBTAIL CREEK NEAR JONES PASS, CO

LOCATION.--Lat 39°45'37", long 105°54'21", in sec.28, T.3 S., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 320 ft upstream from diversion dam and 0.4 mi south of entrance to August P. Gumlick Tunnel.

DRAINAGE AREA.--5.49 mi^2.

PERIOD OF RECORD.--October 1965 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09034900

GAGE.--Water-stage recorder. Elevation of gage is 10,430 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	e1.3	e1.5	e1.2	e1.1	e0.79	e0.99	e3.3	120	52	10	8.6
2	3.1	e1.3	e1.6	e1.2	e1.3	e0.79	e1.5	e3.3	97	51	8.9	7.8
3	3.1	e1.3	e1.4	e1.2	e1.3	e0.79	e1.9	e3.2	83	49	10	8.6
4	2.7	e1.3	e1.3	e1.2	e1.1	e0.79	e2.1	e3.5	72	47	8.4	7.8
5	2.6	e1.3	e1.1	e1.2	e1.1	e0.79	e2.1	e3.7	64	44	7.7	8.0
6	2.6	e1.3	e1.1	e1.1	e1.0	e0.93	e2.1	e3.9	53	41	7.5	11
7	2.8	e1.3	e1.1	e0.92	e0.96	e1.0	e2.1	e3.9	46	37	8.7	13
8	2.7	e1.3	e0.92	e0.82	e0.96	e1.0	e2.1	e3.6	45	35	8.4	13
9	2.6	e1.3	e0.92	e0.89	e0.93	e1.1	e2.1	e3.6	55	34	7.9	20
10	2.4	e1.4	e0.92	e0.89	e0.84	e1.1	e2.1	e3.5	67	32	7.1	18
11	2.2	e1.4	e0.92	e0.86	e0.84	e1.1	e2.2	e3.5	71	28	6.5	17
12	e2.0	e1.4	e0.92	e0.86	e0.99	e1.1	e2.5	e3.5	70	26	6.3	15
13	e2.0	e1.4	e1.1	e0.86	e0.99	e1.1	e2.7	e5.4	66	25	6.1	14
14	e1.7	e1.4	e1.3	e0.86	e0.99	e1.2	e3.1	e5.5	72	24	5.7	13
15	e1.5	e1.3	e1.4	e0.86	e1.2	e1.2	e2.6	e5.8	79	25	5.5	11
16	e1.4	e1.3	e1.5	e0.86	e1.3	e1.2	e2.4	e12	74	27	12	10
17	e1.5	e1.3	e1.5	e0.86	e1.3	e1.0	e2.2	e21	73	28	15	9.2
18	e1.5	e1.7	e1.5	e0.86	e1.4	e0.86	e2.0	e24	75	27	21	8.8
19	e1.4	e1.7	e1.4	e0.86	e1.4	e0.86	e1.8	e25	78	27	15	8.0
20	e1.4	e1.6	e1.3	e0.86	e1.4	e0.89	e1.2	24	76	28	13	7.4
21	e1.7	e1.5	e1.2	e0.86	e1.4	e0.89	e1.3	25	75	24	11	6.8
22	e1.8	e1.5	e1.1	e0.86	e1.4	e0.89	e1.8	32	72	22	9.7	6.4
23	e1.8	e1.5	e0.98	e0.86	e1.3	e0.92	e1.5	41	73	20	11	6.0
24	e1.7	e1.3	e0.92	e0.98	e1.2	e0.92	e1.5	46	67	16	9.7	5.6
25	e1.7	e1.1	e0.92	e0.98	e1.2	e0.96	e1.4	51	59	17	10	5.2
26	e1.6	e1.1	e0.92	e0.80	e1.1	e0.93	e1.7	56	55	18	9.2	4.9
27	e1.6	e1.1	e0.92	e0.71	e1.0	e0.80	e1.8	65	55	17	8.2	4.7
28	e1.5	e1.3	e1.1	e0.61	e0.70	e0.62	e1.9	85	55	14	7.7	4.5
29	e1.4	e1.2	e1.2	e0.62	---	e0.62	e3.0	101	55	13	8.2	4.3
30	e1.3	e1.4	e1.2	e0.62	---	e0.63	e3.3	110	54	12	11	4.1
31	e1.3	---	e1.2	e1.1	---	e0.71	---	127	---	11	10	---
TOTAL	61.4	40.6	36.36	28.22	31.70	28.48	60.99	904.2	2,056	871	296.4	281.7
MEAN	1.98	1.35	1.17	0.91	1.13	0.92	2.03	29.2	68.5	28.1	9.56	9.39
MAX	3.1	1.7	1.6	1.2	1.4	1.2	3.3	127	120	52	21	20
MIN	1.3	1.1	0.92	0.61	0.70	0.62	0.99	3.2	45	11	5.5	4.1
AC-FT	122	81	72	56	63	56	121	1,790	4,080	1,730	588	559

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	2.97	1.73	1.10	0.88	0.80	0.78	1.48	15.5	56.3	29.3	9.43	4.71
MAX	5.49	3.33	1.79	1.24	1.15	1.21	4.30	32.6	85.8	75.5	25.5	9.74
(WY)	(1985)	(1984)	(1983)	(1983)	(1995)	(1995)	(1969)	(2000)	(1997)	(1995)	(1983)	(1983)
MIN	1.51	1.03	0.78	0.58	0.48	0.52	0.68	1.57	20.1	4.74	3.39	2.35
(WY)	(1981)	(1974)	(1977)	(1972)	(1972)	(1972)	(1973)	(1995)	(2002)	(2002)	(2002)	(1987)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003	
ANNUAL TOTAL	1,698.72		4,697.05			
ANNUAL MEAN	4.65		12.9		10.4	
HIGHEST ANNUAL MEAN					15.5	1984
LOWEST ANNUAL MEAN					4.80	2002
HIGHEST DAILY MEAN	39	Jun 1	127	May 31	146	Jun 25, 1983
LOWEST DAILY MEAN	e0.75	Mar 3	e0.61	Jan 28	0.44	Feb 11, 1972
ANNUAL SEVEN-DAY MINIMUM	e0.79	Feb 27	e0.75	Mar 25	0.46	Feb 11, 1972
MAXIMUM PEAK FLOW			197	May 31	290	Jun 28, 1988
MAXIMUM PEAK STAGE			4.96	May 31	a5.19	Jun 28, 1988
ANNUAL RUNOFF (AC-FT)	3,370		9,320		7,560	
10 PERCENT EXCEEDS	13		51		33	
50 PERCENT EXCEEDS	2.0		2.0		2.0	
90 PERCENT EXCEEDS	0.89		0.89		0.72	

e Estimated.
a Maximum gage height, 7.57 ft, May 15, 1984, backwater from ice.

09035500 WILLIAMS FORK BELOW STEELMAN CREEK, CO

LOCATION.--Lat 39°46'44", long 105°55'40", in sec.20, T.3 S., R.76 W., Grand County, Hydrologic Unit 14010001, on right bank 700 ft downstream from Steelman Creek and 6.5 mi southeast of Leal.

DRAINAGE AREA.--16.3 mi^2.

PERIOD OF RECORD.--July 1933 to September 1941, published as Williams River below Steelman Creek. October 1965 to current year. Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09035500

REVISED RECORDS.--WSP 1313: 1937(M).

GAGE.--Water-stage recorder. Elevation of gage is 9,800 ft above NGVD of 1929, from topographic map. Prior to July 21, 1933, nonrecording gage, and July 21, 1933 to Sept. 30, 1941, water-stage recorder at site 600 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station through August P. Gumlick Tunnel (station 09035000) since May 10, 1940. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.82	e0.65	e0.87	e0.56	e0.50	e0.73	e0.70	7.5	333	110	1.7	1.4
2	1.9	e0.65	e0.91	e0.56	e0.57	e0.70	e1.0	6.8	251	106	1.6	1.2
3	1.2	e0.65	e0.76	e0.56	e0.57	e0.68	e1.4	6.5	219	102	2.1	1.3
4	2.4	e0.66	e0.71	e0.62	e0.52	e0.69	e1.7	6.5	200	97	2.1	1.4
5	1.2	e0.67	e0.58	e0.61	e0.53	e0.69	e1.8	6.3	173	91	1.6	1.2
6	1.1	e0.68	e0.63	e0.54	e0.53	e0.73	e1.9	6.1	143	70	1.5	1.5
7	2.9	e0.71	e0.59	e0.46	e0.50	e0.75	e1.9	6.0	126	35	1.5	1.8
8	2.2	e0.72	e0.51	e0.48	e0.49	e0.86	e1.8	6.0	120	5.3	1.5	1.6
9	2.5	e0.72	e0.51	e0.51	e0.49	e0.90	e1.8	5.8	140	4.6	1.4	3.4
10	0.94	e0.72	e0.51	e0.51	e0.44	e0.90	e1.8	6.1	168	16	1.9	11
11	2.3	e0.73	e0.51	e0.44	e0.44	e0.91	e2.5	5.8	181	3.9	1.3	2.1
12	0.92	e0.73	e0.52	e0.44	e0.44	e0.92	e3.4	6.6	184	3.5	1.2	1.9
13	0.84	e0.70	e0.61	e0.44	e0.66	e0.92	e4.3	10	172	3.3	1.2	1.7
14	2.6	e0.67	e0.73	e0.44	e0.67	e0.93	e5.1	14	183	16	1.1	1.6
15	2.0	e0.64	e0.78	e0.44	e0.66	e0.94	e5.7	21	195	4.0	1.0	1.5
16	0.81	e0.64	e0.79	e0.44	e0.80	e0.86	e5.0	30	193	3.7	3.2	1.4
17	0.76	e0.74	e0.80	e0.44	e0.83	e0.79	e4.5	53	188	9.3	3.1	1.4
18	0.73	e0.86	e0.73	e0.44	e0.83	e0.74	e4.3	70	195	3.0	4.0	1.4
19	0.65	e0.86	e0.70	e0.44	e0.84	e0.69	e4.1	64	198	2.9	1.9	1.4
20	0.56	e0.84	e0.59	e0.44	e0.82	e0.73	e3.7	58	189	2.9	1.5	1.3
21	0.64	e0.79	e0.52	e0.44	e0.80	e0.75	e3.8	74	177	14	1.3	1.3
22	e0.72	e0.79	e0.47	e0.44	e0.77	e0.78	e3.9	98	168	2.6	1.3	1.3
23	e0.77	e0.79	e0.45	e0.44	e0.75	e0.78	e3.6	121	166	2.3	1.7	1.2
24	e0.75	e0.67	e0.44	e0.49	e0.72	e0.90	e2.5	134	152	12	1.8	1.2
25	e0.68	e0.58	e0.45	e0.49	e0.70	e0.93	e3.6	147	135	2.2	2.0	1.5
26	e0.65	e0.56	e0.45	e0.42	e0.69	e0.93	e4.7	153	124	2.3	1.7	1.6
27	e0.64	e0.56	e0.49	e0.39	e0.68	e0.79	e6.2	186	121	2.2	1.4	1.2
28	e0.62	e0.74	e0.56	e0.35	e0.68	e0.57	e6.8	224	120	14	1.3	1.4
29	e0.62	e0.72	e0.57	e0.35	---	e0.56	7.1	262	118	2.0	1.3	2.7
30	e0.63	e0.78	e0.59	e0.35	---	e0.55	7.6	265	113	1.8	1.8	11
31	e0.64	---	e0.59	e0.51	---	e0.57	---	303	---	1.8	1.7	---
TOTAL	36.69	21.22	18.92	14.48	17.92	24.17	108.20	2,363.0	5,145	746.6	53.7	65.9
MEAN	1.18	0.71	0.61	0.47	0.64	0.78	3.61	76.2	172	24.1	1.73	2.20
MAX	2.9	0.86	0.91	0.62	0.84	0.94	7.6	303	333	110	4.0	11
MIN	0.56	0.56	0.44	0.35	0.44	0.55	0.70	5.8	113	1.8	1.0	1.2
AC-FT	73	42	38	29	36	48	215	4,690	10,210	1,480	107	131
a	294	222	167	169	115	109	40	0	0	2,388	1,035	978

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

MEAN	5.37	3.51	2.44	2.05	1.95	2.02	3.80	32.9	116	55.7	11.7	6.84
MAX	16.3	8.07	4.85	4.30	4.02	4.99	10.6	89.2	213	200	44.5	18.4
(WY)	(1985)	(1938)	(1996)	(1939)	(1999)	(1999)	(1992)	(1936)	(1938)	(1995)	(1983)	(1984)
MIN	0.98	0.58	0.39	0.31	0.30	0.35	0.61	5.45	5.83	1.07	0.67	0.68
(WY)	(1967)	(1987)	(1987)	(1978)	(1978)	(1987)	(1973)	(1991)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1934 - 2003	
ANNUAL TOTAL	718.34		b8,615.80			
ANNUAL MEAN	1.97		b23.6		c26.4	
HIGHEST ANNUAL MEAN					39.0	1995
LOWEST ANNUAL MEAN					2.41	2002
HIGHEST DAILY MEAN	32	Jun 3	333	Jun 1	395	Jul 12, 1995
LOWEST DAILY MEAN	0.40	Aug 28	e0.35	Jan 28	0.20	Mar 6, 1967
ANNUAL SEVEN-DAY MINIMUM	0.44	Aug 23	e0.41	Jan 24	0.27	Feb 13, 1971
MAXIMUM PEAK FLOW			431	May 31	d516	Jul 11, 1995
MAXIMUM PEAK STAGE			5.27	May 31	f5.64	Jul 11, 1995
ANNUAL RUNOFF (AC-FT)	1,420		b17,090		c19,130	
10 PERCENT EXCEEDS	3.7		120		68	
50 PERCENT EXCEEDS	1.1		1.2		3.5	
90 PERCENT EXCEEDS	0.56		0.51		0.60	

e Estimated.
a Diversions in acre-feet, through August P. Gumlick Tunnel, provided by Denver Water Board.
b Does not include diversions through August P. Gumlick Tunnel.
c Includes diversions to August P. Gumlick Tunnel.
d From rating curve extended above 250 ft^3/s.
f Maximum gage height, 6.96 ft, May 15, 1984, backwater from ice.

09035700 WILLIAMS FORK ABOVE DARLING CREEK, NEAR LEAL, CO

LOCATION.--Lat 39°47'50", long 106°01'32", in NW¼NW¼ sec.16, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 0.3 mi upstream from Darling Creek, and 1.4 mi southeast of Leal.

DRAINAGE AREA.--35.0 mi^2.

PERIOD OF RECORD.--October 1965 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09035700

REVISED RECORDS.--WDR CO-93-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,940 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1972, and May 6, 1981 to Jan. 31, 1983, at site 300 ft upstream at different datum. Feb. 1, 1983 to Oct. 19, 1992, and Oct. 1, 1972 to May 5, 1981, at site 0.6 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversion upstream from station through August P. Gumlick Tunnel (station 09035000). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	e5.1	7.4	e4.2	e4.5	e4.4	e6.5	21	443	196	24	16
2	7.1	e5.2	7.9	e4.3	e5.0	e4.2	e6.6	20	386	191	23	15
3	8.9	e5.4	7.2	e4.5	e4.7	e4.0	e6.8	19	359	186	29	15
4	7.8	e5.1	e6.9	e4.5	e4.4	e4.0	e7.0	19	328	179	30	15
5	7.9	e5.7	e7.2	e4.0	e4.5	e4.4	e6.5	18	304	170	23	14
6	7.1	e5.5	e6.9	e3.9	e4.3	e4.3	e6.6	17	268	152	22	15
7	7.6	e5.7	e6.6	e3.9	e4.3	e4.2	e6.5	17	245	111	21	18
8	8.5	e5.9	e6.5	e4.3	e4.4	e4.2	e6.1	17	227	68	21	18
9	8.1	e6.1	e6.3	e4.3	e3.9	e4.4	e7.0	17	245	63	20	25
10	7.6	e6.3	e5.9	e4.2	e3.9	e4.4	e8.7	17	271	73	19	28
11	6.5	e6.1	e5.6	e4.3	e3.9	e4.2	e12	15	284	58	18	21
12	7.2	e6.0	e5.5	e4.5	e3.9	e4.4	e15	18	286	54	18	18
13	5.5	e6.0	e5.7	e4.5	e4.0	e4.5	18	24	280	50	17	17
14	5.7	e6.2	e5.8	e4.7	e4.2	e4.6	18	32	284	61	16	16
15	7.1	e6.0	e6.0	e4.6	e4.4	e4.4	20	42	300	48	15	15
16	6.3	e5.7	e5.9	e4.3	e4.5	e4.1	20	55	297	46	20	14
17	5.4	e6.3	e5.9	e4.5	e4.5	e4.4	e19	84	291	49	34	14
18	5.4	e6.9	e5.9	e4.7	e4.5	e4.5	16	98	296	43	35	15
19	5.3	e6.9	e5.8	e4.9	e4.5	e4.3	e15	99	299	41	24	14
20	5.0	7.2	e5.4	e4.9	e4.7	e4.4	e15	93	297	40	19	14
21	5.0	6.7	e5.4	e4.8	e4.5	e5.0	15	113	279	50	17	13
22	5.1	e6.5	e5.4	e4.7	e4.8	e4.8	16	145	271	37	17	13
23	6.6	e6.8	e5.2	e4.6	e4.5	e4.6	15	196	269	34	23	13
24	5.8	6.8	e4.8	e4.5	e4.5	e4.6	e13	232	255	43	26	12
25	5.5	6.7	e4.6	e4.4	e4.7	e5.0	e17	253	237	33	24	12
26	5.9	e6.0	e4.6	e4.2	e4.4	e5.0	21	270	222	35	21	12
27	5.8	6.4	e4.3	e4.3	e4.3	e4.4	22	325	218	33	19	11
28	5.4	6.3	e4.4	e4.5	e4.3	e4.2	22	375	216	41	18	11
29	5.3	6.7	e4.4	e4.3	---	e4.8	23	403	214	30	16	11
30	5.3	7.1	e4.5	e4.1	---	e5.2	22	416	207	27	19	18
31	e5.9	---	e4.3	e4.3	---	e6.3	---	425	---	25	18	---
TOTAL	198.2	185.3	178.2	136.7	123.0	140.2	422.3	3,895	8,378	2,267	666	463
MEAN	6.39	6.18	5.75	4.41	4.39	4.52	14.1	126	279	73.1	21.5	15.4
MAX	8.9	7.2	7.9	4.9	5.0	6.3	23	425	443	196	35	28
MIN	5.0	5.1	4.3	3.9	3.9	4.0	6.1	15	207	25	15	11
AC-FT	393	368	353	271	244	278	838	7,730	16,620	4,500	1,320	918

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	12.2	9.53	8.01	6.68	6.09	6.53	11.7	64.0	202	102	26.7	15.9
MAX	33.5	20.6	15.5	13.4	13.6	17.9	26.0	155	378	320	75.5	40.9
(WY)	(1996)	(1998)	(1996)	(1996)	(1996)	(1996)	(1996)	(1996)	(1997)	(1995)	(1983)	(1984)
MIN	6.20	4.90	3.87	3.43	3.47	3.21	5.29	21.3	29.5	9.27	4.89	5.70
(WY)	(1980)	(1990)	(1975)	(1975)	(1975)	(1980)	(1973)	(1975)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003	
ANNUAL TOTAL	3,691.4		17,052.9			
ANNUAL MEAN	10.1		46.7		39.3	
HIGHEST ANNUAL MEAN					71.3	1984
LOWEST ANNUAL MEAN					10.8	2002
HIGHEST DAILY MEAN	80	Jun 3	443	Jun 1	555	Jul 12, 1995
LOWEST DAILY MEAN	3.5	Aug 19	e3.9	Jan 6	2.7	Apr 5, 1977
ANNUAL SEVEN-DAY MINIMUM	3.6	Aug 23	e4.0	Feb 8	2.8	Mar 31, 1977
MAXIMUM PEAK FLOW			520	May 31	751	Jun 17, 1995
MAXIMUM PEAK STAGE			8.20	May 31	a6.94	Jun 17, 1995
ANNUAL RUNOFF (AC-FT)	7,320		33,820		28,480	
10 PERCENT EXCEEDS	19		215		116	
50 PERCENT EXCEEDS	6.6		7.4		11	
90 PERCENT EXCEEDS	4.9		4.3		5.0	

e Estimated.
a Maximum gage height, 8.20 ft, May 31, 2003, present site and datum.

09035800 DARLING CREEK NEAR LEAL, CO

LOCATION.--Lat 39°48'02", long 106°01'33", in SW¼SW¼ sec.9, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 700 ft upstream from mouth, and 1.2 mi southeast of Leal.

DRAINAGE AREA.--8.76 mi^2.

PERIOD OF RECORD.--October 1965 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09035800

GAGE.--Water-stage recorder. Elevation of gage is 8,940 ft above NGVD of 1929, from topographic map. Prior to Aug. 23, 1996, at site 2,400 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.3	e2.5	e2.8	e2.2	e1.9	e1.7	e2.7	4.5	88	e34	e6.2	7.5
2	e2.6	e2.6	e3.1	e2.3	e2.2	e1.6	e2.8	4.4	76	e33	e5.6	7.1
3	e3.5	e2.5	e2.8	e2.4	e2.0	e1.5	e3.0	4.3	68	e31	e9.5	7.4
4	e2.8	e2.4	e2.6	e2.3	e1.8	e1.5	e3.2	4.4	58	e30	e11	7.2
5	e3.0	e2.7	e3.0	e2.0	e1.9	e1.7	e2.9	4.2	52	e28	e9.5	6.6
6	e2.4	e2.7	e2.8	e1.9	e1.7	e1.6	e3.0	4.1	47	e26	e8.9	7.4
7	e3.1	e2.7	e2.7	e1.9	e1.7	e1.6	e2.9	4.1	43	e23	e8.4	8.7
8	e3.5	e2.9	e2.6	e2.0	e1.8	e1.6	e2.8	4.0	43	e22	e7.8	7.8
9	e3.2	e2.9	e2.5	e2.0	e1.5	e1.7	e3.0	4.0	46	e20	e7.2	10
10	e3.0	e2.9	e2.4	e1.8	e1.6	e1.7	e3.2	4.0	51	e19	e6.7	9.5
11	e2.6	e2.7	e2.3	e1.8	e1.6	e1.6	e3.6	3.8	55	e18	e6.4	9.3
12	e2.9	e2.5	e2.3	e1.9	e1.7	e1.8	e4.1	4.4	55	e16	e6.1	8.9
13	e2.1	e2.4	e2.6	e1.9	e1.8	e1.9	e4.6	5.8	52	e15	e5.8	8.3
14	e2.4	e2.5	e2.7	e2.0	e1.8	e2.0	e4.5	7.1	54	e14	5.5	7.9
15	e3.0	e2.4	e2.9	e2.0	e1.9	e1.8	e5.2	8.6	57	e13	5.3	7.8
16	e2.6	e2.4	e2.9	e1.8	e1.9	e1.7	e5.0	12	55	e13	9.8	7.6
17	e2.4	e2.6	e2.9	e1.9	e2.0	e1.8	e4.5	16	55	e12	12	7.4
18	e2.2	e2.8	e2.9	e1.9	e2.0	e1.9	e3.8	16	56	e11	14	8.1
19	e2.1	e2.8	e2.8	e2.0	e2.0	e1.8	e3.1	17	55	e10	8.9	7.7
20	e2.0	e3.0	e2.6	e2.0	e2.1	e1.8	e2.6	19	53	e8.9	7.4	7.2
21	e1.9	e2.8	e2.6	e1.8	e1.9	e2.1	e3.1	22	51	e8.0	6.8	7.0
22	e2.3	e2.6	e2.6	e1.7	e2.1	e1.8	e3.4	26	51	e7.1	6.7	6.8
23	e2.7	e2.7	e2.4	e1.6	e1.9	e1.6	e3.0	32	50	e6.8	13	6.5
24	e2.4	e2.7	e2.3	e1.6	e1.8	e1.6	e2.4	37	47	e7.1	12	6.3
25	e2.1	e2.6	e2.3	e1.4	e2.0	e1.7	e4.2	41	e42	e7.7	12	6.1
26	e2.4	e2.2	e2.3	e1.3	e1.8	e1.7	4.4	43	e42	e7.7	10	5.9
27	e2.5	e2.4	e2.1	e1.5	e1.7	e1.5	4.8	54	e41	e6.8	9.3	5.8
28	e2.4	e2.3	e2.4	e1.6	e1.7	e1.4	4.8	71	e39	e6.2	8.9	5.7
29	e2.4	e2.4	e2.3	e1.3	---	e1.7	5.0	84	e38	e7.1	8.1	5.7
30	e2.5	e2.6	e2.4	e1.5	---	e1.9	4.9	85	e36	e7.1	8.8	5.5
31	e3.1	---	e2.3	e1.7	---	e2.5	---	89	---	e7.1	8.3	---
TOTAL	80.4	78.2	80.2	57.0	51.8	53.8	110.5	735.7	1,556	475.6	265.9	220.7
MEAN	2.59	2.61	2.59	1.84	1.85	1.74	3.68	23.7	51.9	15.3	8.58	7.36
MAX	3.5	3.0	3.1	2.4	2.2	2.5	5.2	89	88	34	14	10
MIN	1.9	2.2	2.1	1.3	1.5	1.4	2.4	3.8	36	6.2	5.3	5.5
AC-FT	159	155	159	113	103	107	219	1,460	3,090	943	527	438

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	4.00	3.11	2.56	2.18	2.00	2.01	2.89	15.4	46.7	21.1	7.20	4.68
MAX	7.86	5.52	4.33	3.00	3.07	2.90	6.03	31.2	85.1	91.6	20.2	9.64
(WY)	(1985)	(1985)	(1985)	(1985)	(1998)	(1998)	(1985)	(2000)	(1984)	(1983)	(1983)	(1984)
MIN	2.55	1.82	1.38	1.20	1.21	1.10	1.49	4.39	12.3	4.15	2.22	2.12
(WY)	(1979)	(1976)	(1976)	(1976)	(1975)	(1975)	(1975)	(1983)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003	
ANNUAL TOTAL	1,516.2		3,765.8			
ANNUAL MEAN	4.15		10.3		9.49	
HIGHEST ANNUAL MEAN					18.1	1983
LOWEST ANNUAL MEAN					4.13	2002
HIGHEST DAILY MEAN	24	Jun 1	89	May 31	175	Jun 25, 1983
LOWEST DAILY MEAN	1.2	Aug 26	e1.3	Jan 26	1.0	Jan 12, 1975
ANNUAL SEVEN-DAY MINIMUM	1.4	Sep 1	e1.5	Jan 24	1.1	Feb 24, 1975
MAXIMUM PEAK FLOW			113	May 31	a241	Jun 30, 1984
MAXIMUM PEAK STAGE			5.22	May 31	b4.30	Jun 30, 1984
ANNUAL RUNOFF (AC-FT)	3,010		7,470		6,880	
10 PERCENT EXCEEDS	9.5		37		26	
50 PERCENT EXCEEDS	2.5		3.0		3.4	
90 PERCENT EXCEEDS	2.0		1.7		1.9	

e Estimated.
a From rating curve extended above 100 ft^3/s.
b Maximum gage height, 5.44 ft, Jun 19, 1997, present site and datum.

09035900 SOUTH FORK WILLIAMS FORK NEAR LEAL, CO

LOCATION.--Lat 39°47'45", long 106°01'48", in NE$^1/_4$ sec.17, T.3 S., R.77 W., Grand County, Hydrologic Unit 14010001, on left bank 800 ft upstream from county road bridge, 0.6 mi upstream from mouth, and 1.2 mi southeast of Leal.

DRAINAGE AREA.--27.3 mi^2.

PERIOD OF RECORD.--October 1965 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09035900

GAGE.--Water-stage recorder. Elevation of gage is 8,950 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for high flow period, May 22 to June 26, which is fair, and estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	e8.0	e8.5	e6.4	e7.0	e7.7	e8.9	16	321	123	26	23
2	9.8	e8.1	e8.2	e6.6	e7.2	e7.9	e9.3	15	254	115	25	22
3	11	e8.0	e7.9	e6.7	e7.0	e7.7	e9.8	15	213	107	32	22
4	10	e7.6	e8.0	e6.8	e6.9	e7.6	e9.8	16	187	99	34	22
5	10	e7.8	e7.8	e6.4	e7.2	e7.7	e9.7	15	173	91	26	21
6	9.7	e7.9	e7.6	e6.7	e7.1	e7.7	e9.6	15	153	85	25	24
7	9.7	e8.1	e7.6	e6.7	e7.2	e7.7	e9.4	15	145	81	25	26
8	9.7	e7.9	e7.5	e7.1	e7.3	e7.6	e9.0	15	140	75	27	26
9	9.3	e8.0	e7.4	e7.1	e7.2	e7.6	e9.3	15	144	71	25	33
10	8.9	e8.1	e7.3	e6.9	e7.4	e7.6	e9.7	15	154	66	23	29
11	8.9	e8.3	e7.1	e6.7	e7.3	e7.7	e10	14	158	61	22	29
12	8.6	e8.3	e7.0	e7.1	e7.5	e7.6	e11	16	158	57	23	28
13	7.9	e8.3	e7.1	e7.1	e7.5	e7.7	e12	23	154	53	24	27
14	8.2	e8.1	e7.2	e7.4	e7.5	e7.7	e14	31	158	51	22	25
15	8.2	e7.9	e7.4	e7.4	e7.4	e7.7	e16	43	162	51	21	24
16	8.2	e7.6	e7.3	e6.9	e7.5	e7.5	e14	61	163	50	25	23
17	8.0	e7.7	e7.4	e7.1	e7.7	e7.6	e13	89	164	48	43	23
18	8.0	e7.6	e7.4	e7.2	e7.7	e7.6	e12	103	168	46	44	23
19	7.9	e7.5	e7.4	e7.5	e7.5	e7.6	e11	108	175	46	31	22
20	7.8	e7.7	e7.0	e7.5	e7.7	e7.7	e10	100	172	43	26	22
21	7.8	e7.8	e7.0	e7.1	e7.8	e8.0	e11	105	164	41	24	21
22	8.0	e7.7	e6.8	e6.8	e7.9	e7.7	e11	121	161	39	23	20
23	8.6	e8.0	e6.4	e6.8	e7.7	e7.6	e12	135	160	35	24	19
24	8.4	e8.0	e6.2	e6.8	e7.5	e7.6	16	172	157	33	27	19
25	8.2	e8.0	e6.0	e6.8	e7.8	e7.5	19	205	154	32	30	18
26	7.9	e7.9	e6.0	e6.6	e7.8	e7.9	14	221	150	32	27	18
27	8.9	e8.2	e5.7	e6.9	e7.7	e8.1	16	244	144	30	25	18
28	8.1	e8.2	e5.7	e7.1	e7.6	e7.9	16	277	140	28	24	17
29	8.3	e8.3	e6.1	e6.8	---	e8.0	17	272	137	28	23	17
30	e7.8	e8.4	e6.4	e6.6	---	e8.2	17	258	130	27	26	16
31	e8.3	---	e6.2	e6.8	---	e8.5	---	263	---	27	26	---
TOTAL	269.6	239.0	218.6	214.4	208.6	240.2	366.5	3,013	5,013	1,771	828	677
MEAN	8.70	7.97	7.05	6.92	7.45	7.75	12.2	97.2	167	57.1	26.7	22.6
MAX	11	8.4	8.5	7.5	7.9	8.5	19	277	321	123	44	33
MIN	7.8	7.5	5.7	6.4	6.9	7.5	8.9	14	130	27	21	16
AC-FT	535	474	434	425	414	476	727	5,980	9,940	3,510	1,640	1,340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	13.4	10.9	9.25	7.80	7.40	7.45	11.6	58.8	155	70.7	25.8	16.6
MAX	24.0	16.7	21.1	12.8	11.4	11.5	25.0	118	243	215	63.3	32.3
(WY)	(1985)	(1998)	(1986)	(1998)	(1996)	(1996)	(1971)	(1996)	(1984)	(1983)	(1983)	(1984)
MIN	8.70	3.71	3.46	2.95	2.90	3.19	4.47	18.4	44.3	13.6	9.58	8.78
(WY)	(2003)	(1967)	(1967)	(1967)	(1967)	(1967)	(1967)	(1995)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1966 - 2003	
ANNUAL TOTAL	5,251.4		13,058.9			
ANNUAL MEAN	14.4		35.8		32.9	
HIGHEST ANNUAL MEAN					54.8	1984
LOWEST ANNUAL MEAN					14.9	2002
HIGHEST DAILY MEAN	81	Jun 2	321	Jun 1	404	Jun 17, 1995
LOWEST DAILY MEAN	e5.7	Dec 27	e5.7	Dec 27	2.6	Mar 6, 1967
ANNUAL SEVEN-DAY MINIMUM	e6.0	Dec 23	e6.0	Dec 23	2.8	Feb 28, 1967
MAXIMUM PEAK FLOW			415	May 27	a574	Jun 17, 1995
MAXIMUM PEAK STAGE			3.87	May 27	b4.17	Jun 17, 1995
ANNUAL RUNOFF (AC-FT)	10,420		25,900		23,840	
10 PERCENT EXCEEDS	31		138		95	
50 PERCENT EXCEEDS	8.3		9.7		12	
90 PERCENT EXCEEDS	7.6		7.1		6.7	

e Estimated.
a From rating curve extended above 256 ft^3/s.
b Maximum gage height, 4.22 ft, Nov 22, 1979, backwater from ice.

09036000 WILLIAMS FORK NEAR LEAL, CO

LOCATION.--Lat 39°50'02", long 106°03'21", in sec.31, T.2 S., R.77 W., Grand County, Hydrologic Unit 14010001, on right bank at downstream side of bridge, 100 ft downstream from Kinney Creek, and 1.7 mi northwest of Leal.

DRAINAGE AREA.--89.5 mi^2.

PERIOD OF RECORD.--July 1933 to current year. Records since May 10, 1940, equivalent to earlier records if diversion to August P. Gumlick Tunnel is added to flow past station. Prior to October 1958, published as Williams River near Leal. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09036000

REVISED RECORDS.--WSP 1733: 1951. WSP 2124: Drainage area. WRD CO. 1973: 1972.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,790 ft above NGVD of 1929, from topographic map. Prior to Aug. 16, 1953, at site 15 ft downstream at present datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Transmountain diversion upstream from station through August P. Gumlick Tunnel (see table below for figures of diversion). Diversions for irrigation of about 200 acres of hay meadows upstream from station and about 40 acres downstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	19	22	14	15	18	17	57	1,320	485	74	61
2	22	19	22	14	17	18	18	53	e1,110	459	69	56
3	28	19	22	14	16	18	18	54	e990	435	79	56
4	27	18	20	14	16	18	18	56	911	410	96	57
5	26	19	21	14	17	18	17	53	838	383	72	52
6	24	18	20	14	16	18	17	51	741	354	66	59
7	24	19	19	14	e16	18	17	51	679	289	62	71
8	25	20	19	14	e17	18	16	51	620	231	67	70
9	24	21	18	14	17	18	17	50	653	212	61	96
10	23	21	17	14	17	18	20	52	724	207	57	94
11	21	21	17	14	17	18	24	47	766	183	54	88
12	22	20	16	14	17	18	31	54	785	170	54	78
13	20	20	17	14	17	18	36	74	762	161	56	71
14	20	20	17	14	17	18	45	98	761	165	51	67
15	20	20	17	14	17	18	47	137	e806	149	48	63
16	21	18	17	14	17	18	43	176	e800	143	56	61
17	20	19	17	14	17	18	41	246	e792	141	118	58
18	20	20	17	14	17	18	39	283	e806	131	119	61
19	20	19	17	15	17	18	35	290	e822	126	83	60
20	20	20	16	15	18	19	33	281	e812	122	67	57
21	21	20	16	14	18	20	35	306	774	126	60	55
22	21	19	16	14	18	19	37	373	753	111	58	52
23	22	20	15	14	18	18	37	456	737	101	76	51
24	23	21	14	14	18	18	29	521	692	107	100	49
25	25	21	14	14	18	18	41	569	636	103	90	48
26	23	19	14	14	18	17	50	592	584	104	81	46
27	25	20	13	14	18	16	58	676	560	98	69	44
28	24	21	14	14	18	15	60	880	544	99	66	43
29	23	21	14	14	---	15	62	1,020	531	92	60	42
30	22	22	14	14	---	15	61	1,110	506	81	68	48
31	23	---	14	15	---	17	---	1,130	---	76	71	---
TOTAL	700	594	526	437	479	549	1,019	9,847	22,815	6,054	2,208	1,814
MEAN	22.6	19.8	17.0	14.1	17.1	17.7	34.0	318	760	195	71.2	60.5
MAX	28	22	22	15	18	20	62	1,130	1,320	485	119	96
MIN	20	18	13	14	15	15	16	47	506	76	48	42
AC-FT	1,390	1,180	1,040	867	950	1,090	2,020	19,530	45,250	12,010	4,380	3,600
a	294	222	167	169	115	109	40	0	0	2,388	1,035	978

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

MEAN	37.9	29.7	24.1	20.7	19.2	19.2	36.3	180	484	215	70.3	44.2
MAX	102	52.6	35.1	28.6	26.4	24.5	91.3	392	966	765	198	98.4
(WY)	(1962)	(1962)	(1985)	(1985)	(1962)	(1946)	(1946)	(1996)	(1938)	(1983)	(1983)	(1961)
MIN	18.5	18.7	14.4	14.1	14.0	14.1	19.8	76.1	109	31.0	17.6	18.4
(WY)	(1964)	(1964)	(1964)	(1964)	(1964)	(1964)	(1944)	(1968)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1934 - 2003	
ANNUAL TOTAL	12,479		47,042			
ANNUAL MEAN	34.2		b137		b105	
HIGHEST ANNUAL MEAN					c176	1984
LOWEST ANNUAL MEAN					35.6	2002
HIGHEST DAILY MEAN	207	Jun 3	1,320	Jun 1	1,430	Jun 21, 1938
LOWEST DAILY MEAN	12	Aug 19	13	Dec 27	d12	Aug 19, 2002
ANNUAL SEVEN-DAY MINIMUM	13	Aug 15	14	Dec 24	13	Aug 15, 2002
MAXIMUM PEAK FLOW			1,390	May 31	1,720	Jun 10, 1952
MAXIMUM PEAK STAGE			3.80	May 31	f4.23	Jun 10, 1952
ANNUAL RUNOFF (AC-FT)	24,750		b99,260		b76,070	
10 PERCENT EXCEEDS	76		525		274	
50 PERCENT EXCEEDS	20		24		33	
90 PERCENT EXCEEDS	15		15		18	

e Estimated.
a Diversions in acre-feet, through August P. Gumlick Tunnel, provided by Denver Water Board.
b Includes diversions through August P. Gumlick Tunnel, since May 10, 1940.
c Does not include diversions through August P. Gumlick Tunnel.
d Also occurred Aug 20, 27-28, 2002.
f Maximum gage height, 5.46 ft, Jun 29, 1971, backwater from log.

09037500 WILLIAMS FORK NEAR PARSHALL, CO

LOCATION.--Lat 40°00'01", long 106°10'45", in SW ¼ SW ¼ sec.31, T.1 N., R.78 W., Grand County, Hydrologic Unit 14010001, on left bank 30 ft downstream from bridge on State Highway 286, 3.7 mi downstream from Skylark Creek, 3.9 mi south of Parshall, and 4.2 mi upstream from Williams Fork Reservoir Dam.

DRAINAGE AREA.--184 mi^2.

PERIOD OF RECORD.--July 1904 to September 1924, June 1933 to current year. Records since May 10, 1940, equivalent to earlier records if diversion to August P. Gumlick Tunnel is added to flow past station. Published as "near (Hot) Sulphur Springs", 1904-12, and as Williams River near Parshall, June 1933 to September 1958. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09037500

REVISED RECORDS.--WSP 1243: 1918. WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,808.95 ft above NGVD of 1929, (Denver Board of Water Commissioners Datum). See WSP 1733 for history of changes prior to Aug. 9, 1938. Aug. 10, 1938 to Aug. 19, 1983, gage located on right bank at present datum. Aug. 19, 1983 to May 14, 1991, gage located 120 ft downstream of present site on left bank at present datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Transmountain diversion upstream from station through August P. Gumlick Tunnel (station 09035000). Diversions for irrigation of about 1,300 acres upstream from station, and about 2,500 acres downstream from station. About 150 acres upstream from station irrigated by diversions into the drainage area. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	38	e38	e31	e30	e31	35	136	e1,500	407	21	42
2	25	38	e38	e31	e30	e31	39	124	e1,260	380	21	37
3	26	36	e38	e32	e30	e31	40	130	e1,160	340	21	35
4	26	e35	e37	e32	e29	e31	38	144	e1,040	272	27	37
5	24	e35	e37	e31	e29	e31	36	125	e952	216	21	34
6	15	e36	e37	e31	e29	e31	35	115	e873	194	21	39
7	15	e36	e37	e30	e29	e31	33	114	e811	153	21	52
8	15	e36	e36	e30	e30	e31	33	120	e739	105	21	71
9	15	e37	e36	e30	e30	e31	35	114	e768	81	21	97
10	14	e37	e36	e30	e30	e31	43	125	e808	73	21	95
11	14	e37	e36	e30	e30	e32	54	106	e833	67	23	107
12	14	e36	e35	e30	e30	e32	68	117	e830	51	23	88
13	14	e36	e36	e30	e30	e32	77	e158	e818	41	23	78
14	21	e36	e36	e30	e30	e32	95	e192	e822	34	23	72
15	34	e34	e36	e30	e30	e32	102	e248	e819	31	22	67
16	35	e36	e35	e30	e30	e32	86	e284	e786	26	24	59
17	34	e36	e35	e30	e30	e32	86	e364	e773	24	55	56
18	34	e36	e35	e31	e30	e32	84	e418	e773	25	90	59
19	33	e35	e34	e31	e30	e32	74	e438	e783	24	68	61
20	32	e36	e34	e31	e30	e32	70	e439	e763	24	71	58
21	32	e36	e34	e31	e30	e33	74	e442	e735	23	61	54
22	33	e35	e33	e30	e31	e32	80	e441	e714	24	38	50
23	37	e36	e32	e30	e31	e32	87	e523	e655	23	40	44
24	37	e36	e32	e30	e31	e32	76	e610	e643	22	88	e42
25	35	e36	e32	e30	e31	e32	82	e723	e588	22	70	39
26	34	e34	e32	e30	e31	e31	108	e707	526	23	70	43
27	35	e36	e31	e30	e31	31	132	e729	500	24	52	47
28	34	e36	e31	e30	e31	30	143	e1,060	469	23	48	46
29	34	e37	e31	e30	---	30	149	1,210	457	26	42	45
30	30	e37	e31	e29	---	32	146	e1,300	428	22	46	46
31	35	---	e31	e30	---	32	---	e1,310	---	21	53	---
TOTAL	841	1,081	1,072	941	843	977	2,240	13,066	23,626	2,821	1,246	1,700
MEAN	27.1	36.0	34.6	30.4	30.1	31.5	74.7	421	788	91.0	40.2	56.7
MAX	37	38	38	32	31	33	149	1,310	1,500	407	90	107
MIN	14	34	31	29	29	30	33	106	428	21	21	34
AC-FT	1,670	2,140	2,130	1,870	1,670	1,940	4,440	25,920	46,860	5,600	2,470	3,370
a	294	222	167	169	115	109	40	0	0	2,388	1,035	978

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2003, BY WATER YEAR (WY)

MEAN	60.0	50.9	42.1	37.0	35.1	39.4	79.8	271	554	212	85.9	61.8
MAX	151	80.9	65.6	59.5	53.9	87.8	199	711	1,243	855	245	153
(WY)	(1962)	(1985)	(1985)	(1910)	(1912)	(1910)	(1962)	(1984)	(1918)	(1983)	(1984)	(1909)
MIN	17.6	32.5	26.8	22.6	22.6	21.5	29.9	28.9	38.6	15.9	13.8	11.1
(WY)	(1956)	(1982)	(1950)	(1964)	(1964)	(1971)	(1981)	(1963)	(1954)	(2002)	(1988)	(1966)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1905 - 2003	
ANNUAL TOTAL	12,862		50,454			
ANNUAL MEAN	35.2		b146		b133	
HIGHEST ANNUAL MEAN					c248	1984
LOWEST ANNUAL MEAN					c38.4	2002
HIGHEST DAILY MEAN	180	Jun 1	e1,500	Jun 1	d2,520	Jun 14, 1918
LOWEST DAILY MEAN	13	Jul 18	14	Oct 10	f4.8	May 6, 1972
ANNUAL SEVEN-DAY MINIMUM	13	Aug 24	14	Oct 7	5.1	May 6, 1972
MAXIMUM PEAK FLOW			not determined		d2,620	Jun 14, 1918
MAXIMUM PEAK STAGE			not determined		6.05	Jun 14, 1918
ANNUAL RUNOFF (AC-FT)	25,510		b105,800		b96,360	
10 PERCENT EXCEEDS	70		481		342	
50 PERCENT EXCEEDS	30		35		52	
90 PERCENT EXCEEDS	14		24		29	

e Estimated.
a Diversions in acre-ft through August P. Gumlick Tunnel provided by Denver Water Board.
b Includes diversions through August P. Gumlick Tunnel.
c Does not include diversions through August P. Gumlick Tunnel.
d Site and datum then in use, from rating curve extended above 1,400 ft^3/s.
f Also occurred May 8-10, 1972.

09038500 WILLIAMS FORK BELOW WILLIAMS FORK RESERVOIR, CO

LOCATION.--Lat 40°02'07", long 106°12'17", in NW¼SE¼ sec.23, T.1 N., R.79 W., Grand County, Hydrologic Unit 14010001, on left bank 400 ft downstream from Williams Fork Reservoir, 2.1 mi upstream from mouth, and 2.1 mi southwest of Parshall.

DRAINAGE AREA.--230 mi^2.

PERIOD OF RECORD.--October 1948 to September 1954, August 1958 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1958, published as Williams River below Williams Fork Reservoir. Water-quality data available, April 1986 to September 1987. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09038500.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Datum of gage is 7,615.0 ft above NGVD of 1929, (Denver Board of Water Commissioners Datum). See WSP 1713 or 1733 for history of changes prior to Oct. 21, 1959.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Williams Fork Reservoir (station 09038000). Transmountain diversion upstream from station through August P. Gumlick Tunnel (station 09036000). Diversions upstream from station for irrigation of about 3,200 acres and about 100 acres downstream from station. About 450 acres upstream from station irrigated by diversion into the drainage area. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	154	111	67	34	38	35	15	16	15	222	183
2	138	155	113	65	34	37	35	15	17	16	210	183
3	138	156	113	65	34	37	41	15	15	29	189	203
4	138	154	112	65	34	37	37	15	15	37	179	232
5	138	140	112	65	34	37	40	15	17	39	203	214
6	138	132	111	65	34	37	52	15	17	40	221	183
7	138	132	111	65	34	37	56	16	16	103	222	183
8	180	132	111	65	34	37	56	17	16	199	227	193
9	206	133	91	65	34	37	56	17	16	169	236	220
10	204	133	77	64	34	37	44	17	17	184	238	253
11	204	132	77	65	34	37	24	17	17	251	210	248
12	204	132	77	66	34	37	24	17	17	245	199	239
13	204	132	78	66	34	37	24	17	17	235	217	282
14	151	132	78	66	34	35	21	17	17	250	217	316
15	123	132	77	66	34	33	14	16	17	277	213	316
16	123	132	77	66	34	35	14	16	17	274	212	309
17	123	131	77	66	34	46	15	17	17	278	229	281
18	123	132	77	66	34	51	15	17	16	278	241	226
19	123	111	77	66	34	50	14	17	15	279	241	188
20	123	134	77	66	34	50	14	17	16	280	242	174
21	123	101	77	66	34	50	14	17	16	157	245	183
22	123	48	77	65	34	51	14	16	16	51	239	194
23	123	38	77	46	34	51	14	17	17	60	236	216
24	123	80	77	37	37	51	14	17	17	129	236	215
25	123	77	77	35	39	53	14	17	15	210	238	212
26	123	101	77	35	39	51	15	17	16	268	240	196
27	123	134	71	35	38	46	15	17	16	266	237	183
28	123	133	68	35	38	47	15	18	15	240	235	183
29	123	123	68	35	---	48	15	17	15	234	234	185
30	123	111	68	35	---	39	15	15	15	269	234	188
31	141	---	67	34	---	35	---	15	---	253	202	---
TOTAL	4,428	3,667	2,638	1,768	973	1,304	776	508	486	5,615	6,944	6,581
MEAN	143	122	85.1	57.0	34.8	42.1	25.9	16.4	16.2	181	224	219
MAX	206	156	113	67	39	53	56	18	17	280	245	316
MIN	123	38	67	34	34	33	14	15	15	15	179	174
AC-FT	8,780	7,270	5,230	3,510	1,930	2,590	1,540	1,010	964	11,140	13,770	13,050

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

MEAN	129	132	104	102	89.9	93.2	79.2	111	199	169	159	155
MAX	264	276	251	264	279	265	273	401	1,007	782	352	342
(WY)	(1979)	(1979)	(1966)	(1984)	(1966)	(1966)	(1986)	(1952)	(1952)	(1983)	(1981)	(1981)
MIN	23.5	36.7	13.5	14.7	7.88	14.1	6.04	6.29	10.8	7.97	19.2	17.1
(WY)	(1988)	(1995)	(1983)	(1983)	(1995)	(1983)	(1960)	(1960)	(1961)	(1963)	(1986)	(1986)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1949 - 2003	
ANNUAL TOTAL	41,907		35,688			
ANNUAL MEAN	115		a165		a129	
HIGHEST ANNUAL MEAN					b254	1984
LOWEST ANNUAL MEAN					39.1	1959
HIGHEST DAILY MEAN	287	Jun 29	316	Sep 14	1,860	Jun 28, 1983
LOWEST DAILY MEAN	14	May 8	14	Apr 15	c0.30	May 14, 1963
ANNUAL SEVEN-DAY MINIMUM	14	May 18	14	Apr 19	0.54	Apr 27, 1959
MAXIMUM PEAK FLOW			321	Sep 13	d2,640	Jun 20, 1953
MAXIMUM PEAK STAGE			2.51	Sep 13	8.50	Jun 20, 1953
ANNUAL RUNOFF (AC-FT)	83,120		a119,600		a93,460	
10 PERCENT EXCEEDS	220		234		250	
50 PERCENT EXCEEDS	102		66		109	
90 PERCENT EXCEEDS	31		16		16	

a Adjusted for storage at Williams Fork Reservoir.
b Not adjusted for storage at Williams Fork Reservoir.
c No flow for part of Apr 29, 1975.
d Site and datum then in use, from rating curve extended above 1,500 ft^3/s.

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO

LOCATION.--Lat 40°12'09", long 106°25'19", in SE¼SE¼ sec.23, T.3 N., R.81 W., Grand County, Hydrologic Unit 14010001, on left bank at upstream side of box culverts on U.S. Highway 40, 10.9 mi north of Kremmling.

DRAINAGE AREA.--145 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1990 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041090

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,520 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	e4.8	e4.0	e2.2	e2.8	e6.1	45	137	468	12	13	8.5
2	4.4	e5.0	e4.1	e2.2	e3.1	e6.0	50	116	392	12	12	6.7
3	4.7	e5.2	e4.1	e2.2	e3.2	e6.0	53	132	288	10	12	5.9
4	e4.7	e5.3	e4.1	e2.2	e3.6	e6.2	37	180	235	10	12	5.6
5	e4.8	e5.3	e3.9	e2.2	e3.8	e6.4	31	157	189	12	12	5.2
6	e4.9	e5.4	e3.7	e2.3	e3.8	e7.2	29	135	156	13	11	5.4
7	e5.0	e5.4	e3.4	e2.2	e3.8	e8.8	25	131	167	9.5	11	6.3
8	e5.1	e5.4	e3.3	e2.2	e3.7	e10	25	137	136	9.0	11	6.4
9	5.0	e5.5	e3.1	e2.1	e3.6	e12	25	142	112	9.7	10	5.9
10	4.6	e5.6	e2.8	e2.0	e3.6	e13	36	146	107	11	9.5	5.6
11	4.2	e5.7	e2.7	e1.9	e3.7	e16	49	124	107	10	8.7	8.0
12	3.9	e5.9	e2.6	e1.8	e3.6	e22	63	115	88	11	7.5	8.8
13	3.6	e6.0	e2.6	e1.7	e3.6	e34	74	163	71	9.5	9.0	7.2
14	3.6	e6.0	e2.6	e1.7	e3.7	e32	107	231	69	9.8	8.2	5.8
15	3.5	e6.1	e2.6	e1.7	e3.8	e32	115	322	65	9.7	7.6	5.1
16	3.5	e6.0	e2.7	e1.6	e3.9	e29	90	354	62	11	7.7	4.7
17	3.4	e6.0	e2.7	e1.7	e3.9	e27	83	456	59	12	8.2	e5.0
18	3.5	e6.0	e2.7	e1.7	e4.1	e26	81	542	48	13	11	e5.2
19	3.7	e5.9	e2.8	e1.8	e4.1	e21	63	503	43	13	9.8	e5.4
20	e3.7	e5.8	e2.9	e1.9	e4.1	e33	61	456	45	20	8.9	e5.6
21	e3.7	e5.8	e2.9	e1.9	e4.1	e38	64	456	53	17	7.5	e5.8
22	e3.8	e5.7	e2.8	e1.9	e4.6	e40	80	459	47	15	7.1	e5.9
23	e4.0	e5.5	e2.7	e2.0	e5.0	e43	96	505	37	12	8.2	e6.2
24	e4.3	e5.3	e2.7	e2.0	e5.5	e46	77	551	26	10	8.0	e6.4
25	e4.3	e5.0	e2.6	e2.1	e5.8	e42	92	563	21	9.9	7.7	e6.6
26	e4.4	e4.8	e2.5	e2.1	e5.9	e42	114	473	22	12	7.9	e6.8
27	e4.4	e5.0	e2.3	e2.1	e6.0	e40	152	493	22	11	8.9	e6.9
28	e4.5	e4.7	e2.3	e2.2	e6.1	e37	163	535	19	11	8.2	e7.1
29	e4.6	e4.6	e2.3	e2.3	---	e42	183	527	17	19	7.4	e7.2
30	e4.6	e4.2	e2.3	e2.4	---	e44	181	546	14	18	7.0	e7.4
31	e4.8	---	e2.2	e2.6	---	e44	---	438	---	15	8.5	---
TOTAL	131.1	162.9	91.0	62.9	116.5	811.7	2,344	10,225	3,185	377.1	286.5	188.6
MEAN	4.23	5.43	2.94	2.03	4.16	26.2	78.1	330	106	12.2	9.24	6.29
MAX	5.1	6.1	4.1	2.6	6.1	46	183	563	468	20	13	8.8
MIN	3.4	4.2	2.2	1.6	2.8	6.0	25	115	14	9.0	7.0	4.7
AC-FT	260	323	180	125	231	1,610	4,650	20,280	6,320	748	568	374

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	8.95	9.18	8.27	7.54	8.15	19.8	94.0	359	146	14.6	11.1	9.16
MAX	38.2	26.4	21.8	20.3	18.7	53.4	152	659	366	52.2	27.5	45.2
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(2000)	(1997)	(1995)	(1995)	(1997)	(1997)
MIN	4.23	4.36	2.82	2.03	3.00	9.86	40.8	76.8	6.09	2.69	2.63	2.06
(WY)	(2003)	(1995)	(1991)	(2003)	(1991)	(2001)	(1995)	(2002)	(2002)	(1994)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	5,679.18		17,982.3			
ANNUAL MEAN	15.6		49.3		59.7	
HIGHEST ANNUAL MEAN					109	1997
LOWEST ANNUAL MEAN					16.1	2002
HIGHEST DAILY MEAN	153	May 8	563	May 25	908	May 18, 1996
LOWEST DAILY MEAN	0.80	Sep 8	e1.6	Jan 16	0.80	Sep 8, 2002
ANNUAL SEVEN-DAY MINIMUM	0.95	Sep 4	e1.7	Jan 12	0.95	Sep 4, 2002
MAXIMUM PEAK FLOW			719	May 30	955	Jun 20, 1994
MAXIMUM PEAK STAGE			6.47	May 30	a7.36	Jun 20, 1994
ANNUAL RUNOFF (AC-FT)	11,260		35,670		43,260	
10 PERCENT EXCEEDS	56		136		184	
50 PERCENT EXCEEDS	5.2		7.2		10	
90 PERCENT EXCEEDS	2.3		2.6		3.9	

e Estimated.
a Maximum gage height, 7.43 ft, May 18, 1996 and May 17, 1997.

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1990 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041090

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1990 to current year.
WATER TEMPERATURE: April 1990 to current year.
SUSPENDED-SEDIMENT DISCHARGE: April 1990 to September 1993.

INSTRUMENTATION.--Water-quality monitor from April 1990 to current year.

REMARKS.--Records for specific conductance are rated good. Records for water temperature are rated good. Daily data that are not published are either missing or of unacceptable quality.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,370 microsiemens/cm, July 7, 2001; minimum, 88 microsiemens/cm, May 20, 1994.
WATER TEMPERATURE: Maximum, 27.2°C, July 19, 2002; minimum, 0.0°C, on many days during winter.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 813 microsiemens/cm, July 11,12; minimum, 110 microsiemens/cm, May 29,31.
WATER TEMPERATURE: Maximum, 26.6°C, July 22; minimum, 0.0°C, on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
OCT													
08...	0915	5.0	7.8	9.5	8.4	391	6.0	170	48.1	11.3	1.82	0.5	15.4
NOV													
14...	0930	6.4	8.2	10.4	8.4	356	0.5	160	46.0	10.6	1.46	0.5	13.9
DEC													
11...	1030	2.4	4.6	9.3	8.3	461	0.0	200	56.2	13.4	1.63	0.5	17.4
JAN													
15...	1000	0.46	7.0	9.9	8.2	390	0.0	160	47.6	10.9	1.95	0.5	13.4
FEB													
20...	1100	3.7	8.0	9.5	8.1	350	0.0	150	43.7	10.0	1.51	0.4	11.9
APR													
01...	1030	47	47	12.3	8.4	428	3.0	190	56.1	13.2	2.14	0.5	15.4
22...	1030	80	160	9.5	8.3	318	4.5	140	40.8	8.62	2.12	0.4	9.60
MAY													
28...	1230	608	120	9.9	8.3	119	8.5	48	14.9	2.65	0.91	0.2	3.08
JUN													
11...	1045	115	13	8.5	8.1	266	13.0	120	32.8	8.28	1.21	0.4	9.20
JUL													
29...	1030	22	6.7	6.0	8.1	675	17.5	360	100	26.0	2.41	0.6	27.7
AUG													
19...	1130	9.5	450	6.5	8.2	399	14.5	190	54.6	13.9	2.43	0.4	13.1
SEP													
23...	1045	6.3	10	6.6	8.4	390	8.5	180	50.4	12.5	1.75	0.4	12.2

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
08...	E141	2.05	0.18	6.0	65.0	--	--	--	244	<10	0.22	0.29	<0.015
NOV													
14...	125	1.62	<0.17	7.7	60.9	217	0.31	3.89	226	--	0.22	0.21	<0.015
DEC													
11...	E160	3.02	0.20	10.1	82.5	--	--	--	303	<10	0.17	0.22	<0.015
JAN													
15...	127	2.23	<0.17	10.3	58.3	221	0.31	0.29	229	--	<0.10	0.21	0.017
FEB													
20...	E143	1.57	0.16	10.3	56.3	--	--	--	223	--	0.22	0.25	0.022
APR													
01...	125	5.74	0.14	8.3	92.0	268	0.39	36.7	290	--	0.28	0.49	0.035
22...	105	3.91	0.15	8.6	60.8	199	0.29	45.9	211	--	0.42	0.95	E.012
MAY													
28...	48	0.99	<0.2	6.9	13.5	72	0.11	133	81	216	0.27	0.77	E.013
JUN													
11...	92	1.32	<0.2	9.9	41.1	159	0.24	55.4	179	--	0.36	0.72	<0.015
JUL													
29...	272	3.12	0.3	9.2	102	434	0.54	23.6	396	--	0.59	0.70	0.016
AUG													
19...	140	1.87	<0.2	5.5	69.2	245	0.34	6.39	249	374	0.24	1.1	<0.015
SEP													
23...	138	2.11	0.2	6.4	65.3	234	0.34	4.29	254	--	0.26	0.27	<0.015

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, fltrd, mg/L (00607)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)
OCT													
08...	<0.022	<0.002	--	<0.007	0.007	0.019	0.3	4.3	5	--	--	--	--
NOV													
14...	<0.022	<0.002	--	<0.007	E.002	0.020	--	--	25	--	--	--	--
DEC													
11...	<0.022	<0.002	--	<0.007	E.004	0.014	0.2	3.4	<1	--	--	--	--
JAN													
15...	0.069	E.002	--	<0.007	E.003	0.019	--	--	<3	--	--	--	--
FEB													
20...	0.094	E.002	0.20	<0.007	E.004	0.026	--	--	<1	--	--	--	--
APR													
01...	0.132	0.003	0.24	E.006	0.013	0.105	--	--	<1	--	--	--	--
22...	0.423	0.005	--	E.006	0.013	0.21	--	--	E1	--	--	--	--
MAY													
28...	0.058	0.004	--	0.009	0.017	0.32	3.0	5.9	E1	2,230	<2	3	25.3
JUN													
11...	<0.022	E.002	--	0.007	0.019	0.066	--	--	20	--	--	--	--
JUL													
29...	<0.022	<0.002	0.57	<0.007	0.010	0.030	--	--	84	--	--	--	--
AUG													
19...	<0.022	<0.002	--	<0.007	E.004	0.42	0.4	4.5	<160	5,960	<2	E2	73.0
SEP													
23...	<0.022	<0.002	--	<0.007	E.004	0.033	--	--	E1	--	--	--	--

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, unfltrd recover-able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)
OCT													
08...	--	--	--	--	--	--	--	--	--	--	42	370	--
NOV													
14...	--	--	--	--	--	--	--	--	--	--	26	410	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	22	300	--
JAN													
15...	--	--	--	--	--	--	--	--	--	--	25	390	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	57	540	--
APR													
01...	--	--	--	--	--	--	--	--	--	--	22	1,500	--
22...	--	--	--	--	--	--	--	--	--	--	67	3,260	--
MAY													
28...	72.5	<2	10	<0.2	0.4	<0.8	2.6	2	<1.2	6.2	53	4,510	<1
JUN													
11...	--	--	--	--	--	--	--	--	--	--	132	650	--
JUL													
29...	--	--	--	--	--	--	--	--	--	--	90	500	--
AUG													
19...	107	M	50	<0.2	0.4	E.6	3.8	2	E1.0	5.9	E7	5,590	<1
SEP													
23...	--	--	--	--	--	--	--	--	--	--	28	590	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water unfltrd recover-able, ug/L (01132)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Molyb-denum, water, fltrd, ug/L (01060)	Molyb-denum, water, unfltrd recover-able, ug/L (01062)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)
OCT													
08...	--	--	26.2	35.1	--	--	--	--	--	--	--	--	--
NOV													
14...	--	--	18.8	35.3	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	28.9	33.1	--	--	--	--	--	--	--	--	--
JAN													
15...	--	--	22.1	30.2	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	25.7	36.7	--	--	--	--	--	--	--	--	--
APR													
01...	--	--	45.5	96.5	--	--	--	--	--	--	--	--	--
22...	--	--	24.5	88.6	--	--	--	--	--	--	--	--	--
MAY													
28...	5	5.2	13.9	107	<0.02	E.02	<1.8	0.6	E1.1	7	<3	0.7	<0.3
JUN													
11...	--	--	23.3	35.9	--	--	--	--	--	--	--	--	--
JUL													
29...	--	--	93.7	102	--	--	--	--	--	--	--	--	--
AUG													
19...	6	18.8	27.1	122	<0.02	E.01	E1.1	1.0	E1.3	10	<3	0.9	<0.3
SEP													
23...	--	--	22.7	34.2	--	--	--	--	--	--	--	--	--

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, unfltrd recover -able, ug/L (01077)	Stront- ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT				
08...	--	--	--	--
NOV				
14...	--	--	--	--
DEC				
11...	--	--	--	--
JAN				
15...	--	--	--	--
FEB				
20...	--	--	--	--
APR				
01...	--	--	--	--
22...	--	--	--	--
MAY				
28...	<0.16	107	E2	25
JUN				
11...	--	--	--	--
JUL				
29...	--	--	--	--
AUG				
19...	<0.16	420	<3	23
SEP				
23...	--	--	--	--

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.
M -- Presence of material verified but not quantified.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT					
08...	0930	5.0	6.0	6	0.08
NOV					
14...	0915	6.4	0.5	8	0.13
14...	1030	6.4	0.5	6	0.11
DEC					
10...	1400	2.4	0.5	6	0.04
11...	1015	2.4	0.0	14	0.09
JAN					
15...	0945	0.50	0.0	9	0.01
FEB					
20...	1115	3.7	0.0	18	0.18
APR					
01...	1045	47	3.0	67	8.5
22...	1015	80	4.5	221	48
23...	1300	85	5.0	139	32
MAY					
27...	1130	501	7.5	286	386
28...	1300	608	8.5	319	524
JUN					
11...	1030	115	13.0	38	12
JUL					
29...	1045	22	17.5	44	2.6
AUG					
19...	1120	9.5	14.5	319	8.2

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	467	450	459	---	---	---	---	---	---	---	---	---
2	457	445	449	---	---	---	---	---	---	---	---	---
3	447	428	437	---	---	---	---	---	---	---	---	---
4	428	401	414	---	---	---	---	---	---	---	---	---
5	402	374	384	---	---	---	---	---	---	---	---	---
6	387	371	376	---	---	---	---	---	---	---	---	---
7	398	387	393	---	---	---	---	---	---	---	---	---
8	398	387	393	---	---	---	---	---	---	---	---	---
9	387	379	383	---	---	---	---	---	---	---	---	---
10	384	373	378	---	---	---	---	---	---	---	---	---
11	389	375	379	---	---	---	---	---	---	---	---	---
12	389	380	384	---	---	---	---	---	---	---	---	---
13	403	386	393	---	---	---	---	---	---	---	---	---
14	410	397	403	---	---	---	---	---	---	---	---	---
15	418	403	411	---	---	---	---	---	---	---	---	---
16	426	414	420	---	---	---	---	---	---	---	---	---
17	435	415	426	---	---	---	---	---	---	---	---	---
18	436	422	430	---	---	---	---	---	---	---	---	---
19	436	426	431	---	---	---	---	---	---	---	---	---
20	433	420	429	---	---	---	---	---	---	---	---	---
21	429	419	424	---	---	---	---	---	---	---	---	---
22	428	422	425	---	---	---	---	---	---	---	---	---
23	430	416	421	---	---	---	---	---	---	---	---	---
24	418	410	414	---	---	---	---	---	---	---	---	---
25	410	393	401	---	---	---	---	---	---	---	---	---
26	393	385	389	---	---	---	---	---	---	---	---	---
27	393	387	390	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	218	198	206
2	---	---	---	---	---	---	416	389	401	220	203	211
3	---	---	---	---	---	---	420	376	390	221	202	208
4	---	---	---	---	---	---	423	350	398	221	188	201
5	---	---	---	---	---	---	469	396	426	261	221	238
6	---	---	---	---	---	---	436	395	421	255	239	248
7	---	---	---	---	---	---	458	415	425	255	234	245
8	---	---	---	---	---	---	490	417	441	252	233	243
9	---	---	---	---	---	---	499	406	439	320	242	274
10	---	---	---	---	---	---	471	401	426	306	281	292
11	---	---	---	---	---	---	446	380	401	287	275	282
12	---	---	---	---	---	---	427	378	389	275	263	267
13	---	---	---	---	---	---	403	369	387	268	228	241
14	---	---	---	---	---	---	394	342	357	228	204	210
15	---	---	---	---	---	---	353	307	327	208	197	203
16	---	---	---	---	---	---	326	305	317	200	175	190
17	---	---	---	---	---	---	342	309	330	181	155	172
18	---	---	---	---	---	---	332	303	314	186	156	167
19	---	---	---	---	---	---	353	317	341	177	138	148
20	---	---	---	---	---	---	352	312	331	148	133	140
21	---	---	---	---	---	---	347	299	321	---	---	---
22	---	---	---	---	---	---	333	298	317	---	---	---
23	---	---	---	---	---	---	339	311	328	---	---	---
24	---	---	---	---	---	---	397	321	357	---	---	---
25	---	---	---	---	---	---	388	336	369	---	---	---
26	---	---	---	---	---	---	366	293	337	---	---	---
27	---	---	---	---	---	---	307	255	281	---	---	---
28	---	---	---	---	---	---	255	232	240	127	117	122
29	---	---	---	---	---	---	233	208	222	128	110	118
30	---	---	---	---	---	---	208	194	198	129	114	121
31	---	---	---	---	---	---	---	---	---	143	110	124
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	142	118	127	658	643	652	614	598	605	416	381	396
2	149	118	133	659	642	651	598	560	571	403	392	397
3	166	133	147	683	651	669	567	531	554	409	394	401
4	182	151	163	687	672	680	534	525	529	413	409	411
5	201	179	190	697	687	692	531	510	518	419	409	414
6	218	197	207	688	680	684	517	506	510	414	408	412
7	230	216	221	695	681	688	522	488	504	413	398	408
8	277	211	238	750	695	718	488	443	458	414	397	405
9	277	262	268	795	750	779	443	413	425	413	400	409
10	289	271	280	799	772	787	415	410	412	419	411	415
11	295	263	276	813	797	802	412	400	405	431	368	413
12	296	267	277	813	772	785	438	405	423	368	334	341
13	302	274	288	782	767	775	439	411	431	339	325	329
14	314	302	310	778	770	773	456	410	429	335	326	330
15	329	305	316	790	776	783	454	424	435	351	334	342
16	349	329	341	808	790	801	426	399	417	---	---	---
17	367	344	355	805	770	788	399	389	395	---	---	---
18	404	362	383	783	755	769	390	375	382	---	---	---
19	462	404	423	761	726	756	415	373	395	383	367	377
20	466	436	454	771	725	738	427	408	417	393	379	386
21	454	433	447	768	725	741	423	418	420	395	388	391
22	475	432	455	777	762	771	429	415	422	395	388	391
23	493	461	481	762	751	755	417	392	406	395	390	393
24	493	461	478	779	760	768	662	389	494	403	392	397
25	542	493	525	794	779	789	515	412	450	413	397	403
26	571	523	537	795	752	773	447	423	432	415	402	407
27	625	571	602	754	740	746	433	381	412	423	404	409
28	641	579	603	743	717	732	500	365	441	422	405	412
29	632	602	609	719	626	676	427	405	414	430	418	422
30	649	613	625	627	610	618	407	399	402	433	421	427
31	---	---	---	613	601	607	411	388	397	---	---	---
MONTH	649	118	359	813	601	734	662	365	449	---	---	---

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	13.9	6.2	10	---	---	---	---	---	---	---	---	---
2	13.7	7.7	10.8	---	---	---	---	---	---	---	---	---
3	10.9	8.5	9.5	---	---	---	---	---	---	---	---	---
4	9.0	6.8	7.9	---	---	---	---	---	---	---	---	---
5	10.1	6.4	7.8	---	---	---	---	---	---	---	---	---
6	11.6	5.7	8.4	---	---	---	---	---	---	---	---	---
7	12.6	4.4	8.6	---	---	---	---	---	---	---	---	---
8	13.1	4.9	9.0	---	---	---	---	---	---	---	---	---
9	12.7	4.6	8.6	---	---	---	---	---	---	---	---	---
10	11.9	4.1	8.2	---	---	---	---	---	---	---	---	---
11	10.4	5.3	8.2	---	---	---	---	---	---	---	---	---
12	10.0	3.3	6.7	---	---	---	---	---	---	---	---	---
13	9.2	1.3	5.0	---	---	---	---	---	---	---	---	---
14	9.0	1.5	4.9	---	---	---	---	---	---	---	---	---
15	8.6	1.2	4.7	---	---	---	---	---	---	---	---	---
16	8.8	1.5	4.9	---	---	---	---	---	---	---	---	---
17	9.0	1.4	5.0	---	---	---	---	---	---	---	---	---
18	9.1	1.4	5.0	---	---	---	---	---	---	---	---	---
19	8.9	1.5	5.0	---	---	---	---	---	---	---	---	---
20	7.8	1.1	4.3	---	---	---	---	---	---	---	---	---
21	7.7	1.0	4.1	---	---	---	---	---	---	---	---	---
22	5.9	1.3	3.8	---	---	---	---	---	---	---	---	---
23	6.1	4.2	5.0	---	---	---	---	---	---	---	---	---
24	6.9	3.8	5.0	---	---	---	---	---	---	---	---	---
25	6.1	1.7	4.0	---	---	---	---	---	---	---	---	---
26	5.7	2.6	4.2	---	---	---	---	---	---	---	---	---
27	7.3	3.5	5.1	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	7.0	2.2	4.2
2	---	---	---	---	---	---	7.0	0.0	3.4	9.0	3.0	5.6
3	---	---	---	---	---	---	3.2	0.0	1.2	10.8	5.6	7.9
4	---	---	---	---	---	---	3.6	0.0	1.4	7.8	4.5	5.6
5	---	---	---	---	---	---	5.3	0.1	2.7	9.2	3.5	6.2
6	---	---	---	---	---	---	6.2	1.5	3.8	9.9	4.1	6.9
7	---	---	---	---	---	---	5.7	0.8	3.4	10.2	4.9	7.2
8	---	---	---	---	---	---	7.5	0.0	3.7	7.3	4.7	5.9
9	---	---	---	---	---	---	10.2	1.0	5.7	10.8	3.0	6.6
10	---	---	---	---	---	---	10.3	2.4	6.2	7.8	5.4	6.5
11	---	---	---	---	---	---	9.5	0.6	5.3	8.1	3.8	6.2
12	---	---	---	---	---	---	7.9	1.6	4.9	12.7	4.3	8.3
13	---	---	---	---	---	---	10.9	1.5	5.7	12.3	7.3	9.7
14	---	---	---	---	---	---	7.7	1.8	4.9	12.7	5.7	9.5
15	---	---	---	---	---	---	5.4	2.1	3.8	11.6	6.1	8.2
16	---	---	---	---	---	---	8.0	1.6	4.4	11.9	4.8	8.5
17	---	---	---	---	---	---	8.6	3.4	5.8	10.6	4.5	7.8
18	---	---	---	---	---	---	7.1	3.5	5.3	9.1	4.6	6.6
19	---	---	---	---	---	---	8.9	2.7	5.3	9.9	3.0	6.4
20	---	---	---	---	---	---	10.7	2.6	6.3	10.1	2.6	6.5
21	---	---	---	---	---	---	9.8	3.5	6.5	---	---	---
22	---	---	---	---	---	---	9.4	4.7	6.5	---	---	---
23	---	---	---	---	---	---	6.3	1.9	4.3	---	---	---
24	---	---	---	---	---	---	8.7	1.4	4.2	---	---	---
25	---	---	---	---	---	---	12.4	4.1	7.4	---	---	---
26	---	---	---	---	---	---	12.6	5.7	8.8	---	---	---
27	---	---	---	---	---	---	10.1	4.9	7.7	---	---	---
28	---	---	---	---	---	---	9.7	4.2	7.0	14.0	6.2	10.4
29	---	---	---	---	---	---	7.6	4.1	6.2	13.4	6.5	10.4
30	---	---	---	---	---	---	7.1	3.9	5.5	12.4	7.3	10.3
31	---	---	---	---	---	---	---	---	---	13.6	7.7	11.0
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	12.5	8.3	11.0	21.7	14.7	18.3	23.2	15.8	19.1	18.4	12.0	15.2
2	14.1	8.5	11.1	23.3	14.3	18.8	24.5	16.8	20.4	18.7	13.6	16.1
3	15.0	8.7	11.7	23.5	15.2	19.5	24.0	18.4	21.1	18.5	13.8	16.2
4	15.5	9.1	12.2	23.9	15.4	19.7	24.0	18.6	21.1	20.4	13.2	16.7
5	16.2	9.3	12.5	23.1	15.1	19.1	24.6	17.1	20.7	17.7	13.6	16.0
6	14.0	8.6	11.4	20.3	15.3	17.9	23.8	17.5	20.6	16.8	14.2	15.3
7	15.7	8.6	11.9	19.5	13.8	17.0	20.8	17.2	19.0	15.6	13.9	14.6
8	17.2	8.1	12.6	22.6	13.0	17.8	23.3	16.3	19.5	16.6	11.7	13.9
9	14.9	10.6	13.1	23.5	13.7	18.7	23.1	17.1	20.1	16.5	12.6	14.5
10	15.4	11.3	13.5	24.8	13.0	18.9	24.0	16.5	20.3	14.3	11.4	12.6
11	15.1	10.7	13.2	22.8	14.2	18.7	24.3	17.8	21.0	13.7	10.4	11.8
12	16.5	9.5	12.9	23.9	14.0	19.0	23.6	16.6	20.3	13.4	9.7	11.7
13	16.2	10.5	13.4	22.0	14.8	18.8	23.1	17.2	20.3	15.0	10.4	12.7
14	19.8	11.2	15.3	24.6	14.4	19.4	24.4	16.9	20.3	14.2	8.6	11.3
15	20.4	12.6	16.4	21.6	16.1	19.2	23.2	15.3	19.3	14.3	8.4	11.3
16	17.8	13.9	15.9	21.7	15.5	18.7	21.8	16.9	19.5	---	---	---
17	19.9	11.7	15.5	25.2	15.1	19.7	19.2	16.5	17.8	---	---	---
18	21.0	12.8	16.8	23.4	17.3	20.5	17.5	15.1	16.3	---	---	---
19	18.2	13.3	16.2	25.1	16.4	20.5	19.5	12.9	16.0	14.1	7.3	10.7
20	18.2	12.3	15.2	25.3	16.8	20.7	22.0	14.7	18.1	13.8	8.4	11.2
21	19.0	11.3	15.2	25.4	16.7	20.9	21.9	16.2	19.0	13.4	7.7	10.7
22	19.7	11.6	15.6	26.6	16.6	21.2	22.6	16.7	19.5	13.8	7.3	10.6
23	20.7	11.5	16.1	25.5	16.3	20.7	20.8	17.4	19.0	14.2	7.9	11.1
24	20.1	12.8	16.3	24.2	16.7	20.6	19.7	16.1	18.0	14.0	8.0	11.1
25	19.4	11.7	15.4	23.2	17.1	20.2	20.6	16.2	17.9	13.4	7.8	10.8
26	20.5	10.8	15.7	24.0	16.1	20.1	21.1	15.3	17.8	13.7	8.0	10.9
27	21.1	11.5	16.5	23.2	17.0	20.1	18.7	16.1	17.4	14.0	8.5	11.4
28	21.0	12.6	16.8	23.1	16.2	19.8	21.1	15.0	17.7	14.0	9.0	11.7
29	23.4	13.5	18.3	22.4	16.6	19.6	20.2	15.5	17.9	14.1	9.3	11.8
30	22.1	13.8	18.4	22.7	15.7	19.5	17.5	14.9	16.1	14.8	10.1	12.5
31	---	---	---	20.8	16.8	19.0	17.8	13.3	15.3	---	---	---
MONTH	23.4	8.1	14.5	26.6	13.0	19.4	24.6	12.9	18.9	---	---	---

401110106244800 WOLFORD MOUNTAIN RESERVOIR AT INFLOW NEAR KREMMLING, CO

WATER-QUALITY RECORDS

LOCATION.--Lat. 40°11'10", long 106°24'48", in NE¼NW¼ sec.36, T.3 N, R.81 W. (revised), Grand County, Hydrologic Unit 14010001, 5 mi north of Kremmling.

DRAINAGE AREA.--270 mi^2.

PERIOD OF RECORD.--July 1995 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=401110106244800

REMARKS.--Samples were collected at mid-depth at the upper inflow.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sampling depth, feet (00003)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUN						
26...	1125	0.50	6.2	8.0	520	16.7
26...	1126	5.00	6.1	8.0	540	15.6
JUL						
17...	1107	0.50	6.9	8.0	543	20.1
17...	1108	5.00	6.9	8.1	545	19.4
AUG						
26...	1151	0.50	6.3	7.9	596	19.5
26...	1152	5.00	6.2	7.9	594	19.3
26...	1153	10.0	6.1	8.0	595	19.1
SEP						
30...	1121	0.50	7.1	8.1	599	13.4
30...	1122	5.00	7.2	8.1	600	13.1
30...	1123	10.0	6.7	8.1	617	12.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sampling depth, feet (00003)	Transparency Secchi disc, inches (00077)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
JUN													
26...	1130	5.00	63.0	--	6.1	8.0	540	15.6	230	60.5	20.3	2.18	0.6
JUL													
17...	1115	4.00	68.0	4.2	6.9	8.1	545	19.4	250	63.0	21.5	2.32	0.6
AUG													
26...	1200	5.00	68.0	4.3	6.2	7.9	594	19.3	290	74.1	24.8	2.60	0.6
SEP													
30...	1130	5.00	38.0	7.7	7.2	8.1	600	13.1	290	73.5	25.1	2.45	0.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
JUN													
26...	22.5	116	2.87	<0.2	9.1	160	347	0.52	383	0.47	0.48	0.015	0.101
JUL													
17...	23.3	113	3.20	0.2	8.4	176	366	0.55	402	0.42	0.44	0.024	0.058
AUG													
26...	24.8	123	3.41	0.2	7.3	198	410	0.60	438	0.42	0.42	0.021	0.047
SEP													
30...	26.2	124	3.53	0.2	7.4	203	416	0.61	452	0.35	0.43	E.010	0.082

401110106244800 WOLFORD MOUNTAIN RESERVOIR AT INFLOW NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, fltrd, mg/L (00607)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, unfltrd recover-able, ug/L (01012)
JUN 26...	0.004	0.46	<0.007	0.012	0.030	0.5	7.6	104	<2	<2	52.9	50.5	<0.5
JUL 17...	0.006	0.40	<0.007	0.008	0.026	0.3	7.9	103	<2	<2	52.8	50.3	<0.5
AUG 26...	0.004	0.40	<0.007	0.007	0.019	0.3	6.8	66	<2	E1	57.6	64.9	<0.5
SEP 30...	0.004	--	<0.007	0.006	0.024	0.6	6.8	103	M	E2	58.1	50.6	<0.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water unfltrd recover-able, ug/L (01132)	Mangan-ese, water, fltrd, ug/L (01056)
JUN 26...	<0.2	<0.2	<0.8	<0.8	0.507	1.8	2.9	39	200	<0.08	0.25	20.0	19.0
JUL 17...	<0.2	<0.2	<0.8	<0.8	0.496	1.9	2.4	27	160	E.07	0.12	22.8	20.0
AUG 26...	<0.2	<0.2	<0.8	<0.8	0.498	2.7	2.6	E8	30	<0.08	0.19	26.2	12.3
SEP 30...	<0.2	<0.2	<0.8	<0.8	0.510	2.0	3.4	E4	240	<0.08	0.29	27.0	37.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Molyb-denum, water, unfltrd recover-able, ug/L (01062)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
JUN 26...	25	<0.02	<0.02	2.1	3.74	2.0	1.9	<0.2	<0.16	2	E2
JUL 17...	27	<0.02	<0.02	2.4	3.83	2.1	2.5	<0.2	<0.16	M	E1
AUG 26...	27	<0.02	<0.02	2.9	3.48	2.2	2.3	<0.2	<0.16	1	<2
SEP 30...	53	<0.02	<0.02	2.8	3.53	2.6	2.3	<0.2	<0.16	M	E1

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.
M -- Presence of material verified but not quantified.

400841106240600 WOLFORD MOUNTAIN RESERVOIR AT MIDLAKE NEAR KREMMLING, CO

WATER-QUALITY RECORDS

LOCATION.--Lat. 40°08'41", long 106°24'06", in NW¼NW¼ sec.18, T.2 N, R.80 W., Grand County, Hydrologic Unit 14010001, 5 mi north of Kremmling.

DRAINAGE AREA.--270 mi^2.

PERIOD OF RECORD.--July 1995 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400841106240600

REMARKS.--Samples were collected near-surface and near-bottom in the bay east of boat ramp.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sampling depth, feet (00003)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUN						
26...	1045	0.50	6.2	8.0	430	15.5
26...	1046	5.00	6.3	8.0	433	15.5
26...	1047	10.0	6.2	8.0	435	15.4
26...	1048	15.0	5.9	8.0	436	15.3
26...	1049	20.0	5.9	8.0	436	15.3
26...	1050	25.0	5.6	7.9	436	15.3
26...	1051	30.0	5.4	7.8	451	14.0
26...	1052	35.0	4.4	7.7	494	12.8
26...	1053	40.0	3.7	7.6	552	11.2
26...	1054	45.0	3.3	7.5	598	10.0
26...	1055	50.0	3.0	7.5	614	9.8
JUL						
17...	1035	0.50	7.1	8.0	489	19.4
17...	1036	5.00	6.9	8.1	489	18.8
17...	1037	10.0	6.8	8.1	495	18.8
17...	1038	15.0	6.4	8.0	509	18.7
17...	1039	20.0	4.9	7.9	529	17.2
17...	1040	25.0	4.0	7.8	516	15.4
17...	1041	30.0	3.6	7.7	528	14.5
17...	1042	35.0	3.1	7.6	548	13.6
17...	1043	40.0	2.7	7.6	561	13.1
17...	1044	45.0	2.0	7.5	589	11.4
AUG						
26...	1110	0.50	6.1	7.9	540	19.2
26...	1111	5.00	6.1	7.9	540	19.1
26...	1112	10.0	5.9	7.9	540	19.0
26...	1113	15.0	5.9	8.0	540	19.0
26...	1114	20.0	5.9	8.0	540	19.0
26...	1115	25.0	4.1	7.9	538	18.3
26...	1116	30.0	0.6	7.7	567	16.6
26...	1117	35.0	0.2	7.5	562	13.9
26...	1118	40.0	0.2	7.5	569	12.6
26...	1119	45.0	0.2	7.4	579	11.9
SEP						
30...	1047	0.50	6.5	8.0	566	13.8
30...	1048	5.00	6.5	8.0	564	13.6
30...	1049	10.0	6.4	8.0	564	13.6
30...	1050	15.0	6.3	8.0	564	13.6
30...	1051	20.0	6.2	8.0	563	13.6
30...	1052	25.0	5.9	8.0	565	13.5
30...	1053	30.0	5.8	8.0	566	13.5
30...	1054	35.0	5.8	8.0	567	13.4
30...	1055	40.0	5.3	7.9	572	13.3
30...	1056	45.0	4.7	7.9	573	13.2
30...	1057	50.0	2.0	7.8	590	12.4
30...	1058	55.0	0.8	7.7	601	12.0

400841106240600 WOLFORD MOUNTAIN RESERVOIR AT MIDLAKE NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sampling depth, feet (00003)	Transparency Secchi disc, inches (00077)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
JUN													
26...	1100	0.10	92.0	--	6.2	8.0	430	15.5	190	50.4	16.0	1.99	0.6
26...	1115	45.0	--	--	3.3	7.5	598	10.0	260	65.1	23.4	2.52	0.8
JUL													
17...	1045	0.10	90.0	3.7	7.1	8.0	489	19.4	210	56.1	17.6	2.06	0.6
17...	1100	45.0	--	6.0	2.0	7.5	589	11.4	240	63.4	21.0	2.23	0.7
AUG													
26...	1130	0.10	134	1.6	6.1	7.9	540	19.2	260	68.6	21.5	2.38	0.6
26...	1145	45.0	--	4.9	0.2	7.4	579	11.9	280	71.6	23.5	2.47	0.7
SEP													
30...	1100	0.10	129	1.8	6.5	8.0	566	13.8	270	70.0	22.7	2.25	0.6
30...	1110	55.0	--	42	0.8	7.7	601	12.0	280	71.0	24.4	2.37	0.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
JUN													
26...	18.4	92	3.13	<0.2	8.1	128	282	0.43	315	0.42	0.38	0.021	0.130
26...	29.9	112	5.01	0.2	7.4	196	398	0.59	434	0.35	0.37	E.010	0.340
JUL													
17...	20.0	100	3.15	<0.2	8.2	144	311	0.46	337	0.38	0.41	0.017	0.070
17...	24.6	109	4.10	<0.2	8.3	181	371	0.55	401	0.35	0.40	0.016	0.271
AUG													
26...	21.4	111	3.35	0.2	7.8	172	364	0.52	385	0.35	0.35	E.010	0.082
26...	25.6	114	4.24	<0.2	8.5	188	394	0.56	415	0.36	0.36	E.012	0.306
SEP													
30...	23.9	116	3.42	0.2	8.0	185	385	0.56	414	0.33	0.38	E.014	0.132
30...	27.8	122	4.18	0.2	8.8	200	413	0.60	439	0.43	0.54	0.095	0.173

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)
JUN													
26...	0.005	0.40	<0.007	0.007	0.021	E1	0.3	<0.1	102	<2	<2	47.4	46.7
26...	<0.002	--	E.004	0.010	0.025	--	--	--	99	<2	<2	57.7	55.2
JUL													
17...	0.006	0.36	<0.007	0.007	0.021	E2	0.3	<0.1	96	<2	<2	51.1	52.6
17...	0.003	0.33	<0.007	0.006	0.021	--	--	--	116	<2	<2	53.9	59.2
AUG													
26...	0.005	--	<0.007	0.005	0.011	E1	1.2	<0.1	25	<2	<2	54.6	57.1
26...	E.002	--	<0.007	0.006	0.017	--	--	--	55	<2	<2	53.6	58.2
SEP													
30...	0.005	--	<0.007	0.005	0.010	<1	0.6	<0.1	31	M	E1	56.8	47.3
30...	0.005	0.33	<0.007	0.009	0.064	--	--	--	409	E1	2	56.9	54.0

400841106240600 WOLFORD MOUNTAIN RESERVOIR AT MIDLAKE NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Beryll-ium, water, unfltrd recover-able, ug/L (01012)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water unfltrd recover-able, ug/L (01132)
JUN													
26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.390	1.7	3.2	31	160	0.21	0.20	15.4
26...	<0.5	<0.2	<0.2	<0.8	E.5	0.415	1.8	2.3	12	160	<0.08	0.19	22.7
JUL													
17...	<0.5	<0.2	<0.2	<0.8	<0.8	0.363	1.7	2.1	28	130	<0.08	0.11	18.1
17...	<0.5	<0.2	<0.2	<0.8	<0.8	0.366	1.7	2.2	15	180	<0.08	0.10	22.4
AUG													
26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.376	2.8	2.7	E6	10	<0.08	0.08	21.9
26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.477	2.4	2.3	17	10	<0.08	0.10	23.9
SEP													
30...	<0.5	<0.2	<0.2	<0.8	<0.8	0.344	1.8	3.0	E5	40	<0.08	E.06	23.7
30...	<0.5	<0.2	<0.2	<0.8	<0.8	0.884	1.5	3.5	10	750	<0.08	0.75	28.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Molyb-denum, water, unfltrd recover-able, ug/L (01062)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
JUN												
26...	5.4	8	<0.02	<0.02	1.9	3.24	2.4	2.3	<0.2	<0.16	2	E1
26...	3.9	20	<0.02	<0.02	2.5	4.23	3.1	3.2	<0.2	<0.16	1	E2
JUL												
17...	2.2	6	<0.02	<0.02	2.1	3.27	2.4	2.3	<0.2	<0.16	1	E1
17...	4.9	25	<0.02	<0.02	2.3	3.90	2.6	2.7	<0.2	<0.16	1	E2
AUG												
26...	0.5	3	<0.02	<0.02	2.5	3.98	2.5	2.4	<0.2	<0.16	1	<2
26...	55.8	99	<0.02	<0.02	2.5	3.54	2.5	2.5	<0.2	<0.16	2	<2
SEP												
30...	3.1	7	<0.02	<0.02	2.5	3.22	2.2	2.5	<0.2	<0.16	M	<2
30...	221	371	<0.02	<0.02	2.6	3.96	3.0	2.4	<0.2	<0.16	1	4

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.
M -- Presence of material verified but not quantified.

400812106254800 ALKALI SLOUGH #2 AT WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°08'12", long 106°25'48", NW¼NW¼ sec.18, T.2 N., R.81 W., Grand County, Hydrologic Unit 14010001, 5 mi north of Kremmling.

PERIOD OF RECORD.--July 1996 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400812106254800

REMARKS.--Samples were collected approximately 100 yards from mouth.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
OCT 07...	1500	0.10	13	7.8	7.6	2,550	11.0	1,800	569	88.3	5.01	0.3	28.9
JUL 23...	1020	0.10	4.2	7.6	7.9	2,240	10.5	1,700	556	63.3	4.41	0.3	26.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 07...	E236	7.03	0.93	9.3	1,500	--	--	--	2,590	22	0.30	0.43	0.143
JUL 23...	240	9.43	1.1	11.3	1,450	2,280	3.43	0.68	2,520	<10	0.47	0.54	0.264

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)
OCT 07...	0.039	E.002	0.16	<0.007	0.005	0.035	0.7	6.8	168	M	E1	6.5	22.1
JUL 23...	1.08	E.002	0.21	<0.007	0.009	0.013	0.3	8.4	16	<2	<2	19.1	19.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Beryllium, water, unfltrd recoverable, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Cobalt water, unfltrd recoverable, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)
OCT 07...	<2	70	E.2	0.2	<0.8	<0.8	2	1.8	13.0	23	720	<1	M
JUL 23...	<0.5	160	<0.2	<0.2	<0.8	<0.8	2	2.1	9.1	19	130	<1	M

400812106254800 ALKALI SLOUGH #2 AT WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Lithium water unfltrd recover -able, ug/L (01132)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover -able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover -able, ug/L (71900)	Molybdenum, water, fltrd, ug/L (01060)	Molybdenum, water, unfltrd recover -able, ug/L (01062)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover -able, ug/L (01077)
OCT													
07...	72.6	17.2	52	<0.02	<0.02	11.3	13.3	18.1	38	4	5.8	<0.3	<0.16
JUL													
23...	55.3	35.4	36	<0.02	<0.02	14.4	13.3	16.6	33	33	86.7	<0.3	<0.16

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Strontium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT			
07...	1,820	<24	19
JUL			
23...	5,150	14	9

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.
M -- Presence of material verified but not quantified.

09041395 WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO

LOCATION.--Lat 40°06'46", long 106°24'52", in SW¼NE¼, sec.25, T.2 N., R.81 W., Grand County, Hydrologic Unit 14010001, in outlet tower at dam, 5 mi north of Kremmling.

DRAINAGE AREA.--270 mi^2.

RESERVOIR ELEVATIONS AND CONTENTS RECORDS

PERIOD OF RECORD.--May 1995 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041395

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,500.00 ft above NGVD of 1929; gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earth-filled dam. Storage began May 1995; dam completed May 1995. Usable capacity, 65,870 acre-ft, at elevation 7,489 ft, crest of spillway. No dead storage. Figures given represent total contents. Water-quality sampling at three sites in reservoir.

COOPERATION.--Colorado River Water Conservation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 68,160 acre-ft, June 3, 1997, elevation, 7,490.62 ft; minimum observed since appreciable storage was first obtained, 16,800 acre-ft, Apr. 10, 2003, elevation, 7,440.93 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 45,600 acre-ft, July 8, elevation, 7,473.94 ft; minimum, 16,800 acre-ft, Apr. 10, elevation, 7,440.93 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,451.78	24,700	-
Oct. 31	7,444.17	18,900	-5,800
Nov. 30	7,443.15	18,200	-700
Dec. 31	7,442.01	17,500	-700
CAL YR 2002	-	-	-24,400
Jan. 31	7,441.37	17,100	-400
Feb. 28	7,441.23	17,000	-100
Mar. 31	7,441.09	16,900	-100
Apr. 30	7,445.24	19,700	+2,800
May 31	7,465.88	36,700	+17,000
June 30	7,473.61	45,200	+8,500
July 31	7,472.03	43,400	-1,800
Aug. 31	7,471.10	42,300	-1,100
Sept. 30	7,470.30	41,400	-900
WTR YR 2003	-	-	+16,700

09041395 WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1995 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041395

REMARKS.--Samples were collected near-surface and near-bottom, near dam.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sampling depth, feet (00003)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUN						
26...	1002	0.50	6.5	8.0	419	15.9
26...	1003	5.00	6.4	8.0	419	15.4
26...	1004	10.0	6.6	8.0	420	15.4
26...	1005	15.0	6.7	7.9	419	15.3
26...	1006	20.0	6.6	7.9	420	15.2
26...	1007	25.0	6.2	7.9	422	15.2
26...	1008	30.0	6.3	7.9	426	15.0
26...	1009	35.0	5.0	7.7	535	11.3
26...	1010	40.0	4.3	7.6	562	10.6
26...	1011	45.0	4.3	7.6	586	10.2
26...	1012	50.0	4.0	7.5	612	9.8
26...	1013	55.0	3.7	7.5	634	9.5
26...	1014	60.0	3.5	7.5	645	9.3
26...	1015	65.0	3.4	7.5	656	9.2
26...	1016	70.0	3.4	7.5	663	9.2
26...	1017	75.0	3.2	7.5	674	9.1
26...	1018	80.0	3.1	7.5	684	9.0
26...	1019	85.0	2.9	7.4	703	9.0
26...	1020	90.0	2.9	7.4	718	8.9
JUL						
17...	0955	0.50	6.8	7.7	486	18.6
17...	0956	5.00	6.8	7.8	484	18.2
17...	0957	10.0	6.6	7.8	479	18.0
17...	0958	15.0	6.6	7.9	477	18.0
17...	0959	20.0	6.3	7.9	478	17.8
17...	1000	25.0	4.6	7.8	484	16.8
17...	1001	30.0	4.0	7.7	484	14.7
17...	1002	35.0	3.4	7.6	523	13.1
17...	1003	40.0	3.1	7.5	551	12.2
17...	1004	45.0	2.8	7.5	591	10.9
17...	1005	50.0	2.8	7.5	619	10.2
17...	1006	55.0	2.6	7.4	658	9.7
17...	1007	60.0	2.3	7.4	671	9.4
17...	1008	65.0	2.2	7.4	674	9.4
17...	1009	70.0	2.2	7.4	679	9.4
17...	1010	75.0	2.2	7.4	681	9.3
17...	1011	80.0	2.0	7.4	681	9.3

09041395 WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sampling depth, feet (00003)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
AUG						
26...	1027	0.50	6.2	7.9	534	19.6
26...	1028	5.00	6.1	7.9	534	19.4
26...	1029	10.0	6.1	7.9	534	19.4
26...	1030	15.0	6.1	8.0	534	19.3
26...	1031	20.0	5.8	8.0	534	19.2
26...	1032	25.0	4.8	7.8	535	18.5
26...	1033	30.0	0.7	7.6	536	15.7
26...	1034	35.0	0.7	7.6	537	14.4
26...	1035	40.0	0.7	7.6	548	13.4
26...	1036	45.0	0.6	7.5	567	12.4
26...	1037	50.0	0.4	7.5	591	11.4
26...	1038	55.0	0.4	7.4	600	11.0
26...	1039	60.0	0.3	7.4	607	10.7
26...	1040	65.0	0.2	7.4	619	10.4
26...	1041	70.0	0.2	7.4	629	10.2
26...	1042	75.0	0.1	7.3	640	10.0
26...	1043	80.0	0.1	7.3	650	10.0
26...	1044	85.0	0.1	7.3	655	10.0
26...	1045	90.0	0.1	7.3	681	9.9
SEP						
30...	1003	0.50	6.7	7.4	591	14.1
30...	1004	5.00	6.7	7.5	576	14.1
30...	1005	10.0	6.6	7.6	574	14.0
30...	1006	15.0	6.3	7.6	569	13.8
30...	1007	20.0	5.7	7.6	570	13.7
30...	1008	25.0	5.4	7.7	569	13.6
30...	1009	30.0	5.0	7.7	572	13.4
30...	1010	35.0	4.5	7.7	575	13.2
30...	1011	40.0	3.8	7.6	576	13.1
30...	1012	45.0	3.4	7.6	578	12.9
30...	1013	50.0	2.1	7.6	586	12.5
30...	1014	55.0	0.5	7.5	594	11.8
30...	1015	60.0	0.2	7.5	608	11.0
30...	1016	65.0	0.1	7.5	620	10.7
30...	1017	70.0	0.1	7.5	626	10.6
30...	1018	75.0	0.1	7.4	632	10.5
30...	1019	80.0	0.1	7.4	637	10.5
30...	1020	85.0	0.1	7.4	641	10.4
30...	1021	90.0	0.1	7.4	658	10.4

09041395 WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sampling depth, feet (00003)	Transparency Secchi disc, inches (00077)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)
JUN													
26...	1025	0.10	77.0	--	6.5	8.0	419	15.9	180	48.2	15.1	1.95	0.6
26...	1035	85.0	--	--	2.9	7.4	703	9.0	310	78.6	28.2	2.82	0.9
JUL													
17...	1015	0.10	84.0	3.7	6.8	7.7	486	18.6	200	53.3	16.6	2.01	0.6
17...	1030	80.0	--	4.2	2.0	7.4	681	9.3	290	71.5	26.6	2.65	0.9
AUG													
26...	1050	0.10	120	1.9	6.2	7.9	534	19.6	270	71.2	21.4	2.38	0.6
26...	1100	90.0	--	14	0.1	7.3	681	9.9	310	79.4	26.6	2.64	0.8
SEP													
30...	1030	0.10	96.0	2.3	6.7	7.4	591	14.1	270	69.5	22.6	2.27	0.6
30...	1040	88.0	--	7.8	0.1	7.4	658	10.4	300	76.9	26.2	2.45	0.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
JUN													
26...	17.8	88	3.18	<0.2	7.9	125	273	0.40	297	0.36	0.36	0.019	0.137
26...	36.4	124	5.73	0.2	7.1	252	487	0.72	529	0.36	0.33	E.014	0.377
JUL													
17...	19.2	97	3.14	<0.2	8.0	140	300	0.45	330	0.37	0.42	0.015	0.067
17...	34.5	121	5.59	0.2	7.4	227	449	0.13	96	0.47	0.34	0.021	0.374
AUG													
26...	21.5	110	3.33	0.2	7.9	169	363	0.53	388	0.35	0.38	0.020	0.084
26...	30.5	121	5.10	0.2	8.2	228	455	0.66	483	0.37	0.39	0.029	0.368
SEP													
30...	23.7	116	3.53	0.2	8.0	185	384	0.57	416	0.33	0.37	E.008	0.131
30...	30.4	121	4.83	0.2	8.8	221	446	0.65	477	0.44	0.47	0.132	0.226

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)
JUN													
26...	0.004	0.34	<0.007	0.008	0.026	E2	0.7	<0.1	100	<2	<2	46.7	46.2
26...	<0.002	--	E.005	0.013	0.025	--	--	--	86	<2	M	60.6	59.8
JUL													
17...	0.006	0.36	<0.007	0.007	0.022	E1	0.5	<0.1	80	<2	<2	49.6	52.5
17...	E.002	0.45	0.008	0.014	0.025	--	--	--	77	<2	<2	60.3	63.0
AUG													
26...	0.005	0.33	<0.007	0.005	0.012	E1	0.9	<0.1	30	<2	<2	52.5	57.2
26...	<0.002	0.34	E.005	0.012	0.040	--	--	--	194	E1	E1	55.5	62.6
SEP													
30...	0.005	--	<0.007	0.004	0.011	<1	0.8	<0.1	31	E1	E1	56.7	47.2
30...	0.011	0.31	0.008	0.015	0.036	--	--	--	63	E2	3	59.1	49.5

09041395 WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Beryll-ium, water, unfltrd recover-able, ug/L (01012)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water unfltrd recover-able, ug/L (01132)
JUN													
26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.370	1.7	2.2	27	160	<0.08	0.21	14.5
26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.521	1.8	2.3	E6	150	<0.08	0.16	27.0
JUL													
17...	<0.5	<0.2	<0.2	<0.8	<0.8	0.360	1.8	2.2	25	120	E.06	0.06	17.7
17...	<0.5	<0.2	<0.2	<0.8	<0.8	0.365	1.5	2.1	E5	100	<0.08	<0.06	27.8
AUG													
26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.378	2.6	2.7	E5	30	<0.08	0.08	21.4
26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.715	2.6	3.1	16	380	<0.08	0.43	27.2
SEP													
30...	<0.5	<0.2	<0.2	<0.8	<0.8	0.354	1.9	3.5	<8	40	<0.08	E.06	23.8
30...	<0.5	<0.2	<0.2	<0.8	<0.8	0.941	1.5	2.8	23	270	<0.08	0.14	26.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Molyb-denum, water, unfltrd recover-able, ug/L (01062)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
JUN												
26...	3.1	5	<0.02	<0.02	2.0	3.25	2.3	2.4	<0.2	<0.16	1	E1
26...	13.8	57	<0.02	<0.02	3.6	5.05	3.4	3.2	<0.2	<0.16	2	E2
JUL												
17...	0.6	4	<0.02	<0.02	2.2	3.34	2.3	2.5	<0.2	<0.16	2	E1
17...	2.0	54	<0.02	<0.02	3.0	4.28	3.0	3.1	<0.2	<0.16	1	E1
AUG												
26...	0.5	2	<0.02	<0.02	2.5	3.40	2.5	2.4	<0.2	<0.16	2	<2
26...	141	197	<0.02	0.05	3.2	4.52	2.9	2.7	<0.2	<0.16	2	3
SEP												
30...	1.7	6	<0.02	<0.02	2.6	3.28	3.1	2.3	<0.2	<0.16	1	<2
30...	480	502	<0.02	<0.02	3.1	3.87	2.8	2.4	<0.2	<0.16	2	E1

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.
M -- Presence of material verified but not quantified.

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO

LOCATION.--Lat 40°06'31", long 106°24'48", in NW¼SE¼ sec.25, T.2 N., R.81 W., Grand County, Hydrologic Unit 14010001, on left bank 1,500 ft downstream from Wolford Mountain Reservoir, and 4 mi northwest of Kremmling.

DRAINAGE AREA.--270 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1995 to current year. For a complete listing of historical data available for this site see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041400

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,380 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow is entirely regulated by Wolford Mountain Reservoir.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	19	24	18	15	11	24	20	40	22	24	20
2	25	19	22	18	15	11	32	20	40	22	25	20
3	24	19	21	18	15	11	44	19	36	22	25	20
4	23	19	20	18	15	11	52	20	33	23	25	20
5	24	18	20	19	15	11	52	20	33	23	25	20
6	24	21	20	19	15	12	39	50	34	23	25	20
7	25	21	19	20	15	13	28	75	34	23	26	20
8	26	20	19	19	15	13	37	76	34	23	26	20
9	52	20	19	19	15	13	44	73	34	38	26	20
10	75	20	18	19	15	14	44	20	34	92	26	21
11	71	19	19	19	15	14	32	19	34	123	23	20
12	71	19	20	19	15	26	22	18	35	104	23	20
13	72	20	19	18	15	68	22	18	36	87	23	20
14	129	20	19	17	15	100	22	24	36	87	23	20
15	191	20	19	17	15	84	23	62	36	86	23	20
16	209	20	19	17	15	49	22	62	28	101	24	20
17	209	20	19	16	15	38	21	62	21	121	24	20
18	207	20	19	16	15	38	21	62	21	121	24	20
19	207	20	19	16	16	43	21	65	22	111	25	20
20	206	20	19	15	15	39	21	67	22	111	25	20
21	211	20	19	15	11	31	21	66	22	80	24	20
22	215	27	19	15	7.1	30	21	52	22	29	22	20
23	210	42	19	15	11	30	22	34	22	18	22	20
24	200	27	18	15	11	30	22	35	22	24	22	20
25	198	21	18	15	11	35	21	35	23	53	23	20
26	133	23	18	15	11	46	20	35	23	72	22	20
27	33	24	18	15	11	52	19	35	22	72	21	20
28	29	24	18	15	11	46	19	35	22	48	20	20
29	24	24	18	15	---	38	20	35	22	32	20	20
30	20	24	18	15	---	38	20	37	22	25	20	20
31	19	---	18	15	---	28	---	39	---	23	20	---
TOTAL	3,186	650	594	522	385.1	1,023	828	1,290	865	1,839	726	601
MEAN	103	21.7	19.2	16.8	13.8	33.0	27.6	41.6	28.8	59.3	23.4	20.0
MAX	215	42	24	20	16	100	52	76	40	123	26	21
MIN	19	18	18	15	7.1	11	19	18	21	18	20	20
AC-FT	6,320	1,290	1,180	1,040	764	2,030	1,640	2,560	1,720	3,650	1,440	1,190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

MEAN	74.3	28.0	21.5	22.0	23.5	37.8	86.1	230	183	70.6	92.4	104
MAX	172	46.5	32.7	32.3	34.4	75.8	249	454	492	99.6	153	189
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1997)	(1996)	(1998)	(1997)	(2000)	(1996)	(1998)
MIN	21.8	20.4	7.07	15.8	13.8	21.2	27.6	41.6	28.8	22.5	23.4	20.0
(WY)	(2001)	(2002)	(1996)	(1996)	(2003)	(2000)	(2003)	(2003)	(2003)	(2002)	(2003)	(2003)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1995 - 2003	
ANNUAL TOTAL	19,710		12,509.1			
ANNUAL MEAN	54.0		34.3		82.5	
HIGHEST ANNUAL MEAN					129	1997
LOWEST ANNUAL MEAN					34.3	2003
HIGHEST DAILY MEAN	228	Sep 2	215	Oct 22	992	Jun 3, 1997
LOWEST DAILY MEAN	10	Sep 21	7.1	Feb 22	2.8	Dec 3, 1995
ANNUAL SEVEN-DAY MINIMUM	15	Sep 21	10	Feb 21	3.4	Dec 2, 1995
MAXIMUM PEAK FLOW			217	Oct 21	1,030	Jun 2, 1997
MAXIMUM PEAK STAGE			5.42	Oct 21	8.39	Jun 2, 1997
ANNUAL RUNOFF (AC-FT)	39,090		24,810		59,730	
10 PERCENT EXCEEDS	128		69		193	
50 PERCENT EXCEEDS	23		22		36	
90 PERCENT EXCEEDS	19		15		20	

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1995 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041400

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1995 to current year.
WATER TEMPERATURE: October 1995 to current year.
DISSOLVED OXYGEN: October 1995 to current year.

INSTRUMENTATION.--Water-quality monitor from October 1995 to current year.

REMARKS.--Water temperature records are rated good. Specific conductance record is rated good. Dissolved oxygen records are rated poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum 1,910 microsiemens/cm, Oct. 20, 1996; minimum, 281 microsiemens/cm, June 10, 1997.
WATER TEMPERATURE: Maximum 19.2°C, June 24, 1997; minimum 1.1°C, Feb. 2, 1996.
DISSOLVED OXYGEN: Maximum, 12.2 mg/L, August 29, 2003; minimum, 4.9 mg/L, July 31, 1996.

EXTREMES FOR CURRENT PERIOD.--
SPECIFIC CONDUCTANCE: Maximum, 1580 microsiemens/cm, April 29; minimum, 632 microsiemens/cm, July 30.
WATER TEMPERATURE: Maximum, 14.2°C, Oct. 1; minimum, 1.4°C, Feb. 21.
DISSOLVED OXYGEN: Maximum, 12.2 mg/L, Aug. 29; minimum, 5.6 mg/L, Sept. 30.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
OCT													
08...	1115	26	17	9.2	8.2	780	13.0	340	85.4	31.1	2.50	0.9	37.1
NOV													
14...	1200	19	9.5	9.2	8.4	950	6.0	400	95.2	39.1	2.61	1	53.6
DEC													
11...	1215	19	12	8.6	8.4	974	4.0	420	101	41.8	2.69	1	58.2
JAN													
15...	1430	16	2.5	8.7	8.5	869	4.0	390	93.8	37.0	2.70	1	45.2
FEB													
19...	1530	15	1.3	8.1	8.3	879	4.5	390	92.5	38.0	2.81	1	45.5
MAR													
12...	1035	23	2.0	7.6	8.3	894	4.0	410	99.6	39.2	2.76	1	50.2
APR													
23...	1130	22	6.8	9.4	8.5	831	8.0	350	81.9	34.1	3.17	1	43.4
MAY													
30...	1200	40	14	9.9	8.2	792	10.0	320	78.0	30.3	2.85	1	39.7
JUN													
12...	1100	36	5.6	10.7	8.4	750	10.5	310	77.9	28.8	2.58	0.9	38.4
JUL													
30...	1030	33	3.6	10.4	8.2	660	12.0	310	78.6	26.7	2.39	0.8	30.7
AUG													
21...	1115	25	1.8	10.1	8.4	688	12.0	320	85.4	26.5	2.60	0.7	30.3
SEP													
25...	1030	21	3.4	10.8	8.6	699	11.0	320	83.7	27.0	2.59	0.8	31.3

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
08...	E144	3.96	0.21	6.1	275	--	--	--	569	10	0.33	0.45	0.029
NOV													
14...	153	6.42	0.22	5.6	341	636	0.95	36.5	701	--	0.41	0.46	0.058
DEC													
11...	E159	7.17	0.25	5.1	367	--	--	--	727	<10	0.45	0.52	0.097
JAN													
15...	154	4.18	0.23	4.7	299	579	0.87	28.4	638	--	0.39	0.46	0.077
FEB													
19...	E187	5.26	0.25	4.8	316	--	--	--	649	--	0.40	0.40	0.041
MAR													
12...	158	6.21	0.24	4.8	317	616	0.90	41.3	665	--	0.37	0.39	0.025
APR													
23...	145	6.44	0.22	5.6	292	554	0.82	36.3	603	--	0.33	0.50	0.020
MAY													
30...	132	6.09	0.2	6.4	268	512	0.77	61.1	566	--	0.42	0.45	0.058
JUN													
12...	126	5.75	0.2	6.5	255	492	0.72	51.7	526	--	0.36	0.47	0.028
JUL													
30...	116	4.90	0.2	7.2	219	442	0.51	33.1	376	10	0.34	0.38	E.011
AUG													
21...	118	4.80	0.2	7.8	232	463	0.67	32.9	495	<10	0.40	0.44	E.013
SEP													
25...	121	5.00	0.2	8.0	237	469	0.68	28.8	499	--	0.40	0.43	0.046

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro-gen, water, fltrd, mg/L (00607)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)
OCT													
08...	0.080	0.005	0.30	<0.007	0.010	0.036	0.5	6.6	<1	--	--	--	--
NOV													
14...	0.088	0.003	0.35	<0.007	0.005	0.026	--	--	<1	--	--	--	--
DEC													
11...	0.091	0.003	0.36	<0.007	0.007	0.028	0.4	6.5	<1	--	--	--	--
JAN													
15...	0.079	0.003	0.32	<0.007	0.006	0.013	--	--	<1	--	--	--	--
FEB													
19...	0.127	E.002	0.36	<0.007	0.006	0.011	--	--	<1	--	--	--	--
MAR													
12...	0.169	<0.002	0.35	<0.007	0.006	0.013	--	--	<1	--	--	--	--
APR													
23...	0.100	E.002	0.31	<0.007	0.005	0.023	--	--	<1	--	--	--	--
MAY													
30...	0.246	0.009	0.36	<0.007	0.006	0.025	--	--	<1	--	--	--	--
JUN													
12...	0.289	0.003	0.33	<0.007	0.007	0.022	--	--	E1	--	--	--	--
JUL													
30...	0.334	E.002	--	<0.007	0.009	0.019	0.2	6.2	E1	53	<2	<2	55.9
AUG													
21...	0.353	0.003	--	<0.007	0.009	0.031	0.1	6.4	<1	27	<2	<2	54.4
SEP													
25...	0.249	0.012	0.35	<0.007	0.009	0.027	--	--	E1	--	--	--	--

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, unfltrd recover-able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, fltrd, ug/L (01030)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)
OCT 08...	--	--	--	--	--	--	--	--	--	--	<10	360	--
NOV 14...	--	--	--	--	--	--	--	--	--	--	<10	190	--
DEC 11...	--	--	--	--	--	--	--	--	--	--	<10	290	--
JAN 15...	--	--	--	--	--	--	--	--	--	--	<10	60	--
FEB 19...	--	--	--	--	--	--	--	--	--	--	<10	30	--
MAR 12...	--	--	--	--	--	--	--	--	--	--	<10	50	--
APR 23...	--	--	--	--	--	--	--	--	--	--	<10	100	--
MAY 30...	--	--	--	--	--	--	--	--	--	--	<8	190	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	<8	140	--
JUL 30...	55.1	<0.5	58	<0.2	<0.2	<0.8	<0.8	0.515	E1.0	1.8	10	80	<1
AUG 21...	53.2	<0.5	60	<0.2	E.1	<0.8	<0.8	0.490	1.3	2.3	9	50	<1
SEP 25...	--	--	--	--	--	--	--	--	--	--	11	220	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water unfltrd recover-able, ug/L (01132)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Molyb-denum, water, fltrd, ug/L (01060)	Molyb-denum, water, unfltrd recover-able, ug/L (01062)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)
OCT 08...	--	--	86.6	113	--	--	--	--	--	--	--	--	--
NOV 14...	--	--	197	205	--	--	--	--	--	--	--	--	--
DEC 11...	--	--	279	292	--	--	--	--	--	--	--	--	--
JAN 15...	--	--	138	157	--	--	--	--	--	--	--	--	--
FEB 19...	--	--	107	144	--	--	--	--	--	--	--	--	--
MAR 12...	--	--	20.7	81.4	--	--	--	--	--	--	--	--	--
APR 23...	--	--	5.0	48.1	--	--	--	--	--	--	--	--	--
MAY 30...	--	--	21.9	50.9	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	15.9	34.2	--	--	--	--	--	--	--	--	--
JUL 30...	<0.06	23.4	17.2	45	<0.02	<0.02	3.7	3.0	2.6	3.73	E2	3.1	<0.3
AUG 21...	<0.06	23.6	48.3	61	<0.02	<0.02	3.0	3.4	2.2	5.90	E2	3.1	<0.3
SEP 25...	--	--	316	323	--	--	--	--	--	--	--	--	--

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, unfltrd recover -able, ug/L (01077)	Stront- ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT 08...	--	--	--	--
NOV 14...	--	--	--	--
DEC 11...	--	--	--	--
JAN 15...	--	--	--	--
FEB 19...	--	--	--	--
MAR 12...	--	--	--	--
APR 23...	--	--	--	--
MAY 30...	--	--	--	--
JUN 12...	--	--	--	--
JUL 30...	<0.16	654	E2	E1
AUG 21...	<0.16	723	<3	E1
SEP 25...	--	--	--	--

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.5	7.1	7.9	10.6	7.1	8.2	8.9	6.8	7.4	9.0	7.9	8.3
2	9.4	7.0	7.7	10.4	7.0	8.1	8.9	6.7	7.3	8.9	7.8	8.2
3	8.9	7.0	7.6	10.6	7.4	8.5	9.1	6.7	7.4	8.9	7.7	8.1
4	9.2	7.1	7.7	10.8	7.5	8.5	8.9	6.7	7.4	8.7	7.6	8.0
5	9.4	7.1	7.8	10.7	7.4	8.5	9.1	6.7	7.4	8.9	7.7	8.2
6	9.5	7.1	7.8	10.9	6.8	8.5	9.3	6.7	7.5	9.0	7.8	8.2
7	9.5	7.0	7.9	9.6	6.1	7.4	9.2	6.7	7.4	8.9	7.8	8.3
8	9.6	7.0	7.8	9.6	6.0	7.1	9.0	6.7	7.4	9.1	8.0	8.4
9	9.7	7.1	7.9	8.9	6.1	7.0	8.8	6.6	7.3	9.1	8.0	8.3
10	8.7	7.5	7.9	10.0	6.7	7.8	8.8	6.5	7.2	8.9	7.9	8.3
11	8.9	7.5	7.9	---	---	---	9.2	6.5	7.3	8.9	7.7	8.2
12	8.9	7.5	8.0	---	---	---	8.7	6.3	7.2	8.7	7.6	8.0
13	8.9	7.6	8.0	---	---	---	9.5	6.2	7.7	8.7	7.4	7.9
14	8.6	7.6	8.0	---	---	---	10.2	8.4	9.0	8.7	7.4	7.8
15	8.2	7.7	7.9	9.4	6.1	7.2	10.4	8.3	9.0	8.9	7.3	7.9
16	8.0	7.6	7.8	9.5	6.5	7.5	9.8	8.1	8.6	8.8	7.2	7.7
17	8.3	7.7	7.9	9.4	6.5	7.4	9.3	7.8	8.3	8.8	7.0	7.6
18	8.2	7.8	8.0	9.4	6.4	7.3	9.2	7.6	8.1	8.6	7.0	7.5
19	8.5	7.8	8.2	9.4	6.4	7.3	9.1	7.4	8.0	8.5	6.9	7.4
20	8.4	7.9	8.1	9.2	6.4	7.2	9.0	7.6	8.1	8.5	6.8	7.3
21	8.5	8.0	8.2	9.3	6.5	7.3	9.0	7.6	8.1	8.7	6.9	7.4
22	8.5	8.1	8.3	9.3	6.5	7.8	9.2	7.6	8.1	8.5	6.8	7.3
23	8.7	8.2	8.5	9.7	8.3	8.9	9.4	7.9	8.4	8.2	6.8	7.2
24	8.5	8.1	8.3	9.7	6.6	8.2	9.5	7.9	8.4	8.3	6.7	7.2
25	8.8	8.2	8.4	8.7	6.4	7.3	9.4	8.0	8.5	8.3	6.6	7.2
26	8.8	7.1	8.2	8.9	6.7	7.4	9.5	8.1	8.6	8.9	6.6	7.2
27	9.1	6.9	7.7	8.7	6.6	7.4	9.3	7.9	8.4	8.8	6.4	7.1
28	9.2	6.9	7.6	8.7	6.6	7.3	9.1	7.8	8.3	8.0	6.3	6.9
29	9.6	6.9	7.7	8.7	6.7	7.3	9.4	8.0	8.4	8.4	6.5	7.1
30	10.0	7.0	8.0	8.9	6.7	7.4	9.2	7.9	8.4	8.1	6.4	6.9
31	10.2	6.9	7.9	---	---	---	9.0	8.0	8.3	8.6	6.3	6.9
MONTH	10.2	6.9	8.0	---	---	---	10.4	6.2	8.0	9.1	6.3	7.7

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.4	6.3	6.9	8.5	6.0	6.6	9.9	9.2	9.5	9.3	8.6	8.9
2	8.3	6.4	7.1	8.2	5.9	6.6	10.1	9.3	9.7	9.2	8.5	8.8
3	8.7	6.8	7.4	7.9	5.8	6.4	10.3	9.6	10	9.2	8.3	8.7
4	8.2	6.6	7.1	7.3	5.7	6.4	10.5	9.9	10.2	9.2	8.3	8.6
5	8.1	6.5	7.1	8.5	5.7	6.5	10.3	9.8	10.0	9.5	8.6	8.9
6	8.0	6.3	6.9	8.0	5.9	6.6	10.4	9.6	10.0	9.6	8.6	9.2
7	7.3	6.2	6.5	7.9	6.0	6.6	10.2	9.6	9.9	9.7	9.3	9.5
8	7.0	6.1	6.5	8.3	5.9	6.5	10.5	10.0	10.2	9.7	9.3	9.5
9	7.1	6.1	6.5	8.0	5.9	6.4	10.6	9.9	10.2	9.7	8.6	9.3
10	7.5	6.4	6.8	8.0	5.9	6.5	10.8	10.0	10.5	9.8	7.5	9.1
11	7.3	6.3	6.7	7.8	6.0	6.6	10.7	9.9	10.3	9.7	8.6	9.1
12	7.2	6.3	6.6	9.3	6.2	7.8	10.5	9.8	10.1	9.5	8.4	9.0
13	7.1	6.1	6.5	10.5	7.6	9.2	10.5	9.7	10.1	9.4	8.4	8.8
14	7.2	6.0	6.4	10.3	9.9	10.1	10.5	9.7	10.1	9.3	8.4	8.8
15	7.3	6.1	6.6	10.4	9.9	10.1	10.2	9.4	9.8	9.5	8.8	9.3
16	7.5	6.3	6.8	10.2	9.7	10	10.1	9.2	9.6	9.6	9.1	9.3
17	7.6	6.3	6.8	9.7	9.0	9.4	10.0	9.2	9.5	9.6	9.0	9.3
18	7.6	6.2	6.8	9.9	9.1	9.6	10.0	9.3	9.5	9.5	9.1	9.3
19	8.4	6.2	7.0	10.2	9.6	9.9	10.0	9.2	9.6	9.5	8.9	9.2
20	8.5	6.9	7.4	10.4	9.6	10.0	9.9	9.2	9.5	9.3	8.9	9.1
21	8.6	5.8	7.2	10.4	9.6	10	9.9	9.1	9.5	9.4	8.9	9.1
22	8.6	5.8	7.0	10.4	9.8	10.1	9.7	8.9	9.3	9.5	8.5	9.1
23	8.6	6.5	7.2	10.2	9.6	9.9	9.4	8.8	9.1	9.4	8.5	8.9
24	8.6	6.3	7.2	10.2	9.7	9.9	9.5	8.7	9.1	9.5	8.6	8.9
25	8.4	6.0	6.9	10.3	9.7	9.9	9.5	8.6	9.0	9.5	8.5	8.9
26	8.5	5.9	6.8	10.3	9.7	10	9.3	8.5	8.9	9.4	8.4	8.8
27	8.6	5.9	6.8	10.2	9.8	10	9.3	8.4	8.8	9.6	8.4	9.0
28	8.2	5.9	6.7	10.5	10.0	10.3	9.3	8.2	8.7	9.7	8.4	9.0
29	---	---	---	10.5	9.9	10.3	9.2	8.3	8.8	9.6	8.4	8.8
30	---	---	---	10.3	9.8	10.1	9.2	8.6	8.8	9.9	8.4	8.9
31	---	---	---	10.2	9.3	9.8	---	---	---	10.0	8.6	9.1
MONTH	8.7	5.8	6.9	10.5	5.7	8.6	10.8	8.2	9.6	10.0	7.5	9.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	10.5	8.4	9.3	9.8	6.5	8.1	10.3	7.2	8.4	11.6	---	---
2	10.1	8.4	9.2	9.1	6.5	7.6	10.4	7.0	8.3	11.6	6.9	8.5
3	10.1	8.3	9.1	9.6	6.5	7.8	10.3	7.0	8.2	11.7	6.9	8.5
4	10.4	8.3	9.0	9.7	6.5	7.8	10.4	7.1	8.5	11.5	6.9	8.6
5	10.4	8.1	9.2	9.3	6.4	7.7	10.7	7.6	8.8	11.7	6.8	8.6
6	9.9	8.2	8.9	9.2	6.3	7.4	10.8	7.6	8.7	11.5	6.6	8.0
7	10.3	8.1	9.1	9.3	6.3	7.5	10.9	7.6	8.7	10.2	6.5	7.8
8	10.4	8.0	9.0	10.4	6.6	8.2	10.5	7.6	8.7	10.9	6.4	7.9
9	10.3	8.0	8.9	10.1	7.0	8.3	10.8	7.4	8.5	10.7	6.4	7.9
10	---	---	---	8.9	7.7	8.3	10.6	7.3	8.6	10.3	6.5	7.8
11	---	---	---	8.7	8.2	8.4	10.2	7.2	8.3	11.7	7.0	8.6
12	---	---	---	8.6	8.0	8.3	10.5	7.1	8.3	11.2	6.8	8.5
13	10.1	7.7	8.5	8.7	7.9	8.3	10.6	7.1	8.1	11.1	6.8	8.5
14	10.0	7.6	8.6	8.7	8.0	8.3	10.9	7.1	8.9	11.3	6.8	8.4
15	10.1	7.6	8.6	8.7	8.0	8.3	11.3	7.8	9.2	11.3	6.7	8.4
16	10.7	7.4	8.8	9.1	8.1	8.5	11.3	7.6	8.9	10.9	6.5	8.1
17	10.7	7.2	8.7	9.0	8.2	8.5	10.8	7.2	8.5	10.9	6.5	7.9
18	10.4	7.0	8.3	8.9	8.2	8.5	9.9	7.1	8.0	11.0	6.7	8.3
19	10.0	7.0	8.0	9.1	8.2	8.5	10.8	7.1	8.3	11.1	6.6	8.2
20	9.8	6.7	7.9	9.2	8.2	8.6	10.6	7.1	8.4	10.9	6.6	8.0
21	9.7	6.6	7.9	9.2	7.4	8.4	10.9	7.0	8.4	---	---	---
22	10.4	6.3	8.3	9.9	6.4	8.3	11.4	6.9	8.1	---	---	---
23	9.8	6.7	8.1	10.0	6.4	8.2	10.4	6.9	7.9	---	---	---
24	10.0	6.9	8.2	10.3	7.5	8.6	11.6	6.6	8.4	---	---	---
25	9.9	7.0	8.2	10.2	7.4	8.5	11.4	7.3	8.7	---	---	---
26	10.0	6.8	8.3	9.8	8.1	8.8	11.9	6.6	8.7	9.8	5.9	7.3
27	9.4	6.6	7.9	9.9	8.5	9.0	11.1	6.7	8.1	9.8	5.9	7.3
28	10.2	7.0	8.3	10.5	7.8	9.0	12.0	7.1	8.9	9.7	5.9	7.3
29	10.1	7.1	8.5	10.3	7.7	8.7	12.2	7.1	8.8	10.4	6.2	7.7
30	10.3	6.9	8.4	10.8	7.2	8.9	12.1	6.6	8.4	9.5	5.6	7.1
31	---	---	---	10.6	7.2	8.6	11.7	6.7	8.6	---	---	---
MONTH	---	---	---	10.8	6.3	8.3	12.2	6.6	8.5	---	---	---

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	775	766	771	847	808	824	1,000	996	999	837	832	835
2	778	768	774	864	836	856	998	990	994	841	836	839
3	790	778	784	836	806	815	998	989	994	842	840	841
4	789	777	783	815	804	809	997	993	995	844	842	843
5	788	773	784	820	807	813	998	988	994	847	841	845
6	789	779	784	848	815	826	996	991	993	847	846	847
7	795	785	789	892	848	866	996	988	992	850	847	849
8	805	794	798	914	892	905	995	987	991	851	849	850
9	805	783	796	917	845	884	992	976	986	853	851	852
10	787	780	784	855	833	838	984	973	979	853	849	851
11	786	772	776	848	838	843	995	967	974	854	851	853
12	773	761	765	882	845	856	970	965	967	855	853	854
13	765	760	762	918	882	900	966	854	924	857	854	855
14	763	754	757	986	918	948	854	827	834	857	856	856
15	757	740	750	1,020	986	1,010	829	824	827	858	853	856
16	746	730	738	1,050	1,010	1,030	831	828	829	858	856	857
17	736	714	723	1,050	1,040	1,050	834	828	832	858	856	857
18	730	718	724	1,040	1,030	1,030	836	833	834	860	857	858
19	729	706	716	1,040	1,030	1,030	836	833	835	861	858	860
20	723	708	711	1,060	1,040	1,050	835	833	834	861	859	861
21	731	714	725	1,070	1,060	1,060	835	832	834	861	860	861
22	738	725	733	1,060	996	1,050	835	833	835	861	860	861
23	732	719	725	996	965	973	835	832	834	863	861	862
24	739	711	726	971	939	953	835	832	834	864	862	863
25	747	725	738	1,000	949	979	835	833	834	865	863	864
26	779	747	756	1,020	1,000	1,010	835	833	834	866	864	865
27	820	779	798	1,030	1,020	1,030	836	834	835	866	864	865
28	859	811	836	1,030	1,000	1,020	836	828	833	866	864	865
29	862	830	853	1,000	987	993	834	832	833	866	864	865
30	869	828	841	999	988	992	835	832	834	867	866	866
31	869	839	850	---	---	---	835	830	833	868	866	867
MONTH	869	706	769	1,070	804	941	1,000	824	896	868	832	856
		FEBRUARY			MARCH			APRIL			MAY	
1	868	864	867	880	877	879	912	907	910	1,070	1,020	1,040
2	868	852	865	880	877	879	929	906	916	1,020	1,020	1,020
3	867	864	866	881	878	880	935	893	922	1,020	992	1,010
4	869	866	867	881	879	880	893	866	874	992	965	975
5	868	865	866	883	879	881	938	805	893	974	964	970
6	868	865	867	883	880	881	939	842	879	965	904	943
7	868	865	867	882	876	880	849	836	841	914	902	907
8	868	864	866	882	860	878	924	841	850	911	873	889
9	868	864	866	883	857	878	888	856	872	898	867	880
10	867	865	866	886	861	881	879	854	863	975	869	911
11	869	866	867	889	839	880	863	850	854	1,070	843	910
12	869	866	867	917	887	900	908	851	865	993	825	901
13	870	868	869	909	901	905	909	869	886	911	901	905
14	872	869	870	917	902	909	909	875	891	940	890	909
15	869	867	868	918	911	915	899	854	874	1,000	864	918
16	870	867	869	917	808	909	854	841	845	929	855	868
17	871	868	870	915	905	912	890	841	856	871	856	862
18	872	869	870	914	889	902	883	854	867	870	825	842
19	880	870	875	894	885	889	854	844	849	831	780	810
20	881	879	880	898	892	896	861	842	848	813	784	804
21	881	869	878	907	897	902	863	842	851	811	802	806
22	885	872	881	903	895	898	861	843	853	816	803	811
23	882	880	881	918	903	910	847	838	843	817	809	813
24	881	851	880	916	909	913	849	845	847	813	804	809
25	881	877	880	912	907	909	874	844	853	808	798	803
26	883	874	881	911	904	907	901	852	873	809	801	805
27	882	877	880	904	901	903	894	833	866	805	791	799
28	881	879	880	901	895	898	1,550	852	1,000	809	792	798
29	---	---	---	909	888	903	1,580	1,260	1,460	805	795	799
30	---	---	---	907	902	905	1,260	1,070	1,150	797	785	792
31	---	---	---	911	905	908	---	---	---	793	771	783
MONTH	885	851	872	918	808	896	1,580	805	902	1,070	771	874

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	788	769	779	713	705	709	693	686	690	699	689	693
2	790	773	779	712	672	707	694	686	690	699	689	696
3	787	773	780	709	701	705	695	686	692	699	687	694
4	785	774	780	707	692	700	694	687	689	705	691	697
5	781	752	772	700	686	693	693	686	690	708	697	703
6	781	758	772	696	679	688	695	690	693	708	692	700
7	775	760	766	685	669	677	694	685	690	716	687	704
8	766	760	763	721	664	680	692	686	688	719	712	716
9	765	752	760	719	685	708	691	685	688	720	709	714
10	753	742	749	690	679	685	696	691	693	712	701	709
11	751	739	744	691	673	683	695	685	691	713	704	709
12	756	741	748	686	670	681	697	691	694	716	708	711
13	758	749	755	688	669	682	696	689	693	721	707	714
14	756	746	750	681	669	677	695	684	691	715	706	709
15	756	745	751	684	667	676	695	691	693	716	709	713
16	763	743	752	684	660	676	697	693	695	715	709	711
17	762	756	759	683	657	670	694	682	690	716	695	709
18	762	741	749	679	663	670	698	684	695	695	686	691
19	751	744	748	674	658	670	698	692	695	701	692	695
20	749	735	740	672	655	663	703	695	698	701	692	697
21	735	726	729	676	658	666	709	701	704	701	693	697
22	732	722	727	687	663	671	709	699	703	701	688	695
23	726	712	720	697	666	684	702	695	698	703	695	700
24	719	708	714	669	648	658	701	696	698	704	692	698
25	709	691	700	680	655	664	704	696	699	708	696	702
26	703	691	697	672	650	664	701	693	697	707	696	701
27	700	684	694	671	657	663	705	698	702	704	695	700
28	694	679	688	670	650	658	707	701	704	704	672	693
29	693	680	688	661	639	651	706	694	701	700	680	694
30	723	688	703	694	632	666	705	688	696	698	686	693
31	---	---	---	696	689	693	694	685	691	---	---	---
MONTH	790	679	742	721	632	679	709	682	695	721	672	702
YEAR	1,580	632	818									

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	14.2	12.3	13.0	8.8	6.7	7.5	4.2	3.4	3.7	3.9	2.7	3.2
2	14.0	12.2	12.9	8.6	6.5	7.3	4.8	3.3	3.8	3.9	2.5	2.9
3	13.0	12.2	12.5	7.5	5.9	6.5	4.3	3.0	3.4	4.0	2.9	3.3
4	12.8	12.1	12.3	7.4	5.6	6.1	4.0	3.0	3.5	4.5	2.9	3.4
5	13.4	12.0	12.4	7.4	5.6	6.2	4.4	3.4	3.7	3.8	2.9	3.3
6	13.3	11.7	12.1	7.0	5.2	6.0	4.7	3.1	3.6	4.0	2.6	3.1
7	13.5	11.4	12.1	7.2	5.9	6.3	4.1	3.0	3.3	3.9	2.6	3.1
8	13.4	11.3	12.0	7.4	5.9	6.3	4.3	2.9	3.3	3.9	2.6	3.0
9	12.7	11.0	11.8	6.3	5.7	6.0	4.2	2.7	3.2	3.8	2.4	2.9
10	12.6	11.6	11.9	6.5	5.1	5.7	4.2	2.7	3.2	3.6	2.4	2.9
11	12.3	11.4	11.7	6.8	5.4	5.7	4.0	2.9	3.4	4.1	2.9	3.3
12	12.0	11.1	11.4	6.6	4.9	5.5	4.1	3.2	3.7	4.2	3.1	3.4
13	12.0	10.9	11.3	6.0	5.0	5.4	4.6	2.8	3.7	4.4	2.9	3.4
14	11.6	10.6	11.1	6.3	5.0	5.5	3.9	2.6	3.0	4.2	2.8	3.2
15	11.5	11.0	11.2	5.9	4.3	5.0	4.0	2.6	3.0	3.6	2.7	3.0
16	11.3	10.9	11.1	5.4	4.1	4.6	3.9	2.6	3.1	4.1	2.6	3.1
17	11.2	10.8	10.9	5.5	4.0	4.6	4.0	2.8	3.3	4.1	2.5	3.2
18	11.0	10.4	10.7	5.7	4.2	4.7	3.8	2.7	3.1	3.9	2.2	2.8
19	10.6	10.1	10.3	5.7	4.0	4.7	3.9	2.6	3.0	3.9	2.2	2.8
20	10.3	9.9	10.1	5.6	4.1	4.6	3.5	2.4	2.9	4.0	2.2	2.8
21	10.2	9.8	10	5.4	4.0	4.4	3.7	2.7	3.1	4.3	2.3	3.0
22	10.1	9.8	9.9	5.1	3.9	4.3	3.9	2.4	2.9	4.1	2.6	3.1
23	9.8	9.6	9.7	4.8	4.0	4.3	3.5	2.1	2.6	4.0	3.1	3.4
24	9.6	9.4	9.5	5.3	4.0	4.4	3.5	2.3	2.8	4.1	3.2	3.5
25	9.5	9.2	9.3	5.1	3.4	4.0	3.4	2.3	2.7	4.1	3.0	3.4
26	9.4	8.9	9.2	4.6	3.3	3.7	3.5	2.3	2.8	4.8	3.2	3.7
27	9.7	8.4	9.0	4.4	3.3	3.7	4.1	2.7	3.1	4.8	3.0	3.6
28	9.1	8.1	8.6	4.6	3.3	3.7	3.9	2.5	2.9	4.0	3.1	3.5
29	8.6	7.4	8.0	4.5	3.2	3.6	4.0	2.4	3.0	4.6	2.8	3.4
30	8.3	7.1	7.5	4.5	3.2	3.6	3.8	2.6	3.0	4.1	3.1	3.5
31	8.8	7.1	7.6	---	---	---	3.7	2.4	2.9	5.0	3.3	3.8
MONTH	14.2	7.1	10.7	8.8	3.2	5.1	4.8	2.1	3.2	5.0	2.2	3.2
		FEBRUARY			MARCH			APRIL			MAY	
1	4.9	3.1	3.7	5.1	1.8	3.0	5.9	3.6	4.5	7.0	5.0	5.7
2	4.8	1.6	3.2	4.8	1.6	2.9	5.4	3.8	4.4	6.8	5.3	5.9
3	4.2	2.3	3.0	5.5	1.9	3.2	4.7	3.8	4.1	7.9	5.5	6.3
4	4.2	2.6	3.2	3.8	2.7	3.2	4.9	3.8	4.2	7.1	5.6	6.3
5	3.9	2.4	2.8	5.2	2.5	3.4	4.9	3.8	4.2	7.8	5.8	6.5
6	4.2	2.1	2.7	5.5	2.4	3.4	5.4	3.7	4.3	8.1	5.8	6.7
7	3.9	1.9	2.6	5.4	2.8	3.7	5.5	3.8	4.4	7.8	6.7	7.1
8	3.9	2.0	2.6	5.6	2.9	3.8	5.2	3.5	4.2	7.4	6.8	7.0
9	3.5	2.5	2.9	5.4	2.6	3.6	5.4	3.7	4.4	8.1	6.3	7.2
10	4.0	2.6	3.1	5.4	2.7	3.6	5.7	3.9	4.6	7.9	6.5	7.0
11	4.3	2.4	3.0	5.8	3.0	3.8	6.8	4.1	5.1	8.2	6.4	7.2
12	4.3	2.2	3.0	4.4	3.1	3.6	6.6	4.4	5.2	9.2	6.5	7.6
13	4.2	2.8	3.4	4.2	3.2	3.7	7.0	4.1	5.2	9.1	6.7	7.7
14	5.0	3.1	3.6	4.3	3.5	3.8	6.5	4.3	5.1	9.4	6.9	7.9
15	4.3	2.8	3.4	4.4	3.6	3.9	6.5	4.5	5.4	8.6	7.5	7.9
16	4.1	2.6	3.2	4.3	3.7	4.0	8.1	5.9	6.8	8.8	7.7	8.1
17	4.6	2.7	3.4	4.7	3.1	3.9	8.3	5.7	6.7	9.1	7.6	8.0
18	4.7	2.8	3.3	4.1	3.2	3.5	7.1	5.5	6.0	9.1	7.6	8.3
19	4.9	2.5	3.3	4.6	3.3	3.7	7.9	5.8	6.5	9.6	8.1	8.8
20	5.0	2.3	3.1	4.9	3.5	4.1	8.6	6.1	7.0	9.6	8.4	8.9
21	4.5	1.4	3.0	5.6	3.8	4.3	8.3	5.9	6.9	9.6	8.3	8.9
22	4.4	1.6	2.8	5.5	4.0	4.5	8.5	6.4	7.0	10.1	8.3	9.0
23	5.0	2.1	3.1	6.0	4.2	4.8	7.9	6.4	7.0	10.0	8.3	9.0
24	4.7	2.5	3.3	5.3	4.1	4.4	8.7	6.5	7.3	10.3	8.3	9.1
25	4.6	2.8	3.4	5.4	3.8	4.5	9.1	6.7	7.6	10.1	8.5	9.0
26	5.1	3.0	3.6	4.7	3.9	4.2	9.0	6.4	7.3	10.3	8.4	9.2
27	5.6	2.7	3.6	4.6	3.6	4.1	9.2	6.4	7.5	10.6	8.7	9.5
28	4.9	2.2	3.2	4.8	3.4	3.8	8.9	6.4	7.5	10.5	8.6	9.4
29	---	---	---	4.4	3.2	3.7	7.9	5.4	6.3	10.5	8.7	9.4
30	---	---	---	4.8	3.6	4.0	7.4	5.2	5.8	10.4	8.7	9.3
31	---	---	---	5.8	3.6	4.4	---	---	---	10.4	8.9	9.4
MONTH	5.6	1.4	3.2	6.0	1.6	3.8	9.2	3.5	5.8	10.6	5.0	8.0

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	10.4	9.0	9.4	11.5	9.4	10.4	12.3	10.3	11.1	12.9	9.9	11.1
2	10.4	8.7	9.4	12.0	9.3	10.5	12.7	10.2	11.2	12.8	10.1	11.1
3	10.4	8.6	9.3	12.0	9.3	10.4	12.4	10.5	11.3	12.8	10.3	11.1
4	10.4	8.5	9.3	12.1	9.3	10.5	12.2	10.6	11.3	12.9	10.1	11.2
5	10.4	8.6	9.3	12.2	9.2	10.5	12.7	10.3	11.2	12.5	10.0	10.9
6	9.8	8.4	9.0	11.6	9.2	10.2	12.7	10.3	11.2	12.7	10.6	11.0
7	10.3	8.5	9.3	12.0	9.4	10.3	12.5	10.4	11.2	11.4	10.4	10.9
8	10.6	8.4	9.3	12.3	9.3	10.6	12.7	10.7	11.4	12.5	10.1	10.9
9	10.4	8.7	9.3	12.0	9.3	10.3	12.6	10.5	11.2	11.8	10.2	10.8
10	10.3	8.9	9.4	10.8	9.5	10.1	12.9	10.4	11.4	11.0	9.9	10.3
11	10.6	8.9	9.5	10.5	9.5	10.0	12.8	10.6	11.3	11.8	9.9	10.5
12	10.9	8.8	9.6	10.7	9.7	10.2	13.1	10.4	11.4	12.1	9.9	10.7
13	10.5	8.9	9.5	10.6	9.7	10.1	13.2	10.5	11.4	11.7	9.7	10.4
14	10.8	8.9	9.7	10.9	9.7	10.3	13.0	10.4	11.4	11.9	9.1	10.3
15	11.0	8.8	9.7	10.9	9.9	10.2	12.8	10.0	11.2	12.3	9.2	10.4
16	11.4	9.1	9.7	10.8	10.0	10.3	12.8	10.5	11.2	11.9	9.6	10.6
17	11.6	8.8	9.9	10.7	10.3	10.5	12.1	10.7	11.1	12.0	9.6	10.4
18	11.6	9.1	10	11.1	10.1	10.5	12.4	10.6	11.1	11.8	9.2	10.2
19	11.2	9.0	9.7	11.0	10.2	10.5	12.8	10.4	11.3	12.0	9.3	10.3
20	11.3	9.1	9.8	11.2	10.3	10.7	12.8	10.3	11.4	11.7	9.6	10.4
21	11.6	9.0	10	11.7	10.2	10.8	13.0	10.5	11.4	12.0	9.3	10.4
22	11.8	9.0	10.1	13.7	10.2	11.4	13.5	10.7	11.6	12.2	9.3	10.5
23	11.7	9.0	10.2	12.4	10.1	11.2	12.4	10.9	11.4	12.2	9.5	10.5
24	11.8	9.2	10.1	12.5	10.2	11.0	12.9	10.7	11.5	12.2	9.4	10.5
25	11.4	9.1	10	11.8	10.3	10.8	12.9	10.8	11.5	12.0	9.3	10.4
26	11.6	8.9	10.1	11.5	10.6	10.9	13.1	10.6	11.5	12.2	9.5	10.5
27	11.8	8.9	10.2	11.5	10.5	10.9	12.8	10.6	11.3	12.2	9.7	10.7
28	11.9	9.1	10.2	12.5	10.4	11.2	13.3	10.8	11.6	12.1	9.7	10.7
29	11.7	9.2	10.3	12.5	10.4	11.1	13.3	10.3	11.3	12.4	9.7	10.7
30	11.8	9.2	10.3	13.1	10.3	11.3	12.7	10.4	10.9	12.3	9.9	10.8
31	---	---	---	12.4	10.2	11.0	12.2	10.3	11.0	---	---	---
MONTH	11.9	8.4	9.7	13.7	9.2	10.6	13.5	10.0	11.3	12.9	9.1	10.6
YEAR	14.2	1.4	7.1									

09041900 MONTE CRISTO DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'51", long 106°04'15", in NE¼SE¼ sec.2, T.8 S., R.78W., Summit County, Hydrologic Unit 14010002, on left bank at entrance to Hoosier Pass tunnel, 2,200 ft downstream from diversion point, 1.4 mi northwest of Hoosier Pass, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year (seasonal records only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041900

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Elevation of gage is 10,986 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. This is a transmountain diversion from Monte Cristo Creek in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion point is in SW¼NE¼ sec.2, T.8 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with city of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 73 ft^3/s, Aug. 12-14, 1980 and Sept. 29, 1994; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e0.00	e0.00	15	17	e0.00	e0.00
2	---	---	---	---	---	---	e0.00	e0.00	11	31	e0.00	e0.00
3	---	---	---	---	---	---	e0.00	e0.00	8.6	28	e0.00	e0.00
4	---	---	---	---	---	---	e0.00	e0.00	7.5	23	e0.00	e0.00
5	---	---	---	---	---	---	e0.00	e0.00	7.1	21	e0.00	e0.00
6	---	---	---	---	---	---	e0.00	e0.00	5.6	20	e0.00	e0.00
7	---	---	---	---	---	---	e0.00	e0.00	5.5	18	e0.00	e0.00
8	---	---	---	---	---	---	e0.00	e0.00	4.9	21	e0.00	e0.00
9	---	---	---	---	---	---	e0.00	e0.00	5.1	23	e0.00	e0.00
10	---	---	---	---	---	---	e0.00	e0.00	6.1	e15	e0.00	e0.00
11	---	---	---	---	---	---	e0.00	e0.00	6.4	e0.00	e0.00	e0.00
12	---	---	---	---	---	---	e0.00	e0.00	6.2	e0.00	e0.00	e0.00
13	---	---	---	---	---	---	e0.00	e0.00	6.2	e0.00	e0.00	e0.00
14	---	---	---	---	---	---	e0.00	e0.00	5.7	e0.00	e0.00	e0.00
15	---	---	---	---	---	---	e0.00	e0.00	5.6	e0.00	e0.00	e0.00
16	---	---	---	---	---	---	e0.00	e0.00	5.4	e0.00	e0.00	e0.00
17	---	---	---	---	---	---	e0.00	e0.00	4.8	e0.00	e0.00	e0.00
18	---	---	---	---	---	---	e0.00	e0.00	4.8	e0.00	e0.00	e0.00
19	---	---	---	---	---	---	e0.00	e0.00	5.1	e0.00	e0.00	e13
20	---	---	---	---	---	---	e0.00	e0.00	4.7	e0.00	e0.00	39
21	---	---	---	---	---	---	e0.00	e4.5	4.4	e0.00	e0.00	39
22	---	---	---	---	---	---	e0.00	8.4	3.9	e8.3	e0.00	38
23	---	---	---	---	---	---	e0.00	9.8	3.6	e8.4	e0.00	37
24	---	---	---	---	---	---	e0.00	12	3.3	e0.00	e0.00	39
25	---	---	---	---	---	---	e0.00	14	3.0	e0.00	e0.00	42
26	---	---	---	---	---	---	e0.00	13	2.7	e0.00	e0.00	42
27	---	---	---	---	---	---	e0.00	14	2.5	e0.00	e0.00	42
28	---	---	---	---	---	---	e0.00	15	3.1	e0.00	e0.00	42
29	---	---	---	---	---	---	e0.00	18	5.3	e0.00	e0.00	41
30	---	---	---	---	---	---	e0.00	16	7.6	e0.00	e0.00	41
31	---	---	---	---	---	---	---	14	---	e0.00	e0.00	---
TOTAL	---	---	---	---	---	---	0.00	138.70	170.7	233.70	0.00	455.00
MEAN	---	---	---	---	---	---	0.000	4.47	5.69	7.54	0.000	15.2
MAX	---	---	---	---	---	---	0.00	18	15	31	0.00	42
MIN	---	---	---	---	---	---	0.00	0.00	2.5	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	0.00	275	339	464	0.00	902

e Estimated.

09044300 BEMROSE-HOOSIER DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'50", long 106°04'13", in NE¼SE¼ sec.2, T.8 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank at entrance to Hoosier Pass tunnel, 1.4 mi northwest of Hoosier Pass, 1.6 mi downstream from diversion point on Bemrose Creek, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year (seasonal records only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09044300

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Elevation of gage is 10,986 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. This is a transmountain diversion from Bemrose and Hoosier Creeks in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion points are in SW¼SW¼ sec.6, T.8 S., R.77 W., and in sec.12, T.8 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with City of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 44 ft^3/s, June 21, 1965; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e0.00	e0.00	23	8.9	1.8	1.3
2	---	---	---	---	---	---	e0.00	e0.00	22	8.4	1.6	1.2
3	---	---	---	---	---	---	e0.00	e0.00	21	8.3	1.9	1.2
4	---	---	---	---	---	---	e0.00	e0.00	19	8.0	1.9	1.3
5	---	---	---	---	---	---	e0.00	e0.00	18	7.7	1.7	1.2
6	---	---	---	---	---	---	e0.00	e0.00	15	7.3	1.6	1.4
7	---	---	---	---	---	---	e0.00	e0.00	14	6.9	1.4	1.5
8	---	---	---	---	---	---	e1.7	e0.00	13	6.5	1.5	1.4
9	---	---	---	---	---	---	e1.8	e0.00	13	5.9	1.5	1.6
10	---	---	---	---	---	---	e0.00	e0.00	14	5.1	1.4	1.5
11	---	---	---	---	---	---	e0.00	e0.00	15	3.7	1.0	1.4
12	---	---	---	---	---	---	e0.00	e1.0	15	3.6	e0.00	1.3
13	---	---	---	---	---	---	e0.00	1.8	15	3.5	e0.00	1.4
14	---	---	---	---	---	---	e0.00	2.8	14	3.3	e0.00	1.4
15	---	---	---	---	---	---	e0.00	3.0	14	3.2	e0.00	1.3
16	---	---	---	---	---	---	e0.00	2.9	14	3.0	e0.00	1.3
17	---	---	---	---	---	---	e0.00	3.7	13	3.0	e0.00	1.3
18	---	---	---	---	---	---	e0.00	3.6	14	3.0	e0.00	1.3
19	---	---	---	---	---	---	e0.00	3.6	16	3.1	e0.00	1.3
20	---	---	---	---	---	---	e0.00	3.7	15	2.8	e0.00	1.3
21	---	---	---	---	---	---	e0.00	5.1	14	2.6	e0.00	1.3
22	---	---	---	---	---	---	e0.00	6.9	14	3.1	e0.00	1.2
23	---	---	---	---	---	---	e0.00	7.9	14	3.0	e0.00	e0.40
24	---	---	---	---	---	---	e0.00	10	13	2.3	e0.00	e0.00
25	---	---	---	---	---	---	e0.00	12	12	2.3	1.0	e0.00
26	---	---	---	---	---	---	e0.00	12	11	2.1	1.6	e0.00
27	---	---	---	---	---	---	e0.00	16	11	2.3	1.3	e0.00
28	---	---	---	---	---	---	e0.00	19	10	2.2	1.2	e0.00
29	---	---	---	---	---	---	e0.00	24	9.7	2.1	1.4	e0.00
30	---	---	---	---	---	---	e0.00	25	9.4	2.0	1.9	e0.00
31	---	---	---	---	---	---	---	23	---	1.9	1.5	---
TOTAL	---	---	---	---	---	---	3.50	187.00	435.1	131.1	27.20	29.80
MEAN	---	---	---	---	---	---	0.12	6.03	14.5	4.23	0.88	0.99
MAX	---	---	---	---	---	---	1.8	25	23	8.9	1.9	1.6
MIN	---	---	---	---	---	---	0.00	0.00	9.4	1.9	0.00	0.00
AC-FT	---	---	---	---	---	---	6.9	371	863	260	54	59

e Estimated.

09044800 MCCULLOUGH-SPRUCE-CRYSTAL DIVERSION NEAR HOOSIER PASS, CO

LOCATION.--Lat 39°22'51", long 106°04'14", in NE¼SE¼ sec.2, T.8 S., R.78 W., Summit County, Hydrologic Unit 14010002, on left bank at entrance to Hoosier Pass tunnel, 1.4 mi northwest of Hoosier Pass, 1.6 mi downstream from diversion point on McCullough Gulch, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year (seasonal records only). Prior to October 1961, Published as McCullough diversion near Hoosier Pass. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09044800

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Elevation of gage is 10,986 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. This is a transmountain diversion from McCullough Gulch and Spruce and Crystal Creeks in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion points are in secs.14, 23, and 26, T.7 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with City of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 142 ft^3/s, May 30, 2003; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e0.00	e0.00	107	11	e0.00	e0.00
2	---	---	---	---	---	---	e0.00	e0.00	69	e3.0	e0.00	e0.00
3	---	---	---	---	---	---	e0.00	e0.00	61	e0.00	e0.00	e0.00
4	---	---	---	---	---	---	e0.00	e0.00	59	e0.00	e0.00	e0.00
5	---	---	---	---	---	---	e0.00	e0.00	54	e0.00	e0.00	e0.00
6	---	---	---	---	---	---	e0.00	e0.00	38	e0.00	e0.00	e0.00
7	---	---	---	---	---	---	e0.00	e0.00	31	e0.00	e0.00	e0.00
8	---	---	---	---	---	---	e0.00	e0.00	27	e0.00	e0.00	e0.00
9	---	---	---	---	---	---	e0.00	e0.00	35	e9.5	e0.00	e0.00
10	---	---	---	---	---	---	e0.00	e0.00	58	12	e0.00	e0.00
11	---	---	---	---	---	---	e0.00	e0.00	58	e0.00	e0.00	e0.00
12	---	---	---	---	---	---	e0.00	e0.00	50	e0.00	e0.00	e0.00
13	---	---	---	---	---	---	e0.00	e0.00	66	e0.00	e0.00	e0.00
14	---	---	---	---	---	---	e0.00	e0.00	36	e0.00	e0.00	e0.00
15	---	---	---	---	---	---	e0.00	e0.00	32	e0.00	e0.00	e0.00
16	---	---	---	---	---	---	e0.00	e0.00	32	e0.00	e0.00	e0.00
17	---	---	---	---	---	---	e0.00	e0.00	27	e0.00	e0.00	e0.00
18	---	---	---	---	---	---	e0.00	e0.00	29	e0.00	e0.00	e0.00
19	---	---	---	---	---	---	e0.00	e0.00	18	e0.00	e0.00	e0.00
20	---	---	---	---	---	---	e0.00	e0.00	8.8	e0.00	e0.00	e0.00
21	---	---	---	---	---	---	e0.00	5.8	12	e0.00	e0.00	e0.00
22	---	---	---	---	---	---	e0.00	18	19	13	e0.00	e0.00
23	---	---	---	---	---	---	e0.00	26	17	15	e0.00	e0.00
24	---	---	---	---	---	---	e0.00	38	14	e0.00	e0.00	e0.00
25	---	---	---	---	---	---	e0.00	51	11	e0.00	e0.00	e0.00
26	---	---	---	---	---	---	e0.00	50	12	e0.00	e0.00	e0.00
27	---	---	---	---	---	---	e0.00	60	20	e0.00	e0.00	e0.00
28	---	---	---	---	---	---	e0.00	82	23	e0.00	e0.00	e0.00
29	---	---	---	---	---	---	e0.00	109	20	e0.00	e0.00	e0.00
30	---	---	---	---	---	---	e0.00	142	16	e0.00	e0.00	e0.00
31	---	---	---	---	---	---	---	124	---	e0.00	e0.00	---
TOTAL	---	---	---	---	---	---	0.00	705.80	1,059.8	63.50	0.00	0.00
MEAN	---	---	---	---	---	---	0.000	22.8	35.3	2.05	0.000	0.000
MAX	---	---	---	---	---	---	0.00	142	107	15	0.00	0.00
MIN	---	---	---	---	---	---	0.00	0.00	8.8	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	0.00	1,400	2,100	126	0.00	0.00

e Estimated.

09046490 BLUE RIVER AT BLUE RIVER, CO

LOCATION.--Lat 39°27'21", long 106°01'52", in NE¼SE¼ sec.7, T.7 S., R.77 W., Summit County, Hydrologic Unit 14010002 on left bank, 350 ft downstream from spillway of Goose Pasture Tarn Dam and 2.0 mi southeast of Breckenridge.

DRAINAGE AREA.--42.4 mi^2 .

PERIOD OF RECORD.--October 1983 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09046490

REVISED RECORDS.--WDR CO-95-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 9,835 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Transmountain diversions upstream from station by Boreas Pass ditch and Hoosier Pass tunnel. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	22	10	2.5	2.4	1.8	3.8	20	213	100	43	33
2	17	21	10	2.6	2.4	1.8	3.9	19	186	102	40	28
3	19	21	10	2.6	2.3	1.9	3.8	18	167	113	40	27
4	17	20	10	2.7	2.0	1.9	3.9	21	151	116	49	27
5	16	20	9.7	5.5	1.9	1.9	3.6	18	145	113	44	24
6	15	19	9.9	6.5	1.9	1.8	4.0	15	125	104	39	26
7	15	20	10	6.4	1.9	1.8	4.1	16	124	93	36	30
8	15	21	10	6.4	1.8	1.8	4.0	19	109	87	34	33
9	15	24	10	6.4	1.8	1.7	3.9	18	100	84	35	41
10	16	21	10	4.3	1.9	1.8	4.2	20	98	59	35	44
11	13	20	10	2.9	1.9	1.7	4.6	18	98	85	36	41
12	13	16	10	2.3	2.0	1.8	5.0	23	131	89	34	37
13	24	13	11	2.1	2.0	1.8	5.1	35	107	87	31	31
14	22	16	11	2.3	1.9	1.8	6.3	41	104	87	31	27
15	21	16	11	2.9	1.8	1.8	7.7	57	133	82	48	25
16	21	14	10	2.8	1.8	2.1	7.8	61	141	83	41	24
17	21	13	9.7	2.9	1.9	2.3	7.2	84	126	90	33	21
18	21	14	9.6	2.9	2.0	3.9	7.3	95	127	96	45	20
19	21	14	8.8	2.9	2.0	4.5	6.6	96	142	94	41	20
20	20	14	6.7	3.0	2.1	3.4	6.4	90	143	87	32	18
21	20	15	4.6	2.6	1.9	3.8	6.6	90	137	80	22	18
22	20	15	3.7	2.0	1.9	3.3	7.4	79	128	68	16	17
23	21	14	3.7	2.1	1.9	3.1	9.1	89	125	32	18	17
24	21	14	3.7	4.8	4.0	3.3	10	104	120	55	24	17
25	20	15	3.8	2.2	3.2	3.5	7.5	123	113	60	33	17
26	20	11	3.1	1.7	2.0	3.3	9.3	123	102	58	40	16
27	22	12	2.7	1.8	2.0	4.2	12	130	99	57	34	15
28	21	13	2.6	2.0	2.0	3.5	15	155	95	59	31	15
29	22	11	2.5	1.5	---	3.0	18	177	99	56	28	15
30	20	10	2.6	1.8	---	3.6	21	221	101	53	32	14
31	22	---	2.6	2.4	---	3.5	---	201	---	46	38	---
TOTAL	586	489	233.0	97.8	58.6	81.4	219.1	2,276	3,789	2,475	1,083	738
MEAN	18.9	16.3	7.52	3.15	2.09	2.63	7.30	73.4	126	79.8	34.9	24.6
MAX	24	24	11	6.5	4.0	4.5	21	221	213	116	49	44
MIN	13	10	2.5	1.5	1.8	1.7	3.6	15	95	32	16	14
AC-FT	1,160	970	462	194	116	161	435	4,510	7,520	4,910	2,150	1,460

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

MEAN	19.0	13.4	9.70	6.67	5.27	5.03	11.1	59.9	119	84.1	43.2	25.8
MAX	32.2	26.5	18.9	14.3	8.11	8.31	21.9	128	276	327	120	44.3
(WY)	(1985)	(1985)	(1985)	(1985)	(1985)	(2000)	(1989)	(1996)	(1995)	(1995)	(1995)	(1984)
MIN	13.5	8.62	6.96	3.15	2.09	2.63	5.53	12.5	11.7	13.9	11.5	10.6
(WY)	(1992)	(1992)	(1995)	(2003)	(2003)	(2003)	(1993)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	3,854.9		12,125.9			
ANNUAL MEAN	10.6		33.2		33.6	
HIGHEST ANNUAL MEAN					70.4	1995
LOWEST ANNUAL MEAN					10.1	2002
HIGHEST DAILY MEAN	28	Aug 6	221	May 30	578	Jul 12, 1995
LOWEST DAILY MEAN	2.5	Dec 29	1.5	Jan 29	1.5	Jan 29, 2003
ANNUAL SEVEN-DAY MINIMUM	2.8	Mar 25	1.8	Mar 6	1.8	Mar 6, 2003
MAXIMUM PEAK FLOW			249	May 30	681	Jun 18, 1995
MAXIMUM PEAK STAGE			2.21	May 30	3.23	Jun 18, 1995
ANNUAL RUNOFF (AC-FT)	7,650		24,050		24,340	
10 PERCENT EXCEEDS	19		101		88	
50 PERCENT EXCEEDS	10		16		14	
90 PERCENT EXCEEDS	3.7		2.0		4.7	

09046530 FRENCH GULCH AT BRECKENRIDGE, CO

LOCATION.--Lat. 39°29'35", long. 106°02'39", in SE¼SW¼, sec.30, T.6 S, R.77 W, Summit County, Hydrologic Unit 14010002, on left bank, 300 ft south of Summit Co. Rd. 450, 200 ft upstream from bridge on Hwy. 9, in Breckenridge.

DRAINAGE AREA.--10.9 mi^2.

PERIOD OF RECORD.--October 1995 to current year. Daily water temperature record available, October 1996 to September 1998. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09046530

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,510 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No diversion or regulation upstream from gage. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	2.7	2.0	1.4	1.8	1.4	2.1	6.3	106	23	8.7	6.3
2	4.1	2.5	2.1	1.4	1.7	1.4	2.3	6.3	93	22	8.3	6.0
3	4.4	2.4	2.2	1.4	1.7	1.4	2.4	6.3	81	21	8.4	6.1
4	4.2	2.3	2.2	1.4	1.6	1.4	2.2	6.6	70	21	9.4	6.3
5	3.9	2.3	2.2	1.4	1.8	1.4	2.1	6.2	63	20	8.6	5.9
6	3.8	2.2	2.2	1.3	1.8	e1.5	2.1	5.8	52	19	8.2	6.2
7	3.7	2.2	2.2	1.3	e1.8	1.5	2.0	5.9	49	18	8.0	6.6
8	3.6	2.4	2.1	1.4	e1.9	1.6	2.1	6.2	43	17	7.9	6.8
9	3.5	2.5	2.0	1.4	1.9	1.5	2.2	6.1	41	16	7.5	7.9
10	3.4	2.6	1.9	1.4	1.9	1.5	2.5	6.3	42	15	7.3	7.4
11	3.4	2.5	1.8	1.5	1.8	1.5	2.9	6.0	44	15	7.3	7.2
12	3.2	2.2	1.7	1.5	1.6	1.5	3.1	6.0	44	14	7.3	6.9
13	3.0	2.4	1.5	1.5	1.6	1.6	3.3	6.9	44	14	8.3	6.6
14	3.0	2.6	1.6	1.6	1.5	1.6	3.7	8.0	41	13	7.7	6.4
15	3.0	2.6	1.6	1.6	1.6	1.7	3.8	9.5	43	13	6.9	6.1
16	2.9	2.3	1.7	1.6	1.6	1.7	3.6	11	42	13	7.0	5.8
17	2.9	2.4	1.7	1.7	1.5	1.6	3.6	13	40	13	8.0	5.6
18	2.9	2.6	1.7	1.7	1.5	1.5	3.6	16	40	13	8.7	5.4
19	2.9	2.3	1.7	1.7	1.5	1.5	3.3	18	39	13	8.0	5.4
20	2.8	2.6	1.7	1.7	e1.5	1.7	3.2	20	38	12	7.3	5.2
21	2.8	2.6	1.7	1.7	1.5	1.6	3.4	22	36	12	6.8	5.1
22	2.8	2.5	1.6	1.7	1.5	1.7	3.6	26	35	11	6.8	4.9
23	2.7	2.5	1.7	1.8	1.5	1.8	3.6	32	33	11	6.8	4.8
24	2.7	2.5	1.7	1.8	1.5	1.9	3.2	38	32	11	6.6	4.7
25	2.6	2.4	1.6	1.8	1.5	1.8	3.7	39	30	11	6.5	4.5
26	2.6	2.0	1.6	1.8	1.4	1.8	4.4	38	27	11	6.3	4.5
27	2.6	2.2	1.6	1.9	1.4	1.9	5.0	42	26	11	6.0	4.5
28	2.6	2.2	1.4	1.9	1.3	1.9	5.5	55	25	10	5.9	4.4
29	2.6	2.1	1.4	1.8	---	2.0	6.0	68	24	10	5.7	4.3
30	2.5	2.0	1.4	1.8	---	2.0	6.4	86	23	9.6	6.3	4.2
31	2.6	---	1.4	1.8	---	2.0	---	105	---	9.1	6.7	---
TOTAL	97.4	71.6	54.9	49.7	45.2	50.9	100.9	727.4	1,346	441.7	229.2	172.0
MEAN	3.14	2.39	1.77	1.60	1.61	1.64	3.36	23.5	44.9	14.2	7.39	5.73
MAX	4.4	2.7	2.2	1.9	1.9	2.0	6.4	105	106	23	9.4	7.9
MIN	2.5	2.0	1.4	1.3	1.3	1.4	2.0	5.8	23	9.1	5.7	4.2
AC-FT	193	142	109	99	90	101	200	1,440	2,670	876	455	341

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

MEAN	4.38	3.02	2.33	1.85	1.75	1.82	3.33	20.2	42.2	16.8	8.59	5.78
MAX	5.15	3.78	2.74	2.10	2.04	2.09	4.07	38.8	75.0	27.3	12.4	7.05
(WY)	(1996)	(1999)	(1996)	(1998)	(1996)	(1997)	(1997)	(1996)	(1997)	(1999)	(1997)	(1999)
MIN	3.14	2.39	1.77	1.60	1.54	1.41	2.48	6.76	8.97	4.14	4.64	3.56
(WY)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(1998)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	1,309.3		3,386.9			
ANNUAL MEAN	3.59		9.28		9.35	
HIGHEST ANNUAL MEAN					13.0	1997
LOWEST ANNUAL MEAN					3.67	2002
HIGHEST DAILY MEAN	16	Jun 1	106	Jun 1	115	Jun 5, 1997
LOWEST DAILY MEAN	1.2	Feb 23	1.3	Jan 6	1.2	Feb 23, 2002
ANNUAL SEVEN-DAY MINIMUM	1.3	Feb 20	1.4	Jan 1	1.3	Feb 20, 2002
MAXIMUM PEAK FLOW			115	May 31	124	Jun 5, 1997
MAXIMUM PEAK STAGE			6.99	May 31	7.09	Jun 5, 1997
ANNUAL RUNOFF (AC-FT)	2,600		6,720		6,770	
10 PERCENT EXCEEDS	7.3		26		24	
50 PERCENT EXCEEDS	3.0		3.2		3.7	
90 PERCENT EXCEEDS	1.5		1.5		1.7	

e Estimated.

09046600 BLUE RIVER NEAR DILLON, CO

LOCATION.--Lat 39°34'00", long 106°02'56", in SW¼SE¼ sec.31, T.5 S., R.77 W., Summit County, Hydrologic Unit 14010002, on left bank 0.3 mi upstream from Dillon Reservoir, and 5.0 mi south of Dillon.

DRAINAGE AREA.--121 mi^2.

PERIOD OF RECORD.--October 1957 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09046600

REVISED RECORDS.--WSP 2124: Drainage area. WDR CO-95-2: 1994.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,020 ft above NGVD of 1929, from topographic map. Prior to Aug. 6, 1992, at site 1.4 mi upstream at different datum. Aug. 6, 1992 to Oct. 20, 1994, at site 200 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station by Boreas Pass ditch and Hoosier Pass tunnel (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	37	e29	e22	e19	e18	e18	102	734	270	106	78
2	37	41	e28	e22	e19	e18	e18	99	702	267	100	77
3	40	42	e28	e21	e19	e18	e18	100	643	268	e105	75
4	43	41	e28	e21	e19	e18	e18	105	571	270	e108	73
5	44	38	e28	e21	e19	e18	e18	100	533	264	119	72
6	43	37	e27	e21	e19	e18	e18	92	488	251	109	70
7	41	35	e27	e21	e18	e18	e18	87	448	234	104	68
8	40	35	e27	e21	e18	e18	e18	86	410	219	101	71
9	40	39	e27	e21	e18	e18	e18	85	379	207	99	78
10	39	40	e26	e21	e18	e17	e19	88	373	184	97	86
11	39	41	e26	e21	e18	e18	e19	87	374	183	98	88
12	39	37	e26	e21	e18	e18	e22	83	395	191	94	87
13	37	34	e26	e20	e18	e18	e26	93	396	188	96	83
14	37	33	e26	e20	e18	e18	e31	117	375	183	102	77
15	43	e33	e26	e20	e18	e18	e35	155	389	178	94	72
16	44	e32	e25	e20	e18	e18	40	188	402	178	100	68
17	43	e32	e25	e20	e18	e18	40	249	387	180	102	65
18	42	e32	e25	e20	e18	e18	41	297	379	183	107	63
19	41	e32	e25	e20	e18	e18	41	314	393	187	110	61
20	41	e31	e25	e20	e18	e18	39	303	395	178	100	60
21	40	e31	e25	e20	e18	e18	39	306	384	169	89	57
22	40	e31	e24	e20	e18	e18	42	318	368	157	82	54
23	40	e31	e24	e20	e18	e18	46	357	358	132	77	53
24	41	e30	e24	e20	e18	e18	46	394	347	126	72	50
25	41	e29	e23	e20	e18	e18	48	438	332	140	70	49
26	39	e29	e23	e20	e18	e18	53	453	312	141	73	49
27	38	e29	e23	e19	e18	e18	63	462	297	135	77	48
28	39	e29	e23	e19	e18	e18	75	535	286	131	78	48
29	41	e29	e22	e19	---	e18	90	596	280	129	77	47
30	39	e29	e22	e19	---	e18	101	713	278	126	75	45
31	37	---	e22	e19	---	e18	---	730	---	115	75	---
TOTAL	1,245	1,019	785	629	510	557	1,118	8,132	12,408	5,764	2,896	1,972
MEAN	40.2	34.0	25.3	20.3	18.2	18.0	37.3	262	414	186	93.4	65.7
MAX	44	42	29	22	19	18	101	730	734	270	119	88
MIN	37	29	22	19	18	17	18	83	278	115	70	45
AC-FT	2,470	2,020	1,560	1,250	1,010	1,100	2,220	16,130	24,610	11,430	5,740	3,910

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

MEAN	51.5	38.6	31.1	26.0	24.0	23.5	40.1	179	338	201	104	67.2
MAX	101	74.4	54.0	40.3	36.0	32.5	77.7	461	661	644	241	143
(WY)	(1985)	(1985)	(1984)	(1984)	(1983)	(1983)	(1985)	(1996)	(1995)	(1995)	(1984)	(1983)
MIN	30.6	23.8	21.7	17.0	17.2	17.0	23.0	57.5	65.9	44.4	36.7	30.8
(WY)	(1978)	(1978)	(1978)	(1995)	(1992)	(1995)	(1964)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 2003	
ANNUAL TOTAL	13,175		37,035			
ANNUAL MEAN	36.1		101		a106	
HIGHEST ANNUAL MEAN					168	1984
LOWEST ANNUAL MEAN					36.9	2002
HIGHEST DAILY MEAN	90	Jun 4	734	Jun 1	b1,160	Jun 26, 1983
LOWEST DAILY MEAN	e18	Mar 25	e17	Mar 10	16	Feb 12, 1993
ANNUAL SEVEN-DAY MINIMUM	e18	Mar 24	e18	Mar 4	16	Mar 3, 1995
MAXIMUM PEAK FLOW			764	May 31	1,390	Jun 18, 1995
MAXIMUM PEAK STAGE			6.44	May 31	6.91	Jun 18, 1995
ANNUAL RUNOFF (AC-FT)	26,130		73,460		a76,800	
10 PERCENT EXCEEDS	55		313		247	
50 PERCENT EXCEEDS	33		40		44	
90 PERCENT EXCEEDS	20		18		22	

e Estimated.
a Adjusted for diversions to Hoosier Pass tunnel.
b Also occurred Jun 18, 1995.

09047500 SNAKE RIVER NEAR MONTEZUMA, CO

LOCATION.--Lat 39°36'20", long 105°56'33", in NW¼ sec.19, T.5 S., R.76 W. (projected), Summit County, Hydrologic Unit 14010002, on right bank 200 ft downstream from North Fork and 4.5 mi northwest of Montezuma.

DRAINAGE AREA.--57.7 mi^2.

PERIOD OF RECORD.--July 1942 to September 1946, October 1951 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09047500.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,320 ft above NGVD of 1929, from topographic map. Prior to Oct. 14, 1943, nonrecording gage at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Small diversions upstream from station for irrigation and domestic use. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	e19	e16	e16	e16	e13	e16	24	625	238	72	68
2	28	e19	e16	e16	e16	e13	e16	23	545	234	73	64
3	31	e19	e16	e16	e16	e13	e17	23	518	229	85	66
4	27	e20	e16	e16	e16	e12	e17	24	469	216	80	66
5	26	e20	e16	e16	e16	e13	e17	22	427	203	71	67
6	25	e20	e16	e16	e15	e13	e18	22	360	191	66	84
7	26	e20	e16	e16	e15	e13	e18	23	334	177	66	88
8	26	e19	e16	e16	e15	e13	e18	22	308	166	66	83
9	25	e19	e16	e16	e15	e13	e18	21	324	160	64	108
10	24	e19	e16	e16	e15	e13	e17	22	359	151	61	97
11	23	e19	e16	e16	e15	e13	e16	22	383	143	58	89
12	21	e18	e16	e16	e15	e13	15	25	378	136	57	82
13	19	e18	e16	e16	e15	e13	16	35	367	132	53	77
14	20	e18	e16	e16	e14	e13	20	49	358	127	50	72
15	20	e17	e16	e16	e14	e13	19	68	368	122	48	68
16	22	e17	e16	e16	e14	e13	17	86	357	125	62	64
17	27	e17	e16	e16	e14	e13	16	117	343	125	78	60
18	25	e17	e16	e16	e14	e13	16	136	356	121	87	58
19	19	e17	e16	e16	e14	e13	15	143	386	131	70	56
20	18	e17	e16	e16	e14	e13	15	134	356	122	60	53
21	19	e17	e16	e16	e14	e13	15	152	333	115	55	51
22	21	e17	e16	e16	e14	e13	15	212	327	107	55	49
23	21	e17	e16	e16	e14	e13	15	269	324	104	68	47
24	20	e16	e16	e16	e14	e13	16	314	311	98	78	45
25	22	e16	e16	e16	e14	e13	19	347	284	95	84	44
26	24	e16	e16	e16	e14	e13	21	365	265	93	75	42
27	24	e16	e16	e16	e14	e13	24	412	264	90	66	41
28	25	e16	e16	e16	e14	e13	26	500	261	90	64	40
29	20	e16	e16	e16	---	e14	27	563	256	90	60	39
30	e20	e16	e16	e16	---	e14	27	592	246	81	84	37
31	e19	---	e16	e16	---	e15	---	626	---	75	80	---
TOTAL	710	532	496	496	410	406	542	5,393	10,792	4,287	2,096	1,905
MEAN	22.9	17.7	16.0	16.0	14.6	13.1	18.1	174	360	138	67.6	63.5
MAX	31	20	16	16	16	15	27	626	625	238	87	108
MIN	18	16	16	16	14	12	15	21	246	75	48	37
AC-FT	1,410	1,060	984	984	813	805	1,080	10,700	21,410	8,500	4,160	3,780

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

MEAN	27.5	19.8	15.5	12.3	10.9	10.8	18.2	101	283	145	65.7	38.3
MAX	66.9	39.5	25.9	18.0	16.4	17.0	35.4	216	520	385	177	90.7
(WY)	(1985)	(1985)	(1985)	(1985)	(1997)	(1997)	(1946)	(1958)	(1997)	(1995)	(1984)	(1984)
MIN	16.1	11.8	9.90	7.03	7.00	7.40	8.34	28.7	55.8	29.0	22.9	18.0
(WY)	(1945)	(1965)	(1978)	(1963)	(1946)	(1973)	(1973)	(1995)	(2002)	(2002)	(2002)	(1977)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1943 - 2003	
ANNUAL TOTAL	9,059		28,065			
ANNUAL MEAN	24.8		76.9		62.5	
HIGHEST ANNUAL MEAN					95.8	1997
LOWEST ANNUAL MEAN					25.2	2002
HIGHEST DAILY MEAN	102	May 31	626	May 31	870	Jun 22, 1995
LOWEST DAILY MEAN	e11	Feb 26	e12	Mar 4	5.0	Feb 26, 1964
ANNUAL SEVEN-DAY MINIMUM	e11	Feb 23	e13	Mar 1	6.0	Jan 9, 1963
MAXIMUM PEAK FLOW			704	May 31	1,250	Jun 10, 1952
MAXIMUM PEAK STAGE			3.17	May 31	a3.51	Jun 10, 1952
ANNUAL RUNOFF (AC-FT)	17,970		55,670		45,260	
10 PERCENT EXCEEDS	49		262		175	
50 PERCENT EXCEEDS	18		20		23	
90 PERCENT EXCEEDS	13		14		10	

e Estimated.
a Maximum gage height, 3.88 ft, Jun 6, 1972.

09047700 KEYSTONE GULCH NEAR DILLON, CO

LOCATION.--Lat 39°35'40", long 105°58'19", in NE¼NE¼ sec.26, T.5 S., R.77 W., Summit County, Hydrologic Unit 14010002, on right bank 0.7 mi upstream from mouth, and 4.7 mi southeast of Dillon.

DRAINAGE AREA.--9.10 mi^2.

PERIOD OF RECORD.--October 1957 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09047700

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,350 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No known diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	e1.9	e2.1	e2.1	e2.2	e1.9	e2.1	4.0	e84	12	4.9	e5.6
2	1.9	e1.9	e2.1	e2.1	e2.2	e2.0	e2.1	3.6	e76	12	4.9	e5.5
3	2.3	e1.9	e2.2	e2.1	e2.1	e2.0	e2.4	3.6	e69	10	5.1	e5.5
4	1.9	e1.9	e2.2	e2.1	e2.1	e2.1	e2.5	4.0	e56	8.2	4.9	e5.5
5	1.8	e2.0	e2.2	e2.1	e2.1	e2.1	e2.4	3.5	e49	7.5	4.8	e5.5
6	1.7	e2.0	e2.2	e2.1	e2.1	e2.1	e2.2	3.4	e45	7.2	4.8	e5.3
7	1.7	e2.0	e2.2	e2.1	e2.1	e2.1	e2.2	3.3	e42	6.9	4.6	e4.9
8	1.7	e2.0	e2.2	e2.1	e2.1	e2.1	e2.1	3.4	e38	6.7	4.6	e4.8
9	1.6	e2.0	e2.2	e2.1	e2.1	e2.1	e2.2	3.4	e38	6.4	4.6	e4.6
10	1.5	e2.1	e2.3	e2.1	e2.1	e2.1	e2.4	3.5	e38	6.8	4.4	4.1
11	1.6	e2.2	e2.2	e2.1	e2.1	e2.1	e2.4	3.4	e39	6.9	4.3	4.0
12	1.6	e2.3	e2.2	e2.1	e2.1	e2.1	e2.6	3.9	e39	6.6	4.3	3.8
13	1.3	e2.3	e2.1	e2.1	e2.1	e2.0	e2.8	5.3	e39	6.3	4.2	3.8
14	1.4	e2.3	e2.1	e2.1	e2.1	e2.0	e2.8	6.7	e37	6.2	4.0	3.7
15	1.4	e2.5	e2.1	e2.1	e2.1	e2.0	e2.9	7.5	e35	6.0	3.9	3.6
16	1.4	e2.5	e2.1	e2.1	e2.1	e2.0	e3.0	10	e34	6.2	4.5	3.5
17	1.4	e2.6	e2.1	e2.1	e2.1	e2.0	e2.9	13	e29	7.0	5.3	3.4
18	1.4	e2.6	e2.1	e2.2	e2.1	e2.0	e2.9	15	e25	e7.2	6.0	3.3
19	1.6	e2.6	e2.1	e2.2	e2.1	e2.0	e2.8	16	25	e7.4	5.2	3.4
20	1.5	e2.6	e2.1	e2.2	e2.1	e2.0	e2.7	e17	23	e7.6	4.4	3.3
21	1.6	e2.6	e2.1	e2.2	e2.1	e2.0	e2.7	e18	22	e7.1	5.2	3.2
22	1.9	e2.5	e2.1	e2.2	e2.1	e2.0	e2.6	e22	20	e6.5	5.7	3.4
23	1.9	e2.4	e2.1	e2.2	e2.1	e2.0	e2.5	e26	19	e6.3	6.0	e3.4
24	1.7	e2.3	e2.1	e2.2	e2.1	e2.0	2.8	e32	18	e6.0	5.9	e3.3
25	2.0	e2.2	e2.1	e2.2	e2.1	e2.0	2.8	e36	18	e5.9	6.7	e3.3
26	2.0	e2.2	e2.1	e2.2	e2.0	e2.0	2.9	e36	17	5.7	7.3	e3.2
27	1.9	e2.2	e2.1	e2.2	e1.9	e2.0	3.6	e37	16	5.6	6.7	e3.2
28	2.2	e2.1	e2.1	e2.2	e1.9	e2.0	4.0	e43	15	5.3	6.5	e3.1
29	e1.9	e2.1	e2.1	e2.2	---	e2.0	4.5	e55	14	5.1	6.0	e3.1
30	e1.9	e2.1	e2.1	e2.2	---	e2.1	4.4	e64	13	5.1	e6.1	e3.1
31	e1.9	---	e2.1	e2.2	---	e2.1	---	e86	---	5.0	e6.0	---
TOTAL	53.2	66.9	66.2	66.5	58.5	63.0	83.2	588.5	1,032	214.7	161.8	119.4
MEAN	1.72	2.23	2.14	2.15	2.09	2.03	2.77	19.0	34.4	6.93	5.22	3.98
MAX	2.3	2.6	2.3	2.2	2.2	2.1	4.5	86	84	12	7.3	5.6
MIN	1.3	1.9	2.1	2.1	1.9	1.9	2.1	3.3	13	5.0	3.9	3.1
AC-FT	106	133	131	132	116	125	165	1,170	2,050	426	321	237

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

MEAN	3.33	3.02	2.58	2.25	2.08	2.09	3.13	13.0	24.4	9.96	5.22	3.73
MAX	6.12	4.38	3.75	2.97	2.90	3.00	6.19	40.8	58.8	31.2	15.5	7.97
(WY)	(1985)	(2000)	(2002)	(2002)	(1997)	(1986)	(1986)	(1996)	(1995)	(1995)	(1984)	(1984)
MIN	1.72	1.77	1.37	1.39	1.40	1.40	1.44	3.90	2.54	1.51	1.33	1.42
(WY)	(2003)	(1964)	(1964)	(1964)	(1961)	(1973)	(1973)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 2003	
ANNUAL TOTAL	813.11		2,573.9			
ANNUAL MEAN	2.23		7.05		6.24	
HIGHEST ANNUAL MEAN					13.1	1984
LOWEST ANNUAL MEAN					2.65	2002
HIGHEST DAILY MEAN	4.8	Apr 30	e86	May 31	153	Jun 18, 1995
LOWEST DAILY MEAN	0.86	Aug 18	1.3	Oct 13	0.86	Aug 18, 2002
ANNUAL SEVEN-DAY MINIMUM	0.94	Sep 1	1.4	Oct 12	0.94	Sep 1, 2002
MAXIMUM PEAK FLOW			a		b311	Jun 17, 1995
MAXIMUM PEAK STAGE			a		3.47	Jun 17, 1995
ANNUAL RUNOFF (AC-FT)	1,610		5,110		4,520	
10 PERCENT EXCEEDS	3.5		17		14	
50 PERCENT EXCEEDS	2.1		2.4		3.0	
90 PERCENT EXCEEDS	1.2		2.0		1.9	

e Estimated.
a Not determined.
b From rating curve extended above 65 ft^3/s.

09050100 TENMILE CREEK BELOW NORTH TENMILE CREEK AT FRISCO, CO

LOCATION.--Lat 39°34'31", long 106°06'36", in SE ¼ NW ¼ sec.34, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 220 ft upstream from bridge on U.S. Highway 6, 160 ft downstream from North Tenmile Creek, and 0.6 mi west of Frisco.

DRAINAGE AREA.--93.3 mi^2.

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1971, published as "below North Fork, at Frisco." For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09050100

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,100 ft above NGVD of 1929, from topographic map. Prior to Apr. 21, 1981 at site 720 ft downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by a few small diversions upstream from station for irrigation and municipal use, and transbasin diversion from Robinson Reservoir, capacity 2,520 acre-ft, in Eagle River basin. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	e24	e23	e23	e23	e20	e20	62	1,250	294	66	58
2	40	e24	e23	e23	e23	e20	e20	59	1,020	285	61	57
3	45	e24	e23	e23	e23	e20	e21	60	900	274	70	59
4	43	e24	e23	e23	e23	e20	e23	64	815	260	92	58
5	42	e24	e23	e23	e23	e20	e23	60	730	244	70	58
6	42	e24	e23	e23	e22	e20	e22	61	610	226	63	69
7	42	e24	e23	e23	e22	e20	e20	61	557	214	60	78
8	42	e24	e23	e23	e22	e20	e20	67	507	206	62	77
9	41	e25	e23	e23	e22	e19	e20	66	543	196	56	92
10	38	e25	e23	e23	e22	e20	e28	69	607	183	56	90
11	30	e26	e23	e23	e22	e20	28	66	614	171	61	86
12	28	e26	e23	e23	e22	e20	30	75	584	161	57	78
13	26	e26	e23	e23	e22	e20	33	99	579	153	52	74
14	26	e25	e23	e23	e22	e20	42	124	545	143	50	66
15	26	e24	e23	e23	e22	e20	47	159	560	136	46	63
16	26	e24	e23	e23	e22	e20	43	199	536	139	51	59
17	25	e24	e23	e23	e21	e20	42	290	499	131	71	55
18	25	e23	e23	e23	e21	e20	40	324	511	127	95	53
19	23	e23	e23	e23	e21	e20	37	321	506	126	74	49
20	22	e23	e23	e23	e21	e20	35	330	518	119	60	47
21	21	e23	e23	e23	e21	e20	35	371	468	116	54	44
22	22	e23	e23	e23	e21	e20	37	473	450	109	52	42
23	e22	e23	e23	e23	e21	e20	39	572	429	101	56	39
24	e22	e23	e23	e23	e21	e20	41	644	404	90	60	39
25	e22	e23	e23	e23	e21	e20	44	682	370	87	64	42
26	e22	e23	e23	e23	e21	e20	52	682	343	85	56	37
27	e23	e23	e23	e23	e20	e20	59	785	337	82	50	37
28	e23	e23	e23	e23	e20	e20	62	963	330	80	49	36
29	e22	e23	e23	e23	---	e20	65	1,100	322	84	48	35
30	e22	e23	e23	e23	---	e20	66	1,120	307	80	55	33
31	e22	---	e23	e23	---	e20	---	1,030	---	71	61	---
TOTAL	907	716	713	713	607	619	1,094	11,038	16,751	4,773	1,878	1,710
MEAN	29.3	23.9	23.0	23.0	21.7	20.0	36.5	356	558	154	60.6	57.0
MAX	45	26	23	23	23	20	66	1,120	1,250	294	95	92
MIN	21	23	23	23	20	19	20	59	307	71	46	33
AC-FT	1,800	1,420	1,410	1,410	1,200	1,230	2,170	21,890	33,230	9,470	3,730	3,390

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

MEAN	32.5	25.1	19.9	17.4	17.7	19.6	38.9	256	473	190	73.4	44.7
MAX	77.7	76.2	34.5	34.0	33.8	46.0	95.0	493	818	607	251	127
(WY)	(1985)	(1985)	(1994)	(1994)	(1983)	(1983)	(1962)	(1996)	(1997)	(1995)	(1984)	(1984)
MIN	13.0	9.83	11.7	11.0	9.55	9.20	13.7	96.5	138	40.4	25.3	21.8
(WY)	(1978)	(1978)	(1978)	(1963)	(1978)	(1976)	(1973)	(1995)	(2002)	(2002)	(1977)	(1977)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 2003	
ANNUAL TOTAL	17,514		41,519			
ANNUAL MEAN	48.0		114		101	
HIGHEST ANNUAL MEAN					183	1984
LOWEST ANNUAL MEAN					47.0	1977
HIGHEST DAILY MEAN	289	May 31	1,250	Jun 1	1,480	Jun 17, 1965
LOWEST DAILY MEAN	16	Sep 1	e19	Mar 9	5.3	Oct 14, 1994
ANNUAL SEVEN-DAY MINIMUM	16	Sep 1	e20	Mar 3	7.9	Mar 8, 1960
MAXIMUM PEAK FLOW			1,510	May 29	a1,910	Jun 16, 1965
MAXIMUM PEAK STAGE			4.84	May 29	6.15	Jun 16, 1965
ANNUAL RUNOFF (AC-FT)	34,740		82,350		73,100	
10 PERCENT EXCEEDS	119		354		314	
50 PERCENT EXCEEDS	24		30		31	
90 PERCENT EXCEEDS	20		20		14	

e Estimated.
a From rating curve extended above 750 ft^3/s.

09050700 BLUE RIVER BELOW DILLON, CO

LOCATION.--Lat 39°37'32", long 106°03'57", in SE¼SE¼ sec.12, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 0.3 mi downstream from Dillon Dam, 0.1 mi upstream from Straight Creek, and 1.1 mi west of Dillon.

DRAINAGE AREA.--335 mi^2.

PERIOD OF RECORD.--January 1960 to current year. Statistical summary computed for 1963 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09050700.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Elevation of gage is 8,760 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since Sept. 3, 1963, by Dillon Reservoir, 0.3 mi upstream (station 09050600). Natural flow of stream affected by transmountain diversions, transbasin diversions, and diversions upstream from station for irrigation of about 400 acres of hay meadows. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	54	54	56	77	94	75	50	52	51	113	110
2	54	54	54	56	77	94	75	50	52	51	113	110
3	54	54	54	56	77	94	75	50	52	86	113	110
4	54	54	55	55	77	93	61	50	53	110	113	110
5	54	54	54	54	77	94	50	50	54	110	113	110
6	54	54	54	55	77	94	50	50	54	110	113	110
7	54	54	54	55	81	95	50	50	54	110	113	110
8	54	54	54	54	82	94	50	50	54	110	113	110
9	54	54	54	54	82	94	50	51	54	110	113	110
10	54	54	54	54	82	93	50	52	52	148	113	110
11	54	54	54	54	82	83	50	51	50	273	113	86
12	54	54	54	54	82	78	50	51	50	393	113	74
13	54	54	54	55	82	77	50	52	50	350	112	110
14	54	54	54	54	84	70	50	52	51	167	113	110
15	54	54	54	55	82	52	50	52	51	110	113	110
16	54	54	54	55	82	50	50	52	52	110	113	110
17	54	54	54	54	82	50	50	52	51	164	113	110
18	54	54	54	54	82	50	50	52	50	348	113	110
19	54	54	54	54	82	50	50	52	50	395	113	110
20	54	54	54	54	82	50	50	52	50	344	113	110
21	54	54	54	54	82	50	50	52	50	122	113	110
22	54	54	54	54	82	50	50	53	51	50	113	110
23	54	54	54	70	82	50	50	54	51	50	113	111
24	54	54	54	81	82	61	50	53	50	86	113	113
25	54	54	54	82	82	80	50	52	50	109	113	113
26	54	54	54	82	82	81	50	52	50	110	113	113
27	54	54	54	82	90	81	50	51	50	110	113	112
28	54	54	54	79	94	81	50	50	50	111	113	112
29	54	54	54	77	---	81	50	50	50	113	113	113
30	54	54	54	77	---	77	50	50	50	112	111	113
31	54	---	55	77	---	75	---	51	---	113	109	---
TOTAL	1,674	1,620	1,676	1,907	2,287	2,316	1,586	1,589	1,538	4,736	3,496	3,260
MEAN	54.0	54.0	54.1	61.5	81.7	74.7	52.9	51.3	51.3	153	113	109
MAX	54	54	55	82	94	95	75	54	54	395	113	113
MIN	54	54	54	54	77	50	50	50	50	50	109	74
AC-FT	3,320	3,210	3,320	3,780	4,540	4,590	3,150	3,150	3,050	9,390	6,930	6,470

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)

MEAN	120	99.1	85.2	77.0	79.2	83.3	124	301	693	425	244	158
MAX	305	268	193	158	155	269	742	1,101	1,813	1,476	999	348
(WY)	(2000)	(1985)	(1985)	(1966)	(1997)	(1996)	(1996)	(1984)	(1984)	(1984)	(1984)	(1983)
MIN	0.000	23.2	44.6	31.0	47.6	48.6	39.3	24.0	32.3	51.5	51.7	18.6
(WY)	(1964)	(1964)	(1989)	(1984)	(1986)	(1986)	(1965)	(1965)	(1965)	(1981)	(1981)	(1963)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1963 - 2003	
ANNUAL TOTAL	21,746		27,685			
ANNUAL MEAN	59.6		75.8		208	
HIGHEST ANNUAL MEAN					538	1984
LOWEST ANNUAL MEAN					65.5	1981
HIGHEST DAILY MEAN	96	Jan 3	395	Jul 19	1,940	May 24, 1984
LOWEST DAILY MEAN	53	Jul 14	50	Mar 16	a0.00	Sep 4, 1963
ANNUAL SEVEN-DAY MINIMUM	54	Jul 8	50	Mar 16	0.00	Sep 4, 1963
MAXIMUM PEAK FLOW			399	Jul 18	2,010	May 25, 1984
MAXIMUM PEAK STAGE			1.78	Jul 18	b3.88	May 25, 1984
ANNUAL RUNOFF (AC-FT)	43,130		54,910		150,400	
10 PERCENT EXCEEDS	77		113		455	
50 PERCENT EXCEEDS	54		54		103	
90 PERCENT EXCEEDS	54		50		51	

a Also occurred Sept 5 to Nov 29, 1963.
b Maximum gage height for period of record, 3.95 ft, Jun 22, 1983.

09051050 STRAIGHT CREEK BELOW LASKEY GULCH, NEAR DILLON, CO

LOCATION.--Lat 39°38'23", long 106°02'23", in SW¼SW¼ sec.5, T.5 S., R.77 W., Summit County, Hydrologic Unit 14010002, on right bank, 120 ft upstream from culverts on Deer Trail Drive, in the community of Dillon Valley, 0.9 mi north of Dillon, 1.1 mi downstream of Laskey Gulch, and 1.8 mi upstream from mouth.

DRAINAGE AREA.--18.3 mi^2.

PERIOD OF RECORD.--October 1986 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09051050

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,070 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversion upstream from station for municipal purposes downstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	2.9	e4.3	e3.2	e3.6	e2.3	e2.8	8.9	148	52	13	10
2	4.0	2.5	e4.3	e3.2	e3.5	e2.2	e2.8	8.0	123	50	12	10
3	4.8	2.6	e4.3	e3.1	e3.4	e2.2	e2.7	8.2	120	48	15	10
4	4.3	e2.6	e4.4	e3.1	e3.4	e2.2	e2.7	8.6	92	46	16	9.7
5	3.7	e2.7	e4.3	e3.1	e3.3	e2.2	e2.6	8.1	76	43	14	9.6
6	3.8	e2.8	e4.1	e3.1	e3.3	e2.2	e2.6	7.2	68	39	13	13
7	3.7	e2.9	e4.1	e3.1	e3.3	e2.1	e2.6	6.8	61	35	15	14
8	3.8	e3.0	e4.0	e3.1	e3.2	e2.1	e3.8	5.7	62	32	14	12
9	3.4	e3.3	e3.9	e3.2	e3.2	e2.0	e4.1	5.5	66	29	13	17
10	3.4	e3.7	e3.8	e3.2	e3.1	e2.2	e4.8	5.8	70	27	12	15
11	3.1	e3.9	e3.6	e3.3	e3.1	e2.2	e5.5	5.5	68	25	12	14
12	2.3	e4.3	e3.6	e3.3	e3.0	e2.2	7.4	6.3	64	24	12	13
13	2.4	e4.4	e3.6	e3.3	e3.0	e2.2	8.1	7.7	62	22	11	13
14	2.3	e4.4	e3.5	e3.3	e2.9	e2.2	10	9.8	61	20	11	12
15	2.3	e4.4	e3.5	e3.4	e2.9	e2.2	7.8	12	63	20	10	12
16	2.3	e4.4	e3.5	e3.4	e2.8	e2.2	7.9	16	67	21	14	12
17	2.1	e4.3	e3.5	e3.5	e2.8	e2.2	7.1	23	65	20	16	11
18	2.3	e4.3	e3.5	e3.5	e2.7	e2.3	6.6	27	73	19	20	11
19	2.3	e4.3	e3.5	e3.6	e2.7	e2.3	6.1	28	124	18	13	11
20	2.3	e4.3	e3.5	e3.6	e2.7	e2.3	6.2	26	126	17	11	11
21	2.4	e4.3	e3.5	e3.6	e2.6	e2.3	6.5	28	105	16	11	11
22	2.7	e4.2	e3.5	e3.6	e2.6	e2.4	7.1	36	92	15	10	11
23	2.5	e4.2	e3.5	e3.6	e2.5	e2.4	6.5	46	88	14	14	10
24	2.7	e4.2	e3.5	e3.6	e2.5	e2.5	5.5	54	81	14	14	10
25	2.5	e4.2	e3.5	e3.6	e2.4	e2.5	7.9	60	73	15	14	9.9
26	2.5	e4.2	e3.4	e3.6	e2.4	e2.6	10	65	68	17	12	9.6
27	2.5	e4.2	e3.4	e3.6	e2.4	e2.6	11	90	64	16	11	9.5
28	2.6	e4.2	e3.3	e3.6	e2.3	e2.7	10	136	61	15	11	8.6
29	2.1	e4.2	e3.3	e3.6	---	e2.7	10	113	58	15	10	8.0
30	2.2	e4.2	e3.2	e3.6	---	e2.7	9.9	105	55	14	13	7.8
31	2.7	---	e3.2	e3.6	---	e2.8	---	108	---	14	11	---
TOTAL	89.7	114.1	114.1	105.2	81.6	72.2	188.6	1,075.1	2,404	772	398	335.7
MEAN	2.89	3.80	3.68	3.39	2.91	2.33	6.29	34.7	80.1	24.9	12.8	11.2
MAX	4.8	4.4	4.4	3.6	3.6	2.8	11	136	148	52	20	17
MIN	2.1	2.5	3.2	3.1	2.3	2.0	2.6	5.5	55	14	10	7.8
AC-FT	178	226	226	209	162	143	374	2,130	4,770	1,530	789	666

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	7.09	5.69	4.49	3.88	3.75	3.88	6.33	26.4	63.7	29.4	12.4	8.11
MAX	12.2	8.77	6.99	5.54	6.40	7.32	9.99	63.1	119	89.0	23.6	13.3
(WY)	(1996)	(1996)	(1996)	(1996)	(1996)	(1996)	(1989)	(1996)	(1996)	(1995)	(1995)	(1995)
MIN	2.89	3.80	3.20	2.43	2.39	2.33	3.55	9.45	10.0	3.45	3.03	2.31
(WY)	(2003)	(2003)	(2001)	(1992)	(1992)	(2003)	(1995)	(1995)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	1,636.1		5,750.3			
ANNUAL MEAN	4.48		15.8		14.6	
HIGHEST ANNUAL MEAN					25.5	1996
LOWEST ANNUAL MEAN					4.89	2002
HIGHEST DAILY MEAN	22	Jun 1	148	Jun 1	226	Jun 17, 1995
LOWEST DAILY MEAN	1.3	Aug 20	e2.0	Mar 9	1.3	Aug 20, 2002
ANNUAL SEVEN-DAY MINIMUM	1.6	Aug 20	e2.1	Mar 3	1.6	Aug 20, 2002
MAXIMUM PEAK FLOW			289	Jun 19	a416	Jun 17, 1995
MAXIMUM PEAK STAGE			5.59	Jun 19	5.78	Jun 17, 1995
ANNUAL RUNOFF (AC-FT)	3,250		11,410		10,580	
10 PERCENT EXCEEDS	8.7		56		38	
50 PERCENT EXCEEDS	3.2		4.3		6.4	
90 PERCENT EXCEEDS	2.2		2.4		3.3	

e Estimated.
a From rating curve extended above 150 ft^3/s.

09057500 BLUE RIVER BELOW GREEN MOUNTAIN RESERVOIR, CO

LOCATION.--Lat 39°52'49", long 106°20'00", in SW¼NE¼ sec.15, T.2 S., R.80 W., Summit County, Hydrologic Unit 14010002, on left bank 0.3 mi upstream from Elliott Creek, 0.3 mi downstream from Green Mountain Dam, and 13 mi southeast of Kremmling.

DRAINAGE AREA.--599 mi^2, includes 15.3 mi^2 of Elliott Creek above diversion for Elliott Creek feeder canal.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1943, published as Blue River below Green Mountain Reservoir, near Kremmling. Statistical summary computed for 1943 to current year. Water-quality data available, January 1986 to September 1987. Daily specific conductance and water temperature record available, October 1986 to September 1987 and October 1995 to September 1999. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09057500.

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,682.66 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation). Prior to Oct. 1, 1951, water-stage recorder at site 3.7 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Green Mountain Reservoir since November 1942 (station 09057000). Diversions for irrigation of about 5,000 acres upstream from station. Transmountain diversions upstream from station (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	295	170	142	155	209	220	55	9.1	60	455	515
2	62	294	170	142	155	209	220	57	4.2	58	549	518
3	61	293	170	142	167	210	159	60	14	58	635	591
4	61	254	169	142	177	209	79	62	63	57	690	634
5	61	230	169	142	177	209	53	62	64	57	652	665
6	61	269	169	142	176	209	87	62	64	57	616	694
7	61	305	170	142	178	202	154	62	64	57	587	693
8	61	306	169	142	178	192	176	62	64	57	556	580
9	61	306	138	142	173	194	159	62	64	57	551	448
10	60	307	116	142	172	196	97	62	64	57	545	317
11	60	306	119	142	173	187	57	62	65	93	538	176
12	60	307	110	142	173	176	57	62	64	122	532	93
13	60	306	106	142	173	177	57	62	64	121	591	106
14	60	307	116	142	182	124	55	62	64	119	629	135
15	60	306	117	142	182	55	55	61	65	108	629	175
16	60	257	133	142	181	55	55	61	66	102	632	258
17	59	160	146	142	181	65	55	61	66	97	632	385
18	60	110	148	141	178	74	55	61	64	92	632	495
19	59	111	148	141	177	73	55	61	63	95	530	556
20	59	110	146	142	177	133	55	61	64	131	550	612
21	59	110	142	142	178	232	55	62	64	314	549	638
22	83	148	142	141	177	276	55	62	64	292	550	668
23	114	170	142	155	177	263	55	63	64	301	548	668
24	112	169	142	160	178	183	55	64	64	346	550	780
25	112	170	142	163	177	131	55	64	64	369	550	878
26	209	169	142	157	175	132	55	64	63	380	558	869
27	293	170	142	158	195	132	55	30	61	370	548	869
28	291	170	142	157	210	152	54	6.2	61	350	508	869
29	291	169	142	157	---	164	54	7.7	61	314	516	872
30	291	170	142	158	---	189	54	9.5	61	244	513	872
31	287	---	142	155	---	209	---	4.8	---	323	514	---
TOTAL	3,352	6,754	4,461	4,541	4,952	5,221	2,507	1,657.2	1,746.3	5,258	17,635	16,629
MEAN	108	225	144	146	177	168	83.6	53.5	58.2	170	569	554
MAX	293	307	170	163	210	276	220	64	66	380	690	878
MIN	59	110	106	141	155	55	53	4.8	4.2	57	455	93
AC-FT	6,650	13,400	8,850	9,010	9,820	10,360	4,970	3,290	3,460	10,430	34,980	32,980

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

MEAN	383	292	307	302	290	312	383	505	721	782	619	499
MAX	1,258	800	580	566	559	864	1,286	1,557	2,134	2,536	1,547	846
(WY)	(1963)	(1963)	(1947)	(1948)	(1962)	(1962)	(1996)	(1952)	(1984)	(1984)	(1984)	(1990)
MIN	108	82.5	0.72	0.46	0.19	0.61	47.2	53.5	54.4	131	270	70.0
(WY)	(2003)	(1943)	(1943)	(1943)	(1943)	(1943)	(1943)	(2003)	(1981)	(1981)	(1964)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1943 - 2003	
ANNUAL TOTAL	74,900		74,713.5			
ANNUAL MEAN	205		205			
HIGHEST ANNUAL MEAN					946	1984
LOWEST ANNUAL MEAN					200	1964
HIGHEST DAILY MEAN	623	Jul 20	878	Sep 25	4,010	Jul 12, 1995
LOWEST DAILY MEAN	59	Oct 17	4.2	Jun 2	a,b0.00	Dec 6, 1942
ANNUAL SEVEN-DAY MINIMUM	59	Oct 15	7.9	May 28	0.00	Jan 5, 1943
MAXIMUM PEAK FLOW			894	Sep 24	4,040	Jul 12, 1995
MAXIMUM PEAK STAGE			5.96	Sep 24	10.85	Jul 12, 1995
ANNUAL RUNOFF (AC-FT)	148,600		148,200			
10 PERCENT EXCEEDS	430		549		835	
50 PERCENT EXCEEDS	167		142		362	
90 PERCENT EXCEEDS	65		57		112	

a No flow at times in 1943.
b Minimum daily discharge (prior to Green Mountain Reservoir), 80 ft^3/s, Feb 18-24, 1938, Feb 18-19, 1940.

09058000 COLORADO RIVER NEAR KREMMLING, CO

LOCATION.--Lat 40°02'12", long 106°26'22", in NE¼SW¼ sec.23, T.1 N., R.81 W., Grand County, Hydrologic Unit 14010001, on right bank at upstream end of Gore Canyon, 3.0 mi southwest of Kremmling and 3.8 mi downstream from Blue River.

DRAINAGE AREA.--2,382 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1904 to September 1918 (published as Grand River near Kremmling), October 1961 to September 1970, October 1971 to current year. Statistical summary computed for 1962 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09058000

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,320 ft above NGVD of 1929, from topographic map. See WSP 1313 for history of changes prior to Oct. 1, 1961.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, diversions for irrigation of about 40,000 acres upstream from station, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	334	593	e460	e400	367	406	499	386	2,470	335	933	938
2	334	606	e470	e390	366	413	516	369	2,420	489	973	915
3	342	600	e460	e395	372	423	512	360	1,660	464	1,030	927
4	345	571	e450	e390	396	431	449	380	1,110	429	1,090	1,030
5	341	520	420	e400	394	420	402	412	784	421	1,080	1,050
6	e345	502	423	e390	398	418	377	381	599	435	1,050	1,060
7	e350	556	441	e370	370	424	417	399	507	449	1,030	1,070
8	346	568	e440	e370	374	423	461	346	477	577	1,000	1,030
9	401	591	e360	e360	e380	432	478	551	466	601	991	930
10	431	585	e350	e370	e390	472	443	685	460	506	1,010	877
11	436	574	341	e395	e395	530	429	556	455	660	966	767
12	430	574	352	e400	e390	580	409	418	440	732	919	607
13	426	561	e360	e395	e380	626	479	372	443	731	948	562
14	430	570	e370	e375	400	642	563	394	548	708	1,010	659
15	430	570	e360	e360	391	518	501	443	564	765	995	667
16	462	556	e350	e365	381	462	435	554	527	795	980	720
17	476	474	e380	e365	399	451	379	568	488	823	993	810
18	465	409	e385	e350	382	462	364	649	442	800	1,130	902
19	462	379	e390	e400	381	427	352	737	457	789	1,070	938
20	463	380	e390	e400	385	416	328	773	467	849	1,000	946
21	467	380	e410	e390	395	490	320	789	475	998	996	982
22	476	350	e395	e380	379	570	352	783	450	821	987	1,020
23	538	346	e390	383	380	581	394	843	417	705	990	1,040
24	546	392	e350	379	379	575	379	1,010	396	761	993	1,080
25	539	404	e355	376	383	474	356	1,280	389	863	1,010	1,230
26	549	326	e350	371	385	466	389	1,450	392	998	1,020	1,230
27	583	392	e380	400	396	454	497	1,370	377	1,020	1,030	1,190
28	551	455	e385	384	412	429	557	1,420	352	991	968	1,200
29	556	471	e400	382	---	422	457	1,780	355	914	953	1,190
30	548	461	e405	361	---	441	410	2,210	348	839	950	1,180
31	548	---	e400	364	---	461	---	2,430	---	848	975	---
TOTAL	13,950	14,716	12,172	11,810	10,800	14,739	12,904	25,098	19,735	22,116	31,070	28,747
MEAN	450	491	393	381	386	475	430	810	658	713	1,002	958
MAX	583	606	470	400	412	642	563	2,430	2,470	1,020	1,130	1,230
MIN	334	326	341	350	366	406	320	346	348	335	919	562
AC-FT	27,670	29,190	24,140	23,430	21,420	29,230	25,600	49,780	39,140	43,870	61,630	57,020

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

MEAN	757	639	569	551	542	642	999	1,815	2,086	1,531	1,085	872
MAX	1,413	1,030	1,067	1,000	1,025	1,394	3,297	6,200	7,160	5,840	2,321	1,366
(WY)	(1963)	(1985)	(1985)	(1985)	(1962)	(1962)	(1962)	(1984)	(1984)	(1983)	(1984)	(1984)
MIN	450	352	277	278	294	331	430	320	379	539	630	461
(WY)	(2003)	(1978)	(1964)	(1964)	(1964)	(1977)	(2003)	(2002)	(1966)	(1963)	(1963)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003	
ANNUAL TOTAL	182,940		217,857			
ANNUAL MEAN	501		597		1,009	
HIGHEST ANNUAL MEAN					2,378	1984
LOWEST ANNUAL MEAN					523	2002
HIGHEST DAILY MEAN	891	Jul 4	2,470	Jun 1	a12,700	May 26, 1984
LOWEST DAILY MEAN	200	May 11	320	Apr 21	b200	May 11, 2002
ANNUAL SEVEN-DAY MINIMUM	225	May 8	342	Oct 1	225	May 8, 2002
MAXIMUM PEAK FLOW			2,620	Jun 2	c13,600	May 26, 1984
MAXIMUM PEAK STAGE			8.75	Jun 2	16.60	May 26, 1984
ANNUAL RUNOFF (AC-FT)	362,900		432,100		731,100	
10 PERCENT EXCEEDS	792		1,010		1,810	
50 PERCENT EXCEEDS	450		460		754	
90 PERCENT EXCEEDS	333		363		417	

e Estimated.
a Maximum daily discharge for period of record, 20,000 ft^3/s, Jun 7, 1912.
b Minimum discharge observed for period of record, 166 ft^3/s, Dec 19, 1907.
c Maximum discharge observed for period of record, 21,500 ft^3/s, Jun 7, 1912, gage height, 21.8 ft, datum then in use, from rating curve extended above 14,000 ft^3/s.

09058000 COLORADO RIVER NEAR KREMMLING, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1989 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09058000

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)
OCT													
07...	1130	366	8.3	8.3	247	9.5	100	29.8	6.33	1.81	0.4	9.41	E85
MAR													
11...	1230	518	9.9	8.2	252	3.5	100	31.2	5.77	3.51	0.5	10.6	81
MAY													
29...	1045	1,790	6.7	8.0	187	13.5	69	19.3	4.97	1.45	0.5	8.71	55
JUN													
26...	1120	388	7.1	8.0	297	15.5	120	36.7	7.41	1.83	0.6	14.6	114
AUG													
20...	1020	1,020	7.5	8.4	212	14.0	91	28.3	4.97	1.79	0.3	6.39	57

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT													
07...	3.10	0.33	10.4	34.5	--	--	--	156	0.23	<0.015	<0.022	<0.002	<0.007
MAR													
11...	7.25	0.35	8.36	38.7	156	0.22	230	165	0.64	0.044	0.236	0.004	0.043
MAY													
29...	2.42	<0.2	14.0	30.8	116	0.18	650	134	0.81	E.013	0.049	0.004	0.015
JUN													
26...	4.23	0.3	13.8	33.1	181	0.26	202	193	0.39	E.012	E.013	E.002	0.012
AUG													
20...	6.32	0.3	7.18	28.3	119	0.18	363	132	0.26	<0.015	0.205	E.002	<0.007

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)
OCT													
07...	0.010	0.019	<1	36.1	<0.5	<0.2	<0.8	0.09	0.9	50	<0.08	9.3	34.7
MAR													
11...	0.057	0.140	<1	45.4	<0.5	<0.2	<0.8	0.19	1.0	26	E.04	12.3	47.4
MAY													
29...	0.028	0.157	E7	26.3	<0.4	<0.2	<0.8	0.18	1.1	78	E.07	6.0	85.4
JUN													
26...	0.021	0.051	13	48.9	<0.4	<0.2	<0.8	0.19	0.9	195	<0.08	10.5	114
AUG													
20...	0.008	0.026	E9	39.6	<0.4	<0.2	<0.8	0.10	1.0	56	E.05	5.5	15.4

09058000 COLORADO RIVER NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)
OCT						
07...	8.6	0.51	<0.20	182	0.6	2
MAR						
11...	19.1	2.19	<0.20	200	0.7	1
MAY						
29...	1.1	0.91	<0.20	174	1.1	2
JUN						
26...	7.3	1.90	<0.20	255	0.8	2
AUG						
20...	23.6	1.31	<0.20	144	0.3	2

< -- Actual value is known to be less than the value shown.
E -- Estimated laboratory analysis value.