

Water Resources Data

Colorado

Water Year 2003

Volume 1. Missouri River Basin, Arkansas River Basin,
and Rio Grande Basin

By R.M. Crowfoot, W.F. Payne, and G.B. O'Neill

Water-Data Report CO-03-1

Prepared in cooperation with the State of Colorado
and with other agencies

U.S. Department of the Interior
Gale A. Norton, Secretary

U.S. Geological Survey
Charles G. Groat, Director

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Prepared by U.S. Geological Survey,
Colorado District, MS 415, Bldg. 53, Box 25046,
Denver Federal Center
Denver, CO 80225
(303)236-4882

Information about the USGS, Colorado District is available on the internet at <http://co.water.usgs.gov>

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PREFACE

Volume 1 of the annual hydrologic data report of Colorado is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each state, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Colorado are contained in two volumes:

- Volume 1. Missouri River, Arkansas River, and Rio Grande
basins in Colorado,
- Volume 2. Colorado River basin.

Volume 1 is the culmination of a concerted effort by dedicated personnel of the U. S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

B. D. Bemis	T. J. Hennessy	M. A. Penrod	K. W. Stull
R. J. Brandle	L. A. Klausner	S. M. Powers	W. J. Thomas
A. J. Brogan	T. L. Krizman	S. A. Rafferty	C. H. Thompson
J. F. Bruce	J. M. Kuzmiak	R. L. Reed	W. J. Walker
J. A. Collins	M. Lewis	E. A. Samuels	N. O. Young
R. L. Dixon	J. D. Martinez	B. G. Scott	
E. E. Evans	M. Messer	D. G. Shubert	
J. S. Ferarese	J. K. Monson	C. J. Smith	
S. A. Ferguson	R. M. Neam	G. J. Smith	
S. T. Green	R. A. Orr	D. E. Smits	
M. J. Haley	R. J. Ortiz	J. O. Stull	

This report was prepared in cooperation with the State of Colorado and with other agencies under the general supervision of W.F. Horak, District Chief, Colorado.

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13. ABSTRACT <i>(Maximum 200 words)</i> Water-resources data for Colorado for the 2003 water year consist of records of stage, discharge, and water quality of streams; stage, contents, and water-quality of lakes and reservoirs; meteorological data; and water levels and water quality of wells and springs. This report (Volumes 1 and 2) contains discharge records for 329 gaging stations, stage and contents of 19 lakes and reservoirs, discharge measurements for 1 partial-record low-flow station and 1 miscellaneous site, peak flow information for 23 crest-stage partial-record stations; water-quality for 128 gaging stations and for 8 lakes and reservoirs, supplemental water-quality for 182 gaged sites; water-quality for 61 miscellaneous sites and 15 observation wells; water levels for 3 observation wells, and meteorological data for 62 sites. Three pertinent stations operated by bordering states also are included in this report. The records were collected and computed by the Water Resources Discipline of the U.S. Geological Survey under the direction of W.F. Horak, District Chief. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies.

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CONTENTS

	Page
Preface.....	III
List of surface-water stations, in downstream order, for which records are published in this volume	VII
Introduction	1
Cooperation.....	4
Special networks and programs.....	5
Explanation of the records	5
Station identification numbers	5
Downstream order system.....	5
Latitude-longitude system.....	6
Records of stage and water discharge	6
Data collection and computation.....	7
Data presentation	7
Station manuscript.....	7
Data table of daily mean values	8
Statistics of monthly mean data.....	8
Summary statistics	8
Identifying estimated daily discharge.....	9
Accuracy of the records.....	10
Other records available.....	10
Records of surface-water quality.....	10
Accuracy of the records.....	10
Classification of records.....	10
Arrangement of records.....	11
Onsite measurements and sample collection	11
Water temperature	11
Sediment.....	11
Miscellaneous water-quality data.....	12
Laboratory measurements.....	12
Water-quality data reporting convention	12
Data presentation	12
Remark codes	13
Records of ground-water quality.....	13
Data collection and computation.....	13
Data presentation	13
Access to USGS water data.....	13
Definition of terms.....	14
Selected references	25
List of discontinued surface-water discharge or stage only stations	27
List of discontinued surface-water-quality stations.....	31
Publications on techniques of water-resources investigations	37
Station records, surface-water	43
Transmountain diversions from Colorado River basin in Colorado that are no longer published.....	464
Discharge at partial-record stations and miscellaneous sites	465
Crest-stage partial-record stations.....	465
Special study and miscellaneous sites	468
Precipitation data at miscellaneous sites	469
Precipitation data at sites on Fort Carson Military Reservation	469
Precipitation data at sites on Pinon Canyon Maneuver Site	474
Supplemental water-quality data for gaging stations.....	486
Miscellaneous water-quality data	510
South Platte River Basin National Water-Quality Assessment Program Study.....	510
Big Thompson Project.....	511
Station records, ground-water levels in Pueblo County.....	561
Quality of ground-water in El Paso County	562
Index.....	571

ILLUSTRATIONS

	Page
Figures 1-2. Map showing:	
1. Locations of lake and surface-water stations and surface-water-quality stations in Colorado	2
2. Locations of crest-stage partial-record stations in Colorado.....	3

NOTE.--Data for partial-record stations and miscellaneous sites for both surface-water
discharge and quality are published in separate sections of the data report.

(Letter after station name designates type and frequency of published data.

Daily tables: (D) discharge, (C) specific conductance, (S) sediment, (T) temperature, (E) elevation or contents,
(O) dissolved oxygen, (P) pH, (R) precipitation, (TU) turbidity.

Periodic tables: (c) chemical, (b) biological, (e) elevation or contents, (m) microbiological, (s) sediment, (t) temperature.)

	Station number	page
MISSOURI RIVER BASIN		
Missouri River:		
 PLATTE RIVER BASIN		
North Platte River:		
Michigan River near Cameron Pass (D)	06614800	43
Illinois River below Ish Baldwin Ditch near Walden (D)	06618300	44
Illinois River below Potter Creek near Walden (D)	06618480	45
North Platte River near Northgate (D)	06620000	46
South Platte River:		
Middle Fork South Platte River:		
Mosquito Creek near Alma (D)	06693800	47
Tarryall Creek at Upper Station near Como (D)	06696980	48
South Platte River above Cheesman Lake (DR)	06700000	49
South Platte River below Cheesman Lake (D)	06701500	52
Fourmile Creek above Mouth near Deckers (DR)	06701550	53
Trout Creek below Fern Creek near Westcreek (DR)	06701620	55
West Creek above Shrewsbury Gulch near Westcreek (DR)	06701700	57
South Platte River below Brush Creek near Trumbull (D,TU)	06701900	59
Spring Creek above mouth near South Platte (DR)	06701970	63
North Fork South Platte River:		
North Fork South Platte River above Elk Creek at Pine (DR)	06706400	65
Buffalo Creek at mouth, at Buffalo Creek (DR)	06706800	67
South Platte River at South Platte (D)	06707500	69
Plum Creek:		
East Plum Creek below Haskins Gulch near Castle Rock (D)	06708800	70
Plum Creek near Sedalia (D)	06709000	71
Plum Creek at Titan Road near Louviers (D)	06709530	72
South Platte River below Union Avenue at Englewood (D)	06710247	73
Bear Creek above Evergreen (D)	06710385	74
Bear Creek at Morrison (D)	06710500	75
Bear Creek above Bear Creek Lake near Morrison (D)	06710605	76
Turkey Creek near Indian Hills (D)	06710992	77
Bear Creek at mouth, at Sheridan (D)	06711500	78
South Platte River at Englewood (DTPCO)	06711565	79
Cherry Creek near Franktown (D)	06712000	88
Cherry Creek near Parker (D)	393109104464500	89
Cherry Creek below Cherry Creek Lake (D)	06713000	90
Cherry Creek at Glendale (D)	06713300	91
Cherry Creek at Denver (D)	06713500	92
South Platte River at Denver (D)	06714000	93
South Platte River at 64th Avenue, at Commerce City (D)	06714215	94
Sand Creek at mouth near Commerce City (D)	394839104570300	95
Clear Creek:		
Leavenworth Creek at mouth near Georgetown (D)	06714800	96
Clear Creek above Georgetown Lake near Georgetown (D)	394308105413800	97
Georgetown Lake near Georgetown (E)	394359105411900	98
Clear Creek above West Fork Clear Creek near Empire (D)	06715000	99
West Fork Clear Creek above mouth near Empire (D)	06716100	100
Clear Creek near Lawson (D)	06716500	101
Chicago Creek below Devils Canyon near Idaho Springs (D)	06717400	102

	Station number	page
Missouri River--Continued		
PLATTE RIVER BASIN--Continued		
South Platte River--Continued		
Clear Creek above Johnson Gulch near Idaho Springs (D)	06718300	103
North Clear Creek above mouth near Blackhawk (D)	06718550	104
Clear Creek at Golden (D)	06719505	105
South Platte River at Henderson (D)	06720500	106
Big Dry Creek at Westminster (D)	06720820	107
Big Dry Creek at mouth near Fort Lupton (D)	06720990	108
South Platte River at Fort Lupton (D)	06721000	109
St. Vrain Creek below Longmont (D)	06725450	110
Boulder Creek at North 75th Street near Boulder (D)	06730200	111
Coal Creek near Louisville (D)	06730400	112
Boulder Creek at mouth near Longmont (D)	06730500	113
Big Thompson River below Moraine Park near Estes Park (D)	402114105350101	114
Lake Estes near Dam near Estes Park (tcm)	402231105291900	115
Horsetooth Reservoir near Fort Collins (etcn)	06737500	116
Horsetooth Reservoir near Spring Canyon Dam near Fort Collins (tcmb)	403147105083800	120
Big Thompson River at mouth of canyon near Drake (D)	06738000	122
Big Thompson River at Loveland (Dct)	06741510	123
Carter Lake near Berthoud (etcmb)	06742500	124
Cache la Poudre River:		
Joe Wright Creek above Joe Wright Reservoir (D)	06746095	127
Joe Wright Creek below Joe Wright Reservoir (D)	06746110	128
North Fork Cache la Poudre River below Halligan Reservoir near Virginia Dale (D)	06751150	129
North Fork Cache la Poudre River at Livermore (D)	06751490	130
Cache la Poudre River at mouth of canyon near Fort Collins (D)	06752000	131
Cache la Poudre River at Shields Street, at Fort Collins (ct)	06752258	132
Cache la Poudre River at Fort Collins (Dct)	06752260	134
Cache la Poudre River below Fort Collins (ct)	06752270	137
Cache la Poudre River above Boxelder Creek near Timnath (Dct)	06752280	139
Lonetree Creek near Greeley (D)	06753990	142
South Platte River near Kersey (D)	06754000	143
South Platte River near Weldona (Dctm)	06758500	144
South Platte River at Fort Morgan (D)	06759500	146
South Platte River at Julesburg (D)	06764000	147
KANSAS RIVER BASIN		
Arikaree River (head of Kansas River):		
Arikaree River above Spring Canyon near Idalia (D)	06821360	148
LOWER MISSISSIPPI RIVER BASIN		
Mississippi River:		
ARKANSAS RIVER BASIN		
Arkansas River:		
East Fork Arkansas River at Highway 24 near Leadville (D)	07079300	150
Arkansas River near Leadville (D)	07081200	151
Lake Fork Arkansas River:		
Dinero Mine Drainage Tunnel below Turquoise Lake near Leadville (D)	391504106225200	152
Halfmoon Creek near Malta (D)	07083000	153
Arkansas River at Granite (DCT)	07086000	154
Arkansas River below Granite (D)	07087050	159
Arkansas River near Nathrop (DT)	07091200	160
Arkansas River near Wellsville (Dct)	07093700	163
Badger Creek Upper Station near Howard (DTSS)	07093740	165
Badger Creek Lower Station near Howard (DT)	07093775	171
Arkansas River at Parkdale (DT)	07094500	174
Arkansas River at Canon City (DCT)	07096000	177

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN IX
THIS VOLUME

	Station number	page
Mississippi River--Continued		
ARKANSAS RIVER BASIN--Continued		
Arkansas River--Continued		
Fourmile Creek below Cripple Creek near Victor (D)	07096250	182
Arkansas River at Portland (DCT)	07097000	183
Beaver Creek above Upper Beaver Cemetery near Penrose (D)	07099050	188
Beaver Creek above Highway 115 near Penrose (D)	07099060	189
Red Creek below Sullivan Park at Fort Carson (DRS)	07099080	190
Arkansas River near Portland (ct)	07099200	195
Turkey Creek--Continued		
Turkey Creek near Fountain (D)	07099215	196
Turkey Creek above Teller Reservoir near Stone City (D)	07099230	197
Teller Reservoir near Stone City (E)	07099233	198
Turkey Creek East Seepage below Teller Reservoir near Stone City (D)	382629104493000	199
Turkey Creek West Seepage below Teller Reservoir near Stone City (D)	382628104493700	200
Turkey Creek near Stone City (D)	07099235	201
Teller Reservoir Spillway near Stone City (DR)	07099238	202
Pueblo Reservoir near Pueblo (ect)	07099350	204
Arkansas River above Pueblo (DctCT)	07099400	217
Pond 46.212 near Teller Reservoir at Fort Carson (ER)	382624104472400	223
Arkansas River at St. Charles Mesa Diversion, at Pueblo (C)	07099969	225
Arkansas River at Moffat Street, at Pueblo (DctCT)	07099970	227
Fountain Creek at Green Mountain Falls (DR)	07099990	232
Fountain Creek near Colorado Springs (DctsmS)	07103700	234
Camp Creek at Garden of the Gods (D)	07103703	240
Fountain Creek at 8th Street, at Colorado Springs (cmts)	07103707	241
Monument Creek:		
North Monument Creek at Spring Street at Palmer Lake (DR)	07103740	243
Monument Creek above North Gate Boulevard at U.S. Air Force Academy (DctmsR)	07103780	245
Deadmans Creek above Deadmans Lake at U.S. Air Force Academy (DR)	07103785	249
Monument Creek below Sewage Treatment Plant at U. S. Air Force Academy (DR)	07103790	251
West Monument Creek below Rampart Reservoir (D)	07103797	253
West Monument Creek at U.S. Air Force Academy (DR)	07103800	254
West Monument Creek at mouth, at U.S. Air Force Academy (D)	07103930	256
Monument Creek at south boundary, at U.S. Air Force Academy (DR)	07103940	257
Kettle Creek above Old Ranch Road near Colorado Springs (cmts)	385854104470100	259
Kettle Creek above U.S. Air Force Academy (DRctms)	07103960	260
Pine Creek above Highway 83 at Colorado Springs (cmts)	385124104501301	264
Monument Creek above Woodmen Road at Colorado Springs (DctmsS)	07103970	265
Cottonwood Creek at Cowpoke Road, at Colorado Springs (DctmsS)	07103977	273
Cottonwood Creek at Woodmen Road near Colorado Springs (DRs)	07103980	277
Cottonwood Creek Tributary above Rangewood Drive at Colorado Springs (DctmsRS)	07103985	280
Cottonwood Creek at mouth at Pikeview (DctmsS)	07103990	284
Monument Creek at Pikeview (D)	07104000	290
Monument Creek Tributary 1 near Pulpit Rock at Colorado Springs (cmts)	385501104483701	291
North Rockrimmon Creek above Delmonico Drive at Colorado Springs (cmts)	07104050	292
Monument Creek Tributary 2 below Fillmore Street at Colorado Springs (cmts)	385204104510101	293
Monument Creek Tributary 2 at Sondermann Park at Colorado Springs (cmts)	385124104501301	294
Monument Creek at Bijou Street at Colorado Springs (DctmsRS)	07104905	295
Bear Creek near Colorado Springs (Dctms)	07105000	302
Bear Creek above 8th Street at Colorado Springs (cmts)	384909104504401	304
Cheyenne Creek at Evans Avenue at Colorado Springs (DR)	07105490	305
Fountain Creek at Colorado Springs (DctmsS)	07105500	307
Fountain Creek below Janitell Road below Colorado Springs (DctmsR)	07105530	315
Sand Creek above mouth at Colorado Springs (DctmsS)	07105600	321
Fountain Creek at Security (DctmsS)	07105800	325
Jimmy Camp Creek at Fountain (Dctms)	07105900	333
Rock Creek above Fort Carson Reservation (D)	07105945	335

	Station number	page
Mississippi River--Continued		
ARKANSAS RIVER BASIN--Continued		
Arkansas River--Continued		
Fountain Creek near Fountain (DctmsCPTO)	07106000	336
Williams Creek at the mouth near Wigwam (cmnts)	383347104373401	347
Sutherland Ditch at mouth near Pinon (cmnts)	382625104353701	348
Fountain Creek near Pinon (DctmsR)	07106300	349
Fountain Creek at Pueblo (DctmsCTS)	07106500	353
St. Charles River at Vineland (D)	07108900	363
Arkansas River near Avondale (DctCPTO)	07109500	364
Huerfano River near Boone (D)	07116500	374
Apishapa River near Fowler (DR)	07119500	375
Arkansas River at Catlin Dam near Fowler (DctCT)	07119700	377
Lake Meredith Outlet at Highway 71 near Ordway (CTct)	07120480	383
Arkansas River near Rocky Ford (ct)	07120500	388
Timpas Creek at mouth near Swink (D)	07121500	389
Arkansas River at La Junta (D)	07123000	390
Arkansas River at Las Animas (DCT)	07124000	391
Purgatoire River at Madrid (D)	07124200	396
Trinidad Lake near Trinidad (E)	07124400	397
Purgatoire River below Trinidad Lake (D)	07124410	398
Van Bremer Arroyo near Tyrone (DR)	07126140	399
Van Bremer Arroyo near Model (DRsS)	07126200	401
Purgatoire River near Thatcher (DR)	07126300	407
Taylor Arroyo below Rock Crossing near Thatcher (DRS)	07126325	409
Lockwood Canyon Creek near Thatcher (DRS)	07126390	414
Red Rock Canyon Creek at mouth near Thatcher (DRS)	07126415	417
Bent Canyon Creek at mouth near Timpas (DRS)	07126480	422
Purgatoire River at Rock Crossing near Timpas (DsSR)	07126485	427
Purgatoire River near Las Animas (DR)	07128500	432
John Martin Reservoir at Caddoa (E)	07130000	434
Arkansas River below John Martin Reservoir (DCT)	07130500	435
Arkansas River at Lamar (D)	07133000	440
Big Sandy Creek near Lamar (DR)	07134100	441
Arkansas River near Granada (D)	07134180	443
Wild Horse Creek above Holly (D)	07134990	444
Frontier Ditch near Coolidge, KS (D)	07137000	445
Arkansas River near Coolidge, KS (D)	07137500	446
WESTERN GULF OF MEXICO BASINS		
RIO GRANDE BASIN		
Rio Grande:		
South Fork Rio Grande at South Fork (D)	08219500	447
Rio Grande near Del Norte (D)	08220000	448
Closed Basin in San Luis Valley:		
Kerber Creek above Little Kerber Creek near Villa Grove (D)	08224500	449
Saguache Creek near Saguache (Dcts)	08227000	450
La Garita Creek near La Garita (D)	08231000	452
Closed Basin Project Canal near Alamosa (D)	372833105455800	453
Trinchera Creek:		
Ute Creek near Fort Garland (D)	08242500	454
Conejos River below Platoro Reservoir (D)	08245000	455
Conejos River near Mogote (D)	08246500	456
San Antonio River at Ortiz (D)	08247500	457
Los Pinos River near Ortiz (D)	08248000	458
Conejos River near Lasausas (D)	08249000	459
Culebra Creek at San Luis (D)	08250000	460
Rio Grande near Lobatos (Dct)	08251500	461

HYDROLOGIC STATIONS FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

Discharge at partial-record stations and miscellaneous sites	465
Crest-stage partial-record stations	465
Special study and miscellaneous sites	468
Precipitation data at miscellaneous sites	469
Precipitation data at sites on Fort Carson Military Reservation	469
Precipitation data at sites on Pinon Canyon Maneuver Site	474
Supplemental water-quality data for gaging stations	486
Miscellaneous water-quality data	510
South Platte River Basin National Water-Quality Assessment Program Study	510
Big Thompson Project	511
Station records, ground-water levels in Pueblo County	561
Quality of ground-water in El Paso County	562

CALENDAR FOR WATER YEAR 2003

2002

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2	1	2	3	4	5	6	7
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
27	28	29	30	31			24	25	26	27	28	29	30	29	30	31				

2003

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4							1							1
5	6	7	8	9	10	11	2	3	4	5	6	7	8	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22	16	17	18	19	20	21	22
26	27	28	29	30	31		23	24	25	26	27	28		23	24	25	26	27	28	29
														30	31					

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4					1	2	3	1	2	3	4	5	6	7
6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14
13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21
20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28
27	28	29	30				25	26	27	28	29	30	31	29	30					

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4						1	2		1	2	3	4	5	6
6	7	8	9	10	11	12	3	4	5	6	7	8	9	7	8	9	10	11	12	13
13	14	15	16	17	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20
20	21	22	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27
27	28	29	30	31			24	25	26	27	28	29	30	28	29	30				

31

Conversion Factors

Multiply	By	To obtain
Length		
inch (in.)	2.54×10^1	millimeter (mm)
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^0	kilometer (km)
Area		
acre	4.047×10^3	square meter (m ²)
	4.047×10^{-1}	square hectometer (hm ²)
	4.047×10^{-3}	square kilometer (km ²)
square mile (mi ²)	2.590×10^0	square kilometer (km ²)
Volume		
gallon (gal)	3.785×10^0	liter (L)
	3.785×10^{-3}	cubic meter (m ³)
	3.785×10^0	cubic decimeter (dm ³)
million gallons (Mgal)	3.785×10^3	cubic meter (m ³)
	3.785×10^{-3}	cubic hectometer (hm ³)
cubic foot (ft ³)	2.832×10^{-2}	cubic meter (m ³)
	2.832×10^1	cubic decimeter (dm ³)
cubic-foot-per-second-per-day [(ft ³ /s/d)]	2.447×10^3	cubic meter (m ³)
	2.447×10^{-3}	cubic hectometer (hm ³)
acre-foot (acre-ft)	1.223×10^3	cubic meter (m ³)
	1.223×10^{-3}	cubic hectometer (hm ³)
	1.223×10^{-6}	cubic kilometer (km ³)
Flow rate		
cubic foot per second (ft ³ /s)	2.832×10^1	liter (L/s)
	2.832×10^{-2}	cubic meter per second (m ³ /s)
	2.832×10^1	cubic decimeter per second (dm ³ /s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m ³ /s)
	6.309×10^{-2}	cubic decimeter per second (dm ³ /s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second
	4.381×10^1	cubic decimeter per second (dm ³ /s)
Mass		
ton, short (2,000 lb)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$

VOLUME 1: MISSOURI RIVER, ARKANSAS RIVER, AND RIO GRANDE BASINS

By R.M. Crowfoot, W.F. Payne, and G.B. O'Neill

INTRODUCTION

The Water-Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Colorado each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in the report series entitled "Water Resources Data - Colorado".

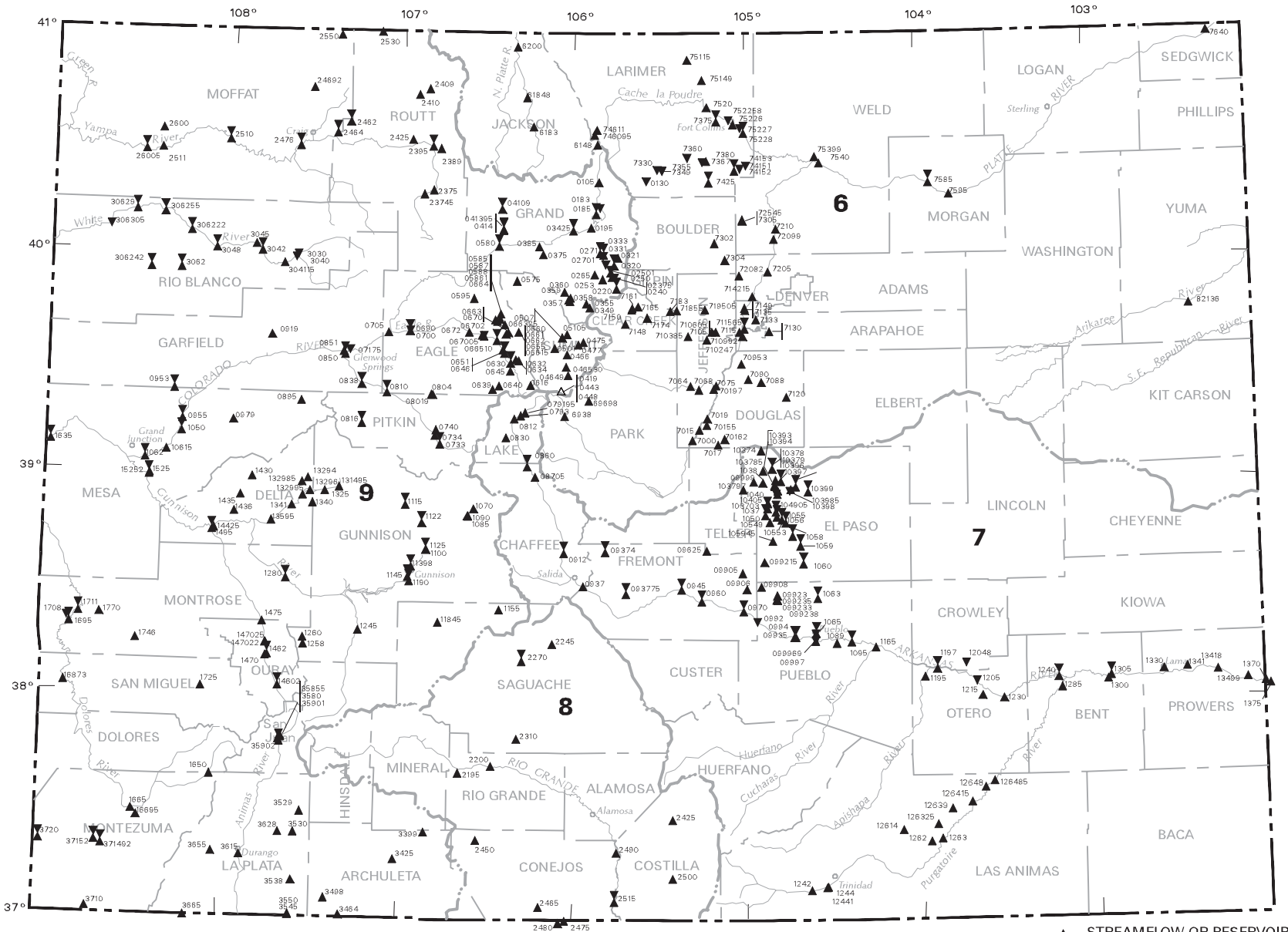
This report (Volume 1 of two volumes) includes records on both surface and ground water in the State, east of the Continental Divide. Specifically, it contains: (1) discharge records for 162 surface-water stations, peak discharges for 22 partial-record surface-water stations and discharge measurements only for 1 miscellaneous site; (2) stage and contents for 8 lakes and reservoirs; (3) water-quality data for 55 surface-water stations, 4 reservoirs, 17 miscellaneous sites, 15 wells, and miscellaneous surface-water-quality data for 73 gaged sites; and (4) ground-water level records for 1 site, and meteorological data for 52 sites. Locations of lake and surface-water stations and surface-water-quality stations are shown in figure 1, locations of crest-stage partial-record stations are shown in figure 2. Three pertinent stations operated by bordering States are included in this report. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Colorado.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Colorado were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-water Supply of the United States," Parts 6B, 7, 8, and 9. For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States." Data on ground-water levels for the 1935 through 1955 water years were published annually under the title "Water Levels and Artesian Pressures in Observation Wells in the United States." For the 1956 through 1974 water years the data were published in four 5-year reports under the title "Ground-Water Levels in the United States." Water-supply papers may be purchased from the U.S. Geological Survey, Books and Open-File Reports, Federal Center, Building 810, Box 25425, Denver, CO 80225.

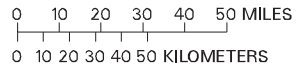
For water years 1961 through 1970, surface-water data were released by the Survey in annual reports on a State-boundary basis. Surface-water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with surface-water records.

Beginning with the 1971 water year, water data on surface-water, water quality, and ground water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CO-03-1." These water-data reports are for sale, in paper copy or in micro-fiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (303) 236-4882.

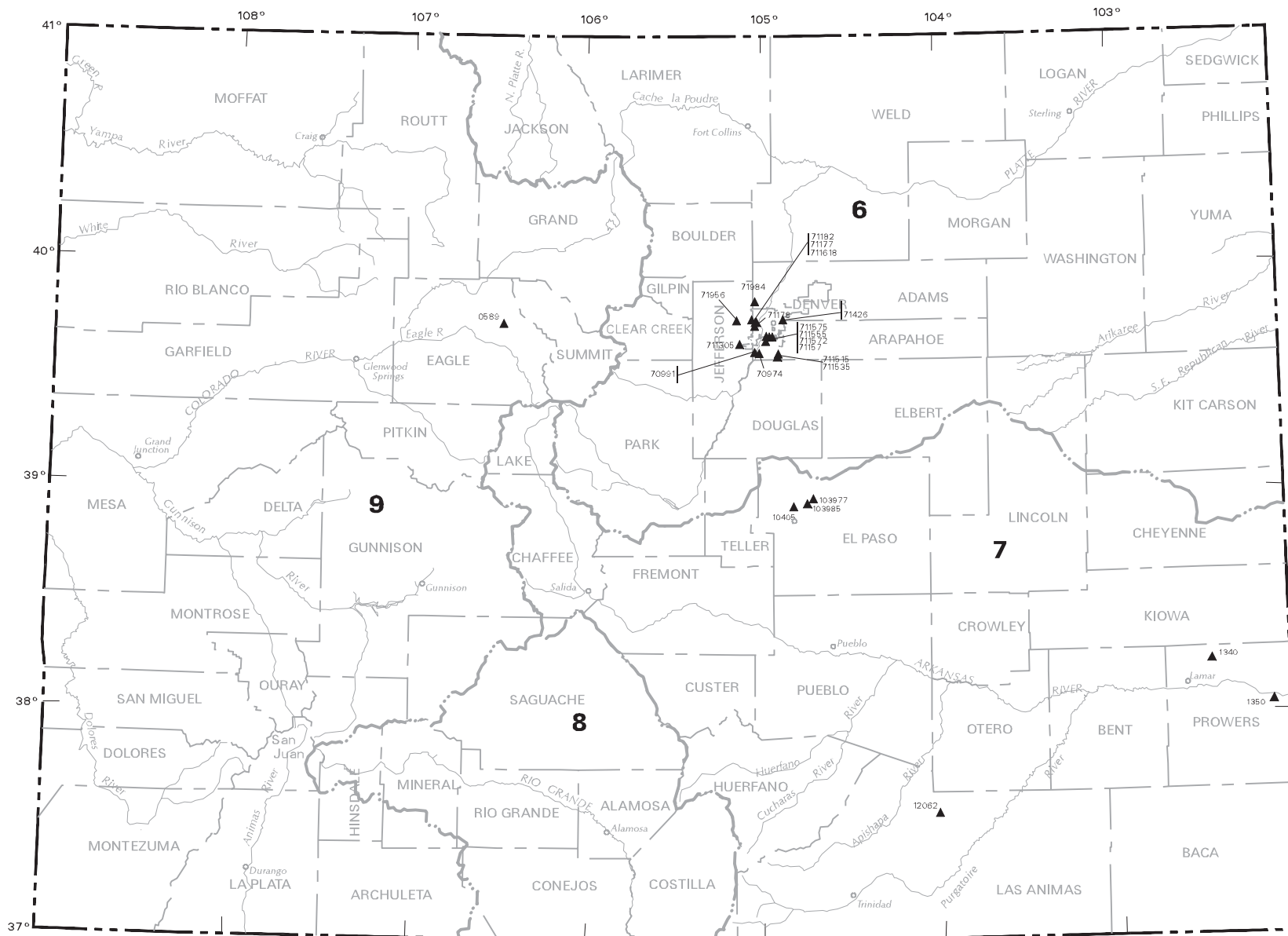


Base from U.S. Geological Survey
 1:100,000 Digital Line Graphs
 Lambert projection
 Standard Parallels 33° and 45°, central meridian -105° 30'

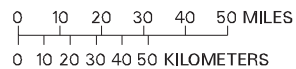


- ▲ STREAMFLOW OR RESERVOIR STATION
- ▼ WATER-QUALITY STATION
- △ TRANSMOUNTAIN DIVERSION

Figure 1.--Map showing locations of lake and surface-water stations and surface-water-quality stations in Colorado.



Base from U.S. Geological Survey
 1:100,000 Digital Line Graphs
 Lambert projection
 Standard Parallels 33° and 45°, central meridian -105°30"



▲ PARTIAL RECORD STATION

Figure 2.--Map showing locations of crest-stage partial-record stations in Colorado.

COOPERATION

The U.S. Geological Survey and organizations in the State of Colorado have had cooperative agreements for the systematic collection of surface-water records since 1895 and for water-quality records since 1941. Organizations that supported data-collection activities through cooperative agreements with the Survey during the 2003 water year are:

Arapahoe County Water and Wastewater Authority.	Fountain Valley Authority.
Arkansas River Compact Administration.	Gilpin County.
Centennial Water and Sanitation District.	Grand County.
Cherokee Metropolitan District.	Jefferson County Board of County Commissioners.
City and County of Denver, Board of Water Commissioners.	Lower Fountain Water-Quality Management Association.
City of Aurora.	Meeker Sanitation District.
City of Black Hawk.	Metro Wastewater Reclamation District.
City of Boulder.	Mount Crested Butte Water and Sanitation District.
City of Brush.	North Front Range Water Quality Planning Association.
City and County of Broomfield.	Northern Colorado Water Conservancy District.
City of Colorado Springs.	Northwest Colorado Council of Governments.
City of Craig.	Park County.
City of Englewood.	Plum Creek Wastewater Authority.
City of Fort Collins.	Pueblo Board of Water Works.
City of Fort Morgan.	Pueblo County.
City of Glendale.	Pueblo West Metropolitan District.
City of Golden.	Rio Blanco County Board of County Commissioners.
City of Gunnison.	Rio Grande Water Conservation District.
City of Idaho Springs.	Southeastern Colorado Water Conservancy District.
City of Lakewood.	Southern Ute Indian Tribe.
City of Longmont.	Southwestern Colorado Water Conservation District.
City of Louisville.	St. Charles Mesa Water District.
City of Loveland.	Teller - Park Soil Conservation District.
City of Pueblo.	Town of Basalt.
City of Steamboat Springs.	Town of Breckenridge.
City of Westminster.	Town of Colbran.
Clear Creek Board of County Commissioners.	Town of Crested Butte.
Colorado Department of Public Health and Environment.	Town of Eagle.
Colorado Division of Parks and Outdoor Recreation.	Town of Georgetown.
Colorado Division of Water Resources.	Town of Gypsum.
Colorado Division of Wildlife.	Town of Hotchkiss.
Colorado River Water Conservation District.	Town of Meeker.
Colorado Springs Utilities.	Town of Paonia.
Colorado Water Conservation Board.	Town of Rangely.
Crested Butte South Metropolitan District.	Trinchera Water Conservancy District.
Custer County.	Upper Arkansas River Water Conservancy District.
Delta County Board of County Commissioners.	Upper Eagle Regional Water Authority.
Dolores Water Conservancy District.	Upper Gunnison River Water Conservancy District.
Douglas County.	Upper Yampa Water Conservancy District.
Eagle County Board of Commissioners.	Urban Drainage and Flood Control District.
Eagle River Water and Sanitation District.	Western State College of Colorado.
East Grand County Water-Quality Board.	Wyoming State Engineer.
El Paso County.	Yellowjacket Water Conservancy District.
Evergreen Metropolitan District.	

Financial assistance was also provided by the U.S. Air Force Academy; U.S. Army, Corps of Engineers; U.S. Army; Bureau of Land Management; Bureau of Reclamation; National Park Service; U.S. Fish and Wildlife Service; and U.S. Forest Service. Organizations that supplied data are acknowledged in station descriptions.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from <http://water.usgs.gov/hbn/>.

National Stream-Quality Accounting Network (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from <http://water.usgs.gov/nasqan/>.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) is a network of monitoring sites that provide continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from <http://bqs.usgs.gov/acidrain/>.

The USGS National Water-Quality Assessment (NAWQA) Program is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents is measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program may be accessed from <http://water.usgs.gov/nawqa/>.

The USGS National Streamflow Information Program (NSIP) is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from <http://water.usgs.gov/nsip/>.

EXPLANATION OF THE RECORDS

The surface-water, ground-water, and precipitation records published in this report are for the 2003 water year that began on October 1, 2002, and ended September 30, 2003. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, ground-water level data, water-quality data for surface and ground water, and precipitation data. The locations of the stations where the surface-water data were collected are shown in figures 1 and 2. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Colorado, for surface-water stations where only infrequent measurements are made.

Downstream Order System

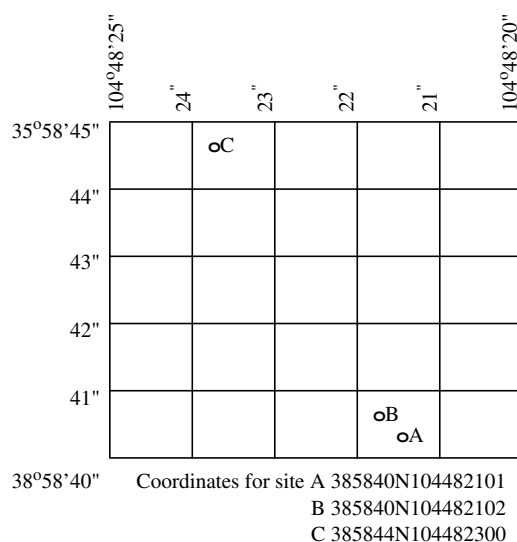
Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with

respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 06614800, which appears just to the left of the station name, includes the two-digit Part number "06" plus the six-digit downstream-order number "614800." The Part number designates the major river basin; for example, Part "06" is the Missouri River basin.

Latitude-Longitude System

The identification numbers for wells, springs, and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote the degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number, and may have no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure below).



System for numbering wells, springs, and miscellaneous sites.

The local well number locates a well within a 10-acre tract using the U.S. Bureau of Land Management system of land subdivision. The components of the local well number proceed from the largest to the smallest land subdivisions. This is in contrast to the legal description, which proceeds from the smallest to the largest land subdivision. The largest subdivision is the survey. Colorado is governed by three surveys: The Sixth Principal Meridian Survey (S), the New Mexico Survey (N), and the Ute Survey (U). Costilla County was not included in any of the above official surveys. This report follows the convention of the Costilla County Assessor in which the northern part of the county is governed by the Sixth Principal Meridian Survey and the southern part of the county is governed by a local system called the Costilla Survey (C). The first letter of the well location designates the survey.

A survey is subdivided into four quadrants formed by the intersection of the baseline and the principal meridian. The second letter of the well location designates the quadrant: A indicates the northeast quadrant, B the northwest, C the southwest, and D the southeast. A quadrant is subdivided in the north-south direction every 6 mi by townships and is divided in the east-west direction every 6 mi by ranges. The first number of the well location designates the township and the second number designates the range.

The 36-mi² area described by the township and range designation is subdivided into 1-mi² areas called sections. The sections are numbered sequentially. The third number of the well location designates the section. The section, which contains 640 acres, is subdivided into quarter sections. The 160-acre area is designated by the first letter following the section: A indicates the northeast quarter, B the northwest, C the southwest, and D the southeast. The quarter section is subdivided into quarter-quarter sections. The 40-acre area is designated in the same manner by the second letter following the section. The 10-acre area is designated in the same manner by the third letter following the section. If more than one well is located within the 10-acre tract, the wells are numbered sequentially in the order in which they were originally inventoried. If this number is necessary, it will follow the three-letter designation.

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles. Records of miscellaneous discharge measurements or of measurements from special studies may be considered as partial records, but they are presented separately in this report. Location of all complete-record stations for which data are given in this report are shown in figure 1.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage, with digital recorders that punch stage values on paper tapes at selected time intervals, with electronic recorders that store stage values on computer chips at selected time intervals, or with satellite data-collection platforms that transmit near real-time data at selected time intervals to office computers. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves, or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections. "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1992 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts, the manuscript or station description and the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flow as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that flow at it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to sea level (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

Data table of daily mean values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second during the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

If applicable, data collected at partial-record stations follow the information for continuous-record sites. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS _____ - _____, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER

YEARS _____-_____, " will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (see line headings below), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

MAXIMUM PEAK FLOW.-- The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript

MAXIMUM PEAK STAGE.-- The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true value; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for daily values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Colorado District office. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

In March 1989 the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989.

On October 1, 1995, the Colorado District adopted a new sampling and quality-assurance protocol for sampling of surface waters (Horowitz and others, 1994). This protocol was adopted as standard operating procedure for the collection and processing of all trace-element, major-ion, nutrient, and radiochemical species in filtered, surface-water samples.

Accuracy of the Records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made, as described by Wagner and others (2000). Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Rating continuous water-quality records

[≤, less than or equal to; ±, plus or minus value shown; °C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured physical property	Ratings			
	Excellent	Good	Fair	Poor
Water temperature	≤ ± 0.2 °C	> ± 0.2 to 0.5 °C	> ± 0.5 to 0.8 °C	> ± 0.8 °C
Specific conductance	≤ ± 3%	> ± 3 to 10%	> ± 10 to 15%	> ± 15%
Dissolved oxygen	≤ ± 0.3 mg/L	> ± 0.3 to 0.5 mg/L	> ± 0.5 to 0.8 mg/L	> ± 0.8 mg/L
pH	≤ ± 0.2 unit	> ± 0.2 to 0.5 unit	> ± 0.5 to 0.8 unit	> ± 0.8 unit
Turbidity	≤ ± 5%	> ± 5 to 10%	> ± 10 to 15%	> ± 15%

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched or recorded at short intervals on a paper tape, magnetic tape, computer chip, or some other medium. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 1.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the "Supplemental Water-Quality Data For Gaging Stations" section.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4; Book 9, Chap. A1-A9. All of these references are listed on pages 30 and 31 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S.G.S. District Office whose address is given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are recorded to the nearest 0.1 degree Celsius. Water temperatures measured at the time of water-discharge measurements are published in this report as supplemental water-quality for gaging stations.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Miscellaneous Water-Quality Data

Miscellaneous water-quality data refers to measurements of water temperature and specific conductance that are made in streams concurrently with discharge measurements. Miscellaneous water-quality measurements typically are made at an individual point in a stream cross section. If the stream is well mixed and its chemistry is relatively uniform, a single point measurement may be sufficient to represent the stream cross section. Point measurements of water temperature and specific conductance in streams that are not well mixed may not be representative of the cross section.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally, most other samples are analyzed in the Geological Survey laboratories in Lakewood, CO. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Historical and current-year dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter. If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter and could reflect contamination introduced during some phase of the procedure.

Water-Quality Data Reporting Convention

The USGS National Water Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDL's) and laboratory reporting levels (LRL's). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. The chance of falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a non-detection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as <LRL for samples in which the analyte was either not detected or did not pass identification. Analytes that are detected at concentrations between the LT-MDL and LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of "E". These data should be used with the understanding that their uncertainty is greater than that of data reported without the "E" remark code.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made in the U.S. Geological Survey's distributed data system, NWIS, and subsequently to its web-based National data system, NWISWeb [<http://water.usgs.gov/nwis/nwis>]. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure the most recent updates. Updates to NWISWeb are currently made on an annual basis.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remarks codes may appear with the water-quality data in this report:

PRINTED OUTPUT REMARK

E	Estimated laboratory analysis value
e	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Based on non-ideal colony count
M	Presence of material verified but not quantified
V	Analyte was detected in both the environmental sample and the associated blanks

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed at the end of the introductory text. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County, and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed at :

http://waterdata.usgs.gov/nwis	National water data page
http://co.water.usgs.gov	Colorado home page

Water-quality, ground-water, and meteorological data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3.5 inch floppy diskette. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on the back of the title page).

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from <http://water.usgs.gov/glossaries.html>.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "ltered" sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also "Annual runoff")

Adenosine triphosphate (ATP) is an organic, phosphate-rich compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

Adjusted discharge is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample. (See also "Biomass" and "Dry weight")

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "ltered" sample.

Annual runoff is the total quantity of water that is discharged ("runs off") from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

Aroclor is the registered trademark for a group of poly-chlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

Artificial substrate is a device that purposely is placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also "Substrate")

Ash mass is the mass or amount of residue present after the residue from a dry-mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2). (See also "Biomass" and "Dry mass")

Aspect is the direction toward which a slope faces with respect to the compass.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also "Peak flow")

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced stream flows. Natural base flow is sustained largely by ground-water discharge.

Bed material is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

Bedload is material in transport that primarily is supported by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to the top of the bedload sampler nozzle (an elevation ranging from 0.25 to 0.5 foot). These particles are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as mass per unit area or volume of habitat.

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This also is called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton and periphyton organisms with a blue pigment in addition to a green pigment called chlorophyll. Blue-green algae can cause nuisance water-quality conditions in lakes and slow-moving rivers; however, they are found commonly in streams throughout the year. The abundance of blue-green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm²) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also "Phytoplankton" and "Periphyton")

Bottom material (See "Bed material")

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

Canadian Geodetic Vertical Datum 1928 is a geodetic datum derived from a general adjustment of Canada's first order level network in 1928.

Cell volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are used frequently in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } 4/3 \pi r^3 \quad \text{cone } 1/3 \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi (π) is the ratio of the circumference to the diameter of a circle; $\pi = 3.14159\dots$

From cell volume, total algal biomass expressed as biovolume ($\mu\text{m}^3/\text{mL}$) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cells/volume refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and generally are reported as cells or units per milliliter (mL) or liter (L).

Cfs-day (See "Cubic foot per second-day")

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also "Biochemical oxygen demand (BOD)"]

Clostridium perfringens (*C. perfringens*) is a spore-forming bacterium that is common in the feces of human and other warm-blooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and the presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding an artesian well.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure, as used in this report, is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

Cubic foot per second (CFS, ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, [(ft³/s)/d]) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables numerically are equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

Cubic foot per second per square mile [CFSM, (ft³/s)/mi²] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also "Annual runoff")

Daily mean suspended-sediment concentration is the time-weighted mean concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

- Daily record station** is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to data collection on a daily or near-daily basis.
- Data collection platform (DCP)** is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.
- Data logger** is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data usually are downloaded from onsite data loggers for entry into office data systems.
- Datum** is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or Universal Transverse Mercator (UTM) coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")
- Diatoms (*Bacillariophyta*)** are unicellular or colonial algae with a siliceous cell wall. The abundance of diatoms in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of diatoms in periphyton samples is given in cells per square centimeter (cells/cm²) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also "Phytoplankton" and "Periphyton")
- Diel** is of or pertaining to a 24-hour period of time; a regular daily cycle.
- Discharge, or flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, and so forth, within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).
- Dissolved** refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.
- Dissolved oxygen (DO)** is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.
- Dissolved solids concentration** in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO₃) can be converted to carbonate concentration by multiplying by 0.60.
- Diversity index (H) (Shannon index)** is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:
- $$\bar{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n},$$
- where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.
- Drainage area** of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.
- Drainage basin** is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")
- Dry mass** refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also "Ash mass," "Biomass," and "Wet mass")
- Dry weight** refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")
- Embeddedness** is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")
- Enterococcus bacteria** commonly are found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants. (See also "Bacteria")
- EPT Index** is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that generally are considered pollution sensitive; the index usually decreases with pollution.
- Escherichia coli (*E. coli*)** are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) value of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an E code will be reported with the value. If the analyte is identified qualitatively as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an E code even though the measured value is greater than the MDL. A value reported with an E code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<). For bacteriological data, concentrations are reported as estimated when results are based on non-ideal colony counts.

Euglenoids (*Euglenophyta*) are a group of algae that usually are free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

Fecal coliform bacteria are present in the intestines or feces of warmblooded animals. They often are used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C plus or minus 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Fire algae (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

Gaging station is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained.

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are unival geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

Green algae (*Chlorophyta*) are unicellular or colonial algae with chlorophyll pigments similar to those in terrestrial green plants. Some forms of green algae produce mats or coating "moss" in lakes. The abundance of green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm²) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also "Phytoplankton" and "Periphyton")

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat typically are made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate (CaCO₃).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA Web site: <http://www.co-ops.nos.noaa.gov/tideglos.html>

Hilsenhoff's Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \frac{\sum(n)(a)}{N}$$

where n is the number of individuals of each taxon, a is the tolerance value of each taxon, and N is the total number of organisms in the sample.

Horizontal datum (See "Datum")

- Hydrologic index stations** referred to in this report are continuous-record gaging stations that have been selected as representative of stream flow patterns for their respective regions. Station locations are shown on index maps.
- Hydrologic unit** is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.
- Inch** (IN., in.), in reference to stream flow, as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were distributed uniformly on it. (See also "Annual runoff")
- Instantaneous discharge** is the discharge at a particular instant of time. (See also "Discharge")
- International Boundary Commission Survey Datum** refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.
- Island**, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year, on average, and remains stable except during large flood events.
- Laboratory reporting level (LRL)** generally is equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. The LRL replaces the term 'non-detection value' (NDV).
- Land-surface datum (lsd)** is a datum plane that is approximately at land surface at each ground-water observation well.
- Latent heat flux** (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.
- Light-attenuation coefficient**, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:
- $$I = I_0 e^{-\lambda L},$$
- where I_0 is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as
- $$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0}.$$
- Lipid** is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.
- Long-term method detection level (LT-MDL)** is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike-sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.
- Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. See NOAA Web site: <http://www.co-ops.nos.noaa.gov/tideglos.html>
- Macrophytes** are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.
- Mean concentration of suspended sediment** (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")
- Mean discharge (MEAN)** is the arithmetic mean of individual daily mean discharges during a specific period. (See also "Discharge")
- Mean high or low tide** is the average of all high or low tides, respectively, over a specific period.
- Mean sea level** is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")
- Measuring point (MP)** is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.
- Megahertz** is a unit of frequency. One megahertz equals one million cycles per second.
- Membrane filter** is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.
- Metamorphic stage** refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.
- Method detection limit (MDL)** is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.
- Method of Cubatures** is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

- Methylene blue active substances (MBAS)** indicate the presence of detergents (anionic surfactants). The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.
- Micrograms per gram (UG/G, $\mu\text{g/g}$)** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.
- Micrograms per kilogram (UG/KG, $\mu\text{g/kg}$)** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.
- Micrograms per liter (UG/L, $\mu\text{g/L}$)** is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.
- Microsiemens per centimeter (US/CM, $\mu\text{S/cm}$)** is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.
- Milligrams per liter (MG/L, mg/L)** is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.
- Minimum reporting level (MRL)** is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.
- Miscellaneous site**, miscellaneous station, or miscellaneous sampling site is a site where stream flow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.
- Most probable number (MPN)** is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.
- Multiple-plate samplers** are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.
- Nanograms per liter (NG/L, ng/L)** is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.
- National Geodetic Vertical Datum of 1929 (NGVD 29)** is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It formerly was called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. See NOAA Web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88> (See "North American Vertical Datum of 1988")
- Natural substrate** refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")
- Nekton** are the consumers in the aquatic environment and consist of large, free-swimming organisms that are capable of sustained, directed mobility.
- Nephelometric turbidity unit (NTU)** is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.
- North American Datum of 1927 (NAD 27)** is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.
- North American Datum of 1983 (NAD 83)** is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.
- North American Vertical Datum of 1988 (NAVD 88)** is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and United States first-order terrestrial leveling networks.
- Open or screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.
- Organic carbon (OC)** is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).
- Organic mass or volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")
- Organism count/area** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.
- Organism count/volume** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.
- Organochlorine compounds** are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.
- Parameter code** is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method uses the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedigraph) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of stream flows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

Percent composition or percent of total is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, mass, or volume.

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

Phytoplankton is the plant part of the plankton. They usually are microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and commonly are known as algae. (See also "Plankton")

Picocurie (PC, pCi) is one-trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photo-synthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [$\text{mg C}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg C}/(\text{m}^3/\text{time})$] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [$\text{mg O}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg O}/(\text{m}^3/\text{time})$] for phytoplankton. The oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

Recoverable from bed (bottom) material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. (See also "Bed material")

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period (See "Recurrence interval")

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged ("runs off") from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also "Annual runoff")

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as "uvial sediment." Sediment includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

Sensible heat flux (often used interchangeably with latent sensible heat flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also "Annual 7-day minimum" and "Recurrence interval")

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to

75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stable isotope ratio (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage (See "Gage height")

Stage-discharge relation is the relation between the water-surface elevation, termed stage (gage height), and the volume of water flowing in a channel per unit time.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "stream flow" uniquely describes the discharge in a surface stream course. The term "stream flow" is more general than "runoff" as stream flow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2 mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

Surficial bed material is the upper surface (0.1 to 0.2 foot) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Surrogate is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is defined operationally as the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment, and, thus, the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of "suspended, recoverable" constituents are made either by directly analyzing the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also "Suspended")

Suspended sediment is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also "Sediment")

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft³/s) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

Suspended solids, total residue at 105 °C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

Synoptic studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>
Species:	<i>Hexagenia limbata</i>

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table descriptions and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric ton per day.

Total is the amount of a given constituent in a representative whole-water (unfiltered) sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined at least 95 percent of the constituent in the sample.)

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, non-spore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also "Bacteria")

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total in bottom material is the amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total length (sh) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume")

Total recoverable is the amount of a given constituent in a whole-water sample after a sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also "Bedload," "Bedload discharge," "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Total sediment load or total load is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-sediment load," and "Total load")

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is the reduction in the transparency of a solution because of the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by sus-

pended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to USEPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of path length of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See "Water-table aquifer")

Vertical datum (See "Datum")

Volatile organic compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and, subsequently, analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They often are components of fuels, solvents, hydraulic fluids, paint thinners, and dry-cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human-health concern because many are toxic and are known or suspected human carcinogens.

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which the water table is found.

Water year in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2002, is called the "2002 water year."

Watershed (See "Drainage basin")

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976.)

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

Wet mass is the mass of living matter plus contained water. (See also "Biomass" and "Dry mass")

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also "Dry weight")

WSP is used as an acronym for "Water-Supply Paper" in reference to previously published reports.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers. (See also "Plankton")

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DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Colorado have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Colorado Creek near Spicer, CO	06611000	25.8	1950-55
Grizzly Creek near Spicer, CO	06611100	118	1976-80
Buffalo Creek near Hebron, CO	06611200	56.3	1976-80
Grizzly Creek near Hebron, CO	06611300	223	1976-80
Grizzly Creek near Walden, CO	06611500	258	1904-05, 1923, 1926-47
Little Grizzly Creek near Coalmont, CO	06611700	10.1	1967-73
Little Grizzly Creek above Coalmont, CO	06611800	35.4	1976-80
Little Grizzly Creek above Hebron, CO	06611900	52.2	1976-80
Little Grizzly Creek near Hebron, CO	06612000	98.6	1904-05, 1931-45
Roaring Fork near Walden, CO	06612500	79.1	1904-05, 1923-47
North Platte River near Walden, CO	06613000	469	1904-05, 1923-47
North Fork North Platte River near Walden, CO	06614000	160	1923-28, 1936-45
South Fork Michigan River near Gould, CO	06615000	11.4	1950-58
Michigan River near Lindland, CO	06615500	60.9	1931-41
North Fork Michigan River near Gould, CO	06616000	20.5	1950-82
Michigan River at Walden, CO	06617100	182	1904-05, 1923-47
Illinois Creek near Rand, CO	06617500	70.6	1931-40
Willow Creek near Rand, CO	06618000	55.9	1931-40
Illinois Creek at Walden, CO	06618500	259	1923-47
Michigan River near Cowdrey, CO	06619000	478	1904-05, 1937-47
Canadian River near Lindland, CO	06619400	44.0	1978-83
Bush Draw near Walden, CO	06619415	4.10	1980-83
Williams Draw near Walden, CO	06619420	3.95	1979-83
Canadian River near Brownlee, CO	06619450	158	1978-83
Canadian River at Cowdrey, CO	06619500	181	1904-05, 1929-31, 1937-47
Laramie River near Glendevey, CO	06657500	101	1904-05, 1910-82
Middle Fork South Platte River above Fairplay, CO	06693980	62.2	1978-80
Middle Fork South Platte River near Hartsel, CO	06694100	250	1978-80
South Fork South Platte River above Fairplay, CO	06694400	50.3	1978-80
Fourmile Creek near Fairplay, CO	06694700	12.0	1978-80
Elevenmile Canyon Reservoir	06695500	963	1932-98
South Platte River near Lake George, CO	06696000	963	1929-98
South Platte River at Lake George, CO	06696200	1,084	1910-11, 1929
Tarryall Creek below Park Gulch near Como, CO	06697100	76.1	1997-2001
French Creek near Jefferson, CO	06697200	4.63	1986-90
Michigan Creek above Jefferson, CO	06697450	23.1	1978-86
Jefferson Creek near Jefferson, CO	06698000	11.8	1910-12, 1978-86
Tarryall Creek near Jefferson, CO	06698500	183	1910-11, 1912-17, 1977-81
Rock Creek near Jefferson, CO	06699000	45.5	1986-90
Tarryall Creek below Rock Creek, near Jefferson, CO	06699005	230	1983-97

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Tarryall Creek near Lake George, CO	06699500	434	1910-12, 1925-55
Goose Creek above Cheesman Lake, CO	06700500	86.6	1899, 1924-82
Cheesman Lake	06701000	1,752	1900-98
Spring Creek above mouth near South Platte, CO	06701970	9.79	1997-2003
South Platte River above North Fork at South Platte, CO	06702000	2,098	1905-12
North Fork South Platte River at Grant, CO	06702500	49.0	1910-17
Duck Creek near Grant, CO	06704500	7.78	1995-97
Geneva Creek at Grant, CO	06705500	74.6	1908-18 1995-97
North Fork South Platte River below Geneva Creek, at Grant, CO	06706000	127	1908-13, 1942-98
North Fork South Platte River at Pine, CO	06706500	374	1942-46
Miller Gulch near Buffalo Creek, CO	06706600	3.16	2000-2002
Buffalo Creek at mouth at Buffalo Creek, CO	06706800	47.4	1997-2003
North Fork South Platte River at South Platte, CO	06707000	479	1909-10, 1913-82
South Platte River at Waterton, CO	06708000	2,621	1926-80
East Plum Creek at Castle Rock, CO	06708750	102	1985-89
Plum Creek near Louviers, CO	06709500	302	1947-90
Chat eld Lak e near Littleton, CO	06709600	3,018	1975-98
South Platte River at Littleton, CO	06710000	3,069	1941-86
South Platte River at Union Avenue, at Englewood, CO	06710245	3,093 (revised)	1989-95
Turkey Creek at mouth of canyon near Morrison, CO	06710995	47.4	1998-2001
Turkey Creek above Bear Creek Lake, near Morrison, CO	06711040	50.6	1986-89
Little Dry Creek at Greenwood Village, CO	06711545	14.4	1994-97
South Platte River at Florida Avenue, at Denver, CO	06711590	--	1981-82
Cherry Creek near Melvin, CO	06712500	360	1939-69
Cherry Creek Lake near Denver, CO	06712990	385	1960-98
Cherry Creek at Glendale, CO	06713300	404	1985-2003
South Platte River at 50th Avenue at Denver, CO	06714130	3,810	1980-81
Senac Creek at North Border Sludge Area, near Aurora, CO	06714220	7.81	1989-93
South Clear Creek above Lower Cabin Creek Reservoir, near Georgetown, CO	06714400	--	1996-97
South Clear Creek above Leavenworth Creek, near Georgetown, CO	06714600	16.0	1995-97
West Fork Clear Creek above Empire, CO	06715500	40.5	1942-46
West Fork Clear Creek near Empire, CO	06716000	58.2	1929-31
Clear Creek below Idaho Springs, CO	06718000	259	1951-55
North Clear Creek near Blackhawk, CO	06718500	52.2	1951-55
Clear Creek at Forks Creek, CO	06719000	339	1899-1912
Clear Creek near Golden, CO	06719500	399	1908-09, 1911-74
Clear Creek at Tabor Street, at Lakewood, CO	06719526	427	1981-83
Ralston Creek near Plainview, CO	06719725	36.9	1983-84
Schwartzwalder Mine Ef uent near Plain view, CO	06719730	--	1983-84
Ralston Creek below Schwartzwalder Mine near Plainview, CO	06719735	38.9	1983-84
Ralston Creek above Ralston Reservoir near Golden, CO	06719740	42.7	1983-84
Clear Creek at Mouth near Derby, CO	06720000	575	1914, 1927-82
Grange Hall Creek at Grant Park at Northglenn, CO	06720330	--	1978-79
Grange Hall Creek at Northglenn, CO	06720415	3.08	1978-81
Grange Hall Creek below Northglenn, CO	06720417	--	1981-82
First Creek below Buckley Road, near Rocky Mountain Arsenal, CO	06720460	26.4	1992-94
First Creek at Highway 2, near Rocky Mountain Arsenal, CO	06720490	39.0	1992-94
Woman Creek near Plainview, CO	06720690	--	1973-74

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
North Saint Vrain Creek near Allens Park, CO	06721500	32.6	1926-30, 1987-97
North Saint Vrain Creek at Longmont Dam near Lyons, CO	06722000	106	1925-53
South Saint Vrain Creek near Ward, CO	06722500	14.4	1925-27, 1928-31, 1954-73
Middle Saint Vrain Creek near Raymond, CO	06722900	16.8	1956-58
Middle Saint Vrain Creek near Allens Park, CO	06723000	28.0	1925-30, ^a
South Saint Vrain Creek above Lyons, CO	06723400	81.4	1971-80
St. Vrain Creek at Lyons, CO	06724000	212	1887-1895 1895-1998
Lefthand Creek near Boulder, CO	06724500	52.0	1929-31, 1947-53, 1976-80
Lefthand Creek at Mouth at Longmont, CO	06725000	72.0	1927-42, 1953-55, 1976-79
Saint Vrain Creek near Longmont, CO	06725100	370	1964-68
North Boulder Creek at Silver Lake, CO	06726000	8.70	1913-32
North Boulder Creek near Nederland, CO	06726500	30.4	1929-31
Bummers Gulch near El Vado, CO	06726900	3.87	1983-95
Fourmile Creek at Orodell, CO	06727500	24.1	1947-53, 1983-95
South Boulder Creek near Rollinsville, CO	06729000	42.7	1910-18, 1945-49
South Boulder Creek at Pinecliff, CO	06729300	72.7	1979-80
Coal Creek near Plainview, CO	06730300	15.1	1959-82
St. Vrain Creek at Mouth near Platteville, CO	06731000	976	1904-06, 1915, 1927-98
Boulder Brook near Estes Park, CO	06731800	3.83	1968-70
Glacier Creek near Estes Park, CO	06732000	20.8	1941-57, 1968-70
Beaver Brook near Estes Park, CO	06732300	1.49	1968-70
Fall River at Estes Park, CO	06732500	39.8	1945-53 ^a
Big Thompson River at Estes Park, CO	06733000	137	1946-98
Fish Creek near Estes Park, CO	06734500	15.8	1947-55
North Fork Big Thompson River at Drake, CO	06736000	85.1	1947-55
Big Thompson River below Power House near Drake, CO	06736500	278	1917-55
Dry Creek near Pinewood, CO	06740000	7.11	1950-52
Cottonwood Creek near Pinewood, CO	06741000	14.7	1947-53
Big Thompson River near Loveland, CO	06741500	505	1947-55
Little Thompson River near Berthoud, CO	06742000	100	1929-30, 1947-61
Little Thompson River at Milliken, CO	06743500	199	1951-55
Big Thompson River at Mouth near La Salle, CO	06744000	830	1914-15, 1927-82
Cache La Poudre River above Chambers Lake Outlet, CO	06745000	89.7	1929-31
Joe Wright Creek near Cameron Pass, CO	06746100	5.05	1974-78
Cache La Poudre River near Rustic, CO	06747500	198	1956-68
Cache La Poudre River near Log Cabin, CO	06748000	234	1909-11, 1929-31
Fall Creek near Rustic, CO	06748200	3.59	1960-73
South Fork Cache La Poudre near Eggers, CO	06748500	70.6	1929-31
Little Beaver Creek near Idylwilde, CO	06748510	0.88	1960-73
Little Beaver Creek near Rustic, CO	06748530	12.3	1960-73

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
South Fork Cache La Poudre River near Rustic, CO	06748600	92.4	1956-79
Cache La Poudre River below Elkhorn, CO	06749000	409	1946-59
North Fork Cache La Poudre River near Livermore, CO	06751500	567	1947-65
Cache La Poudre River near Greeley, CO	06752500	1,877	1903-04, 1914-19, 1924-98
Lonetree Creek at Carr, CO	06753400	167	1993-95
Lonetree Creek near Nunn, CO	06753500	199	1951-57
Crow Creek near Barnsville, CO	06756500	1,324	1951-57
South Platte River at Masters, CO	06756995	12,169 (revised)	1976-88
South Platte River at Sublette, CO	06757000	12,220 (revised)	1926-42, 1943-55
Kiowa Creek at K-79 Reservoir near Eastonville, CO	06757600	3.20	1955-65
Kiowa Creek at Elbert, CO	06758000	28.6	1955-65
West Kiowa Creek at Elbert, CO	06758100	35.9	1962-65
Kiowa Creek at Kiowa, CO	06758200	111	1955-65
Kiowa Creek at Bennett, CO	06758300	236	1960-65

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Bijou Creek near Wiggins, CO	06759000	1,314	1950-56
Bijou Creek near Fort Morgan, CO	06759100	1,500	1976-87
South Platte River at Cooper Bridge near Balzac, CO	06759910	16,623 (revised)	1987-98
South Platte River at Balzac, CO	06760000	16,623 (revised)	1916-80
South Platte River near Crook, CO	06760500	19,006 (revised)	1953-58
North Fork Republican River near Wray, CO	06822000	1,019	1937-46, 1951-57, 1962-64
South Fork Republican River near Idalia, CO	06825000	1,300	1950-71, 1972-81
Landsman Creek near Hale, CO	06825500	268	1950-76, 1977-81
Bonny Reservoir near Hale, CO	06826000	1,820	1950-95
South Fork Republican River near Hale, CO	06826500	1,825	1946-48, 1951-86
Leadville Mine Drainage Tunnel at Leadville, CO	07079200	--	1990-93
East Fork Arkansas River near Leadville, CO	07079500	50.0	1890-1903, 1910-24
Saint Kevin Gulch above Temple Gulch, near Leadville, CO	07080980	1.84	1993-96
Tennessee Creek near Leadville, CO	07081000	48.0	1890-1903, 1910-24
California Gulch at Malta, CO	07081800	8.13	1991-92
Lake Fork above Sugar Loaf Reservoir, CO	07082000	23.9	1946-67
Halfmoon Creek near Leadville, CO	07083500	25.2	1911-14
Arkansas River near Malta, CO	07083700	228	1964-67, 1976-84
Arkansas River below Empire Gulch, near Malta, CO	07083710	237	1990-93
Lake Creek above Twin Lakes Reservoir, CO	07084500	75	1946-98
Arkansas River at Buena Vista, CO	07087200	611	1964-80, 1986-93
Cottonwood Creek below Hot Springs near Buena Vista, CO	07089000	65.0	1910-23, 1949-86
Chalk Creek Upper Station near Saint Elmo, CO	07090000	48.0	1913-19
Chalk Creek near Saint Elmo, CO	07090500	83.0	1910-16
Chalk Creek near Nathrop, CO	07091000	97.0	1910, 1949-56, ^a
Arkansas River at Salida, CO	07091500	1,218	1895-97, 1901-03, 1909-80
South Arkansas River at Poncha, CO	07092000	140	1910-18
Poncha Creek at Poncha, CO	07093000	56.0	1910-18
South Arkansas River near Salida, CO	07093500	208	1922-23, 1929-40
South Colony Creek near Westcliffe, CO	07094600	6.03	1974-78
Middle Taylor Creek near Westcliffe, CO	07094900	3.19	1974-78, 1984-85
Fourmile Creek near Canon City, CO	07096500	434	1910-11, 1949-53, 1971-97
Beaver Creek near Portland, CO	07099100	214	1971-81
Arkansas River near Portland, CO	07099200	4,280	1964-79
Little Turkey Creek near Fountain, CO	07099220	9.59	1978-88

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Arkansas River near Pueblo, CO	07099500	4,686	1885-87, 1889, 1894-1975
Monument Creek at Palmer Lake, CO	07103747	25.9	1977-90
Monument Creek at Monument, CO	07103750	28.5	1976-77
Deadmans Creek above Deadmans Lake at U.S. Air Force Academy, CO	07103785	1.55	2000-2003
Monument Creek below Sewage Treatment Plant at U.S. Air Force Academy, CO	07103790	122	2000-2003
West Monument Creek near Pikeview, CO	07103900	15.4	1957-70
West Monument Creek at mouth at U.S. Air Force Academy, CO	07103930	23.5	2000-2003
Monument Creek at South Boundary at U.S. Air Force Academy, CO	07103940	150	2000-2003
Kettle Creek near Black Forest, CO	07103950	9.01	1976-86
Kettle Creek above U.S. Air Force Academy, CO	07103960	16.0	2000-2003 ^a
Cottonwood Creek at Cowpoke Road at Colorado Springs, CO	07103977	5.93	1998-2003 ^a
Cottonwood Creek Tributary above Rangewood Drive at Colorado Springs, CO	07103985	2.81	1998-2003 ^a
Templeton Gap Floodway at Colorado Springs, CO	07104500	8.73	1951-81
B Ditch Drain near Security, CO	07105780	--	1981-88
Clover Ditch near Wide eld, CO	07105820	--	1981-88
Little Fountain Creek above Keaton Reservoir, CO	07105920	11.0	1978-88, 1995-98
Womack Ditch near Fort Carson, CO	07105924	--	1978-91
Little Fountain Creek near Fort Carson, CO	07105928	11.8	1978-89, 1995-98
Little Fountain Creek near Fountain, CO	07105940	26.9	1978-88
Rock Creek near Fort Carson, CO	07105950	7.79	1978-98
Rock Creek near Fountain, CO	07105960	16.9	1978-88
Saint Charles River at San Isabel, CO	07107000	16.0	1936-41
Saint Charles River at Burnt Mill, CO	07107500	166	1923-34
Greenhorn Creek near Rye, CO	07107900	9.56	1974-80, 1999-2001
Greenhorn Creek near Colorado City, CO	07108050	29.6	1974-79
Graneros Creek near Rye, CO	07108100	4.32	1999-2001
Saint Charles River near Pueblo, CO	07108500	467	1941-53,
Saint Charles River near Vineland, CO	07108800	473	1968-74
Saint Charles River at Mouth near Pueblo, CO	07109000	475	1922-25
Sixmile Creek near Avondale, CO	07110000	45.0	1922-24, 1941-46
Chico Creek near Pueblo Chemical Depot, CO	07110400		1997-99
Chico Creek near North Avondale, CO	07110500	864	1941-46
Huerfano River at Malachite, CO	07111500	107	1923-25
Huerfano River near Badito, CO	07112000	499	1941-46, 1978-81
Huerfano River at Badito, CO	07112500	532	1912, 1923-25, 1938-41, 1946-54
Huerfano River at Huerfano, CO	07113000	717	1923-28
Huerfano River near Mustang, CO	07113500	803	1942-47
Cucharas River at Boyd Ranch near La Veta, CO	07114000	56.0	1934-82
Cucharas River near La Veta, CO	07114500	75.0	1923-34
Huerfano River below Huerfano Valley Dam near Undercliffe, CO	07116000	1,673	1939-67
Arkansas River at Nepesta, CO	07117500	9,460	1898-1902, 1904-06, 1936
Chicosa Creek near Fowler, CO	07117600	109	1968-74
Apishapa River near Aguilar, CO	07118000	126	1939-50

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Apishapa River at Aguilar, CO	07118500	149	1938-39, 1978-81
Apishapa River near White Rock, CO	07119000	737	1942-47
Big Arroyo near Thatcher, CO	07120620	15.5	1983-90 ^a
Timpas Creek near Rocky Ford, CO	07121000	451	1922-27, 1940-50
Fort Lyon Canal near Casa, CO	07122060	--	1988-90
Fort Lyon Canal near Cornelia, CO	07122105	--	1988-90
Fort Lyon Canal near Hasty, CO	07122200	--	1968-75 1988-90
Fort Lyon Canal near Big Bend, CO	07122350	--	1988-90
Crooked Arroyo near Swink, CO	07122400	108	1968-93
Crooked Arroyo near La Junta, CO	07122500	--	1922-25
Horse Creek near Sugar City, CO	07123500	1,080	1940-47
Horse Creek near Las Animas, CO	07123675	1,403	1979-93
Middle Fork Purgatoire River at Stonewall, CO	07124050	57.1	1978-81
Molino Canyon near Weston, CO	07124100	4.23	1978-81
Sarcillo Canyon near Segundo, CO	07124120	35.3	1978-81
Mulligan Canyon near Boncarbo, CO	07124210	4.53	1978-81
Reilly Canyon at Cokedale, CO	07124220	35.1	1978-81
Long Canyon Creek near Madrid, CO	07124300	100	1972-89
Carpitos Canyon near Jansen, CO	07124350	4.57	1978-81
Purgatoire River at Trinidad, CO	07124500	795	1895-99, 1905-12, 1915-60, 1961-82
Purgatoire River near Hoehne, CO	07125000	857	1954-68
Frijole Creek near Alfalfa, CO	07125100	80.0	1957-68
San Francisco Creek near Alfalfa, CO	07125500	160	1954-68
Purgatoire River near Alfalfa, CO	07126000	1,320	1905-07, 1924-28, 1951-68
Van Bremer Arroyo near Thatcher, CO	07126130	80.6	1983-85
Burke Arroyo Tributary near Thatcher, CO	07126320	4.66	1983-87
Chacuaco Creek at Mouth, near Timpas, CO	07126470	424	1983-92 ^a
Purgatoire River at Highland Dam near Las Animas, CO	07128000	3,376	1898, 1931-55
Rule Creek near Caddoa, CO	07129500	435	1941-46
Caddoa Creek at Caddoa, CO	07131000	131	1941-46
Willow Creek near Lamar, CO	07133050	42.0	1974-77
Big Sandy Creek above Amity Canal near Korman, CO	07134000	3,396	1941-46
Two Butte Creek near Holly	07135000	817	1942-46, 1995-99 ^a
Arkansas River at Holly, CO	07135500	25,073	1894, 1901-02, 1907-53
Wild Horse Creek at Holly, CO	07136000	270	1922-35, 1938-50
Holly Drain near Holly, CO	07136500	--	1924-50
Rio Grande at Thirtymile Bridge near Creede, CO	08213500	163	1909-23 1925-98
North Clear Creek below Continental Reservoir, CO	08214500	51.7	1929-98
Willow Creek at Creede, CO	08216500	51.7	1951-82
Rio Grande at Wason below Creede, CO	08217000	705	1907-54
Rio Grande at Wagonwheel Gap, CO	08217500	780	1951-2000

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Colorado have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Goose Creek near Wagonwheel Gap, CO	08218000	53.6	1924-26, 1939-52
Goose Creek at Wagonwheel Gap, CO	08218500	90.0	1954-91
Pinos Creek near Del Norte, CO	08220500	53.0	1919-24, 1936-82
San Francisco Creek at upper station near Del Norte, CO	08220900	11.8	1967-69
Rio Grande near Monte Vista, CO	08221500	1,590	1926-80
Rock Creek near Monte Vista, CO	08223500	32.9	1935-55, 1966-70
San Luis Creek near Poncha Pass, CO	08224110	6.57	1979-85
San Luis Creek above Villa Grove, CO	08224113	11.2	1979-85
Raspberry Creek near Villa Grove, CO	08224200	1.78	1967-70, 1936-82
Noland Gulch Tributary Reservoir In o w, near Villa Grove, CO	08226600	0.08	1979-89
Cotton Creek near Mineral Hot Springs, CO	08226700	13.6	1967-70
Anaconda Reservoir near Villa Grove, CO	08227300	0.17	1979-85
Tracy Pit Reservoir In o w near Saguache, CO	08227400	0.05	1979-89
North Crestone Creek near Crestone, CO	08227500	10.7	1936-82
Cottonwood Creek near Crestone, CO	08229500	6.77	1936, 1967-70
Carnero Creek near La Garita, CO	08230500	117	1919-82
Mosca Creek near Mosca, CO	08234200	3.67	1967-70
Alamosa River above Wightman Fork near Jasper, CO	08235250	37.8	1995-99
Wightman Fork below Cropsy Creek at Summitville, CO	08235270	4.44	1995-99
Wightman Fork at mouth near Jasper, CO	08235290	16.1	1995-99
Alamosa River above Jasper, CO	08235350	58.1	1995-99
Alamosa River below Castleman Gulch near Jasper, CO	08235700	76.3	1995-99
Alamosa Creek above Terrace Reservoir, CO	08236000	107	1911-12, 1914-27, 1934-82
Alamosa Creek below Terrace Reservoir, CO	08236500	116	1909-55
La Jara Creek at Gallegos Ranch near Capulin, CO	08238000	98.0	1916-17, 1919-23, 1936-82
Yellow Warbler Reservoir In o w near Antonito, CO	08238350	0.18	1979-89
Turkey Reservoir In o w near Conejos, CO	08238380	0.24	1979-89
Bobolink Reservoir near Conejos, CO	08238400	0.23	1979-89
Rio Grande above Mouth of Trinchera Creek near Lasausas, CO	08240000	5,740	1936-98
Trinchera Creek above Turners Ranch near Fort Garland, CO	08240500	45.0	1923-82
Trinchera Creek above Mountain Home Reservoir near Fort Garland, CO	08241000	61.0	1923-55
Sangre De Cristo Creek near Fort Garland, CO	08241500	190	1916, 1923-30, 1931-82
Trinchera Creek below Smith Reservoir near Blanca, CO	08243500	396	1928-82
Conejos River at Platoro, CO	08245500	44.4	1936-53
Conejos River at Counsellors Cabin near Mogote, CO	08246000	211	1943-47
San Antonio River at mouth near Manassa, CO	08248500	348	1923-82
Culebra Creek near Chama, CO	08249400	72.4	1967-70
Culebra Creek below San Luis, CO	08250500	255	1938-55
Rio Grande at CO-NM State Line	08252000	--	1953-82

^a Converted to a crest-stage partial-record station.

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

The following stations were discontinued as continuous-record surface-water-quality stations. Daily records of temperature, specific conductance, pH, dissolved oxygen or sediment were collected and published for the period of record shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Type of record	Period of record (water years)
Canadian River near Lindland, CO	06619400	44.0	Temp., S.C., Sed.	1978-83
Canadian River near Brownlee, CO	06619450	158	Temp., S.C., Sed.	1978-83
Duck Creek near Grant, CO	06704500	7.78	Temp., S.C., Sed.	1995-97
Geneva Creek at Grant, CO	06705500	74.6	Temp., S.C., Sed.	1995-97
South Platte River at Littleton, CO	06710000	3,069	Temp. S.C.	1970-86 1984-86
South Platte River at 64th Ave. at Commerce City, CO	06714215	3,884	Temp., pH, D.O.	1987
South Clear Creek above Lower Cabin Creek Reservoir near Georgetown, CO	06714400	--	Temp., S.C., Sed.	1995-97 1995,1997
South Clear Creek above Leavenworth Creek near Georgetown, CO	06714600	16.0	Temp., S.C.	1995-97
Leavenworth Creek at mouth, near Georgetown, CO	06714800	12.0	Sed. Temp., S.C.	1995 1995-97
Clear Creek at Golden, CO	06719505	400	pH, D.O., Sed. Temp., S.C.	1981 1981-95
Ralston Creek near Plainview, CO	06719725	36.9	Temp., S.C., pH, D.O.	1983-84
Schwartzwalder Mine Effluent near Plainview, CO	06719730	--	Temp., S.C., pH, D.O.	1983-84
Ralston Creek below Schwartzwalder Mine, CO	06719735	38.9	Temp., S.C., pH, D.O.	1983-84
Ralston Creek above Ralston Res. near Plainview, CO	06719740	42.7	Temp., S.C., pH, D.O.	1983-84
Cache La Poudre River at Fort Collins	06752260	1,127	Temp., S.C., pH	1987-99
Cache La Poudre River near Greeley, CO	06752500	1,877	Temp., S.C., pH, D.O.	1975
South Platte River near Kersey, CO	06754000	8,598	Temp.	1950-53
Kiowa Creek at Elbert, CO	06758000	28.6	Sed.	1957-68, 1960-62, 1964-65
West Kiowa Creek at Elbert, CO	06758100	35.9	Sed.	1962-65
Kiowa Creek at Kiowa, CO	06758200	111	Sed.	1956-65
South Platte River at Julesburg, CO (Chan. 2)	06763990	--	Temp. S.C.	1967-73 1971-73
North Fork Republican River near Wray, CO	06822000	1,019	Temp., Sed.	1962-63
East Fork Arkansas River at Highway 24 near Leadville, CO	07079300	49.9	Temp., S.C., pH	1990-96
Arkansas River near Leadville, CO	07081200	98.8	Temp., S.C., pH	1990-96
California Gulch at Malta, CO	07081800	8.13	Temp., S.C., pH	1991-92
Halfmoon Creek near Malta, CO	07083000	23.6	Temp.	1967-82
Arkansas River below Empire Gulch, near Malta, CO	07083710	237	Temp., S.C., pH	1990-93
Arkansas River at Buena Vista, CO	07087200	611	Temp., S.C.	1986-93
Arkansas River near Nathrop, CO	07091200	1,060	Temp., S.C., pH	1989-93
Arkansas River at Parkdale, CO	07094500	2,548	Temp., S.C.	1986-93
Fountain Creek near Colorado Springs, CO	07103700	103	Sed.	1995-2003
Cottonwood Creek at Cowpoke Road at Colorado Springs, CO	07103977	5.93	Sed.	1998-2003
Cottonwood Creek Tributary above Rangewood Drive at Colorado Springs, CO	07103985	2.81	Sed.	1998-2003
Monument Creek at Pikeview, CO	07104000	204	Sed.	1995-97
Fountain Creek at Security, CO	07105800	495	Temp., S.C., pH, D.O.	1991-98
Fountain Creek near Pinon, CO	07106300	849	Temp., S.C.	1976-79
Apishapa River at Aguilar, CO	07118500	149	Sed.	1979-81
Apishapa River near Fowler, CO	07119500	1,125	Temp., S.C.	1966-68
Big Arroyo near Thatcher, CO	07120620	15.5	Temp., S.C., Sed.	1983-90 ^a
Arkansas River near La Junta, CO	07122000	--	Temp., S.C.	1966-68
Horse Creek near Las Animas, CO	07123675	1,403	Temp., S.C.	1987-93
Middle Fork Purgatoire River at Stonewall, CO	07124050	52.1	Temp., S.C. Sed.	1978-81 1979-81
Molino Canyon near Weston, CO	07124100	4.23	Sed.	1979-81
Sarcillo Canyon near Segundo, CO	07124120	35.3	Sed.	1980-81

DISCONTINUED SURFACE-WATER-QUALITY STATIONS—Continued

The following stations were discontinued as continuous-record surface-water-quality stations. Daily records of temperature, specific conductance, pH, dissolved oxygen or sediment were collected and published for the period of record shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Type of record	Period of record (water years)
Purgatoire River at Madrid, CO	07124200	550	Temp., S.C. Sed.	1979-81 1978-81
Mulligan Canyon near Boncarbo, CO	07124210	4.53	Sed.	1979-81
Reilly Canyon at Cokedale, CO	07124220	35.1	Sed.	1979-81
Carpitos Canyon near Jansen, CO	07124350	100	Sed.	1979-81
Purgatoire River below Trinidad Lake, CO	07124410	672	Sed.	1977-82
Luning Arroyo Tributary near Model, CO	07126110	--	Temp., S.C.	1984
Van Bremer Arroyo near Thatcher, CO	07126130	80.6	Temp., S.C.	1985
Van Bremer Arroyo near Tyrone, CO	07126140	132	Temp., S.C.	1985-98
Van Bremer Arroyo near Model, CO	07126200	175	Temp., S.C.	1983-98
Purgatoire River near Thatcher, CO	07126300	1,791	Sed. Temp., S.C.	1983-92 1983-98
Burke Arroyo Tributary near Thatcher, CO	07126320	4.66	Temp., S.C. Sed.	1983-86 1984-86
Taylor Arroyo below Rock Crossing near Thatcher, CO	07126325	48.4	Temp., S.C.	1983-98
Lockwood Canyon Creek near Thatcher, CO	07126390	41.4	Temp., S.C., Sed.	1989-92
Red Rock Canyon Creek at Mouth, near Thatcher, CO	07126415	48.8	Temp., S.C.	1983-90 ^a
Chacuaco Creek at Mouth near Timpas, CO	07126470	424	Temp., S.C., Sed.	1983-92
Bent Canyon Creek at Mouth near Timpas, CO	07126480	56.2	Temp., S.C.	1983-90 ^a
Purgatoire River at Rock Crossing near Timpas, CO	07126485	2,635	Temp., S.C., Sed.	1983-92
Purgatoire River at Highland Dam near Las Animas, CO	07128000	3,376	S.C.	1967-68
Purgatoire River near Las Animas, CO	07128500	3,318	Temp., S.C.	1986-96
Willow Creek at Creede, CO	08216500	35.3	Temp., S.C.	1976-77
Rio Grande at Wagonwheel Gap, CO	08217500	780	Temp., S.C.	1976-77
San Luis Creek near Poncha Pass, CO	08224110	6.57	Sed.	1981-83
San Luis Creek above Villa Grove, CO	08224113	11.2	Sed.	1981-83
Alamosa River above Wightman Fork near Jasper, CO	08235250	37.8	Temp., S.C., pH	1995-97,99
Wightman Fork at mouth near Jasper, CO	08235290	16.1	Temp., S.C., pH	1995-97,99
Alamosa River above Terrace Reservoir, CO	08236000	106	Temp., S.C., pH	1994-97
Alamosa River below Terrace Reservoir, CO	08236500	116	Temp., S.C., pH	1995-97,99
Rio Grande above Culebra Creek near Lobatos, CO	08249200	--	Temp., S.C.	1964-66

Type of record: Temp. (temperature), S.C. (specific conductance), pH (pH), D.O. (dissolved oxygen), Sed. (sediment).

^a Converted to a crest-stage partial-record station.

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The USGS publishes a series of manuals, the Techniques of Water-Resources Investigations, describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, section A of book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

Reports in the Techniques of Water-Resources Investigations series, which are listed below, are online at <http://water.usgs.gov/pubs/twri/>. Printed copies are for sale by the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office), telephone 1-888-ASK-USGS. Please telephone 1-888-ASK-USGS for current prices, and refer to the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Products can then be ordered by telephone, or online at <http://www.usgs.gov/sales.html>, or by FAX to (303)236-469 of an order form available online at <http://mac.usgs.gov/isb/pubs/forms/>. Prepayment by major credit card or by a check or money order payable to the "U.S. Geological Survey" is required.

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

- 1-D1. *Water temperature—Influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS-TWRI book 1, chap. D1. 1975. 65 p.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS-TWRI book 1, chap. D2. 1976. 24 p.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS-TWRI book 2, chap. D1. 1974. 116 p.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS-TWRI book 2, chap. D2. 1988. 86 p.

Section E. Subsurface Geophysical Methods

- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS-TWRI book 2, chap. E1. 1971. 126 p.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS-TWRI book 2, chap. E2. 1990. 150 p.

Section F. Drilling and Sampling Methods

- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS-TWRI book 2, chap. F1. 1989. 97 p.

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS-TWRI book 3, chap. A1. 1967. 30 p.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS-TWRI book 3, chap. A2. 1967. 12 p.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS-TWRI book 3, chap. A3. 1968. 60 p.

- 3–A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS-TWRI book 3, chap. A4. 1967. 44 p.
- 3–A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS-TWRI book 3, chap. A5. 1967. 29 p.
- 3–A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS-TWRI book 3, chap. A6. 1968. 13 p.
- 3–A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A7. 1968. 28 p.
- 3–A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI book 3, chap. A8. 1969. 65 p.
- 3–A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS-TWRI book 3, chap. A9. 1989. 27 p.
- 3–A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A10. 1984. 59 p.
- 3–A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 3, chap. A11. 1969. 22 p.
- 3–A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS-TWRI book 3, chap. A12. 1986. 34 p.
- 3–A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS-TWRI book 3, chap. A13. 1983. 53 p.
- 3–A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS-TWRI book 3, chap. A14. 1983. 46 p.
- 3–A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI book 3, chap. A15. 1984. 48 p.
- 3–A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS-TWRI book 3, chap. A16. 1985. 52 p.
- 3–A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS-TWRI book 3, chap. A17. 1985. 38 p.
- 3–A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS-TWRI book 3, chap. A18. 1989. 52 p.
- 3–A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A19. 1990. 31 p.
- 3–A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS-TWRI book 3, chap. A20. 1993. 38 p.
- 3–A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS-TWRI book 3, chap. A21. 1995. 56 p.

Section B. Ground-Water Techniques

- 3–B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS-TWRI book 3, chap. B1. 1971. 26 p.
- 3–B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G.D. Bennett: USGS-TWRI book 3, chap. B2. 1976. 172 p.
- 3–B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS-TWRI book 3, chap. B3. 1980. 106 p.
- 3–B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS-TWRI book 3, chap. B4. 1990. 232 p.
- 3–B4. *Supplement 1. Regression modeling of ground-water flow—Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS-TWRI book 3, chap. B4. 1993. 8 p.

- 3–B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS–TWRI book 3, chap. B5. 1987. 15 p.
- 3–B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS–TWRI book 3, chap. B6. 1987. 28 p.
- 3–B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS–TWRI book 3, chap. B7. 1992. 190 p.
- 3–B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

Section C. Sedimentation and Erosion Techniques

- 3–C1. *Fluvial sediment concepts*, by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.
- 3–C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.
- 3–C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

- 4–A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.
- 4–A2. *Frequency curves*, by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.
- 4–A3. *Statistical methods in water resources*, by D.R. Helsel and R.M. Hirsch: USGS–TWRI book 4, chap. A3. 1991. Available only online at <http://water.usgs.gov/pubs/twri/twri4a3/>. (Accessed August 30, 2002.)

Section B. Surface Water

- 4–B1. *Low-flow investigations*, by H.C. Riggs: USGS–TWRI book 4, chap. B1. 1972. 18 p.
- 4–B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS–TWRI book 4, chap. B2. 1973. 20 p.
- 4–B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS–TWRI book 4, chap. B3. 1973. 15 p.

Section D. Interrelated Phases of the Hydrologic Cycle

- 4–D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

Book 5. Laboratory Analysis

Section A. Water Analysis

- 5–A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.
- 5–A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 p.
- 5–A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.
- 5–A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.

- 5–A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 p.
- 5–A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

Section C. Sediment Analysis

- 5–C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

Book 6. Modeling Techniques

Section A. Ground Water

- 6–A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 p.
- 6–A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 p.
- 6–A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 p.
- 6–A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 p.
- 6–A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS–TWRI book 6, chap. A5. 1993. 243 p.
- 6–A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A6. 1996. 125 p.
- 6–A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS–TWRI book 6, chap. A7. 2002. 77 p.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

- 7–C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI book 7, chap. C1. 1976. 116 p.
- 7–C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI book 7, chap. C2. 1978. 90 p.
- 7–C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

- 8–A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 p.
- 8–A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

Section B. Instruments for Measurement of Discharge

- 8–B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 p.

Book 9. Handbooks for Water-Resources Investigations**Section A. National Field Manual for the Collection of Water-Quality Data**

- 9–A1. *National field manual for the collection of water-quality data: Preparations for water sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.
- 9–A2. *National field manual for the collection of water-quality data: Selection of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.
- 9–A3. *National field manual for the collection of water-quality data: Cleaning of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.
- 9–A4. *National field manual for the collection of water-quality data: Collection of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.
- 9–A5. *National field manual for the collection of water-quality data: Processing of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.
- 9–A6. *National field manual for the collection of water-quality data: Field measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.
- 9–A7. *National field manual for the collection of water-quality data: Biological indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9–A8. *National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.
- 9–A9. *National field manual for the collection of water-quality data: Safety in field activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.

PLATTE RIVER BASIN

06614800 MICHIGAN RIVER NEAR CAMERON PASS, CO

LOCATION.--Lat 40°29'46", long 105°51'52", in S¹/₂ sec.12, T.6 N., R.76 W., (unsurveyed), Jackson County, Hydrologic Unit 10180001, on right bank 500 ft upstream from Michigan ditch, 2.2 mi southeast of Cameron Pass, 8 mi east of Gould, and 27 mi southeast of Walden.

DRAINAGE AREA.--1.53 mi².

PERIOD OF RECORD.--October 1973 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06614800

GAGE.--Water-stage recorder. Elevation of gage is 10,390 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. 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	0.70	e0.49	e0.43	e0.28	e0.29	0.42	0.42	0.52	e33	14	2.3	1.5
2	0.76	e0.49	e0.43	e0.28	e0.29	0.43	0.42	0.49	e28	14	2.1	1.4
3	0.79	e0.49	e0.42	e0.28	e0.29	0.47	0.39	0.48	e22	13	2.3	1.3
4	0.91	e0.49	e0.41	e0.28	e0.29	0.48	0.39	0.48	17	12	2.7	1.3
5	0.87	e0.49	e0.41	e0.28	e0.29	e0.47	0.39	0.45	13	12	2.3	1.2
6	0.80	e0.49	e0.40	e0.28	e0.30	e0.47	0.38	0.45	10	11	2.0	1.2
7	0.85	e0.49	e0.39	e0.27	e0.30	e0.47	0.36	0.45	7.7	10	1.9	1.3
8	0.84	e0.49	e0.38	e0.27	e0.30	e0.47	0.36	0.44	6.9	9.7	1.8	1.3
9	0.81	e0.49	e0.38	e0.27	e0.30	e0.47	0.36	0.42	7.9	9.5	1.8	1.2
10	0.77	e0.49	e0.37	e0.27	e0.30	0.48	0.37	0.42	13	8.9	1.7	1.3
11	0.72	e0.49	e0.37	e0.27	e0.30	0.48	0.36	0.42	19	8.4	1.6	1.4
12	0.61	e0.49	e0.36	e0.27	e0.30	0.47	0.36	0.42	15	7.8	1.5	1.3
13	0.63	e0.49	e0.35	e0.27	e0.31	0.45	0.37	0.45	15	7.6	1.5	1.3
14	0.57	e0.49	e0.35	e0.27	e0.31	0.45	0.50	e0.57	22	7.2	1.4	1.2
15	0.54	e0.49	e0.34	e0.28	e0.31	0.42	0.50	e2.7	23	6.8	1.3	1.2
16	0.53	e0.49	e0.33	e0.28	e0.32	0.42	0.49	e3.8	20	6.3	1.4	1.1
17	0.53	e0.49	e0.33	e0.28	e0.32	0.41	0.48	e5.6	21	6.6	3.0	1.0
18	0.52	e0.49	e0.33	e0.28	e0.33	0.40	0.45	e9.3	27	6.6	3.2	1.1
19	0.51	e0.50	e0.32	e0.28	e0.34	0.44	0.45	e7.0	27	5.9	2.5	1.2
20	0.49	e0.49	e0.32	e0.28	e0.34	0.45	0.45	e8.7	24	5.8	2.1	1.1
21	0.49	e0.49	e0.31	e0.28	e0.35	0.45	0.45	e8.3	23	5.1	1.8	1.1
22	0.49	e0.49	e0.31	e0.28	e0.36	0.45	0.42	e9.1	22	4.5	1.8	1.0
23	0.48	e0.48	e0.31	e0.28	e0.37	0.43	0.42	e9.7	23	4.3	2.0	0.99
24	0.48	e0.47	e0.30	e0.28	e0.37	0.42	0.45	e11	20	3.8	1.9	0.97
25	0.48	e0.47	e0.30	e0.28	e0.40	0.42	0.48	e12	16	3.6	1.7	0.95
26	0.48	e0.46	e0.29	e0.28	0.44	0.42	0.52	e13	13	3.5	1.7	0.92
27	0.48	e0.46	e0.29	e0.28	0.44	0.42	0.56	e17	14	3.3	1.6	0.89
28	0.48	e0.45	e0.29	e0.29	0.42	0.42	0.56	e24	15	3.1	1.5	0.86
29	0.48	e0.45	e0.29	e0.29	---	0.42	0.55	e23	15	3.1	1.5	0.82
30	0.48	e0.44	e0.29	e0.29	---	0.42	0.53	e21	15	2.8	1.6	0.76
31	e0.48	---	e0.28	e0.29	---	0.42	---	e30	---	2.5	1.8	---
TOTAL	19.05	14.47	10.68	8.64	9.28	13.71	13.19	221.66	547.5	222.7	59.3	34.16
MEAN	0.61	0.48	0.34	0.28	0.33	0.44	0.44	7.15	18.2	7.18	1.91	1.14
MAX	0.91	0.50	0.43	0.29	0.44	0.48	0.56	30	33	14	3.2	1.5
MIN	0.48	0.44	0.28	0.27	0.29	0.40	0.36	0.42	6.9	2.5	1.3	0.76
AC-FT	38	29	21	17	18	27	26	440	1,090	442	118	68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)

MEAN	0.91	0.56	0.42	0.35	0.32	0.33	0.41	4.09	16.3	8.64	2.68	1.42
MAX	2.25	1.11	0.88	0.57	0.55	0.86	0.80	9.50	27.1	24.8	6.83	4.82
(WY)	(1998)	(1996)	(1996)	(1988)	(1986)	(1986)	(1994)	(1974)	(1990)	(1995)	(1983)	(1997)
MIN	0.32	0.20	0.25	0.17	0.16	0.17	0.22	0.70	9.69	1.56	0.79	0.49
(WY)	(1980)	(1979)	(1979)	(1991)	(1977)	(1974)	(1982)	(1995)	(2002)	(2002)	(2002)	(1988)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1974 - 2003

ANNUAL TOTAL	580.04	1,174.34	
ANNUAL MEAN	1.59	3.22	3.04
HIGHEST ANNUAL MEAN			4.61 1983
LOWEST ANNUAL MEAN			1.59 2002
HIGHEST DAILY MEAN	e21 May 31	e33 Jun 1	69 Jul 14, 1995
LOWEST DAILY MEAN	0.17 Mar 28	e0.27 Jan 7	0.08 Nov 16, 1989
ANNUAL SEVEN-DAY MINIMUM	0.18 Mar 25	e0.27 Jan 7	0.14 Jan 9, 1979
MAXIMUM PEAK FLOW		unknown	a,b115 Jul 12, 1995
MAXIMUM PEAK STAGE		unknown	b,c3.69 Jul 12, 1995
ANNUAL RUNOFF (AC-FT)	1,150	2,330	2,200
10 PERCENT EXCEEDS	3.9	12	9.6
50 PERCENT EXCEEDS	0.49	0.49	0.60
90 PERCENT EXCEEDS	0.20	0.29	0.26

e Estimated.

a From rating curve extended above 82 ft³/s.

b Also occurred Jul 13, 1995.

c Maximum gage height, 3.70 ft, Jun 20, 1997.

06618300 ILLINOIS RIVER BELOW ISH BALDWIN DITCH NEAR WALDEN, CO

LOCATION.--Lat 40°34'32", long 106°14'28", in NW¹/₄SE¹/₄ sec.15, T.7 N., R.79 W., Jackson County, Hydrologic Unit 10180001, on right bank, 200 ft below Ish Baldwin Ditch diversion and 9.7 mi north-northwest of Rand, and 1 mi south-southeast of Walden.

DRAINAGE AREA.--181 mi².

PERIOD OF RECORD.--April 2002 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=06618300

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8295 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream is affected by numerous upstream diversions and return flow.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 500 ft³/s, June 2, 2003, gage height 7.21 ft; no flow many days.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 500 ft³/s, June 2, gage height, 7.21 ft; no flow many days.

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	---	---	---	---	---	---	e4.3	19	430	1.5	3.6	5.5
2	---	---	---	---	---	---	e4.5	7.4	482	0.63	2.5	5.2
3	---	---	---	---	---	---	e4.9	4.6	398	0.18	1.9	3.8
4	---	---	---	---	---	---	e5.1	7.8	271	0.01	1.8	2.5
5	---	---	---	---	---	---	e5.5	18	175	0.00	5.2	1.6
6	---	---	---	---	---	---	e5.3	10	117	0.00	3.2	1.5
7	---	---	---	---	---	---	e6.7	2.7	110	0.00	2.2	2.1
8	---	---	---	---	---	---	e7.8	1.2	113	0.00	1.5	3.9
9	---	---	---	---	---	---	e12	0.88	73	0.00	1.5	4.7
10	---	---	---	---	---	---	e12	1.5	55	0.00	1.8	4.7
11	---	---	---	---	---	---	e12	3.7	62	0.00	1.4	3.9
12	---	---	---	---	---	---	e14	5.4	64	0.00	0.70	4.3
13	---	---	---	---	---	---	e20	2.2	59	0.00	0.01	4.6
14	---	---	---	---	---	---	e36	1.0	100	0.00	0.00	4.3
15	---	---	---	---	---	---	e64	0.71	79	0.00	0.00	3.4
16	---	---	---	---	---	---	e52	3.2	57	0.00	0.00	2.7
17	---	---	---	---	---	---	e44	11	55	0.00	0.00	2.4
18	---	---	---	---	---	---	37	25	55	0.00	8.3	1.8
19	---	---	---	---	---	---	16	66	47	0.00	16	1.8
20	---	---	---	---	---	---	11	72	48	1.8	11	2.0
21	---	---	---	---	---	---	8.4	74	52	4.7	5.8	2.4
22	---	---	---	---	---	---	12	81	41	2.9	3.6	2.1
23	---	---	---	---	---	---	18	96	34	1.3	3.6	1.8
24	---	---	---	---	---	---	9.8	116	27	9.4	4.8	1.8
25	---	---	---	---	---	---	8.5	180	26	9.8	4.0	1.8
26	---	---	---	---	---	---	59	241	25	8.6	5.1	3.3
27	---	---	---	---	---	---	96	234	20	8.8	4.9	2.3
28	---	---	---	---	---	---	81	233	15	8.5	4.0	1.9
29	---	---	---	---	---	---	56	347	6.8	7.3	3.4	1.9
30	---	---	---	---	---	---	37	417	3.3	7.3	2.8	1.9
31	---	---	---	---	---	---	---	459	---	5.2	2.9	---
TOTAL	---	---	---	---	---	---	759.8	2,741.29	3,100.1	77.92	107.51	87.9
MEAN	---	---	---	---	---	---	25.3	88.4	103	2.51	3.47	2.93
MAX	---	---	---	---	---	---	96	459	482	9.8	16	5.5
MIN	---	---	---	---	---	---	4.3	0.71	3.3	0.00	0.00	1.5
AC-FT	---	---	---	---	---	---	1,510	5,440	6,150	155	213	174

e Estimated.

06618480 ILLINOIS RIVER BELOW POTTER CREEK NEAR WALDEN, CO

LOCATION.--Lat 40°42'31", long 106°16'47", in SW¹/₄NW¹/₄ sec.32, T.9 N., R.79 W., Jackson County, Hydrologic Unit 10180001, on left bank 500 ft downstream from Potter Creek, and 1.5 mi south of Walden.

DRAINAGE AREA.--257 mi², of which about 0.33 mi² is probably non-contributing.

PERIOD OF RECORD.--August 2001 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=06618480

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,070 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream is affected by numerous diversions and return flow.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 423 ft³/s, June 3, 2003, gage height, 7.63 ft; no flow many days.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 423 ft³/s, June 3, gage height, 7.63 ft; no flow many days.

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	---	---	---	---	---	---	e4.9	42	385	18	0.00	0.00
2	---	---	---	---	---	---	e5.2	30	400	13	0.00	0.00
3	---	---	---	---	---	---	e5.4	23	414	9.7	0.00	0.00
4	---	---	---	---	---	---	e5.8	16	404	7.3	0.00	0.00
5	---	---	---	---	---	---	e5.7	13	357	5.3	0.00	0.00
6	---	---	---	---	---	---	e5.9	16	287	3.8	0.00	0.00
7	---	---	---	---	---	---	e6.0	17	229	2.9	0.00	0.00
8	---	---	---	---	---	---	e6.6	12	204	2.4	0.00	0.00
9	---	---	---	---	---	---	e7.3	9.4	182	2.3	0.00	0.00
10	---	---	---	---	---	---	9.4	9.4	130	2.1	0.00	0.00
11	---	---	---	---	---	---	9.0	10	109	2.1	0.00	0.00
12	---	---	---	---	---	---	9.6	14	105	1.8	0.00	0.00
13	---	---	---	---	---	---	11	15	106	0.86	0.00	0.00
14	---	---	---	---	---	---	15	14	105	0.43	0.00	0.00
15	---	---	---	---	---	---	38	11	132	0.67	0.00	0.00
16	---	---	---	---	---	---	50	8.8	135	0.34	0.00	0.00
17	---	---	---	---	---	---	41	6.8	104	0.28	0.00	0.00
18	---	---	---	---	---	---	37	5.9	102	0.46	0.00	0.00
19	---	---	---	---	---	---	36	18	108	1.3	0.00	0.00
20	---	---	---	---	---	---	27	45	99	2.2	0.00	0.00
21	---	---	---	---	---	---	19	53	93	0.80	0.00	0.00
22	---	---	---	---	---	---	16	59	93	0.34	0.00	0.00
23	---	---	---	---	---	---	18	68	78	0.53	0.00	0.00
24	---	---	---	---	---	---	25	73	58	0.24	0.00	0.00
25	---	---	---	---	---	---	25	94	51	0.00	0.00	0.00
26	---	---	---	---	---	---	29	148	47	0.00	0.00	0.00
27	---	---	---	---	---	---	59	215	44	0.00	0.00	0.00
28	---	---	---	---	---	---	88	241	38	0.00	0.00	0.00
29	---	---	---	---	---	---	72	243	31	0.00	0.00	0.00
30	---	---	---	---	---	---	54	283	24	0.00	0.00	0.00
31	---	---	---	---	---	---	---	335	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	740.8	2,148.3	4,654	79.15	0.00	0.00
MEAN	---	---	---	---	---	---	24.7	69.3	155	2.55	0.000	0.000
MAX	---	---	---	---	---	---	88	335	414	18	0.00	0.00
MIN	---	---	---	---	---	---	4.9	5.9	24	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	1,470	4,260	9,230	157	0.00	0.00

e Estimated.

06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO

LOCATION.--Lat 40°56'15", long 106°20'16", in NE¹/₄ SW¹/₄ SE¹/₄ sec.11, T.11 N., R.80 W., Jackson County, Hydrologic Unit 10180001, on right bank 1,000 ft downstream from bridge on State Highway 125, 0.7 mi upstream from Camp Creek, 4.2 mi northwest of Northgate, and 4.4 mi south of Colorado-Wyoming State line.

DRAINAGE AREA.--1,431 mi².

PERIOD OF RECORD.--May to November 1904 (published as "near Pinkhampton"), May 1915 to current year. Monthly discharge only for some periods, published in WSP 1310. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/wy/nwis/inventory/?site_no=06620000

REVISED RECORDS.--WSP 1310: 1916-21, 1929(M), 1930-32. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,810.39 ft above NGVD of 1929. See WSP 1730 for history of changes prior to April 8, 1918. April 8, 1918, to August 21, 1961, water-stage recorder at site 0.7 mi downstream at datum 3.36 ft lower. August 22, 1961, to September 18, 1984, at site 650 ft upstream at same datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 130,000 acres of hay meadows upstream from station. Transbasin diversions upstream from station to Cache la Poudre River 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	34	e51	e101	e57	e63	e67	e306	426	2,590	526	245	97
2	36	e51	e101	e54	e63	e68	e397	370	3,130	475	210	98
3	44	e49	e100	e57	e61	e71	e456	301	3,300	435	188	92
4	64	e52	e98	e57	e60	e73	396	249	2,800	408	176	93
5	70	e55	e95	e56	e53	e72	350	239	2,340	360	180	95
6	59	e64	e93	e54	e48	e78	319	254	1,900	314	172	85
7	57	e74	e91	e54	e45	e79	274	247	1,770	301	146	96
8	53	e75	e87	e56	e48	e85	237	227	1,620	305	129	109
9	52	e70	e84	e51	e54	e91	241	227	1,360	281	128	107
10	50	e68	e84	e45	e60	e105	294	266	1,240	262	131	109
11	56	e65	e89	e44	e63	e105	393	302	1,570	297	114	105
12	53	e62	e86	e45	e67	e120	484	326	2,000	294	107	100
13	50	e71	e89	e46	e70	e141	510	291	2,150	293	113	92
14	49	e69	e91	e49	e70	e183	526	247	1,840	265	110	86
15	49	e66	e94	e49	e68	e205	590	229	1,570	255	99	81
16	48	e67	e89	e49	e67	e219	561	263	1,520	249	88	77
17	48	e77	e86	e47	e67	e212	487	332	1,480	266	103	72
18	47	e84	e85	e47	e66	e202	419	411	1,380	272	155	67
19	47	e87	e77	e52	e66	e198	360	548	1,350	343	188	66
20	45	e98	e68	e55	e67	e195	297	601	1,610	389	185	69
21	47	e101	e67	e53	e69	e205	261	526	1,640	359	131	70
22	47	e104	e64	e50	e67	e232	244	489	1,410	317	112	69
23	50	e106	e57	e51	e63	e290	291	498	1,180	281	107	66
24	53	e101	e57	e54	e61	e266	323	531	1,030	295	101	64
25	56	e98	e53	e53	e62	e275	338	667	1,030	280	117	62
26	57	e96	e52	e55	e64	e295	367	943	1,030	257	117	59
27	60	e90	e52	e60	e67	e280	410	1,120	873	252	117	52
28	61	e98	e54	e57	e66	e228	516	1,250	700	315	102	50
29	61	e102	e57	e55	---	e191	502	1,470	596	279	97	51
30	50	e101	e58	e56	---	e198	455	1,770	556	271	90	53
31	e49	---	e56	e60	---	e220	---	2,090	---	280	90	---
TOTAL	1,602	2,352	2,415	1,628	1,745	5,249	11,604	17,710	48,565	9,776	4,148	2,392
MEAN	51.7	78.4	77.9	52.5	62.3	169	387	571	1,619	315	134	79.7
MAX	70	106	101	60	70	295	590	2,090	3,300	526	245	109
MIN	34	49	52	44	45	67	237	227	556	249	88	50
AC-FT	3,180	4,670	4,790	3,230	3,460	10,410	23,020	35,130	96,330	19,390	8,230	4,740

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2003, BY WATER YEAR (WY)

MEAN	159	151	104	83.5	88.9	176	743	1,121	1,459	627	261	147
MAX	538	366	215	177	199	722	2,444	3,649	3,296	2,367	763	712
(WY)	(1962)	(1962)	(1998)	(1984)	(1986)	(1986)	(1962)	(1984)	(1983)	(1957)	(1983)	(1997)
MIN	31.7	54.2	33.9	27.5	35.7	47.8	131	96.1	89.4	26.7	33.3	23.8
(WY)	(1935)	(1935)	(1977)	(1977)	(1933)	(1964)	(1981)	(2002)	(1934)	(1934)	(2002)	(1934)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 CALENDAR YEAR	WATER YEARS 1904 - 2003			
ANNUAL TOTAL	32,273	109,186	--			
ANNUAL MEAN	88.4	299	428			
HIGHEST ANNUAL MEAN	--	--	878	1917		
LOWEST ANNUAL MEAN	--	--	91.5	2002		
HIGHEST DAILY MEAN	e526	Apr 5	3,300	Jun 3	6,450	Jun 10, 1923
LOWEST DAILY MEAN	15	Sep 6, 7	34	Oct 1	15	Sep 6, 7, 2002
ANNUAL SEVEN-DAY MINIMUM	16	Sep 2	47	Jan 10	16	Sep 2, 2002
MAXIMUM PEAK FLOW	--	--	3,410	Jun 3	a6,720	Jun 11, 1923
MAXIMUM PEAK STAGE	--	--	5.91	Jun 3	b9.65	Apr 25, 1980
ANNUAL RUNOFF (AC-FT)	64,010	216,600	310,000			
10 PERCENT EXCEEDS	159	598	1,200			
50 PERCENT EXCEEDS	72	100	160			
90 PERCENT EXCEEDS	33	51	68			

e Estimated.

a Gage height, 6.34 ft, site and datum then in use.

b Backwater from ice, site and datum then in use.

06693800 MOSQUITO CREEK NEAR ALMA, CO

LOCATION.--Lat 39°16'12", long 106°03'02", in SE¼NE¼ sec.13, T.9 S., R.78 W., Park County, Hydrologic Unit 10190001, on left bank 0.1 mi upstream from confluence with Middle Fork South Platte River, and 1.2 mi south of Alma.

DRAINAGE AREA.--16.2 mi².

PERIOD OF RECORD.--October 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=06693800

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 10,220 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 minor diversions for irrigation, and return flow from irrigated areas. 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	7.0	e6.7	e4.4	e3.3	e3.3	e3.4	e4.9	7.8	114	46	18	16
2	7.8	e6.4	e4.3	e3.3	e3.3	e3.5	e5.1	6.3	87	46	16	15
3	8.4	e6.4	e4.2	e3.3	e3.3	e3.6	e5.2	6.3	78	45	17	15
4	7.2	e6.3	e4.1	e3.3	e3.3	e3.6	e5.2	6.5	71	45	20	14
5	7.5	e6.3	e3.9	e3.3	e3.3	e3.6	e5.2	5.9	65	43	16	13
6	7.2	e6.2	e3.9	e3.3	e3.3	e3.6	e5.2	5.9	53	40	16	17
7	7.3	e6.1	e3.7	e3.3	e3.3	e3.6	e5.2	6.1	49	36	15	23
8	7.1	e6.0	e3.6	e3.3	e3.3	e3.7	e5.7	6.3	44	35	15	21
9	6.7	e5.9	e3.6	e3.3	e3.3	e3.7	e6.0	6.9	51	34	14	26
10	6.5	e5.7	e3.5	e3.2	e3.3	e3.7	e6.3	7.4	64	32	14	26
11	6.6	e5.7	e3.4	e3.2	e3.3	e3.8	e6.7	6.8	68	30	14	24
12	6.3	e5.7	e3.4	e3.2	e3.3	e3.8	e7.2	8.0	67	29	13	22
13	6.4	e5.6	e3.4	e3.2	e3.3	e3.9	e7.8	9.7	63	28	14	21
14	6.1	e5.6	e3.4	e3.2	e3.2	e3.9	e9.3	11	56	27	16	20
15	6.5	e5.4	e3.2	e3.2	e3.2	e4.0	e10	15	62	26	13	18
16	6.4	e5.2	e3.2	e3.2	e3.3	e4.0	11	16	60	27	13	17
17	6.4	e5.1	e3.2	e3.2	e3.3	e4.0	9.7	21	53	28	15	16
18	6.4	e5.0	e3.3	e3.2	e3.3	e4.0	13	25	57	27	16	15
19	6.5	e4.9	e3.3	e3.2	e3.3	e4.0	12	23	64	27	16	14
20	6.3	e4.9	e3.3	e3.2	e3.3	e3.9	11	25	59	27	13	14
21	6.5	e4.8	e3.2	e3.2	e3.3	e3.8	10	29	54	26	12	13
22	6.3	e4.8	e3.2	e3.2	e3.3	e3.8	11	38	54	25	12	12
23	6.6	e4.8	e3.2	e3.2	e3.3	e3.8	16	52	55	24	12	11
24	6.4	e4.8	e3.2	e3.3	e3.3	e3.8	11	61	53	23	15	11
25	6.3	e4.6	e3.2	e3.3	e3.3	e3.9	12	68	49	21	20	10
26	7.1	e4.6	e3.2	e3.3	e3.3	e3.9	9.5	71	45	21	19	9.9
27	6.4	e4.5	e3.2	e3.3	e3.4	e3.9	10	89	45	23	16	9.6
28	7.2	e4.5	e3.2	e3.4	e3.4	e4.0	8.3	108	47	25	15	9.4
29	6.5	e4.5	e3.2	e3.3	---	e4.2	8.8	118	47	22	14	9.3
30	7.6	e4.5	e3.2	e3.3	---	e4.5	8.7	118	47	20	17	9.0
31	7.2	---	e3.2	e3.3	---	e4.8	---	111	---	19	19	---
TOTAL	210.7	161.5	107.5	101.0	92.4	119.7	257.0	1,088.9	1,781	927	475	471.2
MEAN	6.80	5.38	3.47	3.26	3.30	3.86	8.57	35.1	59.4	29.9	15.3	15.7
MAX	8.4	6.7	4.4	3.4	3.4	4.8	16	118	114	46	20	26
MIN	6.1	4.5	3.2	3.2	3.2	3.4	4.9	5.9	44	19	12	9.0
AC-FT	418	320	213	200	183	237	510	2,160	3,530	1,840	942	935

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

	1999	2000	2001	2002	2003
MEAN	8.86	6.85	4.44	3.75	3.69
MAX	10.0	7.63	5.75	5.03	4.45
(WY)	(2000)	(2000)	(2000)	(2000)	(1999)
MIN	6.80	5.38	3.47	3.09	2.98
(WY)	(2003)	(2003)	(2003)	(2002)	(2002)

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1999 - 2003

	2002 CALENDAR YEAR	2003 WATER YEAR	1999 - 2003
ANNUAL TOTAL	2,449.5	5,792.9	
ANNUAL MEAN	6.71	15.9	17.0
HIGHEST ANNUAL MEAN			25.3
LOWEST ANNUAL MEAN			6.99
HIGHEST DAILY MEAN	29	May 31	161
LOWEST DAILY MEAN	e2.9	Feb 8	e2.9
ANNUAL SEVEN-DAY MINIMUM	e2.9	Feb 8	e2.9
MAXIMUM PEAK FLOW		155	217
MAXIMUM PEAK STAGE		5.97	6.34
ANNUAL RUNOFF (AC-FT)	4,860	11,490	12,320
10 PERCENT EXCEEDS	14	46	49
50 PERCENT EXCEEDS	5.0	6.5	7.2
90 PERCENT EXCEEDS	3.1	3.3	3.5

e Estimated.

06696980 TARRYALL CREEK AT UPPER STATION, NEAR COMO, CO

LOCATION.--Lat 39°20'22", long 105°54'40", in NE¹/₄SW¹/₄ sec.20, T.8 S., R.76 W., Park County, Hydrologic Unit 10190001, on left bank 200 ft upstream from culvert on country road 33, and 1.8 mi northwest of Como.

DRAINAGE AREA.--23.7 mi².

PERIOD OF RECORD.--June 1978 to September 1986. May 2002 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=06696980

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,935 ft above NGVD of 1929, from topographic map. Prior to July 15, 1980, at site 250 ft downstream at different datum. July 15, 1980 to Sept. 30, 1986 at current site, different datum.

REMARKS.--No estimated daily discharges. Records good. 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 RECORD.--Maximum discharge, not determined; maximum daily, 170 ft³/s, June 12, 1980; maximum gage height, 5.39 ft, June 1, 2003; minimum daily, 1.5 ft³/s, Apr. 5, 1981.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 129 ft³/s, June 1, gage height, 5.39 ft; minimum daily, 3.7 ft³/s, Apr. 1-8.

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	4.1	---	---	---	---	---	3.7	8.8	112	35	13	13
2	5.2	---	---	---	---	---	3.7	9.1	91	34	12	12
3	5.8	---	---	---	---	---	3.7	9.3	87	33	13	12
4	5.2	---	---	---	---	---	3.7	9.6	81	32	13	12
5	5.1	---	---	---	---	---	3.7	8.3	78	30	12	11
6	4.9	---	---	---	---	---	3.7	8.2	68	30	12	13
7	4.9	---	---	---	---	---	3.7	8.4	68	29	11	13
8	4.8	---	---	---	---	---	3.7	8.5	59	27	11	12
9	4.6	---	---	---	---	---	3.8	8.5	55	26	10	13
10	4.5	---	---	---	---	---	4.1	8.6	55	25	10	12
11	4.4	---	---	---	---	---	4.3	8.4	56	24	11	12
12	4.3	---	---	---	---	---	4.2	9.3	58	23	11	11
13	4.2	---	---	---	---	---	5.2	11	58	22	11	12
14	4.1	---	---	---	---	---	5.6	13	54	20	9.6	12
15	4.1	---	---	---	---	---	4.9	15	54	20	9.1	11
16	4.1	---	---	---	---	---	4.9	18	53	19	9.2	11
17	4.0	---	---	---	---	---	5.1	22	52	19	9.7	10
18	3.9	---	---	---	---	---	5.2	25	53	19	9.5	9.9
19	3.9	---	---	---	---	---	5.0	28	54	20	9.1	9.7
20	3.9	---	---	---	---	---	5.0	29	54	20	8.2	9.2
21	3.9	---	---	---	---	---	5.3	30	51	19	7.7	9.0
22	3.9	---	---	---	---	---	5.3	38	48	18	8.3	8.6
23	4.3	---	---	---	---	---	5.0	45	47	17	9.9	8.4
24	4.2	---	---	---	---	---	5.2	54	46	16	10	8.3
25	4.0	---	---	---	---	---	6.2	54	44	17	12	8.2
26	4.0	---	---	---	---	---	7.3	55	42	16	11	7.8
27	4.3	---	---	---	---	---	7.8	62	40	16	9.8	7.6
28	4.1	---	---	---	---	---	8.1	66	38	16	9.2	7.5
29	4.0	---	---	---	---	---	8.6	81	37	15	10	7.4
30	3.9	---	---	---	---	---	9.1	111	36	14	19	7.2
31	4.1	---	---	---	---	---	---	112	---	14	15	---
TOTAL	134.7	---	---	---	---	---	154.8	974.0	1,729	685	336.3	310.8
MEAN	4.35	---	---	---	---	---	5.16	31.4	57.6	22.1	10.8	10.4
MAX	5.8	---	---	---	---	---	9.1	112	112	35	19	13
MIN	3.9	---	---	---	---	---	3.7	8.2	36	14	7.7	7.2
AC-FT	267	---	---	---	---	---	307	1,930	3,430	1,360	667	616

0670000 SOUTH PLATTE RIVER ABOVE CHEESMAN LAKE, CO

LOCATION.--Lat 39°09'46", long 105°18'35", in T.10 S., R.71 W., Douglas County, Hydrologic Unit 10190002, on right bank about 200 ft upstream from high water mark of Cheesman Lake, and 8.0 mi south-southwest of Deckers.

DRAINAGE AREA.--1628 mi², of which 11.9 mi² is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1899 to December 1901, October 1924 to September 1943 (no winter records in water years 1931-33, 1935-39, 1942-43). August 2002 to current year (seasonal records only). Published as South Fork South Platte River at Lake Cheesman, 1899; "below Lake Cheesman", 1900; and South Fork South Platte River at Cheesman, 1901. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06700000

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,845 ft above NGVD of 1929, from topographic map. July 31, 1899 to Dec. 31, 1901, staff gage at site within 4.5 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by minor transmountain diversion from Colorado River basin through Boreas Pass ditch, Antero and Elevenmile Canyon Reservoirs, diversions for irrigation of about 40,000 acres, and return flow from irrigated areas. 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 RECORD (seasonal only).--Maximum discharge, 4,690 ft³/s, July 28, 2003, gage height, 11.54 ft; minimum daily, 3 ft³/s, January 9, 12, 1925, but may have been less during periods of no gage-height record.

EXTREMES FOR 2002 WATER YEAR (seasonal only).--Maximum daily discharge during period August to September, 574 ft³/s, Aug. 13; minimum daily, 77 ft³/s, Sept. 16.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 4,690 ft³/s, July 28, gage height, 11.54 ft; minimum daily, 53 ft³/s, May 14.

**DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	e565	175
2	---	---	---	---	---	---	---	---	---	---	e571	175
3	---	---	---	---	---	---	---	---	---	---	e559	179
4	---	---	---	---	---	---	---	---	---	---	e420	293
5	---	---	---	---	---	---	---	---	---	---	e339	364
6	---	---	---	---	---	---	---	---	---	---	e300	365
7	---	---	---	---	---	---	---	---	---	---	e210	360
8	---	---	---	---	---	---	---	---	---	---	e208	361
9	---	---	---	---	---	---	---	---	---	---	386	363
10	---	---	---	---	---	---	---	---	---	---	558	320
11	---	---	---	---	---	---	---	---	---	---	564	153
12	---	---	---	---	---	---	---	---	---	---	572	143
13	---	---	---	---	---	---	---	---	---	---	574	145
14	---	---	---	---	---	---	---	---	---	---	570	98
15	---	---	---	---	---	---	---	---	---	---	569	78
16	---	---	---	---	---	---	---	---	---	---	522	77
17	---	---	---	---	---	---	---	---	---	---	405	155
18	---	---	---	---	---	---	---	---	---	---	400	235
19	---	---	---	---	---	---	---	---	---	---	398	243
20	---	---	---	---	---	---	---	---	---	---	397	244
21	---	---	---	---	---	---	---	---	---	---	398	244
22	---	---	---	---	---	---	---	---	---	---	398	219
23	---	---	---	---	---	---	---	---	---	---	397	222
24	---	---	---	---	---	---	---	---	---	---	396	223
25	---	---	---	---	---	---	---	---	---	---	396	218
26	---	---	---	---	---	---	---	---	---	---	393	222
27	---	---	---	---	---	---	---	---	---	---	382	223
28	---	---	---	---	---	---	---	---	---	---	313	225
29	---	---	---	---	---	---	---	---	---	---	232	221
30	---	---	---	---	---	---	---	---	---	---	177	223
31	---	---	---	---	---	---	---	---	---	---	175	---
TOTAL	---	---	---	---	---	---	---	---	---	---	12,744	6,766
MEAN	---	---	---	---	---	---	---	---	---	---	411	226
MAX	---	---	---	---	---	---	---	---	---	---	574	365
MIN	---	---	---	---	---	---	---	---	---	---	175	77
AC-FT	---	---	---	---	---	---	---	---	---	---	25,280	13,420

e Estimated.

PLATTE RIVER BASIN

06700000 SOUTH PLATTE RIVER ABOVE CHEESMAN LAKE, CO—Continued

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	---	---	---	---	---	---	128	75	298	135	103	165
2	---	---	---	---	---	---	145	72	315	128	100	149
3	---	---	---	---	---	---	147	71	289	122	104	140
4	---	---	---	---	---	---	137	67	255	113	101	137
5	---	---	---	---	---	---	141	64	264	103	102	126
6	---	---	---	---	---	---	129	62	302	99	105	114
7	---	---	---	---	---	---	110	61	254	94	91	127
8	---	---	---	---	---	---	94	60	235	95	89	140
9	---	---	---	---	---	---	102	57	209	91	88	143
10	---	---	---	---	---	---	104	59	187	82	95	125
11	---	---	---	---	---	---	116	58	181	77	105	119
12	---	---	---	---	---	---	153	57	181	81	105	111
13	---	---	---	---	---	---	139	55	188	81	90	111
14	---	---	---	---	---	---	124	53	210	82	79	116
15	---	---	---	---	---	---	110	63	204	86	74	118
16	---	---	---	---	---	---	102	92	193	90	69	114
17	---	---	---	---	---	---	88	86	202	93	70	99
18	---	---	---	---	---	---	82	83	254	91	73	89
19	---	---	---	---	---	---	86	100	256	101	78	86
20	---	---	---	---	---	---	82	112	240	119	81	84
21	---	---	---	---	---	---	78	113	214	108	74	86
22	---	---	---	---	---	---	77	107	192	101	70	87
23	---	---	---	---	---	---	79	106	165	102	69	86
24	---	---	---	---	---	---	84	119	149	96	98	82
25	---	---	---	---	---	---	87	141	136	90	102	84
26	---	---	---	---	---	---	79	186	130	90	97	79
27	---	---	---	---	---	---	81	199	134	108	97	78
28	---	---	---	---	---	---	83	190	136	350	94	76
29	---	---	---	---	---	---	78	202	137	162	98	74
30	---	---	---	---	---	---	72	214	144	134	124	75
31	---	---	---	---	---	---	---	249	---	114	181	---
TOTAL	---	---	---	---	---	---	3,117	3,233	6,254	3,418	2,906	3,220
MEAN	---	---	---	---	---	---	104	104	208	110	93.7	107
MAX	---	---	---	---	---	---	153	249	315	350	181	165
MIN	---	---	---	---	---	---	72	53	130	77	69	74
AC-FT	---	---	---	---	---	---	6,180	6,410	12,400	6,780	5,760	6,390

06700000 SOUTH PLATTE RIVER ABOVE CHEESMAN LAKE, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=06700000

GAGE.--Tipping-bucket rain gage (no wind shields used) with satellite telemetry.

REMARKS.--None.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily rainfall, 0.79 inches, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
2	---	---	---	---	---	---	---	---	0.00	0.00	0.15	0.00
3	---	---	---	---	---	---	---	---	0.00	0.00	0.09	0.03
4	---	---	---	---	---	---	---	---	0.15	0.00	0.02	0.00
5	---	---	---	---	---	---	---	---	0.23	0.00	0.00	0.09
6	---	---	---	---	---	---	---	---	0.11	0.00	0.00	0.00
7	---	---	---	---	---	---	---	---	0.11	0.00	0.00	0.10
8	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	---	---	0.09	0.00	0.24	0.00
10	---	---	---	---	---	---	---	---	0.00	0.00	0.10	0.00
11	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	---	---	0.06	0.00	0.00	0.02
14	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	---	---	0.04	0.02	0.01	0.00
17	---	---	---	---	---	---	---	---	0.01	0.00	0.00	0.00
18	---	---	---	---	---	---	---	---	0.17	0.08	0.00	0.00
19	---	---	---	---	---	---	---	---	0.09	0.22	0.00	0.00
20	---	---	---	---	---	---	---	---	0.00	0.01	0.00	0.00
21	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	---	0.00	0.00	0.01	0.26	0.00
23	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	---	0.03	0.00	0.00	0.05	0.00
25	---	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00
26	---	---	---	---	---	---	---	0.00	0.01	0.15	0.00	0.00
27	---	---	---	---	---	---	---	0.02	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	---	0.00	0.00	0.41	0.01	0.00
29	---	---	---	---	---	---	---	0.03	0.00	0.39	0.07	0.00
30	---	---	---	---	---	---	---	0.24	0.00	0.00	0.79	0.00
31	---	---	---	---	---	---	---	0.24	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	---	1.08	1.29	1.79	0.24
MAX	---	---	---	---	---	---	---	---	0.23	0.41	0.79	0.10
MIN	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00

06701500 SOUTH PLATTE RIVER BELOW CHEESMAN LAKE, CO

LOCATION.--Lat 39°12'33", long 105°16'02", in SE ¼ NW ¼ sec.6, T.10 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank 1,400 ft downstream from toe of Cheesman Dam, and 3.8 mi southwest of Deckers.

DRAINAGE AREA.--1,752 mi².

PERIOD OF RECORD.--October 1924 to September 1998, October 2001 to current year. Monthly discharge only for some periods, published in WSP 1310. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06701500

REVISED RECORDS.--WSP 1310: 1949. WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Datum of gage is 6,609.29 ft above NGVD of 1929. Prior to May 14, 1956, at site 370 ft upstream at datum 0.50 ft higher.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by minor transmountain diversion from Colorado River basin through Boreas Pass ditch, Antero and Elevenmile Canyon Reservoirs, diversions for irrigation of about 40,000 acres, and return flow from irrigated areas. Flow completely regulated by Cheesman Lake (station 06701000).

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	297	150	81	115	97	57	50	28	87	45	63	127
2	295	118	83	115	98	57	46	26	70	45	63	227
3	254	68	83	115	99	57	44	26	38	45	63	252
4	188	51	93	115	98	57	44	25	38	45	63	249
5	159	52	99	115	98	80	44	25	38	45	63	293
6	160	53	99	115	98	98	44	25	38	45	63	406
7	160	103	99	115	98	98	44	33	38	45	77	537
8	160	140	100	115	98	98	44	38	38	45	98	568
9	160	128	110	115	98	98	70	39	38	45	98	529
10	179	128	120	115	98	98	104	38	38	45	98	497
11	189	97	120	115	98	98	104	38	38	46	125	493
12	189	78	119	115	97	98	104	37	38	47	147	493
13	189	78	119	115	98	98	74	37	38	47	148	492
14	167	78	119	115	98	84	43	38	38	56	148	490
15	149	79	119	103	98	71	35	36	38	71	148	490
16	150	79	119	91	98	71	35	28	39	71	148	487
17	165	79	119	91	98	71	35	23	39	71	148	487
18	183	79	119	91	98	71	35	23	41	71	148	426
19	183	79	106	91	98	71	36	24	44	72	122	335
20	182	79	94	91	98	61	36	22	44	72	103	335
21	182	81	94	92	98	44	36	23	44	71	103	355
22	181	81	94	92	98	44	36	29	44	71	103	443
23	181	81	124	92	98	44	36	36	44	92	101	500
24	181	81	146	92	98	59	37	36	44	118	126	417
25	166	81	146	65	98	71	34	35	44	124	148	363
26	150	81	146	44	98	72	31	35	44	90	148	363
27	150	81	131	41	98	73	31	35	44	76	175	361
28	150	81	117	41	73	59	31	35	44	71	219	360
29	150	81	118	41	---	50	31	35	44	62	184	329
30	150	81	116	41	---	50	31	36	44	62	172	270
31	150	---	115	70	---	50	---	56	---	63	129	---
TOTAL	5,549	2,606	3,467	2,879	2,718	2,208	1,405	1,000	1,298	1,974	3,742	11,974
MEAN	179	86.9	112	92.9	97.1	71.2	46.8	32.3	43.3	63.7	121	399
MAX	297	150	146	115	99	98	104	56	87	124	219	568
MIN	149	51	81	41	73	44	31	22	38	45	63	127
AC-FT	11,010	5,170	6,880	5,710	5,390	4,380	2,790	1,980	2,570	3,920	7,420	23,750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003, BY WATER YEAR (WY)

MEAN	131	68.7	52.7	57.4	55.6	56.4	146	279	330	356	341	207
MAX	380	266	184	156	169	208	932	1,716	1,088	1,451	984	517
(WY)	(1985)	(1985)	(1996)	(1998)	(1998)	(1986)	(1942)	(1970)	(1995)	(1995)	(1984)	(1998)
MIN	12.9	6.33	5.26	5.26	2.76	3.11	2.00	11.0	38.5	53.5	66.7	33.5
(WY)	(1965)	(1960)	(1926)	(1926)	(1957)	(1957)	(1957)	(1938)	(1989)	(1967)	(1978)	(1978)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1925 - 2003

ANNUAL TOTAL	67,390		40,820									
ANNUAL MEAN	185		112							174		
HIGHEST ANNUAL MEAN										450	1970	
LOWEST ANNUAL MEAN										60.1	1978	
HIGHEST DAILY MEAN			461	Aug 28			568	Sep 8		4,580	Apr 29, 1970	
LOWEST DAILY MEAN			39	Jun 29			22	May 20		a1.6	Apr 8, 1957	
ANNUAL SEVEN-DAY MINIMUM			51	Mar 5			25	May 16		1.6	Apr 8, 1957	
MAXIMUM PEAK FLOW							571	Sep 7		4,640	Apr 29, 1970	
MAXIMUM PEAK STAGE							2.81	Sep 7		13.40	Apr 29, 1970	
ANNUAL RUNOFF (AC-FT)	133,700						80,970			126,200		
10 PERCENT EXCEEDS	346						188			427		
50 PERCENT EXCEEDS	154						91			97		
90 PERCENT EXCEEDS	56						36			19		

a Also occurred Apr 9-14, 1957.

06701550 FOURMILE CREEK ABOVE MOUTH NEAR DECKERS, CO

LOCATION.--Lat 39°13'50", long 105°13'29", in SW¼SE¼ sec.28, T.9 S., R.70 W., Douglas County, Hydrologic Unit 10190002, on left bank 1.0 mi upstream of mouth, and 2.0 mi south of Deckers.

DRAINAGE AREA.--7.40 mi²

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 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=06701550

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,740 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 934 ft³/s, May 30, gage height, 11.35 ft; minimum daily, 0.27 ft³/s, Sept. 28.

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	---	---	---	---	---	---	---	e2.4	e2.2	e0.83	e0.70	e1.5
2	---	---	---	---	---	---	---	e2.3	e2.1	e0.83	e0.73	e0.84
3	---	---	---	---	---	---	---	e2.3	e2.0	e0.80	e3.4	e0.72
4	---	---	---	---	---	---	---	e3.1	e1.8	e0.82	e1.0	e0.64
5	---	---	---	---	---	---	---	e2.4	e1.7	e0.81	e0.91	e0.60
6	---	---	---	---	---	---	---	e2.3	e1.5	e0.77	e0.95	e0.59
7	---	---	---	---	---	---	---	e2.4	e1.8	e0.75	12	e0.58
8	---	---	---	---	---	---	---	e2.3	e1.4	e0.73	e1.5	e0.58
9	---	---	---	---	---	---	---	e2.1	e1.3	e0.70	e1.0	e0.56
10	---	---	---	---	---	---	---	e2.9	e1.2	e0.66	e0.81	e0.63
11	---	---	---	---	---	---	---	e2.1	e0.82	e0.63	e1.1	e0.60
12	---	---	---	---	---	---	---	e2.2	e0.79	e0.59	e0.96	e0.62
13	---	---	---	---	---	---	---	e1.9	e0.76	e0.61	e0.91	e0.56
14	---	---	---	---	---	---	---	e1.7	e0.73	e0.56	e0.83	e0.52
15	---	---	---	---	---	---	---	e1.8	e0.73	e0.57	e0.67	e0.52
16	---	---	---	---	---	---	---	e1.9	e0.73	e0.66	e0.79	e0.48
17	---	---	---	---	---	---	---	e2.0	e2.1	e0.61	e0.87	e0.43
18	---	---	---	---	---	---	---	e3.1	12	e0.64	e1.2	e0.44
19	---	---	---	---	---	---	---	e2.2	31	e0.75	e0.90	e0.48
20	---	---	---	---	---	---	---	e2.1	e1.4	e1.0	e0.79	e0.48
21	---	---	---	---	---	---	---	e2.2	e1.1	e0.91	e0.73	e0.50
22	---	---	---	---	---	---	---	e2.1	e0.82	e0.82	e0.68	e0.48
23	---	---	---	---	---	---	---	e2.5	e0.82	e0.77	e0.65	e0.39
24	---	---	---	---	---	---	---	e2.6	e0.75	e0.75	e0.63	e0.39
25	---	---	---	---	---	---	---	e3.3	e0.90	e0.77	e0.63	e0.35
26	---	---	---	---	---	---	---	e3.4	e0.81	e0.73	e0.59	e0.35
27	---	---	---	---	---	---	---	e2.6	e0.72	e0.73	e0.59	e0.31
28	---	---	---	---	---	---	---	e2.2	e0.67	e0.89	e0.59	e0.27
29	---	---	---	---	---	---	---	e2.1	e0.64	e0.84	e0.51	e0.31
30	---	---	---	---	---	---	---	e51	e0.74	e0.82	18	e0.31
31	---	---	---	---	---	---	---	e3.1	---	e0.77	5.5	---
TOTAL	---	---	---	---	---	---	---	122.6	76.03	23.12	61.12	16.03
MEAN	---	---	---	---	---	---	---	3.95	2.53	0.75	1.97	0.53
MAX	---	---	---	---	---	---	---	51	31	1.0	18	1.5
MIN	---	---	---	---	---	---	---	1.7	0.64	0.56	0.51	0.27
AC-FT	---	---	---	---	---	---	---	243	151	46	121	32

e Estimated.

PLATTE RIVER BASIN

06701550 FOURMILE CREEK ABOVE MOUTH NEAR DECKERS, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=06701550

GAGE.--Tipping-bucket rain gage (no wind shields used) with satellite telemetry.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily rainfall, 0.52 inches, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	0.06	0.00	0.00	0.00
2	---	---	---	---	---	---	---	0.00	0.00	0.00	0.01	0.00
3	---	---	---	---	---	---	---	0.00	0.00	0.00	0.36	0.01
4	---	---	---	---	---	---	---	0.01	0.10	0.00	0.03	0.00
5	---	---	---	---	---	---	---	0.00	0.23	0.00	0.00	0.00
6	---	---	---	---	---	---	---	0.00	0.12	0.00	0.01	0.00
7	---	---	---	---	---	---	---	0.00	0.13	0.00	0.06	0.02
8	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	---	0.00	0.05	0.00	0.02	0.01
10	---	---	---	---	---	---	---	0.00	0.10	0.00	0.00	0.00
11	---	---	---	---	---	---	---	0.00	0.00	0.00	0.06	0.00
12	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.02
14	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00
16	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	---	0.00	0.22	0.00	0.12	0.00
19	---	---	---	---	---	---	---	0.00	0.03	0.26	0.00	0.00
20	---	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00
21	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	---	0.00	0.00	0.00	0.05	0.00
23	---	---	---	---	---	---	---	0.02	0.00	0.05	0.00	0.00
24	---	---	---	---	---	---	---	0.02	0.00	0.00	0.03	0.00
25	---	---	---	---	---	---	---	0.00	0.08	0.00	0.00	0.00
26	---	---	---	---	---	---	---	0.00	0.02	0.01	0.00	0.00
27	---	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00
28	---	---	---	---	---	---	---	0.00	0.01	0.00	0.01	0.00
29	---	---	---	---	---	---	---	0.09	0.01	0.08	0.00	0.00
30	---	---	---	---	---	---	---	0.00	0.03	0.00	0.52	0.00
31	---	---	---	---	---	---	---	0.19	---	0.00	0.01	---
TOTAL	---	---	---	---	---	---	---	---	1.20	0.43	1.29	0.06

06701620 TROUT CREEK BELOW FERN CREEK NEAR WESTCREEK, CO

LOCATION.--Lat 39°10'03", long 105°07'18", in SE¹/₄SE¹/₄ sec.21, T.10 S., R.69 W., Douglas County, Hydrologic Unit 10190002, on right bank about 400 ft downstream from lower Rainbow Falls Lakes, 1.1 mi downstream from Fern Creek, and 2.5 mi east of the community of Westcreek.

DRAINAGE AREA.--106 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 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=06701620

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,440 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No diversions upstream from station. Significant contribution of flow from natural spring at Rainbow Falls Park. 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 CURRENT YEAR (seasonal only).--Maximum discharge during period May to September, 15 ft³/s, May 20, gage height, 3.62 ft; minimum daily, 0.79 ft³/s, Aug. 22.

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	3.9	1.3	1.1
2	---	---	---	---	---	---	---	---	6.2	4.2	1.4	1.1
3	---	---	---	---	---	---	---	---	5.9	4.6	1.3	1.1
4	---	---	---	---	---	---	---	---	5.9	4.0	1.3	1.1
5	---	---	---	---	---	---	---	---	8.5	3.4	1.2	1.1
6	---	---	---	---	---	---	---	---	8.9	2.8	1.2	1.1
7	---	---	---	---	---	---	---	---	11	2.5	1.2	1.1
8	---	---	---	---	---	---	---	---	8.6	2.2	1.2	1.2
9	---	---	---	---	---	---	---	12	6.9	1.8	1.2	1.1
10	---	---	---	---	---	---	---	13	6.4	1.8	1.2	1.1
11	---	---	---	---	---	---	---	11	6.1	1.7	1.2	1.1
12	---	---	---	---	---	---	---	10	6.1	1.7	1.1	1.1
13	---	---	---	---	---	---	---	9.7	4.9	1.6	1.1	1.1
14	---	---	---	---	---	---	---	8.9	4.5	1.5	1.1	1.1
15	---	---	---	---	---	---	---	9.1	4.2	1.5	1.0	1.1
16	---	---	---	---	---	---	---	11	4.2	1.6	0.97	1.1
17	---	---	---	---	---	---	---	9.3	3.4	1.6	0.97	0.96
18	---	---	---	---	---	---	---	8.6	4.2	1.5	0.97	1.1
19	---	---	---	---	---	---	---	7.8	4.5	1.6	0.97	1.1
20	---	---	---	---	---	---	---	8.4	5.5	1.6	0.93	1.1
21	---	---	---	---	---	---	---	7.3	6.0	1.5	0.87	1.2
22	---	---	---	---	---	---	---	6.2	5.6	1.4	0.79	1.2
23	---	---	---	---	---	---	---	5.8	5.1	1.4	0.81	1.2
24	---	---	---	---	---	---	---	5.7	3.9	1.4	0.86	1.2
25	---	---	---	---	---	---	---	6.5	3.3	1.5	0.84	1.2
26	---	---	---	---	---	---	---	6.7	3.7	1.5	0.82	1.1
27	---	---	---	---	---	---	---	5.9	3.3	1.5	0.83	1.2
28	---	---	---	---	---	---	---	5.2	3.0	1.6	0.93	1.2
29	---	---	---	---	---	---	---	4.8	3.8	1.6	0.95	1.2
30	---	---	---	---	---	---	---	5.0	5.0	1.5	1.0	1.2
31	---	---	---	---	---	---	---	5.8	---	1.4	1.2	---
TOTAL	---	---	---	---	---	---	---	---	165.3	63.4	32.71	33.86
MEAN	---	---	---	---	---	---	---	---	5.51	2.05	1.06	1.13
MAX	---	---	---	---	---	---	---	---	11	4.6	1.4	1.2
MIN	---	---	---	---	---	---	---	---	3.0	1.4	0.79	0.96
AC-FT	---	---	---	---	---	---	---	---	328	126	65	67

06701620 TROUT CREEK BELOW FERN CREEK NEAR WESTCREEK, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=06701620

GAGE.--Tipping-bucket rain gage (no wind shields used) with satellite telemetry.

REMARKS.--None.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily rainfall, 0.57 inches, July 27, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily rainfall, 0.57 inches, July 27.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	0.01	0.00	0.02	0.00
2	---	---	---	---	---	---	---	---	0.00	0.00	0.19	0.00
3	---	---	---	---	---	---	---	---	0.00	0.00	0.08	0.06
4	---	---	---	---	---	---	---	---	0.20	0.00	0.00	0.00
5	---	---	---	---	---	---	---	---	0.36	0.00	0.00	0.11
6	---	---	---	---	---	---	---	---	0.18	0.00	0.00	0.00
7	---	---	---	---	---	---	---	---	0.12	0.00	0.07	0.10
8	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	---	0.00	0.09	0.00	0.00	0.08
10	---	---	---	---	---	---	---	0.20	0.21	0.00	0.00	0.00
11	---	---	---	---	---	---	---	0.00	0.00	0.00	0.13	0.00
12	---	---	---	---	---	---	---	0.00	0.13	0.00	0.00	0.00
13	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.03
14	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	---	0.26	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	---	0.02	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	---	0.00	0.02	0.00	0.07	0.00
19	---	---	---	---	---	---	---	0.00	0.10	0.20	0.00	0.00
20	---	---	---	---	---	---	---	0.04	0.17	0.00	0.00	0.00
21	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	---	0.00	0.00	0.00	0.01	0.00
23	---	---	---	---	---	---	---	0.08	0.00	0.02	0.23	0.00
24	---	---	---	---	---	---	---	0.21	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	---	0.00	0.12	0.10	0.00	0.00
26	---	---	---	---	---	---	---	0.00	0.22	0.00	0.00	0.00
27	---	---	---	---	---	---	---	0.00	0.00	0.57	0.00	0.00
28	---	---	---	---	---	---	---	0.00	0.00	0.04	0.07	0.00
29	---	---	---	---	---	---	---	0.04	0.19	0.02	0.00	0.00
30	---	---	---	---	---	---	---	0.04	0.00	0.00	0.44	0.00
31	---	---	---	---	---	---	---	0.25	---	0.00	0.01	---
TOTAL	---	---	---	---	---	---	---	---	2.12	0.95	1.32	0.38

06701700 WEST CREEK ABOVE SHREWSBURY GULCH NEAR WESTCREEK, CO

LOCATION.--Lat 39°08'35", long 105°09'39", in NW¹/₄NW¹/₄ sec.31, T.10 S., R.69 W., Douglas County, Hydrologic Unit 10190002, on left bank of J.O. Hill Lake, and 2,000 ft upstream from Shrewsbury Gulch, in town of Westcreek.

DRAINAGE AREA.--56.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 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=06701700

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

REMARKS.--Records poor. Natural flow of the stream affected by a 24 in. pipe diversion through dam, which bypasses spillway and requires further discharges measurements on pipe discharge channel. 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 RECORD (seasonal only).--Maximum discharge, 273 ft³/s, Aug. 31, 2003, gage height, 6.28 ft; minimum daily, 1.80 ft³/s, many days in Sept. 2003.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood known, 2,020 ft³/s, May 7, 1973, on basis of slope-area measurement of peak flow made at location about 1.0 mi downstream from present site, caused by failure of two upstream dams.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 273 ft³/s, Aug. 31, gage height, 6.28 ft; minimum daily, 1.8 ft³/s, many days in Sept.

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	---	---	---	---	---	---	---	e4.5	e5.0	e6.0	e4.6	e8.5
2	---	---	---	---	---	---	---	e4.5	e8.1	e3.8	e25	e6.1
3	---	---	---	---	---	---	---	e4.5	e4.9	e3.2	e7.9	e5.7
4	---	---	---	---	---	---	---	e4.4	e3.6	e2.9	e4.5	e5.0
5	---	---	---	---	---	---	---	e4.4	e4.1	e2.4	e4.1	e3.8
6	---	---	---	---	---	---	---	e4.0	e5.1	e2.3	e3.5	e5.4
7	---	---	---	---	---	---	---	e4.3	e5.1	e2.3	e3.4	e10
8	---	---	---	---	---	---	---	e4.3	e5.1	e2.2	e4.5	e5.8
9	---	---	---	---	---	---	---	e4.3	e4.9	e2.2	e4.5	e2.5
10	---	---	---	---	---	---	---	e4.0	e4.4	e2.2	e4.5	e2.3
11	---	---	---	---	---	---	---	e4.2	e4.3	e2.1	e7.4	e2.2
12	---	---	---	---	---	---	---	e4.2	e4.2	e2.0	e5.5	e2.2
13	---	---	---	---	---	---	---	e4.2	e3.6	e2.0	e4.7	e2.1
14	---	---	---	---	---	---	---	e4.2	e3.7	e2.0	e4.1	e2.1
15	---	---	---	---	---	---	---	e4.1	e4.0	e2.0	e2.5	e2.0
16	---	---	---	---	---	---	---	e6.1	e5.0	e2.0	e2.0	e1.9
17	---	---	---	---	---	---	---	e6.1	e10	e2.1	e2.0	e1.9
18	---	---	---	---	---	---	---	e5.2	e24	e2.1	e2.1	e1.9
19	---	---	---	---	---	---	---	e4.5	e11	e2.4	e3.6	e1.9
20	---	---	---	---	---	---	---	e4.1	e8.9	e22	e4.8	e1.9
21	---	---	---	---	---	---	---	e4.0	e4.0	e8.6	e3.0	e1.8
22	---	---	---	---	---	---	---	e3.9	e3.5	e6.1	e2.8	e1.8
23	---	---	---	---	---	---	---	e3.9	e3.0	e5.0	e3.0	e1.8
24	---	---	---	---	---	---	---	e3.9	e2.5	e4.6	e5.9	e1.8
25	---	---	---	---	---	---	---	e3.9	e2.5	e4.2	e4.9	e1.8
26	---	---	---	---	---	---	---	e4.0	e2.1	e3.9	e4.8	e1.8
27	---	---	---	---	---	---	---	e4.1	e2.3	e6.7	e4.9	e1.8
28	---	---	---	---	---	---	---	e4.8	e2.3	e17	e4.6	e1.8
29	---	---	---	---	---	---	---	e3.9	e38	e22	e4.2	e1.8
30	---	---	---	---	---	---	---	e3.2	e13	e11	e11	e1.8
31	---	---	---	---	---	---	---	e3.2	---	e6.8	e44	---
TOTAL	---	---	---	---	---	---	---	132.9	202.2	166.1	198.3	93.2
MEAN	---	---	---	---	---	---	---	4.29	6.74	5.36	6.40	3.11
MAX	---	---	---	---	---	---	---	6.1	38	22	44	10
MIN	---	---	---	---	---	---	---	3.2	2.1	2.0	2.0	1.8
AC-FT	---	---	---	---	---	---	---	264	401	329	393	185

e Estimated.

06701700 WEST CREEK ABOVE SHREWSBURY GULCH NEAR WESTCREEK, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=06701700

GAGE.--Tipping-bucket rain gage (no wind shields used) with satellite telemetry.

REMARKS.--None.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily rainfall, 0.52 inches, Aug. 30, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily rainfall, 0.52 inches, Aug 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	0.03	0.00	0.07	0.00
2	---	---	---	---	---	---	---	---	0.00	0.00	0.34	0.00
3	---	---	---	---	---	---	---	---	0.00	0.00	0.04	0.07
4	---	---	---	---	---	---	---	---	0.25	0.00	0.02	0.00
5	---	---	---	---	---	---	---	---	0.33	0.00	0.00	0.00
6	---	---	---	---	---	---	---	---	0.10	0.00	0.00	0.00
7	---	---	---	---	---	---	---	---	0.14	0.00	0.01	0.07
8	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.01
9	---	---	---	---	---	---	---	---	0.12	0.00	0.12	0.02
10	---	---	---	---	---	---	---	0.08	0.04	0.00	0.18	0.00
11	---	---	---	---	---	---	---	0.00	0.00	0.00	0.06	0.00
12	---	---	---	---	---	---	---	0.00	0.03	0.00	0.00	0.00
13	---	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.03
14	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01
15	---	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00
16	---	---	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00
17	---	---	---	---	---	---	---	0.00	0.00	0.00	0.02	0.12
18	---	---	---	---	---	---	---	0.00	0.01	0.00	0.03	0.00
19	---	---	---	---	---	---	---	0.00	0.00	0.12	0.00	0.00
20	---	---	---	---	---	---	---	0.00	0.09	0.00	0.00	0.00
21	---	---	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00
22	---	---	---	---	---	---	---	0.00	0.00	0.00	0.01	0.08
23	---	---	---	---	---	---	---	0.08	0.03	0.01	0.12	0.00
24	---	---	---	---	---	---	---	0.21	0.01	0.00	0.00	0.00
25	---	---	---	---	---	---	---	0.07	0.03	0.21	0.00	0.00
26	---	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00
27	---	---	---	---	---	---	---	0.00	0.00	0.49	0.00	0.00
28	---	---	---	---	---	---	---	0.00	0.00	0.03	0.04	0.00
29	---	---	---	---	---	---	---	0.09	0.37	0.00	0.00	0.04
30	---	---	---	---	---	---	---	0.35	0.03	0.00	0.52	0.00
31	---	---	---	---	---	---	---	0.21	---	0.00	0.01	---
TOTAL	---	---	---	---	---	---	---	---	1.63	0.90	1.59	0.45

06701900 SOUTH PLATTE RIVER BELOW BRUSH CREEK NEAR TRUMBULL, CO

LOCATION.--Lat 39°15'36", long 105°13'17", in SE¹/₄SE¹/₄ sec.16, T.9 S., R.70 W., Douglas County, Hydrologic Unit 10190002, on left bank 5 mi downstream from Cheesman Reservoir, and 0.7 mi north-northeast of Deckers.

DRAINAGE AREA.--2021 mi², of which 11.9 mi² is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 2002 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06701900

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,380 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by minor diversion from Colorado River basin through Boreas Pass ditch, Antero and Elevenmile Canyon Reservoirs, diversion for irrigation of about 40,000 acres, and return flow from irrigated areas. Flow mostly regulated by Cheesman Reservoir (station 0670100).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 858 ft³/s, May 30, 2003, gage height, 4.93 ft; minimum daily, 51 ft³/s, Jan. 28, 30, 2003.

EXTREMES FOR 2002 WATER YEAR.--Maximum discharge during period July to September, 815 ft³/s, July 21, gage height, 4.84 ft; minimum daily, 115 ft³/s, Sept. 22-24.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 858 ft³/s, May 30, gage height, 4.93 ft; minimum daily, 51 ft³/s, Jan. 28, 30.

**DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	351	309
2	---	---	---	---	---	---	---	---	---	---	352	365
3	---	---	---	---	---	---	---	---	---	---	335	429
4	---	---	---	---	---	---	---	---	---	---	307	436
5	---	---	---	---	---	---	---	---	---	---	259	439
6	---	---	---	---	---	---	---	---	---	---	243	442
7	---	---	---	---	---	---	---	---	---	---	323	447
8	---	---	---	---	---	---	---	---	---	---	285	417
9	---	---	---	---	---	---	---	---	---	---	251	368
10	---	---	---	---	---	---	---	---	---	---	251	314
11	---	---	---	---	---	---	---	---	---	---	252	235
12	---	---	---	---	---	---	---	---	---	---	255	210
13	---	---	---	---	---	---	---	---	---	---	256	184
14	---	---	---	---	---	---	---	---	---	---	263	130
15	---	---	---	---	---	---	---	---	---	---	284	130
16	---	---	---	---	---	---	---	---	---	---	372	164
17	---	---	---	---	---	---	---	---	---	---	423	260
18	---	---	---	---	---	---	---	---	---	---	422	315
19	---	---	---	---	---	---	---	---	---	358	420	315
20	---	---	---	---	---	---	---	---	---	357	421	246
21	---	---	---	---	---	---	---	---	---	375	428	141
22	---	---	---	---	---	---	---	---	---	327	338	115
23	---	---	---	---	---	---	---	---	---	273	255	115
24	---	---	---	---	---	---	---	---	---	143	256	e115
25	---	---	---	---	---	---	---	---	---	221	256	157
26	---	---	---	---	---	---	---	---	---	309	300	219
27	---	---	---	---	---	---	---	---	---	311	411	213
28	---	---	---	---	---	---	---	---	---	312	491	220
29	---	---	---	---	---	---	---	---	---	313	436	219
30	---	---	---	---	---	---	---	---	---	294	383	278
31	---	---	---	---	---	---	---	---	---	303	348	---
TOTAL	---	---	---	---	---	---	---	---	---	---	10,227	7,947
MEAN	---	---	---	---	---	---	---	---	---	---	330	265
MAX	---	---	---	---	---	---	---	---	---	---	491	447
MIN	---	---	---	---	---	---	---	---	---	---	243	115
AC-FT	---	---	---	---	---	---	---	---	---	---	20,290	15,760

e Estimated.

PLATTE RIVER BASIN

06701900 SOUTH PLATTE RIVER BELOW BRUSH CREEK NEAR TRUMBULL, CO—Continued

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	337	166	e88	125	100	61	90	82	116	63	59	120
2	349	143	e95	124	101	62	97	76	107	60	53	243
3	302	96	e95	124	100	61	101	73	72	59	99	277
4	212	66	105	123	e100	61	98	71	70	57	63	275
5	178	62	114	123	100	78	95	68	77	56	54	315
6	179	62	114	123	100	95	79	65	76	56	53	446
7	179	94	115	121	e100	96	84	66	78	54	66	619
8	180	153	114	120	e100	97	78	70	73	54	91	639
9	180	136	122	119	e99	98	85	67	70	53	93	591
10	199	136	134	e119	e99	98	136	69	68	52	92	548
11	217	113	134	119	99	100	143	66	67	52	116	544
12	219	84	133	119	e100	100	147	65	67	53	150	543
13	213	e85	133	118	101	101	129	64	65	53	149	544
14	192	e87	134	118	102	94	96	63	60	57	147	545
15	163	e89	134	109	101	80	88	64	59	75	146	545
16	166	87	133	98	99	81	86	71	59	76	146	541
17	177	89	132	91	100	80	84	62	60	77	147	539
18	205	88	131	e92	99	89	83	60	80	77	149	482
19	203	87	119	e91	99	85	87	60	101	82	126	349
20	202	86	e110	90	99	80	82	61	79	93	95	348
21	201	86	102	90	98	62	79	62	72	85	94	369
22	201	85	e102	90	98	61	81	60	64	83	96	467
23	202	85	123	90	96	66	85	67	62	98	95	545
24	201	87	153	90	e96	82	89	65	65	131	118	463
25	187	85	153	74	e96	105	87	70	63	146	156	387
26	167	e85	e156	56	96	110	90	67	66	110	154	386
27	171	e85	141	52	96	113	94	67	61	122	176	384
28	170	e85	124	51	82	96	94	66	58	82	242	383
29	168	e85	124	54	---	77	90	63	61	76	207	348
30	162	e85	124	51	---	76	84	115	69	68	214	280
31	164	---	124	67	---	80	---	87	---	62	232	---
TOTAL	6,246	2,862	3,815	3,031	2,756	2,625	2,841	2,132	2,145	2,322	3,878	13,065
MEAN	201	95.4	123	97.8	98.4	84.7	94.7	68.8	71.5	74.9	125	436
MAX	349	166	156	125	102	113	147	115	116	146	242	639
MIN	162	62	88	51	82	61	78	60	58	52	53	120
AC-FT	12,390	5,680	7,570	6,010	5,470	5,210	5,640	4,230	4,250	4,610	7,690	25,910

e Estimated.

PLATTE RIVER BASIN

06701900 SOUTH PLATTE RIVER BELOW BRUSH CREEK NEAR TRUMBULL, CO—Continued

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS—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	---	---	---	---	---	---	100	37	65	41	22	30
2	---	---	---	---	---	---	170	43	94	200	21	38
3	---	---	---	---	---	---	320	71	160	67	29	44
4	---	---	---	---	---	---	290	84	140	37	20	27
5	---	---	---	---	---	---	150	73	96	33	17	25
6	---	---	---	---	---	---	78	44	60	29	17	22
7	---	---	---	---	---	---	80	36	54	24	13	19
8	---	---	---	---	---	---	66	20	41	24	13	18
9	---	---	---	---	---	---	150	17	53	24	12	17
10	---	---	---	---	---	---	90	31	54	24	11	16
11	---	---	---	---	---	---	66	34	52	16	9.1	12
12	---	---	---	---	---	---	130	36	59	16	7.3	11
13	---	---	---	---	---	---	90	51	71	16	8.6	12
14	---	---	---	---	---	---	130	62	90	17	6.9	11
15	---	---	---	---	---	---	90	53	69	24	6.9	12
16	---	---	---	---	---	---	73	36	52	140	20	67
17	---	---	---	---	---	---	61	31	46	58	19	36
18	---	---	---	---	---	---	57	29	40	43	24	34
19	---	---	---	---	---	---	58	29	38	48	23	33
20	---	---	---	---	---	---	38	19	26	45	19	31
21	---	---	---	33	8.5	---	34	15	23	46	19	31
22	---	---	---	36	5.3	17	31	16	23	52	16	30
23	---	---	---	99	12	32	49	15	27	49	21	33
24	---	---	---	98	26	67	53	24	35	40	19	28
25	---	---	---	340	44	99	54	23	33	>300	30	---
26	---	---	---	160	58	96	95	36	55	150	63	96
27	---	---	---	140	60	97	81	46	59	130	51	77
28	---	---	---	67	28	45	72	38	54	64	33	46
29	---	---	---	59	20	37	57	31	42	54	26	38
30	---	---	---	57	19	32	43	25	34	>300	26	---
31	---	---	---	73	18	34	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	320	15	58	---	---	---
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	190	---	120	55	79	350	99	140	280	56	110
2	280	150	210	78	35	53	170	78	110	260	69	130
3	170	96	130	55	26	39	>1,000	88	---	140	76	100
4	130	79	96	55	23	33	1,000	130	---	110	65	88
5	280	89	130	47	19	28	220	110	160	340	51	130
6	110	58	74	230	17	35	190	83	120	700	100	250
7	280	61	99	71	13	25	>1,000	68	---	400	150	230
8	77	44	56	36	11	19	320	94	140	160	81	110
9	200	39	57	24	9.6	16	>1,000	69	---	96	41	64
10	72	36	48	23	8.4	14	690	65	170	54	33	42
11	48	30	37	22	6.1	13	670	68	230	45	31	36
12	>300	25	---	26	7.0	12	230	97	160	42	29	33
13	160	60	84	24	6.6	13	360	77	140	37	25	30
14	73	34	48	62	5.3	17	270	64	95	33	24	28
15	44	22	30	53	16	30	89	55	73	73	23	29
16	35	22	28	35	12	22	84	51	67	32	21	26
17	42	17	23	29	11	19	75	46	62	34	20	25
18	>300	25	---	26	9.5	17	350	43	82	49	18	25
19	>300	190	---	>1,000	15	---	190	15	46	29	15	21
20	>300	---	---	970	54	240	---	---	---	23	14	17
21	270	110	180	84	24	43	---	---	---	27	12	18
22	160	89	120	40	16	26	---	---	---	170	14	32
23	120	68	87	210	12	58	---	---	---	34	19	25
24	140	60	81	230	47	87	---	---	---	26	11	18
25	370	54	98	180	38	93	---	---	---	16	9.9	12
26	>1,000	70	---	51	16	31	---	---	---	16	10	12
27	160	70	100	>1,000	12	---	500	24	120	16	9.1	12
28	88	48	67	>1,000	220	---	300	89	150	15	9.1	12
29	>1,000	43	---	>1,000	320	---	120	34	77	16	10	12
30	>1,000	100	---	>1,000	200	---	>1,000	39	---	22	8.7	13
31	---	---	---	260	120	180	>1,000	130	---	---	---	---
MONTH	---	---	---	1,000	5.3	---	---	---	---	700	8.7	56

> Actual value is known to be greater than the value shown.

06701970 SPRING CREEK ABOVE MOUTH NEAR SOUTH PLATTE, CO

LOCATION.--Lat 39°23'37", long 105°11'01", in SE¹/₄SE¹/₄ sec.35, T.7 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on right bank 0.9 mi upstream from mouth and 1.3 mi southwest of the community of South Platte.

DRAINAGE AREA.--9.79 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1997 to September 2003 (seasonal records only), discontinued. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06701970

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,320 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. No diversion or regulation 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.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 6,380 ft³/s, Aug. 31, 1997, gage height, 13.45 ft, from slope-area measurement of peak flow; minimum daily, 0.23 ft³/s, Aug. 14, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 3.8 ft³/s (estimated) Apr. 4, gage height, 4.51 ft; minimum daily, 0.23 ft³/s, Aug. 14.

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	0.59	---	---	---	---	---	e1.8	e2.0	e1.0	0.60	0.39	0.41
2	0.67	---	---	---	---	---	e1.7	e1.7	e0.97	0.59	0.39	0.36
3	0.69	---	---	---	---	---	e3.3	e1.7	e0.91	0.53	0.39	0.38
4	0.64	---	---	---	---	---	e3.5	e1.7	e0.93	0.53	0.39	0.38
5	0.61	---	---	---	---	---	e2.7	e1.6	e1.0	0.53	0.34	0.36
6	0.59	---	---	---	---	---	e2.5	e1.6	1.1	0.53	0.32	0.35
7	0.57	---	---	---	---	---	e2.1	e1.6	1.2	0.54	0.32	0.38
8	0.57	---	---	---	---	---	e2.3	e1.6	1.1	0.52	0.34	0.38
9	0.61	---	---	---	---	---	e2.3	e1.6	1.0	0.48	0.35	0.44
10	0.63	---	---	---	---	---	e2.3	e1.6	1.0	0.46	0.35	0.41
11	0.62	---	---	---	---	---	e2.1	e1.5	0.93	0.46	0.34	0.40
12	0.62	---	---	---	---	---	1.9	e1.3	0.92	0.46	0.33	0.38
13	0.63	---	---	---	---	---	2.1	e1.1	0.90	0.40	0.30	0.40
14	0.62	---	---	---	---	---	e2.3	e1.1	0.87	0.38	0.23	0.39
15	0.62	---	---	---	---	---	e2.2	e1.1	0.89	0.38	0.26	0.37
16	0.62	---	---	---	---	---	e2.1	e1.1	0.82	0.38	0.24	0.35
17	e0.62	---	---	---	---	---	e2.0	e1.3	0.76	0.36	0.26	0.34
18	e0.62	---	---	---	---	---	e2.0	e1.3	0.71	0.37	0.37	0.35
19	e0.62	---	---	---	---	---	e2.0	e1.2	0.70	0.63	0.41	0.37
20	e0.62	---	---	---	---	---	e2.1	e1.1	0.66	0.90	0.36	0.39
21	e0.62	---	---	---	---	---	e2.1	e1.1	0.62	0.68	0.35	0.38
22	e0.62	---	---	---	---	---	e2.0	e1.1	0.53	0.58	0.31	0.38
23	e0.62	---	---	---	---	---	e1.9	e1.2	0.52	0.49	0.32	0.37
24	e0.62	---	---	---	---	---	e1.9	e1.4	0.57	0.45	0.31	0.38
25	e0.62	---	---	---	---	---	e2.0	e1.3	0.64	0.46	0.30	0.42
26	e0.62	---	---	---	---	---	e1.9	e1.2	0.63	0.48	0.29	0.41
27	e0.65	---	---	---	---	---	e1.9	e1.2	0.61	0.48	0.27	0.42
28	e0.65	---	---	---	---	---	e2.0	e1.1	0.58	0.45	0.24	0.42
29	e0.65	---	---	---	---	---	e2.0	e1.0	0.62	0.48	0.26	0.43
30	e0.65	---	---	---	---	---	e2.0	e0.99	0.56	0.45	0.37	0.50
31	e0.69	---	---	---	---	---	---	e0.99	---	0.40	0.48	---
TOTAL	19.39	---	---	---	---	---	65.0	41.38	24.25	15.43	10.18	11.70
MEAN	0.63	---	---	---	---	---	2.17	1.33	0.81	0.50	0.33	0.39
MAX	0.69	---	---	---	---	---	3.5	2.0	1.2	0.90	0.48	0.50
MIN	0.57	---	---	---	---	---	1.7	0.99	0.52	0.36	0.23	0.34
AC-FT	38	---	---	---	---	---	129	82	48	31	20	23

e Estimated.

PLATTE RIVER BASIN

06701970 SPRING CREEK ABOVE MOUTH NEAR SOUTH PLATTE, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 1997 to September 2003 (seasonal records only), discontinued. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06701970

GAGE.--Tipping-bucket rain gage (no wind shields used) with satellite telemetry.

REMARKS.--None.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily rainfall, 2.38 inches, July 16, 2000.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily rainfall, 0.93 inches, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
2	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.12
3	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.03	0.00
4	---	---	---	---	---	---	0.00	0.05	0.07	0.00	0.01	0.00
5	---	---	---	---	---	---	0.00	0.00	0.50	0.00	0.00	0.00
6	---	---	---	---	---	---	0.00	0.00	0.11	0.00	0.00	0.00
7	---	---	---	---	---	---	0.00	0.00	0.05	0.00	0.00	0.08
8	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	0.00	0.02	0.22	0.00	0.00	0.02
10	---	---	---	---	---	---	0.00	0.00	0.10	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.00	0.43	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00
17	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.00	0.22	0.11	0.00
19	---	---	---	---	---	---	0.00	0.07	0.00	0.85	0.00	0.00
20	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.04	0.00	0.00	0.00	0.08	0.00
23	---	---	---	---	---	---	0.02	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.03	0.00	0.01	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.01	0.02	0.00
28	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.10	0.00	0.00	0.00
30	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.93	0.00
31	---	---	---	---	---	---	---	0.06	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	0.06	0.63	1.24	1.08	1.20	0.22

06706400 NORTH FORK SOUTH PLATTE RIVER ABOVE ELK CREEK AT PINE, CO

LOCATION.--Lat 39°24'27", long 105°19'07", in NE¹/₄SE¹/₄ sec.27, T.7 S., R.71 W., Jefferson County, Hydrologic Unit 10190002, on left bank 500 ft upstream of Elk Creek and in the community of Pine.

DRAINAGE AREA.--310 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 2000 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=06706400

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,720 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Transmountain diversions from Colorado River Basin enter above this 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.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 779 ft³/s, June 9, 2001, gage height, 4.95 ft; minimum daily, 5.7 ft³/s, Sept. 2, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 675 ft³/s, June 1, gage height, 4.78 ft; minimum daily, 25 ft³/s, Oct. 5, 6.

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	73	---	---	---	---	---	46	93	586	234	222	246
2	80	---	---	---	---	---	60	92	455	218	257	342
3	36	---	---	---	---	---	69	88	407	209	335	381
4	30	---	---	---	---	---	60	90	371	240	333	488
5	25	---	---	---	---	---	53	82	397	337	312	413
6	25	---	---	---	---	---	49	81	368	332	316	246
7	28	---	---	---	---	---	43	108	360	326	345	212
8	55	---	---	---	---	---	39	130	327	295	345	169
9	93	---	---	---	---	---	43	134	299	264	335	135
10	93	---	---	---	---	---	52	186	308	256	286	128
11	95	---	---	---	---	---	193	185	322	279	279	114
12	96	---	---	---	---	---	93	170	322	342	285	108
13	95	---	---	---	---	---	106	94	331	319	278	105
14	96	---	---	---	---	---	168	104	343	268	268	112
15	96	---	---	---	---	---	110	138	320	307	262	106
16	96	---	---	---	---	---	91	144	316	314	260	95
17	94	---	---	---	---	---	90	204	337	412	280	95
18	92	---	---	---	---	---	97	247	426	459	288	92
19	91	---	---	---	---	---	192	230	442	450	313	89
20	91	---	---	---	---	---	114	241	347	396	299	90
21	92	---	---	---	---	---	85	218	320	388	294	88
22	92	---	---	---	---	---	87	290	298	440	311	84
23	96	---	---	---	---	---	87	434	290	493	345	82
24	97	---	---	---	---	---	78	397	284	310	352	80
25	94	---	---	---	---	---	80	409	273	417	356	79
26	94	---	---	---	---	---	94	395	285	412	381	77
27	102	---	---	---	---	---	112	433	367	367	402	75
28	96	---	---	---	---	---	101	521	438	362	399	74
29	101	---	---	---	---	---	107	533	442	370	372	83
30	92	---	---	---	---	---	107	563	406	327	439	215
31	110	---	---	---	---	---	---	568	---	226	371	---
TOTAL	2,546	---	---	---	---	---	2,706	7,602	10,787	10,369	9,920	4,703
MEAN	82.1	---	---	---	---	---	90.2	245	360	334	320	157
MAX	110	---	---	---	---	---	193	568	586	493	439	488
MIN	25	---	---	---	---	---	39	81	273	209	222	74
AC-FT	5,050	---	---	---	---	---	5,370	15,080	21,400	20,570	19,680	9,330

06706400 NORTH FORK SOUTH PLATTE RIVER ABOVE ELK CREEK AT PINE, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 2001 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=06706400

GAGE.--Tipping-bucket rain gage (no wind shields used) with satellite telemetry.

REMARKS.--None.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily rainfall, 1.89 inches, Aug. 28, 2000 (occurred during period not published).

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily rainfall, 0.90 inches, June 29.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.08	0.00
2	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.07	0.07
3	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.52	0.05
4	---	---	---	---	---	---	0.00	0.00	0.07	0.00	0.00	0.00
5	---	---	---	---	---	---	0.00	0.00	0.20	0.00	0.03	0.00
6	---	---	---	---	---	---	0.00	0.00	0.11	0.00	0.00	0.03
7	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.13
8	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	0.00	0.06	0.02	0.00	0.00	0.05
10	---	---	---	---	---	---	0.00	0.06	0.09	0.00	0.08	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.20	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.10	0.00	0.00	0.06
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.03	0.54	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.06	0.09	0.00
17	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.01	0.80	0.80	0.00
19	---	---	---	---	---	---	0.03	0.00	0.33	0.39	0.01	0.00
20	---	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.15	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.06	0.00
24	---	---	---	---	---	---	0.01	0.00	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.04	0.01	0.04	0.00
26	---	---	---	---	---	---	0.00	0.06	0.01	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.06	0.00
28	---	---	---	---	---	---	0.00	0.00	0.00	0.10	0.01	0.00
29	---	---	---	---	---	---	0.05	0.00	0.90	0.01	0.04	0.00
30	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.57	0.00
31	---	---	---	---	---	---	---	0.13	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	0.12	0.85	2.15	1.37	2.61	0.39

06706800 BUFFALO CREEK AT MOUTH AT BUFFALO CREEK, CO

LOCATION.--Lat 39°23'27", long 105°16'15", in SE¹/₄SW¹/₄ sec.31, T.7 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank 0.2 mi downstream from State Highway 67, 0.5 mi upstream from mouth, and in the community of Buffalo Creek.

DRAINAGE AREA.--47.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1997 to September 2003 (seasonal records only), discontinued. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06706800

REVISED RECORDS.--WDR CO-00-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,630 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow is slightly regulated by Wellington Lake 7.2 mi upstream. 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 RECORD (seasonal only).--Maximum discharge, 3,400 ft³/s, July 31, 2001, gage height, 10.80 ft; from high water marks; minimum daily, 0.49 ft³/s, July 30, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 28 ft³/s, Aug. 30-31, Oct. 1-2, gage height, 3.80 ft; minimum daily, 2.60 ft³/s, June 23.

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	22	---	---	---	---	---	7.8	12	4.7	7.7	e4.7	19
2	25	---	---	---	---	---	9.6	11	4.0	7.1	e4.6	15
3	23	---	---	---	---	---	12	10	3.5	6.7	e7.0	5.2
4	23	---	---	---	---	---	13	10	3.4	7.4	e15	4.6
5	23	---	---	---	---	---	13	9.6	4.7	7.0	e15	4.2
6	23	---	---	---	---	---	12	9.0	4.0	6.3	15	4.0
7	22	---	---	---	---	---	10	8.4	4.3	6.4	15	4.3
8	22	---	---	---	---	---	9.4	8.1	3.5	6.4	15	4.5
9	22	---	---	---	---	---	9.9	7.9	2.7	5.7	15	4.1
10	23	---	---	---	---	---	12	7.4	e4.0	5.6	15	4.1
11	23	---	---	---	---	---	14	6.9	e4.8	5.5	16	3.9
12	23	---	---	---	---	---	16	6.4	4.8	5.3	21	3.8
13	22	---	---	---	---	---	18	5.3	5.2	5.2	20	3.9
14	22	---	---	---	---	---	19	4.7	5.1	5.0	20	4.0
15	22	---	---	---	---	---	19	5.0	4.3	5.1	21	3.7
16	14	---	---	---	---	---	17	7.6	4.7	4.9	21	3.6
17	14	---	---	---	---	---	16	6.1	5.7	4.7	21	3.4
18	14	---	---	---	---	---	15	5.8	13	e4.4	21	3.4
19	16	---	---	---	---	---	15	6.0	14	e4.4	21	3.5
20	17	---	---	---	---	---	13	5.7	6.7	e4.4	19	3.4
21	18	---	---	---	---	---	12	5.4	4.9	e4.5	19	3.3
22	18	---	---	---	---	---	12	4.9	3.5	e4.6	19	3.3
23	20	---	---	---	---	---	13	5.0	2.6	e4.6	20	3.2
24	23	---	---	---	---	---	13	5.1	2.9	e4.6	19	3.2
25	23	---	---	---	---	---	12	4.9	9.7	e5.1	18	3.1
26	5.3	---	---	---	---	---	12	4.6	9.5	e4.5	18	3.0
27	e4.0	---	---	---	---	---	13	4.7	8.9	e4.5	17	2.9
28	e4.0	---	---	---	---	---	13	4.9	8.3	e4.7	17	3.0
29	e3.0	---	---	---	---	---	13	4.9	8.4	e4.6	17	3.1
30	e3.0	---	---	---	---	---	12	4.3	8.3	e4.5	22	3.1
31	e3.0	---	---	---	---	---	---	4.4	---	e4.5	23	---
TOTAL	539.3	---	---	---	---	---	395.7	206.0	174.1	165.9	531.3	136.8
MEAN	17.4	---	---	---	---	---	13.2	6.65	5.80	5.35	17.1	4.56
MAX	25	---	---	---	---	---	19	12	14	7.7	23	19
MIN	3.0	---	---	---	---	---	7.8	4.3	2.6	4.4	4.6	2.9
AC-FT	1,070	---	---	---	---	---	785	409	345	329	1,050	271

e Estimated.

PLATTE RIVER BASIN

06706800 BUFFALO CREEK AT MOUTH AT BUFFALO CREEK , CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--June 1997 to September 2003 (seasonal records only), discontinued. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06706800

GAGE.--Tipping-bucket rain gage (no wind shields used) with satellite telemetry.

REMARKS.--None.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily rainfall, 1.63 inches, May 25, 1999.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily rainfall, 1.28 inches, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.01	0.00
2	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.04
3	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.09	0.02
4	---	---	---	---	---	---	0.00	0.06	0.08	0.00	0.00	0.00
5	---	---	---	---	---	---	0.00	0.00	0.34	0.00	0.01	0.00
6	---	---	---	---	---	---	0.00	0.00	0.12	0.00	0.00	0.01
7	---	---	---	---	---	---	0.00	0.00	0.05	0.00	0.02	0.13
8	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	0.00	0.04	0.00	0.00	0.00	0.03
10	---	---	---	---	---	---	0.00	0.00	0.10	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.07	0.00
12	---	---	---	---	---	---	0.00	0.00	0.06	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.03
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.00	0.54	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.02	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.02	0.74	0.33	0.00
19	---	---	---	---	---	---	0.00	0.06	0.44	0.77	0.00	0.00
20	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.09	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.05	0.20	0.00	0.00
26	---	---	---	---	---	---	0.00	0.02	0.01	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00
28	---	---	---	---	---	---	0.00	0.00	0.00	0.04	0.00	0.00
29	---	---	---	---	---	---	0.02	0.00	0.11	0.01	0.00	0.00
30	---	---	---	---	---	---	0.00	0.00	0.00	0.00	1.28	0.00
31	---	---	---	---	---	---	---	0.13	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	0.02	0.85	1.42	1.78	1.91	0.26

06707500 SOUTH PLATTE RIVER AT SOUTH PLATTE, CO

LOCATION.--Lat 39°24'33", long 105°10'10", in SE¹/₄ sec.25, T.7 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank at South Platte, 200 ft downstream from bridge on State Highway 75, and 400 ft downstream from North Fork South Platte River.

DRAINAGE AREA.--2,579 mi².

PERIOD OF RECORD.--July 1887 to September 1891, May to October 1892, October 1895 to September 1897, October 1898 to June 1900, October 1900 to September 1982, October 2001 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "at" or "near Deansbury," "at Deansbury and Platte Canyon," "at" or "near Platte Canyon," prior to 1901, and "below North Fork, at South Platte" 1914. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06707500

REVISED RECORDS.--WSP 306: 1910. WSP 1310: 1887-91, 1893, 1896, 1900, 1904, 1915(M), 1922(M), 1936(M). WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,078.43 ft above NGVD of 1929. See WSP 1710 or 1730 for history of changes prior to Mar. 14, 1910.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions through Boreas Pass ditch, Homestake Pipeline, Harold D. Roberts tunnel, and Antero and Elevenmile Canyon Reservoirs, Cheesman Lake, diversions above station for irrigation of about 45,000 acres, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

**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	402	249	247	e256	e205	e215	192	312	714	327	282	352
2	430	274	252	e264	e248	e211	232	295	619	300	303	526
3	363	272	246	e275	e250	e209	269	285	522	285	407	590
4	293	232	246	e255	e256	e198	272	282	478	289	392	712
5	230	234	260	e288	e250	224	254	265	524	399	374	691
6	222	230	257	e268	e226	252	228	250	506	393	366	590
7	221	232	263	e263	e215	255	214	273	488	389	402	691
8	233	318	266	e263	e240	257	202	288	459	366	426	750
9	269	291	267	e254	e246	258	202	278	413	323	428	667
10	278	289	285	e241	e270	261	273	329	413	317	379	605
11	303	283	291	e290	e258	264	409	323	422	322	376	595
12	305	238	296	e266	e248	266	391	312	417	397	427	578
13	306	248	299	e270	e271	268	378	237	422	383	415	572
14	300	253	306	e271	e281	248	439	235	431	318	404	578
15	262	250	304	e255	e257	228	369	263	402	369	399	568
16	257	240	287	e225	e247	229	340	308	395	380	396	551
17	257	240	282	e225	e246	231	335	321	399	457	416	549
18	286	237	276	e227	e251	255	329	362	509	508	423	538
19	286	231	e240	e247	e247	155	409	346	567	524	451	403
20	286	233	e221	e254	e248	159	357	354	478	476	396	399
21	286	236	e221	e251	e255	145	298	334	420	458	386	403
22	285	234	e237	e247	e250	130	300	356	388	483	396	452
23	288	250	e293	e251	e214	141	309	526	374	551	440	546
24	288	249	e231	e248	e257	161	309	481	351	450	447	512
25	286	251	e286	e233	e259	186	306	498	360	477	489	421
26	250	240	e272	e190	e262	199	319	481	360	512	504	412
27	253	250	e290	e170	e256	222	343	508	426	430	529	412
28	250	262	e251	e165	e232	197	337	589	492	462	583	409
29	252	253	e264	e164	---	160	341	600	499	445	568	395
30	243	250	e251	e153	---	160	330	648	505	411	600	419
31	244	---	e271	e238	---	172	---	670	---	304	652	---
TOTAL	8,714	7,549	8,258	7,467	6,945	6,516	9,286	11,609	13,753	12,505	13,456	15,886
MEAN	281	252	266	241	248	210	310	374	458	403	434	530
MAX	430	318	306	290	281	268	439	670	714	551	652	750
MIN	221	230	221	153	205	130	192	235	351	285	282	352
AC-FT	17,280	14,970	16,380	14,810	13,780	12,920	18,420	23,030	27,280	24,800	26,690	31,510

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 2003, BY WATER YEAR (WY)

MEAN	250	171	124	116	113	134	335	729	869	683	590	355
MAX	664	407	266	244	248	476	1,955	2,979	3,047	1,855	1,694	1,900
(WY)	(1910)	(1924)	(2003)	(2002)	(2003)	(1910)	(1942)	(1942)	(1921)	(1914)	(1914)	(1909)
MIN	61.5	49.3	45.2	45.6	36.5	52.1	98.2	180	127	85.3	81.0	81.6
(WY)	(1903)	(1905)	(1940)	(1940)	(1933)	(1957)	(1912)	(1902)	(1902)	(1902)	(1902)	(1902)

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR (a) WATER YEARS 1896 - 2003

ANNUAL TOTAL	140,757	121,944	
ANNUAL MEAN	386	334	373
HIGHEST ANNUAL MEAN			899
LOWEST ANNUAL MEAN			119
HIGHEST DAILY MEAN	748	750	6,140
LOWEST DAILY MEAN	167	130	b10
ANNUAL SEVEN-DAY MINIMUM	185	154	28
MAXIMUM PEAK FLOW		870	c6,320
MAXIMUM PEAK STAGE		3.82	8.95
ANNUAL RUNOFF (AC-FT)	279,200	241,900	270,100
10 PERCENT EXCEEDS	660	512	810
50 PERCENT EXCEEDS	291	288	223
90 PERCENT EXCEEDS	214	226	80

e Estimated.

a Water year 1893 to 2001 data were published by Colorado Division of Water Resources.

b Minimum daily determined.

c From rating curve extended above 3,500 ft³/s. Flood of Jul 12, 1996 may have been higher; peak data being reviewed.

06708800 EAST PLUM CREEK BELOW HASKINS GULCH NEAR CASTLE ROCK, CO

LOCATION.--Lat 39°25'28", long 104°54'27", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.20, T.7 S., R.67 W., Douglas County, Hydrologic Unit 10190002, on right bank at the Plum Creek Wastewater Treatment Plant, 0.1 mi southwest of Happy Canyon Road, 3.0 mi south of Sedalia, and 3.6 mi northwest of Castle Rock.

DRAINAGE AREA.--117 mi².

PERIOD OF RECORD.--April 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=06708800

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,940 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Diversions upstream from station for irrigation. 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	1.4	2.1	2.2	1.8	1.7	1.7	19	56	10	4.1	e4.5	7.5
2	1.9	2.1	2.1	2.6	1.8	2.2	22	51	7.0	4.4	e4.2	5.2
3	1.2	2.0	2.3	3.0	1.9	2.3	23	49	6.6	4.0	e7.0	4.0
4	1.2	2.0	2.3	2.5	2.3	2.1	23	46	8.8	3.9	e6.5	3.3
5	1.1	2.0	2.2	2.4	2.4	2.1	20	46	21	3.4	e6.0	2.5
6	1.2	1.9	2.3	2.3	2.3	1.8	20	44	11	3.7	e5.5	1.8
7	1.2	1.9	2.4	2.5	2.8	1.6	16	42	17	3.6	e5.5	3.2
8	1.1	1.8	2.5	2.1	2.5	1.8	14	39	11	3.7	e5.0	3.0
9	1.2	1.8	3.2	2.7	2.2	1.7	13	36	10	4.0	e5.0	1.4
10	1.2	1.8	3.3	4.5	2.1	1.6	12	38	9.6	4.2	e5.0	2.2
11	1.2	2.0	2.6	2.3	2.6	1.6	9.9	31	8.9	4.0	e20	1.9
12	1.3	1.8	2.9	3.4	3.4	1.5	11	25	6.7	4.0	e10	1.2
13	1.4	1.8	2.2	2.7	3.2	1.4	13	23	6.1	3.8	e5.0	1.3
14	1.4	1.9	2.4	2.3	3.4	1.5	19	23	5.4	2.5	4.1	1.4
15	1.6	1.9	2.5	2.4	5.3	1.4	26	27	4.9	2.6	2.8	2.5
16	1.6	1.8	2.9	2.7	4.6	1.5	27	27	3.5	2.5	5.1	1.5
17	1.5	1.7	2.3	1.8	4.3	2.1	25	24	9.7	3.1	3.3	1.2
18	1.7	1.7	2.2	2.2	4.5	2.6	25	19	9.3	3.4	5.6	1.3
19	1.9	1.7	2.1	2.3	4.3	1.5	41	18	7.0	46	4.9	1.4
20	1.8	1.7	2.4	2.1	3.7	6.0	28	19	7.7	e60	4.4	1.3
21	1.8	1.8	3.0	2.0	2.9	7.1	24	16	9.4	e10	4.7	0.98
22	2.0	1.8	3.4	1.7	3.1	9.4	24	13	8.5	e6.0	6.4	0.99
23	2.2	1.8	3.4	1.8	3.0	21	40	13	7.0	e5.0	8.2	1.2
24	2.5	1.9	3.2	1.7	5.4	19	72	13	6.2	e4.5	3.3	1.1
25	2.5	2.0	3.4	1.3	4.5	22	50	16	5.5	e4.5	2.3	1.1
26	2.3	2.1	2.7	1.6	2.2	26	48	15	4.9	e4.3	2.4	1.2
27	2.9	2.1	2.7	1.7	1.7	21	54	10	4.7	e4.2	2.4	1.3
28	2.4	2.0	1.9	1.7	1.7	17	61	7.5	5.0	e7.0	2.4	1.6
29	2.9	2.1	1.5	1.9	---	13	61	6.2	5.2	e6.0	2.2	1.5
30	2.3	2.1	1.5	1.9	---	16	59	5.9	4.2	e5.7	38	2.4
31	2.1	---	2.5	1.8	---	17	---	5.8	---	e5.0	38	---
TOTAL	54.0	57.1	78.5	69.7	85.8	228.5	899.9	804.4	241.8	233.1	229.7	62.47
MEAN	1.74	1.90	2.53	2.25	3.06	7.37	30.0	25.9	8.06	7.52	7.41	2.08
MAX	2.9	2.1	3.4	4.5	5.4	26	72	56	21	60	38	7.5
MIN	1.1	1.7	1.5	1.3	1.7	1.4	9.9	5.8	3.5	2.5	2.2	0.98
AC-FT	107	113	156	138	170	453	1,780	1,600	480	462	456	124

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

	5.57	5.84	5.83	5.87	6.46	8.43	20.9	37.4	18.5	7.80	9.12	6.28
MEAN	5.57	5.84	5.83	5.87	6.46	8.43	20.9	37.4	18.5	7.80	9.12	6.28
MAX	11.0	11.5	10.6	10.0	9.04	15.0	31.4	109	61.2	21.6	29.0	14.6
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(1999)	(1999)	(1999)	(1999)
MIN	1.74	1.90	2.53	2.25	3.06	4.48	3.17	3.57	4.77	2.51	1.46	2.08
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2001)	(2001)	(2003)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1999 - 2003

ANNUAL TOTAL	1,272.13	3,044.97	
ANNUAL MEAN	3.49	8.34	8.22
HIGHEST ANNUAL MEAN			12.4
LOWEST ANNUAL MEAN			3.93
HIGHEST DAILY MEAN	43	72	410
LOWEST DAILY MEAN	0.33	0.98	0.33
ANNUAL SEVEN-DAY MINIMUM	0.64	1.1	0.64
MAXIMUM PEAK FLOW		561	a901
MAXIMUM PEAK STAGE		7.28	7.75
ANNUAL RUNOFF (AC-FT)	2,520	6,040	5,960
10 PERCENT EXCEEDS	5.8	23	21
50 PERCENT EXCEEDS	2.9	3.0	5.2
90 PERCENT EXCEEDS	1.1	1.5	1.5

e Estimated.

a From rating curve extended above 359 ft³/s.

06709000 PLUM CREEK NEAR SEDALIA, CO

LOCATION.--Lat 39°26'18", long 104°58'57", in NE¹/₄SE¹/₄ sec.15, T.7 S., R.68 W., Douglas County, Hydrologic Unit 10190002, on right bank, on south side of County Road No. 20 bridge over Plum Creek, 1.0 mi west of Sedalia, and 1.4 mi downstream from the confluence of East and West Plum Creeks.

DRAINAGE AREA.--274 mi².

PERIOD OF RECORD.--June 1942 to September 1947. 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=06709000.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,720 ft above NGVD of 1929, from topographic map. Aug. 1942 to Sept. 1947, water-stage recorder at site 150 ft upstream at different datum. Prior to Aug. 1942, nonrecording gage at bridge.

REMARKS.--Records poor. Diversions upstream from station for irrigation. 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.

COOPERATION.--U.S. Army Corps of Engineers.

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	8.1	4.9	6.2	5.6	4.0	55	156	39	12	4.2	13
2	12	9.4	4.7	6.4	5.3	4.5	68	124	32	7.4	2.7	10
3	10	10	4.8	6.6	5.1	4.3	69	102	24	7.0	9.0	6.4
4	12	9.8	5.3	6.3	4.5	3.5	62	91	22	4.4	9.2	8.7
5	8.9	7.1	5.4	6.9	3.8	4.1	65	83	57	4.6	3.1	8.8
6	5.0	7.6	4.7	7.0	3.3	4.6	65	74	42	3.8	2.5	7.0
7	3.4	4.9	5.1	7.3	4.1	4.1	52	64	47	3.5	2.1	7.3
8	4.7	4.3	5.2	6.9	4.7	3.6	48	61	38	3.0	3.6	8.1
9	5.2	6.3	5.1	5.0	4.2	3.8	48	53	34	2.2	3.7	6.9
10	4.3	7.2	3.8	5.8	4.8	3.2	49	62	34	3.8	3.5	6.9
11	4.0	5.4	5.0	5.3	4.1	2.8	54	51	35	2.1	61	4.3
12	3.7	6.8	5.1	5.8	4.8	2.4	69	46	33	2.9	28	3.6
13	5.5	7.6	4.5	6.3	5.7	3.2	89	42	32	2.6	6.6	2.6
14	5.8	7.6	5.8	6.0	6.1	2.7	112	40	30	1.8	4.2	4.6
15	3.9	7.0	6.6	5.5	6.2	2.8	137	43	27	1.6	2.6	5.5
16	5.0	6.7	e6.4	4.0	5.7	3.5	133	48	26	3.2	2.0	4.8
17	5.8	5.3	e6.0	5.2	5.7	3.6	122	43	35	2.6	3.1	3.3
18	4.1	5.8	e5.8	5.8	4.6	5.9	132	39	38	2.0	4.9	3.2
19	5.9	4.9	5.4	6.1	3.6	112	146	36	35	26	4.8	3.7
20	4.5	5.4	6.2	6.6	3.4	56	116	38	39	76	4.7	3.9
21	4.1	5.9	5.6	6.3	3.3	26	100	37	33	11	3.6	3.8
22	4.9	5.4	6.1	4.8	3.5	27	98	36	27	5.0	2.3	4.3
23	5.8	6.6	6.1	5.5	3.1	40	123	34	22	2.1	2.3	3.9
24	4.9	5.8	7.3	6.6	3.1	30	182	33	20	1.9	2.7	2.8
25	4.5	5.3	5.8	6.3	3.3	32	147	42	24	2.8	2.6	3.0
26	4.6	3.6	7.0	6.1	3.8	51	152	40	26	3.4	2.0	2.3
27	6.6	4.0	6.0	6.5	3.5	41	182	37	19	3.8	2.5	2.2
28	7.0	4.3	6.6	5.2	4.1	23	184	34	16	12	2.3	2.3
29	9.6	4.1	7.3	4.6	---	16	182	31	22	6.6	2.6	4.2
30	8.8	4.7	6.6	4.9	---	25	175	30	19	5.8	21	3.9
31	7.3	---	6.4	5.3	---	44	---	30	---	6.2	68	---
TOTAL	186.6	186.9	176.6	183.1	123.0	589.6	3,216	1,680	927	233.1	277.4	155.3
MEAN	6.02	6.23	5.70	5.91	4.39	19.0	107	54.2	30.9	7.52	8.95	5.18
MAX	12	10	7.3	7.3	6.2	112	184	156	57	76	68	13
MIN	3.4	3.6	3.8	4.0	3.1	2.4	48	30	16	1.6	2.0	2.2
AC-FT	370	371	350	363	244	1,170	6,380	3,330	1,840	462	550	308

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2003, BY WATER YEAR (WY)

	9.65	14.9	12.7	12.2	15.0	19.2	54.1	100	37.9	14.9	18.2	7.16
MEAN	9.65	14.9	12.7	12.2	15.0	19.2	54.1	100	37.9	14.9	18.2	7.16
MAX	31.8	30.6	29.1	23.3	27.8	38.5	155	332	134	71.2	147	24.5
(WY)	(1943)	(1943)	(1943)	(2000)	(1944)	(1998)	(1998)	(1944)	(1947)	(1947)	(1945)	(2000)
MIN	1.32	3.34	5.00	4.09	4.39	6.62	12.3	5.06	2.70	1.59	0.020	0.000
(WY)	(1945)	(1945)	(1944)	(1997)	(2003)	(1995)	(2002)	(1946)	(1946)	(1996)	(1996)	(1943)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1942 - 2003

ANNUAL TOTAL	3,014.53		7,934.6			
ANNUAL MEAN	8.26		21.7		26.4	
HIGHEST ANNUAL MEAN					58.3 1947	
LOWEST ANNUAL MEAN					8.69 2002	
HIGHEST DAILY MEAN	68	Jun 20	184	Apr 28	915	Aug 8, 1945
LOWEST DAILY MEAN	0.27	Sep 4	1.6	Jul 15	a0.00	Jul 11, 1943
ANNUAL SEVEN-DAY MINIMUM	0.41	Sep 2	2.4	Jul 12	0.00	Aug 29, 1943
MAXIMUM PEAK FLOW			658	Aug 11	b,c,7,700	Aug 8, 1945
MAXIMUM PEAK STAGE			2.80	Aug 11	d6.52	Aug 8, 1945
ANNUAL RUNOFF (AC-FT)	5,980		15,740		19,160	
10 PERCENT EXCEEDS	15		61		53	
50 PERCENT EXCEEDS	6.6		6.0		13	
90 PERCENT EXCEEDS	2.1		3.1		2.0	

e Estimated.

a No flow many days, also during most years.

b Site and datum then in use, from rating curve extended above 350 ft³/s on basis of slope-area determination of peak flow.

c Highest flood of actual record probably occurred Jun 16, 1965. Discharge computed at Plum Creek near Louviers was 154,000 cfs.

d Maximum gage height, 7.07 ft, Jan 15, 1993, backwater from ice.

06709530 PLUM CREEK AT TITAN ROAD NEAR LOUVIERS, CO

LOCATION.--Lat 39°30'27", long 105°01'26", on line between sec.20 and sec.29, T.6 S., R.68 W., Douglas County, Hydrologic Unit 10190002, on left bank, on downstream side of bridge on Titan Road, 2.4 mi north of Louviers.

DRAINAGE AREA.--315 mi².

PERIOD OF RECORD.--May 1984 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06709530

REVISED RECORDS.--WDR CO-86-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,520 ft above NGVD of 1929, from topographic map. Prior to July 10, 1996, at same site, but different datum.

REMARKS.--No estimated daily discharges. Records poor. Diversions upstream from station for irrigation. 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	0.00	2.4	4.0	4.8	5.0	4.4	139	37	25	8.8	2.2	1.4
2	0.00	2.3	3.8	5.7	5.2	5.1	147	58	22	8.3	1.7	1.2
3	0.00	2.2	3.3	5.3	5.9	4.8	152	73	16	7.8	0.99	1.0
4	0.00	2.1	3.3	4.5	6.4	4.2	150	105	15	7.1	2.0	0.96
5	0.00	1.9	3.4	4.6	6.8	4.5	166	118	38	6.4	1.9	0.90
6	0.00	1.8	3.9	5.2	6.5	4.3	189	125	29	6.0	1.2	0.79
7	0.00	1.7	4.1	5.2	7.2	4.2	159	115	29	5.3	0.52	0.88
8	0.00	1.4	4.5	4.8	6.8	4.0	134	120	19	4.6	0.03	0.85
9	0.00	1.6	5.1	4.4	7.0	4.7	130	128	17	3.5	0.00	0.73
10	0.00	1.9	4.9	4.7	9.6	4.8	135	144	15	2.9	0.00	0.64
11	0.00	2.0	4.9	5.7	11	4.4	141	126	15	2.3	0.00	0.54
12	0.00	2.1	5.2	5.2	9.8	4.3	189	111	16	1.9	3.5	0.50
13	0.00	2.4	6.1	5.0	9.2	4.4	214	104	15	1.5	2.3	0.22
14	0.00	2.7	6.2	4.8	7.3	4.8	240	93	14	0.93	1.8	0.54
15	0.00	2.8	6.8	4.8	7.0	4.7	280	108	13	0.55	1.2	0.72
16	0.00	2.9	8.2	4.5	6.1	5.5	281	106	13	0.34	0.39	0.58
17	0.00	3.0	8.0	4.8	5.4	7.7	227	98	13	0.28	0.00	0.24
18	0.00	3.1	6.6	4.9	5.2	11	180	91	15	0.22	0.00	0.00
19	0.00	3.2	6.6	5.1	4.9	7.9	197	80	13	0.16	0.00	0.00
20	0.53	3.2	6.9	5.2	4.7	15	155	69	13	7.5	0.00	0.00
21	0.86	3.4	7.9	5.5	4.7	41	114	72	13	4.8	0.00	0.00
22	1.1	3.4	7.8	5.3	4.7	28	97	61	12	4.0	0.00	0.00
23	1.5	3.3	8.6	5.2	4.5	27	120	58	11	3.3	0.00	0.00
24	1.9	3.4	7.0	5.6	4.4	32	251	52	11	2.4	0.00	0.00
25	2.1	3.7	7.2	5.1	4.8	33	124	54	11	1.6	0.00	0.00
26	2.2	3.7	5.6	5.2	5.2	55	57	48	11	0.83	0.00	0.00
27	2.7	4.3	7.2	5.6	4.7	65	41	41	11	0.29	0.00	0.00
28	2.9	4.3	9.6	5.2	4.4	58	26	32	11	2.3	0.00	0.00
29	2.9	3.8	6.8	5.1	---	54	13	26	10	3.1	0.00	0.00
30	3.0	3.8	5.7	4.7	---	65	13	23	9.9	2.9	0.00	0.00
31	2.7	---	6.5	4.9	---	104	---	20	---	2.6	1.8	---
TOTAL	24.39	83.8	185.7	156.6	174.4	676.7	4,461	2,496	475.9	104.50	21.53	12.69
MEAN	0.79	2.79	5.99	5.05	6.23	21.8	149	80.5	15.9	3.37	0.69	0.42
MAX	3.0	4.3	9.6	5.7	11	104	281	144	38	8.8	3.5	1.4
MIN	0.00	1.4	3.3	4.4	4.4	4.0	13	20	9.9	0.16	0.00	0.00
AC-FT	48	166	368	311	346	1,340	8,850	4,950	944	207	43	25

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

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	11.3	16.3	14.1	13.6	16.1	25.5	73.0	155	45.5	15.0	14.9	5.77									
MAX	71.8	75.9	44.3	32.1	42.7	62.1	184	779	135	66.5	63.4	31.1									
(WY)	(1985)	(1985)	(1985)	(1988)	(1988)	(1988)	(1998)	(1984)	(1984)	(1995)	(1984)	(1984)									
MIN	0.000	2.15	4.40	4.86	5.14	6.55	8.76	8.15	3.75	0.002	0.000	0.000									
(WY)	(1995)	(1995)	(1996)	(1991)	(1990)	(1995)	(2002)	(2002)	(2002)	(1993)	(1993)	(1990)									

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1984 - 2003
ANNUAL TOTAL	2,154.46	8,873.21	
ANNUAL MEAN	5.90	24.3	30.3
HIGHEST ANNUAL MEAN			73.6 1999
LOWEST ANNUAL MEAN			7.26 2002
HIGHEST DAILY MEAN	33 Jun 20	281 Apr 16	1,770 May 15, 1984
LOWEST DAILY MEAN	0.00 Jun 1	0.00 Oct 1	a0.00 Jul 2, 1989
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 26	0.00 Oct 1	0.00 Jul 2, 1989
MAXIMUM PEAK FLOW		391 Apr 16	b2,900 Apr 30, 1999
MAXIMUM PEAK STAGE		7.89 Apr 16	c8.05 Apr 30, 1999
ANNUAL RUNOFF (AC-FT)	4,270	17,600	21,980
10 PERCENT EXCEEDS	15	104	65
50 PERCENT EXCEEDS	4.0	4.8	13
90 PERCENT EXCEEDS	0.00	0.00	0.00

a No flow many days, most years.

b From rating curve extended above 450 ft³/s.

c Maximum gage height, 10.63 ft, Jun 28, 1995, datum then in use.

06710247 SOUTH PLATTE RIVER BELOW UNION AVENUE, AT ENGLEWOOD, CO

LOCATION.--Lat 39°37'57", long 105°00'52", in SW¼NW¼ sec.9, T.5 S., R.68 W., Arapahoe County, Hydrologic Unit 10190002, on right bank 100 ft downstream from Englewood Water Treatment Plant, 200 ft downstream from Union Avenue bridge in Englewood, and 7.7 mi downstream from Chatfield Dam.

DRAINAGE AREA.--3,043 mi².

PERIOD OF RECORD.--February 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=06710247

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 5,290 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Chatfield Reservoir (station 06709600) 7.7 mi upstream. Diversions for municipal use by City of Englewood 100 ft 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	17	17	6.8	22	7.3	12	163	562	254	107	157	238
2	57	16	7.0	22	8.6	14	147	383	348	242	83	226
3	18	16	6.3	20	18	15	129	358	313	208	47	201
4	17	15	6.5	18	12	11	118	285	205	79	156	228
5	13	13	6.7	19	9.1	14	118	223	148	79	198	237
6	12	14	6.5	18	11	12	133	216	92	134	66	239
7	15	13	5.8	8.8	8.7	11	118	193	185	173	125	144
8	14	11	5.9	9.5	8.1	10	253	171	55	76	111	139
9	16	9.6	6.5	7.1	9.9	10	468	115	68	73	55	184
10	19	11	5.3	6.6	12	11	472	260	242	69	66	260
11	18	11	5.2	8.0	11	9.4	332	259	317	25	149	214
12	17	8.7	4.8	8.8	9.5	10	227	267	289	17	193	120
13	22	8.6	4.8	9.4	13	9.8	226	260	277	16	129	56
14	23	11	4.9	8.2	13	9.7	178	222	238	31	127	54
15	24	9.4	5.8	8.5	26	8.8	178	149	111	112	109	52
16	22	8.6	11	6.9	15	9.4	426	182	218	118	39	48
17	23	9.9	6.4	6.6	12	48	343	230	225	121	38	43
18	22	9.3	6.9	6.6	11	63	249	207	327	129	37	30
19	21	8.0	5.0	7.3	11	39	397	245	206	184	24	24
20	22	7.5	5.5	7.0	10	94	283	279	88	179	37	21
21	22	6.8	6.8	7.0	9.8	126	314	281	251	145	34	22
22	21	7.0	7.4	6.5	10	147	439	215	285	154	25	19
23	21	7.8	8.2	6.1	11	172	400	66	278	171	17	20
24	22	7.7	16	6.5	11	161	435	146	301	141	14	47
25	24	9.3	19	7.2	10	367	363	271	268	44	27	60
26	24	7.2	19	7.9	16	429	365	322	188	47	97	102
27	28	5.9	19	8.2	14	373	351	348	159	112	112	103
28	23	7.1	19	7.0	13	283	405	325	143	186	122	105
29	31	7.2	21	7.4	---	231	563	330	144	359	151	104
30	20	6.5	20	8.3	---	254	675	441	125	363	195	91
31	25	---	20	7.6	---	240	---	358	---	189	166	---
TOTAL	673	300.1	299.0	308.0	331.0	3,204.1	9,268	8,169	6,348	4,083	2,906	3,431
MEAN	21.7	10.0	9.65	9.94	11.8	103	309	264	212	132	93.7	114
MAX	57	17	21	22	26	429	675	562	348	363	198	260
MIN	12	5.9	4.8	6.1	7.3	8.8	118	66	55	16	14	19
AC-FT	1,330	595	593	611	657	6,360	18,380	16,200	12,590	8,100	5,760	6,810

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

MEAN	51.1	43.3	35.1	37.6	45.1	68.8	167	350	373	260	217	70.8
MAX	111	83.5	76.4	73.6	81.7	112	403	932	1,222	550	485	114
(WY)	(1999)	(1998)	(1998)	(1998)	(2001)	(1998)	(1998)	(1998)	(1999)	(1999)	(1999)	(2003)
MIN	20.1	10.0	9.65	9.94	11.8	27.1	23.4	45.0	70.6	22.4	10.8	19.7
(WY)	(2002)	(2003)	(2003)	(2003)	(2003)	(1996)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1996 - 2003
ANNUAL TOTAL	10,452.0	39,320.2	
ANNUAL MEAN	28.6	108	151
HIGHEST ANNUAL MEAN			293 1999
LOWEST ANNUAL MEAN			29.3 2002
HIGHEST DAILY MEAN	169 May 24	675 Apr 30	1,940 Jun 18, 1999
LOWEST DAILY MEAN	4.8 Dec 12	4.8 Dec 12	3.3 Apr 24, 1996
ANNUAL SEVEN-DAY MINIMUM	5.3 Dec 9	5.3 Dec 9	5.3 Dec 9, 2002
MAXIMUM PEAK FLOW		809 Jul 29	2,150 May 28, 1999
MAXIMUM PEAK STAGE		13.00 Jul 29	14.19 May 28, 1999
ANNUAL RUNOFF (AC-FT)	20,730	77,990	109,400
10 PERCENT EXCEEDS	65	287	378
50 PERCENT EXCEEDS	19	37	65
90 PERCENT EXCEEDS	7.2	7.2	13

06710385 BEAR CREEK ABOVE EVERGREEN, CO

LOCATION.--Lat 39°37'58", long 105°20'10", in SE¹/₄NE¹/₄ sec.9, T.5 S., R.71 W., Jefferson County, Hydrologic Unit 10190002, on right bank 0.9 mi upstream from Evergreen Lake dam at Evergreen.

DRAINAGE AREA.--104 mi².

PERIOD OF RECORD.--August 1984 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06710385

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage 7,080 ft above NGVD of 1929, from topographic map. Prior to May 1, 1986, at site 800 ft downstream at different datum. May 1, 1986 to Apr. 2, 2001, at site 600 ft downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by small diversions for irrigation. 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	9.8	e10	e5.1	e4.6	e4.6	e4.8	e30	96	163	62	29	34
2	12	e10	e5.1	e4.6	e4.7	e4.8	e94	89	114	59	30	29
3	12	e10	e5.1	e4.6	e4.8	e4.8	e84	85	105	57	28	33
4	12	e10	e5.1	e4.6	e4.7	e4.8	49	82	101	55	37	41
5	10	e10	e5.1	e4.6	e4.6	e4.8	45	72	110	52	28	31
6	10	e11	e5.5	e4.6	e4.8	e5.0	42	68	106	51	26	29
7	9.9	e11	e5.3	e4.6	e4.7	e5.0	37	65	108	49	26	45
8	10	e10	e5.3	e4.6	e4.7	e5.1	43	63	96	47	26	51
9	10	e10	e5.1	e4.6	e4.6	e5.2	46	62	90	43	27	44
10	9.8	e9.1	e5.1	e4.6	e4.6	e5.2	64	65	92	42	27	40
11	9.2	e9.1	e5.3	e4.6	e4.6	e5.3	73	61	89	41	23	35
12	9.0	e8.6	e5.0	e4.7	e4.6	e5.4	81	61	88	39	23	33
13	8.9	e8.6	e5.0	e4.7	e4.7	e5.5	100	67	87	37	e24	33
14	8.9	e8.5	e5.0	e4.7	e4.7	e5.6	120	70	90	35	e20	34
15	8.8	e8.3	e5.0	e4.7	e4.7	e5.6	125	80	83	35	18	33
16	9.0	e8.5	e4.9	e4.7	e4.7	e5.7	113	77	81	34	18	30
17	8.8	e8.0	e4.7	e4.7	e4.6	e6.8	113	96	81	36	22	29
18	9.1	e7.6	e4.7	e4.7	e4.6	e35	110	101	84	34	22	28
19	8.6	e7.1	e4.7	e4.7	e4.6	e60	103	95	92	43	22	28
20	8.6	e6.8	e4.6	e4.7	e4.7	e20	90	88	93	41	18	27
21	8.6	e6.5	e4.6	e4.7	e4.7	e15	82	84	86	39	17	26
22	8.6	e6.3	e4.6	e4.7	e4.7	e15	85	90	80	34	17	25
23	8.8	e6.0	e4.6	e4.7	e4.8	e15	86	98	77	32	21	25
24	10	e6.1	e4.6	e4.7	e4.9	e15	83	112	76	33	22	24
25	9.0	e5.8	e4.7	e4.7	e4.8	e15	81	118	76	31	21	23
26	9.4	e5.6	e4.7	e4.7	e4.9	e17	92	107	72	30	20	22
27	10	e5.6	e4.6	e4.7	e4.8	e20	102	116	68	31	17	21
28	9.1	e5.3	e4.6	e4.6	e4.8	e17	106	138	65	34	19	22
29	10	e5.0	e4.6	e4.6	---	e17	108	137	66	56	18	21
30	e10	e4.8	e4.6	e4.6	---	e18	105	152	69	37	66	21
31	e10	---	e4.6	e4.5	---	e18	---	140	---	32	47	---
TOTAL	297.9	239.2	151.5	144.1	131.7	386.4	2,492	2,835	2,688	1,281	779	917
MEAN	9.61	7.97	4.89	4.65	4.70	12.5	83.1	91.5	89.6	41.3	25.1	30.6
MAX	12	11	5.5	4.7	4.9	60	125	152	163	62	66	51
MIN	8.6	4.8	4.6	4.5	4.6	4.8	30	61	65	30	17	21
AC-FT	591	474	301	286	261	766	4,940	5,620	5,330	2,540	1,550	1,820

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

	27.4	22.1	15.5	13.0	12.2	15.7	37.6	94.0	98.7	57.1	49.8	33.0
MEAN	27.4	22.1	15.5	13.0	12.2	15.7	37.6	94.0	98.7	57.1	49.8	33.0
MAX	85.1	56.2	32.8	19.6	18.2	26.7	89.7	238	280	134	129	54.2
(WY)	(1985)	(1985)	(1985)	(1998)	(1996)	(1992)	(1987)	(1998)	(1995)	(1995)	(1999)	(1997)
MIN	9.61	7.97	4.89	4.65	4.70	9.57	13.9	12.2	10.7	5.38	8.24	9.66
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(1995)	(1991)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1984 - 2003

ANNUAL TOTAL	3,368.1	12,342.8	
ANNUAL MEAN	9.23	33.8	39.8
HIGHEST ANNUAL MEAN			70.5 1998
LOWEST ANNUAL MEAN			11.0 2002
HIGHEST DAILY MEAN	21	163	421 Jun 18, 1995
LOWEST DAILY MEAN	2.6	e4.5	2.6 Sep 8, 2002
ANNUAL SEVEN-DAY MINIMUM	3.3	e4.6	3.3 Jul 15, 2002
MAXIMUM PEAK FLOW		216	573 Jun 18, 1995
MAXIMUM PEAK STAGE		5.94	a5.39 Jun 18, 1995
ANNUAL RUNOFF (AC-FT)	6,680	24,480	28,840
10 PERCENT EXCEEDS	14	92	89
50 PERCENT EXCEEDS	9.1	18	24
90 PERCENT EXCEEDS	4.7	4.7	10

e Estimated.

a Maximum gage height, 5.96 ft, Jul 13, 2001, present site and datum.

06710500 BEAR CREEK AT MORRISON, CO

LOCATION.--Lat 39°39'11", long 105°11'43", in SE¹/₄SW¹/₄ sec.35, T.4 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank at Morrison, 180 ft upstream from bridge on State Highway 8, and 0.2 mi upstream from Mount Vernon Creek.

DRAINAGE AREA.--164 mi².

PERIOD OF RECORD.--September 1887 to September 1891, May 1895 to December 1901, February 1902 (gage heights only), October 1919 to current year. No winter records for water years 1888-90, 1896, 1898, 1900. Monthly discharge only for some periods, published in WSP 1310. Published as "near Morrison" 1900-1902, as "at Starbuck" 1919-28, and as "at Idledale" 1929-34. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06710500

REVISED RECORDS.--WSP 976: 1942. WSP 1310: 1888, 1890-91, 1898, 1935(M). WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Datum of gage is 5,780.43 ft above NGVD of 1929. See WSP 1710 or 1730 for history of changes prior to Oct. 1, 1934. Oct. 1, 1934 to Oct. 10, 1961, water-stage recorder at site 80 ft downstream at present datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Small diversions for irrigation of about 1,000 acres upstream from station.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	11	12	11	e4.6	e9.4	e7.0	92	162	177	62	30	39
2	25	14	12	e4.3	e9.0	e7.8	142	149	133	58	30	31
3	22	14	11	e5.6	e8.7	e8.2	152	137	114	54	28	35
4	19	13	10	e6.7	e7.0	7.9	137	131	110	52	38	44
5	18	14	e7.0	e6.9	e8.5	7.5	116	116	124	50	28	35
6	16	12	e7.2	e7.7	e9.0	8.9	105	108	115	50	24	31
7	15	12	e7.9	e7.2	e7.0	10	92	103	121	49	24	40
8	15	13	e8.1	e7.6	e8.0	13	84	99	103	47	25	57
9	15	15	e6.3	e7.2	e9.0	13	100	98	94	42	25	46
10	15	12	e5.7	e6.2	e10	14	139	107	97	41	26	43
11	14	10	e7.6	e8.0	e8.2	15	183	100	93	39	23	38
12	13	9.8	e7.4	e8.0	e7.0	17	206	95	91	39	22	36
13	13	12	e6.9	e7.5	e8.8	17	234	96	91	38	20	36
14	12	13	e8.8	e7.8	e9.7	18	265	100	93	35	19	38
15	12	12	e8.9	e7.4	e11	19	276	113	84	35	19	36
16	11	11	e8.0	e7.3	e9.7	17	236	131	82	36	18	33
17	11	13	e8.2	e7.8	e9.2	19	225	130	82	38	20	29
18	12	12	e8.6	e5.7	e8.7	14	215	139	86	35	26	31
19	11	10	e6.0	e7.9	e9.0	8.7	215	133	92	44	27	30
20	11	11	e4.0	e7.0	e7.8	15	192	125	97	44	21	30
21	10	12	e4.0	e7.9	e9.1	20	169	116	89	43	17	27
22	11	11	e4.7	e6.5	e8.7	30	167	117	79	38	18	26
23	11	12	e3.0	e7.9	e6.0	32	173	122	77	34	24	26
24	11	11	e2.9	e8.3	e5.0	34	169	137	76	33	28	24
25	12	9.1	e4.8	e8.0	e7.0	31	158	142	77	31	23	23
26	11	7.7	e2.0	e7.7	e7.5	45	161	131	73	30	22	22
27	11	8.7	e2.0	e9.2	e7.5	56	175	134	68	30	20	22
28	12	11	e3.0	e8.7	e6.5	44	177	150	65	35	19	22
29	13	12	e2.8	e8.8	---	35	185	142	65	55	21	22
30	11	12	e2.9	e9.0	---	40	180	161	69	44	66	22
31	9.5	---	e3.7	e8.8	---	55	---	148	---	35	58	---
TOTAL	413.5	351.3	196.4	229.2	232.0	679.0	5,120	3,872	2,817	1,296	809	974
MEAN	13.3	11.7	6.34	7.39	8.29	21.9	171	125	93.9	41.8	26.1	32.5
MAX	25	15	12	9.2	11	56	276	162	177	62	66	57
MIN	9.5	7.7	2.0	4.3	5.0	7.0	84	95	65	30	17	22
AC-FT	820	697	390	455	460	1,350	10,160	7,680	5,590	2,570	1,600	1,930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1900 - 2003, BY WATER YEAR (WY)

MEAN	30.8	23.4	16.9	13.8	14.3	20.2	54.4	146	135	71.0	63.3	43.1
MAX	115	86.7	57.0	34.0	36.0	48.3	296	525	551	249	307	371
(WY)	(1985)	(1924)	(1924)	(1924)	(1924)	(1960)	(1942)	(1973)	(1949)	(1949)	(1923)	(1938)
MIN	9.52	9.59	6.34	5.19	4.00	4.00	13.1	12.4	10.5	3.03	3.96	5.41
(WY)	(1935)	(1957)	(2003)	(1950)	(1933)	(1933)	(1982)	(1963)	(2002)	(2002)	(2002)	(1978)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1900 - 2003

ANNUAL TOTAL	3,795.36	16,989.4	
ANNUAL MEAN	10.4	46.5	52.3
HIGHEST ANNUAL MEAN			125
LOWEST ANNUAL MEAN			12.0
HIGHEST DAILY MEAN	e36	Sep 13	276
LOWEST DAILY MEAN	0.62	Jul 20	e2.0
ANNUAL SEVEN-DAY MINIMUM	1.0	Jul 28	e2.9
MAXIMUM PEAK FLOW			312
MAXIMUM PEAK STAGE			7.24
ANNUAL RUNOFF (AC-FT)	7,530	33,700	37,880
10 PERCENT EXCEEDS	16	133	117
50 PERCENT EXCEEDS	11	22	25
90 PERCENT EXCEEDS	2.6	7.2	11

e Estimated.

06710605 BEAR CREEK ABOVE BEAR CREEK LAKE NEAR MORRISON, CO

LOCATION.--Lat 39°39'08", long 105°10'23", in NW¹/₄NE¹/₄ sec.1, T.5 S. R.70 W., Jefferson County, Hydrologic Unit 10190002, on right bank, 0.9 mi downstream from Strain Gulch, 1.0 mi east of Morrison, and 1.1 mi downstream from Mt. Vernon Creek.

DRAINAGE AREA.--176 mi².

PERIOD OF RECORD.--May 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=06710605

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage 5,645 ft above NGVD of 1929, from topographic map. Prior to Apr. 21, 1989, at datum 3.37 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions to Harriman Canal, and Ward Canal, 0.7 mi 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	2.2	2.0	0.10	e0.14	e0.25	e0.20	38	53	154	45	6.1	18
2	14	1.9	0.26	0.14	0.15	e0.22	109	30	119	27	8.6	12
3	6.2	0.67	0.31	0.11	0.22	e0.20	101	16	79	13	8.0	15
4	1.1	0.44	0.31	0.14	0.17	e0.21	35	9.1	55	11	14	24
5	0.75	1.0	0.20	0.15	e0.14	e0.22	3.8	6.6	69	4.2	6.3	14
6	0.57	1.4	0.17	0.17	e0.15	e0.26	4.4	5.8	65	4.0	5.4	8.6
7	0.76	1.2	0.11	0.13	e0.14	1.1	5.1	3.5	70	2.9	6.4	16
8	3.0	1.0	0.12	e0.18	0.15	2.1	3.9	7.0	54	2.9	8.6	33
9	4.7	0.69	0.16	e0.20	e0.14	1.1	11	10	45	2.6	8.0	22
10	4.3	0.60	0.27	e0.21	e0.13	0.91	41	51	45	4.1	8.3	19
11	3.6	1.1	0.27	e0.17	e0.14	0.76	45	62	40	4.1	6.1	17
12	3.1	1.1	0.24	e0.12	e0.15	1.2	89	34	38	3.9	6.2	14
13	3.0	1.4	0.26	e0.11	0.22	2.3	159	18	36	3.6	7.0	13
14	2.0	0.89	e0.22	e0.14	0.19	0.40	184	21	37	3.1	7.1	15
15	3.7	0.43	e0.18	e0.16	0.17	0.45	206	38	30	8.3	8.1	14
16	3.8	0.34	e0.14	e0.18	0.20	0.37	186	80	48	13	6.8	11
17	4.1	0.50	e0.12	e0.19	0.17	0.59	144	106	56	14	9.2	9.2
18	5.4	0.40	e0.10	0.18	0.19	47	115	125	39	10	15	11
19	5.1	0.35	e0.08	e0.15	e0.19	76	100	92	32	18	13	12
20	4.6	0.45	e0.11	e0.12	e0.19	15	79	71	34	18	6.9	13
21	4.5	0.44	e0.12	e0.12	e0.19	0.85	61	61	25	16	5.6	11
22	4.9	0.40	e0.12	0.16	e0.20	0.61	50	61	14	11	7.4	11
23	5.3	0.38	e0.13	e0.23	e0.18	0.78	47	64	14	8.3	13	11
24	5.4	0.49	e0.13	0.23	e0.20	0.74	51	91	16	10	15	9.4
25	5.8	0.33	e0.14	0.26	e0.19	1.4	47	128	16	10	8.5	9.3
26	5.5	0.28	e0.15	0.16	e0.20	3.5	51	122	39	9.9	8.8	8.4
27	5.5	0.26	e0.14	0.19	e0.19	7.8	58	125	52	10	7.7	8.2
28	5.0	0.17	e0.13	e0.26	e0.20	2.5	61	137	48	13	7.1	8.5
29	5.6	0.12	e0.15	0.20	---	2.3	70	131	49	31	8.0	8.6
30	3.8	0.12	e0.15	0.22	---	2.1	67	145	51	17	51	8.8
31	0.94	---	e0.14	0.29	---	2.3	---	136	---	7.6	39	---
TOTAL	128.22	20.85	5.23	5.41	5.00	175.47	2,222.2	2,040.0	1,469	356.5	336.2	405.0
MEAN	4.14	0.69	0.17	0.17	0.18	5.66	74.1	65.8	49.0	11.5	10.8	13.5
MAX	14	2.0	0.31	0.29	0.25	76	206	145	154	45	51	33
MIN	0.57	0.12	0.08	0.11	0.13	0.20	3.8	3.5	14	2.6	5.4	8.2
AC-FT	254	41	10	11	9.9	348	4,410	4,050	2,910	707	667	803

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

MEAN	15.8	15.7	16.6	15.2	14.5	17.2	49.0	119	104	41.4	34.2	19.4
MAX	38.8	44.9	33.8	32.3	25.1	47.0	191	382	512	216	127	58.7
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1995)	(1995)	(1999)	(1997)
MIN	4.14	0.38	0.17	0.17	0.18	1.26	2.83	2.40	1.51	1.21	2.27	1.76
(WY)	(2003)	(1990)	(2003)	(2003)	(2003)	(1995)	(1989)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1986 - 2003

ANNUAL TOTAL	1,170.09		7,169.08		
ANNUAL MEAN	3.21		19.6		39.0
HIGHEST ANNUAL MEAN					96.1 1995
LOWEST ANNUAL MEAN					5.14 2002
HIGHEST DAILY MEAN	15	Jun 5	206	Apr 15	684 Jun 18, 1995
LOWEST DAILY MEAN	0.07	Sep 3	e0.08	Dec 19	0.07 Sep 3, 2002
ANNUAL SEVEN-DAY MINIMUM	0.11	Dec 17	e0.11	Dec 17	0.11 Dec 17, 2002
MAXIMUM PEAK FLOW			324	Apr 16	841 Jun 9, 1995
MAXIMUM PEAK STAGE			5.69	Apr 16	6.45 Jun 9, 1995
ANNUAL RUNOFF (AC-FT)	2,320		14,220		28,260
10 PERCENT EXCEEDS	8.5		61		83
50 PERCENT EXCEEDS	1.7		5.1		18
90 PERCENT EXCEEDS	0.26		0.15		2.4

e Estimated.

06710992 TURKEY CREEK NEAR INDIAN HILLS, CO

LOCATION.--Lat 39°37'03", long 105°13'24", in SE¹/₄NE¹/₄ sec.16, T.5 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank 0.5 mi downstream from Parmalee Gulch and 1.0 mi east of Indian Hills.

DRAINAGE AREA.--45.9 mi².

PERIOD OF RECORD.--April 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=06710992

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,620 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair, 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	0.78	1.1	e0.36	e0.22	e0.32	e1.5	e43	56	17	3.0	0.62	1.2
2	3.7	1.1	e0.31	e0.22	e0.32	e2.0	e63	43	16	2.5	0.37	0.72
3	3.3	1.1	e0.27	e0.24	e0.32	e1.5	e60	31	15	2.1	0.47	0.85
4	2.1	1.1	e0.25	e0.24	e0.32	e2.0	e51	27	14	1.9	1.7	0.85
5	1.7	e1.2	e0.21	e0.25	e0.32	e2.0	e42	23	18	1.6	1.3	0.58
6	1.5	e1.1	e0.19	e0.26	e0.31	e2.0	e36	e38	16	1.6	0.86	0.42
7	1.3	e0.95	e0.18	e0.26	e0.32	e2.0	e29	e37	18	1.5	0.62	0.53
8	1.3	e0.95	e0.17	e0.27	e0.34	e3.5	e29	e38	14	1.5	0.40	0.79
9	1.3	e0.95	e0.17	e0.29	e0.33	e3.3	e29	e41	12	1.2	0.41	0.67
10	1.2	e0.95	e0.16	e0.31	e0.33	e3.0	e34	e64	12	1.0	0.25	0.47
11	1.1	e1.0	e0.16	e0.32	e0.33	e2.9	e36	e55	10	0.88	0.14	0.34
12	1.0	e1.0	e0.15	e0.32	e0.36	e2.9	e45	e52	8.9	0.79	0.11	0.25
13	0.99	e1.1	e0.15	e0.32	e0.37	e3.2	e48	e52	8.2	0.66	0.11	0.28
14	1.0	e1.0	e0.14	e0.34	e0.41	e3.5	e68	e49	8.2	0.56	0.11	0.38
15	1.1	e0.95	e0.13	e0.32	e0.43	e3.6	e70	e50	7.2	0.48	0.10	0.40
16	1.0	e0.88	e0.13	e0.34	e0.41	e3.9	e62	63	6.9	0.44	0.10	0.29
17	1.0	e0.88	e0.14	e0.35	e0.41	e4.3	e60	41	6.8	0.41	0.10	0.19
18	1.0	e0.81	e0.17	e0.34	e0.42	e9.4	e63	40	6.5	0.32	0.46	0.21
19	0.96	e0.74	e0.19	e0.35	e0.42	e46	76	40	6.1	0.93	0.19	0.21
20	0.95	e0.81	e0.16	e0.34	e0.42	e28	142	40	5.9	0.83	0.10	0.19
21	0.94	e0.74	e0.17	e0.33	e0.44	e11	120	32	5.9	0.61	0.08	0.16
22	0.95	e0.74	e0.18	e0.34	e0.43	e8.3	97	25	4.8	0.37	0.08	0.13
23	1.0	e0.81	e0.17	e0.32	e0.42	e10	90	23	4.3	0.26	0.08	0.11
24	0.95	e0.78	e0.17	e0.32	e0.43	e10	98	22	4.3	0.22	0.08	0.10
25	1.0	e0.72	e0.18	e0.31	e0.44	e12	84	21	4.8	0.20	0.26	0.09
26	1.2	e0.59	e0.18	e0.31	e0.43	e17	79	20	4.3	0.19	0.15	0.06
27	1.1	e0.45	e0.19	e0.31	e1.0	e20	73	19	3.7	0.18	0.08	0.05
28	1.1	e0.41	e0.19	e0.30	e0.89	e17	73	19	3.2	0.79	0.06	0.05
29	1.2	e0.41	e0.20	e0.32	---	e16	74	18	3.1	0.76	0.06	0.06
30	1.1	e0.39	e0.21	e0.31	---	e19	70	17	4.0	1.1	0.98	0.09
31	1.1	---	e0.21	e0.32	---	e27	---	17	---	1.1	2.4	---
TOTAL	39.92	25.71	5.84	9.39	11.69	297.8	1,944	1,113	269.1	29.98	12.83	10.72
MEAN	1.29	0.86	0.19	0.30	0.42	9.61	64.8	35.9	8.97	0.97	0.41	0.36
MAX	3.7	1.2	0.36	0.35	1.0	46	142	64	18	3.0	2.4	1.2
MIN	0.78	0.39	0.13	0.22	0.31	1.5	29	17	3.1	0.18	0.06	0.05
AC-FT	79	51	12	19	23	591	3,860	2,210	534	59	25	21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	0.85	0.84	0.36	0.32	0.51	5.49	33.3	18.4	4.14	0.68	0.65	0.55
MAX	1.29	0.86	0.54	0.33	0.60	9.61	64.8	35.9	8.97	1.07	1.52	0.70
(WY)	(2003)	(2003)	(2002)	(2002)	(2002)	(2003)	(2003)	(2003)	(2003)	(2001)	(2001)	(2002)
MIN	0.42	0.83	0.19	0.30	0.42	1.38	1.90	1.65	0.43	0.000	0.001	0.36
(WY)	(2002)	(2002)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 2001 - 2003

ANNUAL TOTAL	283.34	3,769.98	
ANNUAL MEAN	0.78	10.3	5.53
HIGHEST ANNUAL MEAN			10.3 2003
LOWEST ANNUAL MEAN			0.73 2002
HIGHEST DAILY MEAN	5.8 May 26	142 Apr 20	142 Apr 20, 2003
LOWEST DAILY MEAN	0.00 Jun 26	0.05 Sep 27	a0.00 Jun 26, 2002
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 26	0.07 Sep 24	0.00 Jun 26, 2002
MAXIMUM PEAK FLOW		264 Apr 20	264 Apr 20, 2003
MAXIMUM PEAK STAGE		5.38 Apr 20	5.38 Apr 20, 2003
ANNUAL RUNOFF (AC-FT)	562	7,480	4,010
10 PERCENT EXCEEDS	2.0	40	16
50 PERCENT EXCEEDS	0.64	0.95	0.63
90 PERCENT EXCEEDS	0.00	0.17	0.01

e Estimated.

a No flow on many days in 2002.

06711500 BEAR CREEK AT MOUTH, AT SHERIDAN, CO

LOCATION.--Lat 39°39'08", long 105°01'57", in NW¼NW¼ sec.5, T.5 S., R.68 W., Arapahoe County, Hydrologic Unit 10190002, on left bank just downstream from bridge on road to Fort Logan Mental Health Center, at Highway Department maintenance building at northwest city limits of Sheridan, 1.3 mi upstream from mouth, and 2.1 mi west of city hall in Englewood.

DRAINAGE AREA.--260 mi².

PERIOD OF RECORD.--April to November 1914, March 1927 to current year. Monthly discharge only prior to October 1933, published in WSP 1310. Published as "at Sheridan Junction" 1934-41. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06711500

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,295 ft above NGVD of 1929, from topographic map. See WSP 1710 or 1730 for history of changes prior to Oct. 9, 1953. Oct. 9, 1953 to Aug. 6, 1969, water-stage recorder at present site at datum 1.0 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Bear Creek Lake since July 1979. Storage and diversions upstream from station for irrigation of about 12,000 acres.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	7.7	8.4	4.6	3.6	4.4	e3.7	35	153	178	49	15	51
2	13	8.7	4.6	3.5	4.1	e4.7	33	146	155	44	13	44
3	3.8	8.8	4.7	3.5	6.0	e3.8	64	144	118	21	12	41
4	3.0	8.5	4.3	3.5	4.0	3.5	104	142	81	19	13	40
5	3.6	8.2	4.1	3.7	3.9	3.2	102	84	91	13	14	40
6	4.3	8.1	4.0	e3.6	3.8	3.2	104	18	96	8.9	11	30
7	4.1	5.0	3.9	3.5	e3.7	3.3	99	16	104	6.8	8.5	28
8	4.3	4.6	3.9	3.6	e3.5	3.3	97	22	83	5.8	8.7	34
9	3.5	4.5	3.9	3.6	3.5	3.2	80	50	69	4.3	10	32
10	3.4	4.8	3.6	3.6	e3.5	3.1	63	94	64	3.5	9.8	27
11	2.5	4.9	3.6	e3.4	3.5	3.2	64	72	52	4.3	9.0	23
12	1.9	5.0	3.7	e3.2	3.5	3.3	78	115	43	4.9	7.4	21
13	2.1	5.3	3.8	3.3	3.5	3.5	142	116	42	5.0	7.4	20
14	2.1	5.4	3.8	3.3	4.2	5.3	269	76	43	3.8	6.7	20
15	2.4	5.4	3.8	3.3	6.2	6.0	296	32	40	3.3	6.8	18
16	2.3	5.3	3.8	3.4	4.0	6.3	308	45	37	6.7	7.2	16
17	2.9	5.1	3.8	3.4	3.9	21	270	125	59	9.9	7.3	13
18	3.0	5.2	3.8	3.4	3.6	19	227	168	59	19	15	13
19	2.5	5.2	3.7	3.4	3.9	17	257	160	46	15	20	15
20	2.8	4.8	3.9	3.3	3.5	24	198	126	49	19	15	15
21	2.7	4.8	3.8	3.5	3.5	31	190	112	41	19	11	15
22	2.9	4.8	3.7	3.6	3.6	30	176	101	31	15	15	14
23	2.7	5.1	3.8	3.6	e3.7	36	166	99	22	13	20	14
24	2.8	5.4	e3.8	3.6	e3.6	30	201	106	22	9.6	27	13
25	3.1	5.3	e3.8	3.5	e3.3	48	164	150	23	10	26	13
26	4.9	4.9	e3.8	3.5	e3.9	52	155	155	28	11	22	11
27	4.8	4.9	3.8	3.6	e3.9	44	151	150	48	11	23	10
28	5.1	4.6	3.8	11	e4.1	36	151	155	49	14	21	10
29	11	4.6	3.8	9.8	---	33	154	151	49	45	24	11
30	6.9	4.6	3.7	13	---	36	161	161	52	43	84	12
31	8.1	---	3.6	12	---	39	---	158	---	24	89	---
TOTAL	130.2	170.2	120.7	139.8	109.8	558.6	4,559	3,402	1,874	480.8	578.8	664
MEAN	4.20	5.67	3.89	4.51	3.92	18.0	152	110	62.5	15.5	18.7	22.1
MAX	13	8.8	4.7	13	6.2	52	308	168	178	49	89	51
MIN	1.9	4.5	3.6	3.2	3.3	3.1	33	16	22	3.3	6.7	10
AC-FT	258	338	239	277	218	1,110	9,040	6,750	3,720	954	1,150	1,320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2003, BY WATER YEAR (WY)

MEAN	23.5	23.2	21.5	19.7	19.1	22.2	54.9	152	103	37.3	38.9	24.9
MAX	151	99.8	61.3	46.3	43.5	94.4	394	859	630	238	255	256
(WY)	(1985)	(1985)	(1985)	(1970)	(1942)	(1960)	(1942)	(1973)	(1949)	(1983)	(1984)	(1938)
MIN	1.52	3.53	3.89	3.85	3.92	5.35	3.33	1.16	1.67	1.77	1.52	1.82
(WY)	(1955)	(1955)	(2003)	(1945)	(2003)	(1935)	(1935)	(1963)	(1966)	(1963)	(2002)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1927 - 2003

ANNUAL TOTAL	2,435.45	12,787.9	
ANNUAL MEAN	6.67	35.0	45.5
HIGHEST ANNUAL MEAN			157 1983
LOWEST ANNUAL MEAN			6.53 1954
HIGHEST DAILY MEAN	55 May 24	308 Apr 16	4,020 May 7, 1969
LOWEST DAILY MEAN	0.12 Aug 2	1.9 Oct 12	0.00 Jul 13, 1954
ANNUAL SEVEN-DAY MINIMUM	0.28 Jul 29	2.3 Oct 11	0.28 Jul 29, 2002
MAXIMUM PEAK FLOW		334 Apr 19	a8,150 May 7, 1969
MAXIMUM PEAK STAGE		3.98 Apr 19	10.50 May 7, 1969
ANNUAL RUNOFF (AC-FT)	4,830	25,360	32,930
10 PERCENT EXCEEDS	15	117	98
50 PERCENT EXCEEDS	4.9	9.8	17
90 PERCENT EXCEEDS	1.2	3.4	5.9

e Estimated.

a Present datum, from floodmarks, from rating curve extended above 3,400 ft³/s.

06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, CO

LOCATION.--Lat 39°39'54", long 105°00'13", in NW¼NE¼ sec.33, T.4 S., R.68 W., Arapahoe County, Hydrologic Unit 10190002, on right bank, 0.3 mi downstream from Dartmouth Ave bridge at Englewood, and 1.4 mi downstream from Bear Creek.

DRAINAGE AREA.--3,387 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 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=06711565.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,250 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain diversions, storage and flood control reservoirs, power developments, diversions for irrigation and municipal use, and return flow from irrigated areas. Flow regulated by Chatfield Dam since May 29, 1975 (station 06709600), and Bear Creek Dam since July 1979.

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	34	34	18	38	15	23	194	684	434	121	144	257
2	117	34	18	39	16	25	173	476	500	232	78	240
3	34	34	18	35	37	27	181	456	421	190	43	221
4	28	34	19	34	28	22	210	404	271	74	128	233
5	24	32	19	35	18	25	205	293	255	67	184	236
6	23	30	19	37	20	26	234	221	183	103	55	249
7	26	27	17	23	18	20	210	197	340	152	101	159
8	24	23	18	22	16	19	309	184	134	59	96	153
9	25	20	19	20	17	18	454	176	122	56	50	188
10	30	23	17	17	19	18	434	444	290	56	53	265
11	29	23	15	18	20	17	345	340	372	29	118	227
12	26	20	16	21	16	17	276	368	333	22	170	132
13	32	19	15	22	21	17	330	350	317	21	106	74
14	33	29	14	20	23	18	414	283	297	21	104	69
15	33	24	16	19	41	17	432	170	142	90	95	66
16	32	22	23	17	27	19	675	209	254	101	39	62
17	32	22	22	16	23	101	563	333	296	107	37	55
18	31	21	20	14	17	152	437	350	498	142	49	46
19	30	19	17	16	19	121	658	389	295	165	48	42
20	31	18	15	16	18	167	450	380	128	162	43	40
21	32	16	18	16	17	236	463	366	282	128	38	40
22	32	16	20	14	17	260	549	301	305	138	36	38
23	31	19	21	13	20	291	567	154	264	141	36	37
24	32	21	31	13	18	238	762	232	291	123	38	57
25	34	26	34	14	19	435	487	411	257	44	41	66
26	35	22	35	15	27	483	457	464	182	41	96	103
27	45	18	34	16	29	407	449	476	174	98	113	106
28	37	18	34	22	25	302	503	458	162	163	119	111
29	57	19	35	22	---	248	671	459	168	355	158	113
30	39	18	35	26	---	270	815	587	151	384	390	106
31	41	---	35	26	---	276	---	511	---	179	309	---
TOTAL	1,089	701	687	676	601	4,315	12,907	11,126	8,118	3,764	3,115	3,791
MEAN	35.1	23.4	22.2	21.8	21.5	139	430	359	271	121	100	126
MAX	117	34	35	39	41	483	815	684	500	384	390	265
MIN	23	16	14	13	15	17	173	154	122	21	36	37
AC-FT	2,160	1,390	1,360	1,340	1,190	8,560	25,600	22,070	16,100	7,470	6,180	7,520

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)

	141	146	90.2	77.8	82.8	128	356	792	700	503	388	149
MEAN	141	146	90.2	77.8	82.8	128	356	792	700	503	388	149
MAX	1,050	733	268	216	166	261	1,074	2,576	2,479	2,337	1,574	724
(WY)	(1985)	(1985)	(1985)	(1985)	(1985)	(1983)	(1984)	(1987)	(1995)	(1995)	(1984)	(1984)
MIN	35.1	23.4	22.2	21.8	21.5	51.7	40.5	60.4	73.9	39.2	22.8	36.7
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(1991)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1983 - 2003	
ANNUAL TOTAL	15,895		50,890			
ANNUAL MEAN	43.5		139		275	
HIGHEST ANNUAL MEAN					692 1984	
LOWEST ANNUAL MEAN					48.6 2002	
HIGHEST DAILY MEAN	344	May 24	815	Apr 30	4,010	Jun 28, 1995
LOWEST DAILY MEAN	12	Aug 15	13	Jan 23	a12	Aug 15, 2002
ANNUAL SEVEN-DAY MINIMUM	13	Aug 13	14	Jan 20	13	Aug 13, 2002
MAXIMUM PEAK FLOW			1,100	Apr 24	b9,710	Jun 4, 1995
MAXIMUM PEAK STAGE			3.12	Apr 24	7.21	Jun 4, 1995
ANNUAL RUNOFF (AC-FT)	31,530		100,900		199,300	
10 PERCENT EXCEEDS	79		409		593	
50 PERCENT EXCEEDS	33		43		123	
90 PERCENT EXCEEDS	18		18		44	

a Also occurred Aug 17-19, 2002.

b From rating curve extended above 3,800 ft³/s.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06711565

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1985 to current year.

pH: March 1985 to current year.

WATER TEMPERATURE: March 1985 to current year.

DISSOLVED OXYGEN: March 1985 to current year.

INSTRUMENTATION.--Water-quality monitor since March 1985.

REMARKS.--Water temperature record is good. Specific conductance record is fair. pH record is fair. Dissolved oxygen record is fair except for Apr. 21-30, July 17-28, and Sept. 9-11, which is poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2830 microsiemens/cm, Feb. 26, 2003; minimum, 139 microsiemens/cm, Aug. 17, 2000.

pH: Maximum, 10.4 units, Aug. 27, 1997; minimum, 6.4 units, Oct. 18, 1989.

WATER TEMPERATURE: Maximum, 29.0°C, Aug. 17, 1986, July 30, 1987, July 20, 2002; minimum, 0.0°C, freezing point on many days during winter.

DISSOLVED OXYGEN: Maximum, 19.0 mg/L, Feb. 7 and 9, 1995; minimum, 0.2 mg/L, June. 20-22, and July 3, 2002.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2830 microsiemens/cm, Feb. 26; minimum, 140 microsiemens/cm, Aug. 30.

pH: Maximum, 9.4 units, June 15; minimum, 7.3 units, July 25, 26.

WATER TEMPERATURE: Maximum, 28.0°C, July 12; minimum, 0.0°C, several days.

DISSOLVED OXYGEN: Maximum, 16.5 mg/L, Mar. 9; minimum, 1.5 mg/L, July 25.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	11.2	8.6	9.6	12.1	9.7	10.6
2	---	---	---	11.3	9.1	10.1	11.1	8.4	9.5	12.6	10.0	11.1
3	---	---	---	11.0	9.0	9.7	10.7	8.6	9.3	12.5	9.5	10.7
4	---	---	---	11.0	8.8	9.5	10.3	8.7	9.4	12.2	9.4	10.4
5	---	---	---	11.0	8.5	9.1	11.4	9.1	9.9	12.0	9.2	10.1
6	---	---	---	10.8	8.0	9.1	11.1	9.1	9.9	12.5	8.4	10.1
7	---	---	---	10.6	8.0	9.0	11.3	9.2	10	12.3	8.7	10
8	---	---	---	10.6	7.2	8.7	11.3	9.2	10.1	12.3	8.8	10
9	---	---	---	9.6	7.0	8.1	11.3	9.5	10.2	12.6	8.9	10.3
10	---	---	---	10.6	7.4	8.8	11.6	9.2	9.8	12.2	9.3	10.5
11	---	---	---	10.9	8.1	9.2	10.8	9.1	9.7	12.6	9.8	10.8
12	---	---	---	10.9	8.4	9.4	11.2	9.1	9.9	12.4	10.0	10.8
13	---	---	---	10.5	7.5	8.9	11.1	9.1	9.7	12.3	9.6	10.5
14	---	---	---	9.9	7.3	8.2	10.7	9.0	9.7	12.4	9.3	---
15	---	---	---	9.4	6.9	8.1	10.8	9.1	9.7	12.0	---	---
16	---	---	---	10.5	8.1	9.1	10.8	9.2	9.8	---	---	---
17	---	---	---	10.5	8.0	8.9	10.4	8.8	9.6	12.8	---	---
18	---	---	---	10.4	7.7	8.7	10.7	8.8	9.6	12.4	9.7	10.7
19	---	---	---	10.5	7.7	8.7	11.1	9.1	10.0	13.1	9.6	10.8
20	---	---	---	10.5	7.8	8.7	10.9	9.6	10.1	13.2	9.4	10.7
21	---	---	---	10.4	7.7	8.5	11.1	9.4	10.1	12.1	9.3	10.4
22	---	---	---	10.5	7.6	8.8	11.2	9.6	10.2	12.4	9.2	10.5
23	---	---	---	10.8	7.6	8.9	11.5	9.9	10.5	12.6	10.1	11.0
24	---	---	---	9.9	8.1	8.9	11.8	10.2	10.9	12.9	9.4	10.8
25	---	---	---	10.9	8.4	9.6	11.9	10.5	11.0	13.2	9.4	10.8
26	---	---	---	11.1	8.9	9.9	11.9	10.5	11.1	13.4	9.5	10.9
27	---	---	---	11.0	9.2	9.9	11.9	10.3	11.1	14.0	8.7	10.5
28	---	---	---	10.9	8.7	9.6	11.9	9.8	10.7	13.1	8.4	10.4
29	---	---	---	10.9	8.5	9.4	11.5	9.3	10.2	14.0	9.8	11.2
30	---	---	---	11.2	8.5	9.5	11.8	9.2	10.3	14.2	9.5	11.0
31	---	---	---	---	---	---	12.2	9.7	10.6	14.1	9.0	10.8
MONTH	---	---	---	---	---	---	12.2	8.4	10.1	---	---	---

06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, 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	15.6	8.5	10.9	15.1	9.4	11.5	11.0	8.1	9.5	9.3	8.6	8.9
2	12.8	8.0	9.7	15.5	9.3	11.5	11.5	8.0	9.5	9.8	8.5	9.0
3	12.4	8.9	10.3	15.9	8.7	11.3	12.0	8.0	9.6	9.7	8.1	8.9
4	12.9	9.7	10.9	14.4	8.2	10.9	12.1	8.7	10.1	9.9	8.2	8.9
5	12.9	8.9	10.5	15.3	9.7	11.7	12.5	9.0	10.3	10.2	7.8	9.0
6	12.7	9.5	11.0	15.8	8.9	11.4	12.9	9.2	10.6	10.8	7.6	9.0
7	12.8	7.2	10.5	15.2	7.8	10.6	14.0	9.3	11.0	11.0	7.6	9.0
8	12.7	9.7	11.0	16.1	7.2	10.8	14.9	9.3	11.1	11.4	7.3	9.1
9	13.0	9.6	11.1	16.5	7.2	10.9	11.6	9.1	10.3	9.9	7.2	8.7
10	12.9	9.9	11.1	15.6	7.1	10.4	11.7	9.2	10.3	10.4	9.0	9.7
11	13.4	9.6	11.1	15.1	6.5	10.1	12.0	8.5	10.2	11.0	8.2	9.4
12	13.5	9.6	11.0	14.4	6.1	9.8	12.9	8.6	10.4	10.7	8.0	9.2
13	13.5	9.0	10.7	15.1	6.5	9.9	13.2	8.8	10.5	10.8	8.0	9.1
14	14.0	8.5	10.5	15.0	6.3	9.6	11.6	9.3	10.1	11.0	6.6	9.0
15	11.6	8.5	9.7	14.9	5.8	9.3	10.9	9.1	9.9	11.5	6.6	8.6
16	13.8	8.8	10.7	13.8	6.0	9.2	10.8	9.5	10.0	11.7	6.8	8.7
17	15.0	8.9	11.1	11.0	6.1	---	10.9	9.3	10.0	10.3	7.2	8.4
18	15.3	8.2	10.9	---	---	---	11.4	9.4	10.2	10.1	7.4	8.4
19	15.5	8.5	11.1	---	---	---	10.0	9.3	9.6	9.3	7.6	8.5
20	16.1	8.5	11.4	---	---	---	11.3	9.1	10.2	10.4	7.8	8.9
21	15.7	8.6	11.5	---	---	---	11.4	8.6	9.9	9.9	7.3	8.5
22	15.8	8.4	11.6	10.9	9.9	10.5	10.8	8.6	9.4	10.1	7.3	8.6
23	15.9	9.3	11.8	10.5	9.5	10.1	10.2	8.7	9.3	9.7	6.9	8.1
24	14.8	9.9	12.0	10.2	9.9	10.1	10.6	9.2	10.1	9.4	6.7	7.9
25	15.0	10.2	11.9	10.4	9.0	9.8	10.5	8.6	9.6	9.4	7.7	8.3
26	14.0	9.8	11.3	10.2	9.0	9.7	10.7	8.1	9.4	9.4	7.7	8.3
27	13.7	9.3	10.9	10.4	9.5	10.1	11.0	8.0	9.4	9.4	7.6	8.3
28	14.1	9.0	11.0	10.9	9.6	10.3	11.2	8.2	9.3	9.3	7.4	8.2
29	---	---	---	11.2	9.6	10.3	10.4	8.4	9.1	9.3	7.4	8.1
30	---	---	---	11.1	9.1	10.1	9.1	8.4	8.7	8.8	7.4	8.0
31	---	---	---	11.0	8.6	9.9	---	---	---	8.9	7.3	7.9
MONTH	16.1	7.2	11.0	---	---	---	14.9	8.0	9.9	11.7	6.6	8.7
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.4	7.3	7.8	10.3	5.5	7.5	---	---	---	8.1	6.4	7.2
2	8.9	7.4	8.0	10.1	5.9	7.7	---	---	---	8.2	6.3	7.1
3	9.1	7.2	8.0	10.3	5.2	7.7	---	---	---	8.3	6.3	7.2
4	9.0	7.2	7.9	11.3	4.8	7.6	---	---	---	8.4	6.4	7.3
5	8.7	7.5	8.0	11.4	4.6	7.5	---	---	---	8.5	6.4	7.3
6	9.3	7.1	8.1	11.0	5.0	7.7	---	---	---	7.9	6.4	7.2
7	9.2	7.2	8.1	10.0	5.6	7.6	---	---	---	8.1	6.4	7.1
8	9.4	6.8	8.0	11.9	4.7	7.9	---	---	---	8.7	6.4	7.3
9	9.7	6.3	7.6	12.0	4.3	7.5	---	---	---	8.9	6.5	7.6
10	10.2	6.4	7.9	12.2	4.3	7.7	---	---	---	11.7	7.1	8.1
11	9.9	7.1	8.2	11.6	3.9	7.4	---	---	---	10.4	6.9	8.4
12	10.2	7.2	8.2	11.9	3.7	7.4	---	---	---	9.3	6.5	7.9
13	10.1	7.1	8.3	12.0	3.5	7.2	---	---	---	9.2	6.5	7.9
14	10.3	6.5	8.4	12.0	3.4	7.2	---	---	---	9.8	7.0	8.5
15	11.8	6.3	8.4	9.7	4.3	6.6	---	---	---	9.6	6.5	7.9
16	11.0	6.4	8.3	10.4	5.2	7.0	---	---	---	9.7	6.4	7.7
17	10.7	6.5	7.9	9.9	4.7	7.2	---	---	---	9.7	6.3	7.6
18	9.2	6.8	7.7	9.9	4.7	7.0	11.4	---	---	10.3	6.6	8.2
19	9.7	6.2	7.9	8.1	4.3	5.9	11.2	5.2	7.7	10.5	6.7	8.4
20	10.1	6.1	7.4	8.1	5.1	6.4	11.6	4.7	7.4	10.6	6.7	8.1
21	9.9	6.0	7.7	8.4	5.1	6.4	11.5	4.6	7.2	10.4	6.7	8.0
22	9.5	5.9	7.6	8.8	4.6	6.7	12.1	4.6	7.1	10.7	6.6	8.1
23	10.1	6.2	7.9	8.6	4.7	6.5	11.7	5.1	7.5	11.0	6.4	8.1
24	8.2	6.2	7.1	8.1	1.9	5.8	10.9	5.1	7.3	11.2	6.6	8.3
25	9.7	6.1	7.9	5.5	1.5	3.4	10.4	5.2	7.2	11.3	6.9	8.5
26	10.5	5.7	7.9	5.8	2.2	3.8	9.4	5.3	7.0	10.8	6.9	8.4
27	10.3	5.3	7.6	9.5	3.1	6.8	9.1	5.5	7.0	11.1	6.9	8.6
28	10.7	5.3	7.4	8.5	---	---	9.2	5.7	7.1	11.2	6.9	8.7
29	10.5	5.3	7.5	---	---	---	8.8	6.0	7.1	11.3	7.0	8.8
30	10.8	5.5	7.9	---	---	---	7.9	6.1	7.0	11.6	7.2	9.0
31	---	---	---	---	---	---	7.8	6.7	7.4	---	---	---
MONTH	11.8	5.3	7.9	---	---	---	---	---	---	11.7	6.3	8.0

PLATTE RIVER BASIN

06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, CO—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	8.1	7.9	8.0	8.2	8.0	8.1
2	---	---	---	8.0	7.8	7.9	8.1	7.9	8.0	8.2	8.0	8.1
3	---	---	---	8.0	7.8	7.9	8.1	7.9	8.0	8.2	8.0	8.0
4	---	---	---	8.1	7.9	7.9	8.1	8.0	8.0	8.2	8.0	8.0
5	---	---	---	8.0	7.8	---	8.1	7.9	8.0	8.2	8.0	8.0
6	---	---	---	8.1	7.8	7.9	8.1	8.0	8.0	8.2	7.9	8.0
7	---	---	---	8.1	7.8	8.0	8.1	7.9	8.0	8.0	7.8	7.9
8	---	---	---	8.1	7.8	7.9	8.1	7.9	8.0	8.0	7.8	7.9
9	---	---	---	8.0	7.8	7.9	8.1	7.9	8.0	8.0	7.8	7.9
10	---	---	---	8.1	7.8	8.0	8.3	7.9	8.0	8.0	7.8	7.9
11	---	---	---	8.1	7.9	8.0	8.1	7.9	8.0	8.0	7.8	7.9
12	---	---	---	8.1	7.9	8.0	8.3	7.9	8.0	8.0	7.9	7.9
13	---	---	---	8.0	7.8	8.0	8.3	7.9	7.9	8.1	7.8	7.9
14	---	---	---	8.1	7.8	8.0	8.1	7.9	8.0	8.0	7.8	7.9
15	---	---	---	8.0	7.8	7.9	8.1	7.9	8.0	8.1	7.8	7.9
16	---	---	---	8.0	7.9	7.9	8.2	8.0	8.0	8.0	7.8	7.9
17	---	---	---	8.1	7.9	8.0	8.1	7.9	8.0	8.0	7.8	8.0
18	---	---	---	8.1	7.8	8.0	8.1	7.9	8.0	8.0	7.8	8.0
19	---	---	---	8.1	7.9	8.0	8.1	7.9	8.0	8.1	7.8	8.0
20	---	---	---	8.1	7.9	8.0	8.0	7.9	8.0	8.1	7.8	8.0
21	---	---	---	8.1	7.9	---	8.1	7.9	8.0	8.2	7.8	7.9
22	---	---	---	8.0	7.9	8.0	8.1	8.0	8.0	8.0	7.8	7.9
23	---	---	---	8.1	7.9	8.0	8.1	8.0	8.0	8.0	7.8	7.9
24	---	---	---	8.0	7.9	8.0	8.2	8.0	8.1	8.0	7.8	7.9
25	---	---	---	8.1	7.9	8.0	8.2	8.0	8.1	8.1	7.8	7.9
26	---	---	---	8.0	7.9	8.0	8.1	8.0	8.1	8.1	7.8	7.9
27	---	---	---	8.0	7.9	7.9	8.1	8.0	8.1	8.2	7.8	8.0
28	---	---	---	8.0	7.9	7.9	8.2	8.0	8.1	8.2	7.8	8.0
29	---	---	---	8.1	7.9	8.0	8.1	8.0	8.0	8.1	7.9	8.0
30	---	---	---	8.1	7.9	8.0	8.2	8.0	8.1	8.2	7.9	8.0
31	---	---	---	---	---	---	8.1	8.0	8.0	8.2	7.9	8.0
MAX	---	---	---	---	---	---	8.3	8.0	8.1	8.2	8.0	8.1
MIN	---	---	---	---	---	---	8.0	7.9	7.9	8.0	7.8	7.9
	FEBRUARY			MARCH			APRIL			MAY		
1	8.2	7.8	7.9	8.2	7.8	8.0	8.7	8.0	8.2	8.6	8.0	8.2
2	8.0	7.8	8.0	8.2	7.8	8.0	8.9	8.0	8.3	8.7	7.9	8.2
3	8.0	7.8	8.0	8.3	7.8	8.0	8.7	8.0	8.2	8.8	7.9	8.2
4	8.0	7.8	7.9	8.3	7.8	8.1	8.9	7.9	8.2	8.8	7.9	8.1
5	7.9	7.7	7.8	8.2	7.9	8.0	8.8	7.9	8.2	8.7	7.8	8.1
6	8.0	7.8	7.9	8.2	7.9	8.0	9.0	7.9	8.3	8.9	7.9	8.2
7	8.0	7.7	7.8	8.2	7.8	7.9	9.0	7.9	8.3	8.9	7.8	8.2
8	8.0	7.8	7.9	8.3	7.8	8.0	9.2	7.9	8.1	9.0	7.8	8.3
9	8.1	7.8	8.0	8.5	7.8	8.0	8.7	8.0	8.2	8.2	7.8	8.0
10	8.1	7.8	8.0	8.4	7.8	8.0	8.8	8.0	8.2	8.2	7.8	8.0
11	8.1	7.9	8.0	8.4	7.8	8.0	8.8	8.0	8.3	8.9	7.9	8.1
12	8.1	7.8	7.9	8.4	7.8	8.0	9.0	7.9	8.2	9.0	7.8	8.2
13	8.2	7.8	8.0	8.4	7.8	8.0	9.1	7.9	8.2	9.0	7.8	8.2
14	8.3	7.9	8.0	8.4	7.8	8.0	8.8	7.8	8.2	9.0	7.8	8.3
15	8.1	7.8	8.0	8.3	7.8	8.0	8.9	7.8	8.0	8.8	7.8	8.1
16	8.1	7.8	7.9	8.4	7.8	8.0	8.7	7.9	8.0	9.0	7.8	8.2
17	8.3	7.8	8.0	8.7	7.8	---	8.8	7.9	8.1	8.9	7.8	8.2
18	8.3	7.8	8.0	---	---	---	8.9	7.9	8.2	8.8	7.8	8.0
19	8.4	7.9	8.0	---	---	---	8.1	7.8	7.9	8.3	7.8	8.0
20	8.4	7.9	8.1	---	---	---	8.9	7.9	8.1	8.9	7.9	8.1
21	8.4	7.8	8.1	---	---	---	8.9	7.8	8.0	8.9	7.8	8.1
22	8.4	7.8	8.1	8.2	8.0	8.1	8.7	7.9	8.1	8.9	7.8	8.1
23	8.4	7.9	8.1	8.2	7.9	8.0	8.5	7.9	8.0	8.6	7.7	8.0
24	8.2	7.8	8.0	8.2	7.9	8.0	8.2	7.7	7.9	8.9	7.8	8.1
25	8.2	7.8	8.0	8.3	8.1	8.2	8.8	7.9	8.1	8.8	7.9	8.0
26	8.1	7.9	8.0	8.4	8.1	8.2	8.8	7.8	8.1	8.8	7.9	8.1
27	8.1	7.8	8.0	8.4	8.2	8.2	8.9	7.8	8.1	8.8	7.9	8.0
28	8.1	7.8	7.9	8.4	8.2	8.2	9.0	7.8	8.0	8.8	7.8	8.1
29	---	---	---	8.5	8.1	8.2	8.7	7.9	8.0	8.9	7.8	8.0
30	---	---	---	8.5	8.1	8.2	8.4	8.0	8.1	8.6	7.8	8.0
31	---	---	---	8.6	8.1	8.2	---	---	---	8.6	7.8	7.9
MAX	8.4	7.9	8.1	---	---	---	9.2	8.0	8.3	9.0	8.0	8.3
MIN	7.9	7.7	7.8	---	---	---	8.1	7.7	7.9	8.2	7.7	7.9

06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, CO—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
1	8.6	7.8	8.0	8.9	7.6	8.0	8.1	7.6	7.7	8.5	7.7	7.9
2	8.8	7.8	8.0	9.2	7.8	8.2	8.0	7.5	7.6	8.5	7.7	7.8
3	8.8	7.8	8.0	9.2	7.8	8.2	7.9	7.4	7.5	8.3	7.6	7.8
4	8.3	7.8	7.9	8.9	7.6	8.2	8.5	7.6	7.8	8.6	7.7	7.9
5	8.4	7.7	8.0	8.8	7.7	8.2	8.4	7.6	7.8	8.7	7.7	7.8
6	9.1	7.7	8.0	9.1	7.7	8.1	8.1	7.5	7.6	8.2	7.7	7.8
7	8.7	7.8	8.0	8.8	7.8	8.1	8.5	7.7	7.9	8.1	7.7	7.7
8	8.6	7.7	8.1	8.8	7.7	8.3	8.7	7.7	7.9	8.3	7.7	7.8
9	9.0	7.8	8.1	8.9	7.7	8.3	8.3	7.6	7.9	8.3	7.7	7.9
10	9.2	7.8	8.1	8.9	7.7	8.3	9.0	7.6	8.1	8.6	7.8	8.0
11	9.1	7.8	8.1	8.3	7.6	7.9	9.2	7.7	8.0	8.6	7.7	7.9
12	9.1	7.8	8.2	8.2	7.7	7.8	9.0	7.7	8.2	8.4	7.7	7.9
13	9.0	7.8	8.1	8.3	7.7	7.8	9.2	7.6	8.2	7.9	7.6	7.7
14	9.2	7.8	8.4	8.2	7.6	7.8	9.3	7.6	8.3	8.0	7.7	7.8
15	9.4	7.7	8.2	8.7	7.8	8.1	9.3	7.6	8.4	8.0	7.7	7.8
16	9.2	7.8	8.3	8.7	7.7	8.0	8.5	7.5	8.1	8.1	7.7	7.8
17	9.1	7.7	8.2	8.7	7.7	8.1	8.5	7.6	8.2	8.1	7.6	7.8
18	8.9	7.8	8.0	8.7	7.5	7.9	8.5	7.6	8.0	8.0	7.6	7.8
19	8.8	7.8	8.0	8.3	7.4	7.6	8.2	7.6	7.8	8.0	7.7	7.8
20	8.5	7.7	8.1	8.1	7.5	7.6	8.3	7.6	8.0	8.0	7.7	7.8
21	9.1	7.8	8.2	8.2	7.4	7.6	8.2	7.6	7.9	8.0	7.7	7.8
22	9.1	7.8	8.1	8.4	7.5	7.7	8.3	7.6	7.8	8.0	7.7	7.8
23	9.2	7.8	8.1	8.2	7.5	7.7	8.3	7.6	7.7	8.0	7.7	7.8
24	8.3	7.7	7.9	8.0	7.4	7.6	8.2	7.6	7.7	8.3	7.7	8.0
25	9.0	7.8	8.1	7.6	7.3	7.4	8.3	7.6	7.8	8.5	7.7	8.0
26	9.0	7.7	8.2	7.6	7.3	7.4	8.7	7.6	8.1	8.7	7.8	8.2
27	9.0	7.7	8.2	8.1	7.6	7.7	8.6	7.6	7.9	8.8	7.7	8.1
28	9.1	7.7	8.1	8.1	7.6	7.6	8.8	7.6	7.9	8.8	7.7	8.0
29	9.1	7.8	8.2	8.0	7.6	7.7	8.7	7.6	7.9	8.9	7.7	8.0
30	9.1	7.7	8.3	8.1	7.6	7.8	8.1	7.6	7.7	8.9	7.8	8.1
31	---	---	---	8.2	7.6	7.7	8.3	7.7	7.8	---	---	---
MAX	9.4	7.8	8.4	9.2	7.8	8.3	9.3	7.7	8.4	8.9	7.8	8.2
MIN	8.3	7.7	7.9	7.6	7.3	7.4	7.9	7.4	7.5	7.9	7.6	7.7

PLATTE RIVER BASIN

06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, 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	---	---	---	---	---	---	1,260	1,140	1,200	1,000	812	895
2	---	---	---	---	---	---	1,220	1,120	1,170	1,060	841	965
3	---	---	---	---	---	---	1,210	1,100	1,170	1,000	870	955
4	---	---	---	---	---	---	1,200	1,100	1,160	1,000	870	959
5	---	---	---	1,120	---	---	1,190	1,090	1,160	965	854	929
6	---	---	---	1,140	949	1,060	1,200	1,090	1,160	1,040	879	953
7	---	---	---	1,180	963	1,110	1,200	1,100	1,160	1,070	978	1,050
8	---	---	---	1,180	1,050	1,130	1,200	1,100	1,160	1,080	996	1,060
9	---	---	---	1,220	1,060	1,150	1,200	1,090	1,150	1,120	1,030	1,080
10	---	---	---	1,210	1,090	1,160	1,910	1,050	1,150	1,160	1,040	1,110
11	---	---	---	1,210	1,110	1,160	1,240	1,050	1,130	1,160	1,070	1,140
12	---	---	---	1,230	1,110	1,170	1,780	1,040	1,140	1,180	1,090	1,140
13	---	---	---	1,340	1,110	1,190	1,690	1,040	1,100	1,130	1,060	1,100
14	---	---	---	1,470	1,200	1,350	1,210	1,040	1,140	1,120	1,040	1,100
15	---	---	---	1,370	1,180	1,280	1,210	1,100	1,160	1,130	1,050	1,090
16	---	---	---	1,320	1,150	1,230	1,200	1,070	1,130	1,150	1,050	1,100
17	---	---	---	1,220	1,120	1,180	1,290	1,060	1,150	1,180	1,060	1,140
18	---	---	---	1,220	1,110	1,170	1,130	1,040	1,090	1,190	1,090	1,150
19	---	---	---	1,230	1,120	1,180	1,140	1,080	1,130	1,190	1,090	1,150
20	---	---	---	1,220	1,120	1,180	1,160	1,090	1,130	1,200	1,090	1,160
21	---	---	---	1,230	1,130	1,190	1,170	1,080	1,140	1,790	1,050	1,170
22	---	---	---	1,220	1,130	1,190	1,140	1,070	1,110	1,190	1,050	1,090
23	---	---	---	1,200	1,110	1,160	1,120	1,020	1,080	1,250	1,160	1,190
24	---	---	---	1,600	1,110	1,230	1,040	927	1,000	1,250	1,110	1,180
25	---	---	---	1,860	1,240	1,440	958	849	908	1,210	1,100	1,160
26	---	---	---	1,740	1,440	1,540	929	849	900	1,170	1,090	1,140
27	---	---	---	1,620	1,380	1,500	947	849	901	1,200	1,070	1,130
28	---	---	---	1,600	1,360	1,480	924	828	893	1,200	979	1,100
29	---	---	---	1,440	1,220	1,300	929	835	883	1,020	976	998
30	---	---	---	1,300	1,170	1,230	927	802	875	1,000	941	984
31	---	---	---	---	---	---	929	813	870	1,020	988	1,000
MONTH	---	---	---	---	---	---	1,910	802	1,080	1,790	812	1,080
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1,110	1,000	1,060	2,100	1,480	1,780	873	749	791	478	448	465
2	1,660	1,110	1,180	2,290	1,480	1,750	884	776	824	485	458	472
3	2,460	1,130	1,570	2,140	1,440	1,680	909	789	845	490	443	470
4	2,140	1,700	1,840	1,860	1,460	1,650	827	737	785	499	452	473
5	1,970	1,430	1,660	2,350	1,380	1,750	805	731	769	556	459	499
6	1,930	1,380	1,600	2,260	1,520	1,940	888	733	786	580	515	553
7	2,290	1,450	1,760	2,400	1,460	1,760	780	687	739	587	539	572
8	2,250	1,540	1,910	1,940	1,320	1,570	788	606	707	635	546	581
9	1,930	1,410	1,670	1,620	1,210	1,360	634	579	604	649	429	603
10	1,740	1,280	1,500	1,440	1,180	1,290	613	571	592	596	405	474
11	1,570	1,240	1,390	1,390	1,170	1,280	776	569	632	573	481	537
12	1,460	1,200	1,310	1,360	1,150	1,250	716	589	637	515	477	497
13	1,390	1,150	1,260	1,330	1,140	1,230	671	568	603	514	476	495
14	1,560	1,090	1,230	1,320	1,100	1,200	612	529	579	848	472	562
15	1,400	1,100	1,230	1,270	1,090	1,180	881	527	581	941	581	698
16	1,350	1,120	1,230	1,220	1,070	1,140	758	498	556	721	531	625
17	1,330	1,070	1,200	1,560	635	1,110	535	485	505	531	452	487
18	1,270	1,040	1,130	---	---	---	664	490	521	497	438	470
19	1,160	1,020	1,080	---	---	---	593	367	489	493	432	463
20	1,290	1,020	1,130	---	---	---	527	484	512	495	446	469
21	1,290	1,080	1,180	---	599	---	535	473	505	524	437	466
22	1,250	1,070	1,150	773	590	671	523	478	499	768	445	498
23	2,160	1,070	1,300	732	493	616	654	438	505	613	514	537
24	1,650	1,160	1,350	844	521	703	557	332	447	630	459	545
25	1,750	1,140	1,290	705	568	636	564	512	545	487	409	440
26	2,830	1,150	1,730	655	552	610	563	531	547	451	410	432
27	2,580	1,660	2,070	725	565	662	544	495	526	457	408	430
28	2,530	1,700	2,030	765	668	708	534	476	508	453	403	425
29	---	---	---	766	683	731	516	469	488	458	396	422
30	---	---	---	833	666	726	511	462	483	433	394	412
31	---	---	---	868	685	731	---	---	---	456	388	412
MONTH	2,830	1,000	1,430	---	---	---	909	332	604	941	388	499

06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	628	369	443	712	435	537	600	459	495	479	445	462
2	444	381	399	447	383	412	607	548	581	484	403	460
3	456	378	404	532	396	431	824	607	724	642	412	500
4	509	413	448	632	511	584	911	421	562	480	435	454
5	738	433	510	683	567	628	565	401	440	496	443	472
6	564	402	479	625	455	557	705	565	665	552	433	469
7	520	375	425	576	405	457	659	464	517	569	460	525
8	624	459	558	679	559	637	581	469	510	559	512	539
9	721	519	620	693	582	644	703	581	669	533	450	504
10	730	420	493	676	598	639	711	586	673	467	439	451
11	622	406	451	886	622	773	605	417	497	535	434	464
12	511	400	433	983	828	905	515	395	446	575	510	534
13	508	414	442	997	912	949	499	442	480	703	575	649
14	521	398	434	1,010	914	966	498	433	477	721	654	692
15	633	443	571	914	468	579	543	436	482	778	655	714
16	467	413	444	599	496	535	690	543	643	748	690	721
17	553	388	433	561	475	520	732	674	703	777	700	734
18	553	323	391	539	185	495	1,190	532	728	889	705	788
19	510	335	410	510	323	473	709	526	657	862	785	809
20	670	510	607	545	460	487	776	679	719	867	798	816
21	698	432	480	548	506	529	705	654	686	848	786	807
22	477	411	443	531	471	498	689	664	676	841	815	826
23	477	415	445	574	463	500	689	652	667	842	809	822
24	485	406	435	540	470	493	723	618	650	851	646	749
25	494	405	442	880	540	660	736	622	645	685	606	665
26	523	453	490	725	667	700	736	480	546	636	515	545
27	538	451	485	834	490	655	507	461	489	577	514	544
28	515	453	489	628	448	472	513	446	490	583	517	548
29	600	459	518	590	331	456	520	330	445	583	516	552
30	516	440	484	494	408	437	512	140	377	637	516	562
31	---	---	---	498	459	481	552	296	461	---	---	---
MONTH	738	323	470	1,010	185	584	1,190	140	574	889	403	613

PLATTE RIVER BASIN

06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, CO—Continued

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

DAY	MAX	MIN	MEAN	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	7.2	2.9	5.0	4.8	2.8	3.7			
2	---	---	---	6.3	3.2	4.5	7.6	3.6	5.4	4.4	0.9	2.8			
3	---	---	---	8.3	4.1	5.7	5.7	4.1	4.8	5.7	2.7	4.2			
4	---	---	---	7.0	4.2	5.3	5.3	3.5	4.6	5.3	3.7	4.5			
5	---	---	---	8.4	3.9	5.8	6.8	3.1	4.5	5.6	3.6	4.8			
6	---	---	---	10.1	4.7	7.1	6.1	2.1	3.9	7.3	4.4	5.7			
7	---	---	---	8.5	5.2	6.9	5.3	2.0	3.5	7.2	3.4	5.1			
8	---	---	---	10.5	5.3	7.7	4.7	2.1	3.2	7.5	3.0	5.1			
9	---	---	---	9.2	6.6	7.9	5.3	1.3	3.1	5.6	2.6	4.0			
10	---	---	---	7.4	5.0	6.2	5.3	1.1	3.1	3.5	1.1	2.2			
11	---	---	---	7.3	4.1	5.5	4.9	1.6	3.2	3.5	0.8	2.0			
12	---	---	---	7.7	2.7	5.1	4.9	1.1	3.1	4.8	0.4	2.5			
13	---	---	---	8.3	4.8	6.6	6.1	2.0	3.7	5.7	1.8	3.5			
14	---	---	---	9.3	5.9	7.4	5.3	2.3	3.7	6.5	2.5	4.3			
15	---	---	---	7.5	4.9	6.5	4.9	2.4	3.6	5.7	2.2	3.9			
16	---	---	---	7.5	3.3	5.2	5.3	1.8	3.4	4.7	1.0	2.8			
17	---	---	---	8.8	4.3	6.5	4.8	2.3	3.5	5.5	1.8	3.2			
18	---	---	---	9.2	5.3	7.1	4.9	2.4	3.6	4.9	0.8	2.6			
19	---	---	---	9.0	4.9	6.8	4.3	1.2	2.6	5.9	1.4	3.5			
20	---	---	---	9.4	4.9	7.0	3.4	0.4	1.8	5.9	2.1	4.0			
21	---	---	---	9.6	5.1	6.9	4.0	1.1	2.3	4.7	2.1	3.5			
22	---	---	---	8.8	5.3	7.0	3.9	0.7	2.0	3.7	0.9	2.1			
23	---	---	---	8.9	5.7	7.0	3.0	0.8	1.7	4.7	0.3	2.2			
24	---	---	---	5.7	3.4	4.3	2.6	0.1	1.2	5.5	2.2	3.5			
25	---	---	---	5.4	2.2	3.6	3.0	0.2	1.3	5.8	2.2	3.8			
26	---	---	---	4.9	1.0	2.7	2.2	0.0	0.9	7.0	2.1	4.4			
27	---	---	---	4.9	1.5	3.0	2.9	0.5	1.7	9.2	4.8	6.7			
28	---	---	---	6.8	1.9	4.1	5.2	1.7	3.3	6.7	3.7	5.3			
29	---	---	---	7.9	3.3	5.3	6.0	2.7	4.2	6.8	2.1	4.3			
30	---	---	---	6.9	3.3	4.9	5.4	2.5	4.0	5.9	3.0	4.5			
31	---	---	---	---	---	---	4.5	1.8	3.2	7.2	3.3	5.3			
MONTH	---	---	---	---	---	---	7.6	0.0	3.2	9.2	0.3	3.9			
DAY	FEBRUARY			MARCH			APRIL			MAY					
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN			
1	9.7	4.7	6.9	5.9	1.8	3.7	13.0	7.0	10.3	14.0	10.1	11.7			
2	7.3	2.7	5.6	8.7	1.9	4.9	13.3	7.8	10.7	14.2	9.6	11.7			
3	5.4	2.1	3.3	10.1	3.7	6.3	13.0	7.6	10.4	15.6	10.2	12.6			
4	4.3	0.8	2.5	5.9	2.0	3.6	12.7	6.7	9.5	13.8	10.5	11.8			
5	4.0	1.2	2.5	7.5	0.8	3.8	10.0	6.5	8.5	15.0	9.4	12.0			
6	2.3	0.1	1.2	9.6	2.9	6.0	10.3	6.0	7.9	16.3	10.4	13.0			
7	2.7	0.0	0.8	11.6	4.2	7.6	8.9	6.1	7.5	15.0	10.0	12.5			
8	4.3	0.0	1.4	13.2	5.4	8.8	13.1	4.9	8.2	15.4	10.2	12.6			
9	4.3	0.8	1.9	13.5	5.9	9.4	13.9	6.5	9.6	13.1	7.2	10.2			
10	5.6	0.2	2.5	13.0	6.2	9.5	14.3	7.3	10.2	9.0	5.1	6.9			
11	4.1	0.7	2.4	14.5	6.9	10.5	14.0	7.7	10.7	15.8	7.6	11.1			
12	6.4	0.7	3.4	13.6	7.7	10.5	15.3	8.1	11.4	17.3	9.1	12.6			
13	7.2	3.1	5.0	15.6	7.1	11.1	15.9	8.1	11.2	16.6	10.0	13.0			
14	8.5	4.3	6.2	15.4	8.0	11.7	12.6	8.5	10.2	18.7	10.6	14.4			
15	5.7	4.3	4.9	16.6	9.5	12.7	11.1	8.4	9.7	16.4	11.8	13.9			
16	6.3	2.7	4.5	13.9	9.3	11.6	13.3	8.2	10.2	20.1	12.2	15.8			
17	8.8	3.0	5.5	11.4	7.9	9.8	12.9	8.2	10.1	18.2	12.2	15.1			
18	7.6	3.9	5.5	---	---	---	12.9	8.6	10.2	16.0	12.4	14.3			
19	9.4	3.4	6.0	---	---	---	9.5	8.6	9.0	13.8	11.3	12.0			
20	8.2	2.7	5.4	---	---	---	14.3	7.8	10.5	16.8	11.1	13.1			
21	8.7	3.5	5.9	5.7	---	---	14.1	8.3	10.7	19.4	11.4	14.7			
22	7.2	3.6	5.5	7.8	1.9	4.5	13.3	9.5	10.9	19.6	12.1	15.5			
23	6.0	1.3	3.3	9.8	3.3	5.9	11.0	7.0	9.6	20.3	13.5	16.6			
24	4.4	0.1	1.6	5.7	4.5	5.0	9.8	6.1	7.7	17.4	14.7	15.9			
25	4.4	0.1	1.8	10.8	4.5	7.0	14.7	7.9	10.7	17.3	13.4	15.1			
26	5.1	0.5	2.7	10.9	5.0	7.7	15.8	8.7	11.7	18.3	13.2	15.3			
27	4.6	2.6	3.4	7.4	4.5	5.8	15.4	9.2	11.7	20.1	13.8	16.3			
28	5.0	2.6	3.7	8.2	3.8	5.7	15.7	9.7	11.9	20.4	14.2	16.8			
29	---	---	---	9.0	3.3	6.0	14.9	10.3	11.9	20.7	14.1	16.8			
30	---	---	---	11.6	3.9	7.5	13.2	10.5	11.4	19.1	15.1	16.8			
31	---	---	---	12.8	5.6	8.9	---	---	---	18.8	15.4	16.8			
MONTH	9.7	0.0	3.8	---	---	---	15.9	4.9	10.1	20.7	5.1	13.8			

06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.8	15.0	16.5	24.3	18.5	21.4	25.6	19.8	22.4	24.5	18.0	20.9
2	21.0	14.9	17.4	25.5	17.4	21.2	26.5	19.1	22.7	24.4	18.3	21.0
3	20.6	14.8	17.3	25.2	17.4	21.3	25.7	20.5	23.0	21.6	18.3	19.9
4	16.6	14.4	15.4	25.3	19.1	22.4	27.0	19.9	23.4	24.3	17.7	20.6
5	16.6	13.4	14.7	24.0	19.7	22.4	26.6	20.7	23.4	24.6	17.9	20.8
6	19.5	14.0	16.6	23.0	18.0	20.9	26.3	19.8	23.1	21.2	18.9	19.9
7	19.2	13.4	16.0	22.2	17.7	20.3	24.2	19.9	22.5	19.8	17.8	18.7
8	20.7	13.5	17.1	25.1	18.2	21.8	25.5	19.9	22.4	22.7	16.6	19.6
9	20.3	15.4	17.9	25.2	20.1	22.9	25.7	19.9	23.1	20.4	17.0	18.6
10	21.4	14.8	17.7	25.1	19.8	22.7	27.3	20.7	24.2	21.2	16.8	18.3
11	21.7	15.5	18.2	26.3	19.9	23.0	26.4	20.4	23.7	20.7	16.0	18.0
12	20.3	15.2	17.6	28.0	20.2	23.8	27.8	20.2	23.6	21.0	14.3	17.7
13	19.2	15.8	17.2	27.9	20.4	24.2	27.4	19.4	23.4	18.3	12.9	14.9
14	21.9	15.5	18.6	27.5	20.2	23.7	26.6	18.5	22.7	17.4	11.2	14.3
15	23.7	16.1	19.8	23.7	19.3	21.7	26.3	18.6	22.6	18.9	13.2	16.3
16	22.5	15.8	19.0	23.8	18.9	21.7	26.2	19.5	22.7	19.3	14.8	17.4
17	21.0	16.3	18.5	26.4	18.8	22.7	23.4	19.2	21.5	20.0	15.6	17.4
18	19.8	16.1	17.8	26.5	19.7	23.3	23.2	17.6	20.6	17.7	12.7	15.1
19	20.4	15.9	18.1	26.8	20.0	23.2	23.6	17.1	20.1	18.2	12.1	15.0
20	20.2	16.0	18.3	25.4	19.9	22.7	25.8	19.1	22.1	18.4	13.5	15.6
21	23.3	15.6	19.1	25.6	19.5	22.9	24.8	19.9	22.3	19.2	13.4	16.0
22	23.5	16.2	19.5	27.0	19.6	23.2	25.3	19.4	21.8	19.3	13.4	16.1
23	23.6	16.5	19.7	26.2	20.0	23.3	25.3	18.7	21.6	20.1	13.8	16.6
24	19.3	16.5	17.7	27.8	19.5	23.6	25.3	18.9	21.9	18.5	14.3	16.5
25	21.8	16.0	18.5	25.1	21.6	23.2	24.5	19.8	22.0	18.5	13.4	16.2
26	23.3	15.6	19.4	27.6	20.3	23.6	24.9	19.3	22.4	19.3	13.1	16.6
27	24.1	15.8	20.0	26.3	21.6	23.6	24.7	18.9	22.0	18.7	12.8	16.1
28	22.9	16.4	19.9	25.6	20.2	22.5	24.3	19.9	22.1	18.3	12.4	15.7
29	22.6	16.7	19.6	23.6	19.2	21.3	24.5	18.9	21.6	17.4	12.4	15.3
30	24.8	16.6	20.7	25.8	19.8	22.5	20.9	18.0	19.2	16.0	12.0	13.9
31	---	---	---	25.4	19.4	22.3	21.0	17.0	18.8	---	---	---
MONTH	24.8	13.4	18.1	28.0	17.4	22.6	27.8	17.0	22.2	24.6	11.2	17.3

06712000 CHERRY CREEK NEAR FRANKTOWN, CO

LOCATION.--Lat 39°21'21", long 104°45'46", in NE¹/₄ sec.15, T.8 S., R.66 W., Douglas County, Hydrologic Unit 10190003, on right bank 1.3 mi downstream from Castlewood Dam site, 1.5 mi upstream from Russellville Gulch, and 2.5 mi south of Franktown.

DRAINAGE AREA.--169 mi².

PERIOD OF RECORD.--November 1939 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06712000

REVISED RECORDS.--WSP 1730: Drainage area. WDR CO-87-1: 1983-85 (P).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,150 ft above NGVD of 1929, from topographic map. See WSP 1730 for history of changes prior to Oct. 1, 1953.

REMARKS.--Records fair except for estimated discharges, which are poor. Many small diversions upstream from station for irrigation of about 800 acres. 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 OUTSIDE PERIOD OF RECORD.--Flood of Aug. 3, 1933, caused by Castlewood Dam failure, exceeded all other observed floods at this location.

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	1.8	2.6	2.8	2.5	4.2	4.5	63	11	5.8	3.2	1.3	1.7
2	2.1	2.6	2.9	e2.7	4.5	4.2	90	10	6.9	3.5	1.3	1.8
3	2.0	3.1	3.1	e2.7	4.0	4.5	52	8.9	4.5	2.8	1.3	1.8
4	1.9	3.0	3.3	3.1	e3.4	4.2	36	8.6	4.0	1.9	1.5	1.5
5	1.9	2.7	3.0	3.4	4.0	5.1	25	8.4	8.0	1.7	1.7	1.5
6	1.9	2.7	2.7	3.9	3.5	4.0	19	7.5	6.3	1.7	1.5	1.4
7	1.9	2.7	2.8	3.5	e3.1	4.3	12	7.2	5.7	1.7	1.5	1.8
8	1.8	2.8	2.8	3.5	e2.9	4.5	11	7.0	5.2	1.6	1.9	1.7
9	1.8	2.7	e2.4	3.4	3.1	4.3	11	6.9	4.0	1.7	1.5	1.6
10	1.8	2.6	2.5	e3.2	e2.9	4.8	12	8.5	3.6	1.8	1.4	1.6
11	1.8	2.5	2.9	e2.9	3.2	5.0	11	7.0	4.4	1.7	1.7	1.6
12	1.8	2.6	2.9	3.1	3.6	3.6	9.8	5.9	3.9	1.8	1.6	1.5
13	1.8	2.7	2.7	3.5	4.6	3.6	8.8	4.8	3.1	1.6	1.3	1.5
14	1.8	3.1	2.7	4.1	6.0	3.4	7.2	4.5	2.9	1.6	1.3	1.7
15	1.8	3.2	2.8	3.7	6.3	3.3	9.0	4.6	2.4	1.7	1.3	1.4
16	1.8	3.1	3.2	3.8	5.2	3.2	11	7.4	1.8	1.5	1.3	1.3
17	1.8	2.9	3.2	2.9	5.1	3.5	4.1	4.9	24	1.3	1.1	1.5
18	1.9	3.0	3.3	e2.9	e4.5	10	5.3	4.0	25	1.3	1.2	1.4
19	1.9	3.1	3.5	e3.2	5.3	27	11	3.8	17	1.3	1.3	1.4
20	2.0	3.0	e2.8	3.6	4.6	29	11	4.0	9.7	1.4	1.1	1.4
21	2.0	2.9	2.6	e3.5	3.6	11	9.6	3.7	8.0	1.5	1.0	1.5
22	2.0	3.1	e2.3	3.4	4.0	9.1	8.0	3.3	5.3	1.4	1.0	1.4
23	2.1	3.3	e2.4	e3.3	3.6	11	9.4	2.8	4.6	1.5	1.1	1.4
24	2.3	3.2	e2.5	3.8	3.9	13	27	14	3.9	1.5	1.2	1.4
25	2.3	2.9	e2.5	3.9	e3.5	13	122	11	3.9	1.5	1.2	1.6
26	2.4	2.3	e2.5	3.9	3.7	22	138	5.2	3.8	1.9	1.1	1.4
27	2.7	2.7	e2.5	4.2	4.2	25	49	4.2	3.2	2.3	1.0	1.5
28	2.6	2.6	e2.5	4.1	4.6	17	21	3.4	3.0	1.7	1.0	1.5
29	2.8	2.8	e2.3	3.5	---	12	9.0	3.6	2.9	1.8	1.3	1.5
30	2.6	2.8	2.6	3.8	---	19	12	3.9	2.7	1.5	1.8	1.5
31	2.6	---	2.4	3.8	---	34	---	4.5	---	1.4	2.6	---
TOTAL	63.7	85.3	85.4	106.8	115.1	322.1	824.2	194.5	189.5	54.8	42.4	45.8
MEAN	2.05	2.84	2.75	3.45	4.11	10.4	27.5	6.27	6.32	1.77	1.37	1.53
MAX	2.8	3.3	3.5	4.2	6.3	34	138	14	25	3.5	2.6	1.8
MIN	1.8	2.3	2.3	2.5	2.9	3.2	4.1	2.8	1.8	1.3	1.0	1.3
AC-FT	126	169	169	212	228	639	1,630	386	376	109	84	91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	4.44	5.65	5.17	5.31	8.59	21.7	19.6	15.9	8.65	6.96	8.94	3.62
MAX	29.1	30.7	25.2	17.7	29.3	184	138	138	42.6	43.8	59.9	18.2
(WY)	(1985)	(1985)	(1985)	(1985)	(1948)	(1960)	(1984)	(1973)	(1983)	(1957)	(1945)	(1984)
MIN	0.97	1.32	1.41	1.57	1.99	2.36	1.70	1.43	1.12	0.80	0.76	0.78
(WY)	(1953)	(1955)	(1964)	(1951)	(1956)	(1972)	(1963)	(1963)	(1954)	(1981)	(1962)	(1950)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1940 - 2003

ANNUAL TOTAL	2,050.51		2,129.6			
ANNUAL MEAN	5.62		5.83		9.55	
HIGHEST ANNUAL MEAN					31.9 1984	
LOWEST ANNUAL MEAN					2.89 1954	
HIGHEST DAILY MEAN	476	Aug 27	138	Apr 26	1,400	May 6, 1973
LOWEST DAILY MEAN	0.81	Jul 17	1.0	Aug 21	0.20	Jul 13, 1946
ANNUAL SEVEN-DAY MINIMUM	0.83	Jul 14	1.1	Aug 21	0.29	Jul 10, 1946
MAXIMUM PEAK FLOW			350	Apr 25	a9,170	Aug 5, 1945
MAXIMUM PEAK STAGE			5.39	Apr 25	b4.91	Aug 5, 1945
ANNUAL RUNOFF (AC-FT)	4,070		4,220		6,920	
10 PERCENT EXCEEDS	9.1		11		17	
50 PERCENT EXCEEDS	2.6		3.0		4.5	
90 PERCENT EXCEEDS	0.96		1.4		1.3	

e Estimated.

a Site and datum then in use, by float measurement.

b Maximum gage height, 9.33 ft (revised), Aug 27, 2002, current site and datum.

393109104464500 CHERRY CREEK NEAR PARKER, CO

LOCATION.--Lat 39°31'09", long 104°46'45", in SE¹/₄NW¹/₄NE¹/₄ sec.21, T.6 S., R.67 W., Douglas County, Hydrologic Unit 10190003, on right bank 200 ft upstream from Main Street, 1,100 ft downstream from mouth of Sulphur Gulch, and 0.8 mi west of City of Parker.

DRAINAGE AREA.--287 mi².

PERIOD OF RECORD.--October 1991 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=393109104464500

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,805 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Several diversions upstream from station for irrigation. 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	e1.7	4.4	5.5	4.6	4.4	10	47	22	12	8.0	3.3	8.8
2	e10	4.5	5.3	4.7	4.5	9.7	62	22	13	5.9	2.7	9.2
3	e8.8	4.8	5.4	4.5	3.8	9.5	64	22	12	5.6	4.0	8.9
4	e7.7	5.0	5.4	4.5	2.0	8.7	42	21	11	7.3	4.5	8.8
5	e6.8	5.0	4.8	4.7	2.7	7.9	29	20	22	7.5	4.9	e8.6
6	e6.0	5.0	4.6	4.5	5.2	8.3	22	20	17	7.6	4.8	e8.2
7	e5.7	5.2	4.7	4.5	5.7	7.8	16	20	20	7.9	4.8	e6.5
8	e5.6	4.1	4.8	4.4	5.9	7.8	13	19	14	7.4	5.0	e5.4
9	e5.3	5.5	4.8	4.5	5.8	7.3	12	18	12	7.6	4.9	e5.5
10	e5.1	6.0	4.5	4.6	5.6	7.2	10	24	24	7.8	5.0	e5.5
11	e5.1	5.9	4.7	4.6	4.9	7.0	11	21	13	7.6	6.4	e5.6
12	e5.0	5.9	4.7	5.0	5.1	6.8	11	19	10	7.6	6.8	e5.7
13	e4.9	5.9	4.6	3.6	6.2	6.2	10	18	9.1	7.5	5.5	e5.8
14	e4.7	5.2	5.0	3.7	6.9	5.8	9.0	17	8.0	6.5	5.6	e5.9
15	e4.7	5.1	5.1	3.6	7.6	4.6	11	17	7.9	e7.0	5.5	e5.9
16	e4.7	5.2	5.1	3.5	8.4	4.6	16	18	7.8	e7.0	5.3	e6.0
17	e4.5	6.2	4.9	4.4	8.7	5.3	11	19	9.3	e7.0	5.3	e6.1
18	e4.5	6.1	4.9	4.4	6.7	6.7	8.5	17	33	e7.0	4.7	e6.1
19	e4.5	5.5	4.9	4.4	7.4	7.9	12	15	47	e7.0	5.0	e6.2
20	e4.4	5.6	4.7	4.4	7.7	6.0	15	16	27	e7.1	5.3	e6.2
21	e4.3	5.2	4.8	4.3	6.7	5.7	14	15	18	e6.9	5.1	e6.1
22	e4.2	5.3	4.6	4.2	9.3	16	13	13	12	6.5	5.0	e6.0
23	e4.2	5.2	4.8	4.3	9.1	24	34	14	11	6.6	4.8	e6.2
24	e4.2	5.4	4.8	4.2	8.6	17	106	29	10	6.5	4.8	e6.3
25	e4.2	5.4	4.6	4.5	8.3	17	66	31	9.4	6.6	4.9	e6.4
26	4.2	5.1	4.7	4.4	8.9	25	120	16	9.0	15	5.0	e6.4
27	4.3	5.4	3.4	4.4	10	31	94	12	8.4	13	5.0	e6.4
28	4.3	5.2	4.4	4.8	10	22	42	11	8.8	8.2	4.1	e6.3
29	4.3	5.2	4.5	4.7	---	16	25	11	14	4.9	4.1	e6.4
30	4.3	5.3	4.6	2.8	---	17	21	10	10	4.2	15	e6.3
31	4.2	---	4.7	3.3	---	29	---	10	---	3.2	29	---
TOTAL	156.4	158.8	148.3	133.0	186.1	364.8	966.5	557	439.7	225.5	186.1	197.7
MEAN	5.05	5.29	4.78	4.29	6.65	11.8	32.2	18.0	14.7	7.27	6.00	6.59
MAX	10	6.2	5.5	5.0	10	31	120	31	47	15	29	9.2
MIN	1.7	4.1	3.4	2.8	2.0	4.6	8.5	10	7.8	3.2	2.7	5.4
AC-FT	310	315	294	264	369	724	1,920	1,100	872	447	369	392

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	3.88	5.20	6.04	7.84	11.3	16.8	19.9	20.1	11.7	6.77	7.87	3.80
MAX	9.72	9.85	14.9	21.0	21.4	42.8	47.4	87.9	47.5	18.3	29.1	10.3
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(1992)	(1998)	(1999)	(1999)	(1998)	(1998)	(1999)
MIN	1.26	0.79	0.76	1.51	1.74	3.82	7.90	4.15	1.87	1.04	0.58	0.73
(WY)	(1992)	(1995)	(1995)	(1995)	(1995)	(1995)	(2002)	(1997)	(1994)	(1994)	(1994)	(1994)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1992 - 2003
ANNUAL TOTAL	2,330.18	3,719.9	
ANNUAL MEAN	6.38	10.2	10.1
HIGHEST ANNUAL MEAN			21.8 1999
LOWEST ANNUAL MEAN			5.03 1997
HIGHEST DAILY MEAN	35 Aug 27	120 Apr 26	e348 May 1, 1999
LOWEST DAILY MEAN	0.98 Jul 16	e1.7 Oct 1	0.43 Aug 24, 1994
ANNUAL SEVEN-DAY MINIMUM	1.5 Jul 31	3.4 Jan 30	0.45 Aug 21, 1994
MAXIMUM PEAK FLOW		205 Aug 30	a900 Jul 30, 1998
MAXIMUM PEAK STAGE		6.07 Aug 30	b9.65 Jul 30, 1998
ANNUAL RUNOFF (AC-FT)	4,620	7,380	7,310
10 PERCENT EXCEEDS	11	20	21
50 PERCENT EXCEEDS	5.3	6.2	6.2
90 PERCENT EXCEEDS	2.7	4.4	1.4

e Estimated.
a From slope-area measurement of peak flow.
b From floodmark.

06713000 CHERRY CREEK BELOW CHERRY CREEK LAKE, CO

LOCATION.--Lat 39°39'13", long 104°51'45", in SW¹/₄SW¹/₄ sec.35, T.4 S., R.67 W., Denver County, Hydrologic Unit 10190003, on left bank 2,300 ft downstream from Cherry Creek Dam, 2.2 mi southeast of Sullivan, 9 mi southeast of Civic Center in Denver, and 11 mi upstream from mouth.

DRAINAGE AREA.--385 mi².

PERIOD OF RECORD.--June 1950 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06713000

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,490.51 ft above NGVD of 1929, (Corps of Engineers bench mark).

REMARKS.--Records fair except for discharges below 1 ft³/s and estimated daily discharges, which are poor. Flow regulated by Cherry Creek Lake (see elsewhere in this report). Diversions upstream from station for irrigation of about 1,800 acres. 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 OUTSIDE PERIOD OF RECORD.--Maximum flood known, 34,000 ft³/s, Aug. 3, 1933, by slope-area measurement near present site (Castlewood Dam failure).

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	0.05	0.07	0.00	0.00	e0.00	86	194	4.3	34	13	33
2	20	0.06	0.07	0.00	0.00	e0.00	87	196	3.8	32	13	11
3	20	0.05	0.07	0.00	0.00	e0.00	89	191	3.7	32	14	1.6
4	13	0.04	0.06	0.00	e0.00	e0.00	90	178	8.7	32	13	0.97
5	10	0.05	0.06	0.00	e0.00	e0.00	90	179	10	31	10	1.2
6	10	0.07	0.05	0.00	e0.00	e0.00	91	172	8.9	31	10	1.0
7	6.2	0.06	0.05	0.00	e0.00	e0.00	91	129	5.3	15	10	0.66
8	0.51	0.06	0.04	0.00	e0.00	e0.00	74	48	4.8	2.7	8.4	18
9	2.1	0.07	0.05	0.00	e0.00	e0.00	63	29	4.7	3.0	10	31
10	3.1	0.06	0.07	0.00	e0.00	e0.00	63	24	4.0	2.9	10	31
11	3.2	0.06	0.07	0.00	e0.00	e0.00	43	22	4.7	1.5	11	35
12	3.2	0.10	0.07	0.00	e0.00	e0.00	27	24	4.2	0.20	11	33
13	3.3	0.08	0.07	0.00	e0.00	e0.00	27	16	3.8	0.16	12	35
14	3.2	0.09	0.07	0.00	e0.00	e0.00	28	17	2.9	0.10	11	32
15	3.3	0.11	0.07	0.00	e0.00	e0.00	28	24	4.7	0.42	9.7	32
16	3.3	0.21	0.07	0.00	e0.00	0.00	28	25	8.0	0.29	9.3	31
17	3.2	0.24	0.06	0.00	e0.00	0.00	28	25	15	0.94	10	25
18	3.0	0.47	0.16	0.00	e0.00	0.96	28	20	13	5.5	5.5	23
19	2.5	0.37	0.22	0.00	e0.00	0.25	28	21	18	1.5	0.26	20
20	1.8	0.32	0.15	0.00	e0.00	0.25	28	23	29	0.22	0.54	29
21	1.5	0.06	0.13	0.00	e0.00	0.30	28	22	32	0.33	1.4	33
22	1.5	0.29	3.1	0.00	e0.00	0.44	28	17	30	4.0	1.3	23
23	1.5	0.31	e3.0	0.00	e0.00	0.84	26	8.7	32	10	1.6	8.3
24	1.6	0.19	1.6	0.00	e0.00	10	18	8.1	32	10	2.1	19
25	1.6	0.06	2.2	0.00	e0.00	55	17	6.1	33	11	4.8	18
26	1.5	0.24	1.4	0.00	e0.00	84	17	6.0	37	12	1.8	16
27	1.5	0.14	0.54	0.00	e0.00	85	17	6.2	37	9.0	0.85	18
28	3.8	0.03	0.03	0.00	e0.00	84	106	6.1	38	12	1.0	16
29	7.9	0.03	0.12	0.00	---	84	164	5.6	38	12	1.5	18
30	3.9	0.07	0.00	0.00	---	85	175	5.2	36	12	8.0	14
31	0.07	---	0.00	0.00	---	85	---	4.2	---	12	14	---
TOTAL	162.28	4.04	13.72	0.00	0.00	575.04	1,713	1,652.2	506.5	330.76	230.05	607.73
MEAN	5.23	0.13	0.44	0.000	0.000	18.5	57.1	53.3	16.9	10.7	7.42	20.3
MAX	21	0.47	3.1	0.00	0.00	85	175	196	38	34	14	35
MIN	0.07	0.03	0.00	0.00	0.00	0.00	17	4.2	2.9	0.10	0.26	0.66
AC-FT	322	8.0	27	0.00	0.00	1,140	3,400	3,280	1,000	656	456	1,210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2003, BY WATER YEAR (WY)

MEAN	2.07	2.95	3.95	3.49	8.17	13.7	19.0	15.1	10.0	5.16	11.1	3.11
MAX	29.6	38.5	39.1	42.4	60.3	108	166	124	243	71.3	218	54.2
(WY)	(1985)	(1985)	(1985)	(1985)	(1984)	(1974)	(1984)	(1999)	(1973)	(1983)	(1965)	(1965)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1958)	(1958)	(1958)	(1958)	(1958)	(1958)	(1958)	(1958)	(1961)	(1964)	(1957)	(1957)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1950 - 2003

ANNUAL TOTAL	2,251.89	5,795.32	
ANNUAL MEAN	6.17	15.9	8.18
HIGHEST ANNUAL MEAN			38.8 1984
LOWEST ANNUAL MEAN			0.000 1967
HIGHEST DAILY MEAN	33 Mar 17	196 May 2	721 Aug 1, 1956
LOWEST DAILY MEAN	a0.00 Dec 30	a0.00 Dec 30	a0.00 May 19, 1957
ANNUAL SEVEN-DAY MINIMUM	0.02 Apr 20	a0.00 Dec 30	a0.00 May 19, 1957
MAXIMUM PEAK FLOW		242 Apr 29	1,600 May 26, 1999
MAXIMUM PEAK STAGE		5.22 Apr 29	6.92 May 26, 1999
ANNUAL RUNOFF (AC-FT)	4,470	11,500	5,920
10 PERCENT EXCEEDS	17	34	18
50 PERCENT EXCEEDS	0.49	3.0	0.00
90 PERCENT EXCEEDS	0.02	0.00	0.00

e Estimated.

a No flow many days.

06713300 CHERRY CREEK AT GLENDALE, CO

LOCATION.--Lat 39°42'22", long 104°56'13", in SW¹/₄NW¹/₄ sec.18, T.4 S., R.67 W., Denver County, Hydrologic Unit 10190003, on left bank 900 ft upstream from Colorado Boulevard, on Cherry Creek South Drive and Ash Court, in the City of Glendale, and 6 mi downstream from Cherry Creek Reservoir.

DRAINAGE AREA.--404 mi².

PERIOD OF RECORD.--January 1985 to September 2003 (discontinued). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06713300

REVISED RECORDS.--WDR CO-96-1: 1995 (M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,320 ft above NGVD of 1929, from topographic map. From Feb. 24 to Aug. 2, 2000, at site 0.5 mi upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by Cherry Creek Lake (see station 06712990). 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	34	2.8	1.9	2.5	e1.8	2.2	95	170	37	43	14	e52
2	28	2.7	e2.2	e2.2	e2.0	2.2	92	167	15	45	13	e38
3	6.0	2.7	e2.8	e1.9	5.8	2.1	93	167	14	42	22	e40
4	5.1	2.6	e2.8	e1.6	2.6	2.1	100	169	15	39	e20	e16
5	3.6	2.6	2.3	e1.7	2.3	2.5	93	168	35	38	e14	e15
6	3.5	2.9	2.2	e3.0	2.2	2.3	115	168	36	37	e13	e15
7	3.4	2.4	e2.0	e1.9	2.1	2.1	93	146	44	31	e12	e22
8	2.6	2.3	e2.0	e1.9	2.1	2.1	85	68	15	14	e92	e16
9	2.1	e2.2	e2.0	e1.9	2.1	2.0	69	73	18	12	e48	e27
10	2.1	e2.0	e2.0	e1.8	2.2	2.2	66	189	15	11	e15	e27
11	2.3	e2.0	e2.0	e1.9	2.2	2.1	53	112	13	11	e20	e29
12	2.2	1.9	e2.2	e1.7	2.1	2.0	33	47	13	9.3	e20	e33
13	2.2	1.9	e2.1	e1.9	2.2	2.1	34	37	13	8.9	e14	e34
14	2.2	2.2	e2.1	e2.0	2.1	2.1	30	25	13	8.6	e13	e35
15	2.2	2.3	e2.1	1.8	2.2	2.0	38	37	13	8.4	e13	e36
16	2.3	2.1	e2.1	1.8	2.0	2.0	41	37	14	8.4	e13	e34
17	2.3	2.0	e2.1	e1.8	2.0	25	33	35	72	8.2	e13	e32
18	2.2	2.0	e2.0	1.8	1.9	14	31	37	161	93	e25	e31
19	2.2	2.0	e2.0	1.8	1.9	10	71	36	38	160	e11	26
20	2.0	2.0	e2.2	e1.8	1.8	47	32	35	45	25	e11	34
21	2.1	e2.1	e2.5	e1.8	1.8	70	34	35	38	16	e10	34
22	1.9	e2.0	e2.4	e1.8	1.8	64	35	30	38	14	e10	33
23	1.9	e2.0	e2.4	1.9	2.1	78	143	19	39	15	e9.5	16
24	2.0	2.1	e2.4	1.9	1.7	25	173	20	40	16	e8.4	26
25	2.0	2.5	e2.4	1.9	1.7	87	42	20	40	17	e7.8	25
26	2.0	2.3	e2.4	1.8	3.1	133	22	19	40	33	e8.4	23
27	3.0	2.1	e2.4	e1.8	2.5	116	20	17	41	e53	e7.8	21
28	1.9	2.1	e2.5	e1.8	2.5	92	77	17	47	e17	e7.2	21
29	9.5	2.0	2.4	e1.9	---	89	165	16	43	e16	e12	20
30	4.6	1.9	2.5	e1.9	---	98	171	15	43	e15	e149	20
31	2.8	---	2.7	e1.8	---	e97	---	16	---	14	e111	---
TOTAL	146.2	66.7	70.1	59.0	62.8	1,079.1	2,179	2,147	1,048	878.8	757.1	831
MEAN	4.72	2.22	2.26	1.90	2.24	34.8	72.6	69.3	34.9	28.3	24.4	27.7
MAX	34	2.9	2.8	3.0	5.8	133	173	189	161	160	149	52
MIN	1.9	1.9	1.9	1.6	1.7	2.0	20	15	13	8.2	7.2	15
AC-FT	290	132	139	117	125	2,140	4,320	4,260	2,080	1,740	1,500	1,650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	14.4	13.3	12.5	14.1	18.7	30.8	45.0	48.7	37.2	28.2	28.1	19.8								
MAX	38.0	33.8	29.8	45.7	53.2	75.2	104	147	101	55.9	72.0	43.0								
(WY)	(1986)	(1987)	(1988)	(1989)	(1990)	(1991)	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)								
MIN	4.65	2.22	1.94	1.90	2.24	4.41	9.81	9.69	13.7	5.37	4.30	3.90								
(WY)	(1995)	(2003)	(1995)	(2003)	(2003)	(1995)	(1991)	(2002)	(1990)	(2002)	(2002)	(1994)								

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1985 - 2003
ANNUAL TOTAL	4,173.97	9,324.8	
ANNUAL MEAN	11.4	25.5	25.4
HIGHEST ANNUAL MEAN			46.8 1999
LOWEST ANNUAL MEAN			10.9 1994
HIGHEST DAILY MEAN	96 May 24	189 May 10	461 May 17, 1995
LOWEST DAILY MEAN	0.32 Jul 20	e1.6 Jan 4	0.32 Jul 20, 2002
ANNUAL SEVEN-DAY MINIMUM	0.51 Jul 15	1.8 Jan 15	0.51 Jul 15, 2002
MAXIMUM PEAK FLOW		1,850 Jul 18	a2,720 Jul 8, 2001
MAXIMUM PEAK STAGE		8.31 Jul 18	b9.36 Jul 8, 2001
ANNUAL RUNOFF (AC-FT)	8,280	18,500	18,420
10 PERCENT EXCEEDS	23	75	58
50 PERCENT EXCEEDS	6.4	11	15
90 PERCENT EXCEEDS	1.8	1.9	3.9

e Estimated.

a From rating curve extended above 800 ft³/s.

b Also occurred Jul 28, 1997.

06714000 SOUTH PLATTE RIVER AT DENVER, CO

LOCATION.--Lat 39°45'35", long 105°00'10". in NW¹/₄SE¹/₄ sec.28, T.3 S., R.68 W., Denver County, Hydrologic Unit 10190003, on right bank 90 ft upstream from Nineteenth Street Bridge in Denver, and 0.4 mi downstream from Cherry Creek.

DRAINAGE AREA.--3,861 mi².

PERIOD OF RECORD.--May to October 1889, June to October 1890, July 1895 to current year. Monthly discharge only for some periods, published in WSP 1310. Statistical summary computed for 1976 to current year, subsequent to completion of Chatfield Dam. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06714000

REVISED RECORDS.--WSP 1310: 1934(M). WSP 1730: 1957(M). WDR CO-86-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,157.64 ft above NGVD of 1929, adjustment of 1960. Prior to Aug. 12, 1909, nonrecording gages, and Aug. 12, 1909 to Aug. 28, 1931, water-stage recorder, at several sites within 0.5 mi of present site at various datums.

Aug. 29, 1931 to June 28, 1965, water-stage recorder at site 70 ft downstream at datum 3.66 ft lower. June 29, 1965 to Mar. 18, 1966, water-stage recorder at site 70 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records good except for flows above 530 ft³/s, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 79,000 acres and municipal use, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

**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	119	77	61	77	52	69	354	932	495	216	247	381
2	319	77	61	83	53	72	323	685	564	343	179	379
3	113	82	63	75	101	67	319	669	495	319	134	359
4	96	75	64	72	74	62	389	617	384	177	216	314
5	84	73	63	75	55	61	345	517	394	160	310	297
6	82	76	62	86	55	66	415	420	306	168	133	341
7	84	70	62	68	55	57	352	387	582	256	174	271
8	78	66	65	62	60	58	429	334	249	135	316	239
9	79	59	67	60	60	55	564	422	212	122	183	262
10	84	63	65	59	61	56	544	1,110	346	124	116	351
11	76	65	60	57	60	55	479	565	423	99	179	338
12	72	61	56	60	54	53	352	496	392	83	264	239
13	76	59	55	62	56	53	391	464	364	81	185	177
14	80	67	55	62	61	54	496	405	377	74	180	164
15	82	65	58	60	90	54	476	283	201	133	178	160
16	80	66	60	59	67	57	751	316	307	160	114	146
17	78	63	59	57	62	208	655	429	413	164	98	139
18	77	61	58	57	52	369	521	436	831	197	192	134
19	73	59	55	58	53	214	1,020	488	461	523	139	123
20	78	60	53	59	53	373	566	463	272	250	96	123
21	78	58	57	59	55	543	546	461	363	199	91	120
22	72	58	58	59	55	555	635	415	409	216	91	124
23	75	57	60	58	62	597	868	249	360	202	87	103
24	72	67	65	53	59	412	1,270	283	399	213	87	125
25	74	77	66	54	58	621	627	457	385	127	90	139
26	76	69	66	59	72	708	553	513	302	134	140	175
27	90	63	71	59	77	631	535	522	285	211	168	182
28	82	58	71	51	73	462	598	517	279	257	173	185
29	160	57	72	55	---	390	831	488	291	405	218	188
30	108	60	74	57	---	406	1,020	609	279	543	1,080	189
31	86	---	73	60	---	444	---	584	---	277	593	---
TOTAL	2,883	1,968	1,935	1,932	1,745	7,882	17,224	15,536	11,420	6,568	6,451	6,467
MEAN	93.0	65.6	62.4	62.3	62.3	254	574	501	381	212	208	216
MAX	319	82	74	86	101	708	1,270	1,110	831	543	1,080	381
MIN	72	57	53	51	52	53	319	249	201	74	87	103
AC-FT	5,720	3,900	3,840	3,830	3,460	15,630	34,160	30,820	22,650	13,030	12,800	12,830

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

	195	186	139	128	142	196	428	880	793	559	464	228
MEAN	195	186	139	128	142	196	428	880	793	559	464	228
MAX	1,184	809	366	282	273	420	1,377	2,970	2,759	2,546	1,774	911
(WY)	(1985)	(1985)	(1985)	(1985)	(1984)	(1983)	(1984)	(1980)	(1983)	(1995)	(1984)	(1984)
MIN	66.8	65.6	62.4	62.3	62.3	94.9	99.1	141	150	87.5	71.3	76.5
(WY)	(1978)	(2003)	(2003)	(2003)	(2003)	(1978)	(1982)	(2002)	(2002)	(2002)	(2002)	(1977)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1976 - 2003

ANNUAL TOTAL	39,644	82,011	
ANNUAL MEAN	109	225	
HIGHEST ANNUAL MEAN			a363
LOWEST ANNUAL MEAN			961
HIGHEST DAILY MEAN	851	May 24	1,270
LOWEST DAILY MEAN	42	Aug 2	51
ANNUAL SEVEN-DAY MINIMUM	48	Aug 14	54
MAXIMUM PEAK FLOW			2,590
MAXIMUM PEAK STAGE			6.59
ANNUAL RUNOFF (AC-FT)	78,630	162,700	10.90
10 PERCENT EXCEEDS	177	528	722
50 PERCENT EXCEEDS	90	123	186
90 PERCENT EXCEEDS	57	57	85

a Average discharge for 79 years (water years 1896-1974), 344 ft³/s; 249,200 acre-ft/yr, prior to completion of Chatfield Dam.

b Maximum daily discharge for period of record, 12,000 ft³/s, Jun 17, 1965.

c Minimum daily discharge for period of record, 8.8 ft³/s, Mar 25, 1951.

d Maximum discharge and stage for period of record, 40,300 ft³/s, Jun 17, 1965, gage height, 18.66 ft, from floodmarks, present datum, from rating curve extended above 2,700 ft³/s, on basis of contracted-opening measurement of peak flow.

06714215 SOUTH PLATTE RIVER AT 64TH AVENUE, AT COMMERCE CITY, CO

LOCATION.--Lat 39°48'44", long 104°57'28", in NW¹/₄NW¹/₄ sec.12, T.3 S., R.68 W., Adams County, Hydrologic Unit 10190003, on left bank 300 ft southeast of intersection of York Street and East 64th Avenue, and 1,900 ft upstream from mouth of Sand Creek at northwest corner of Metro Denver Sewage Disposal plant at Commerce City.

DRAINAGE AREA.--3,884 mi².

PERIOD OF RECORD.--January 1982 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06714215

REVISED RECORDS.--WDR CO-86-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Elevation of gage is 5,105 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transmountain diversions, storage and flood-control reservoirs, power developments, diversions for irrigation and municipal use, and return flow from irrigated areas. 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	72	9.1	11	9.4	64	9.3	10	389	110	87	130	16
2	378	11	12	7.3	63	8.7	10	216	244	226	68	31
3	94	9.9	14	6.5	124	8.3	10	206	174	205	35	50
4	42	8.3	13	6.6	94	8.7	9.9	156	57	56	95	11
5	14	11	12	6.7	69	8.2	10	80	72	32	222	11
6	13	7.5	11	6.6	e69	7.7	12	18	39	33	33	12
7	11	6.8	13	5.9	69	7.9	11	15	326	144	46	10
8	9.6	21	11	5.9	e74	7.6	12	14	16	26	281	11
9	8.7	71	9.9	7.7	73	7.6	52	162	20	15	148	12
10	8.1	77	8.5	6.3	75	8.3	27	1,170	20	14	22	12
11	7.6	79	6.7	6.5	75	7.4	21	573	78	13	126	12
12	8.8	75	7.3	7.1	69	7.5	15	367	42	14	296	13
13	8.8	70	7.9	7.0	69	7.0	14	214	17	12	212	11
14	9.3	80	8.6	7.5	74	7.7	33	98	16	11	203	10
15	8.6	79	8.1	6.9	47	7.6	31	16	16	13	145	9.9
16	6.9	78	8.2	13	13	8.2	314	15	17	35	34	11
17	7.9	76	8.2	25	13	112	220	131	101	38	31	10
18	8.3	75	9.2	24	12	251	51	215	515	57	77	12
19	7.9	72	8.9	23	13	19	574	255	126	573	30	11
20	9.4	73	8.1	18	12	148	137	182	16	140	21	10
21	9.1	71	7.8	13	10	236	72	118	14	82	19	12
22	8.6	71	6.9	11	10	155	160	50	14	98	16	17
23	10	69	8.1	9.1	e11	178	331	14	26	88	15	14
24	6.8	81	7.8	37	e9.6	55	717	16	31	106	14	13
25	7.3	95	7.3	61	9.0	124	96	55	30	37	14	9.3
26	8.5	89	e7.7	67	8.3	194	26	82	22	24	13	8.1
27	9.2	80	7.6	71	8.5	146	19	53	19	103	15	9.6
28	6.0	47	7.7	60	8.4	21	49	22	19	136	20	8.8
29	42	16	7.3	65	---	12	245	18	99	247	19	12
30	52	13	6.8	66	---	12	412	51	159	481	1,240	11
31	9.2	---	7.1	70	---	11	---	104	---	167	458	---
TOTAL	902.6	1,621.6	278.7	737.0	1,245.8	1,801.7	3,700.9	5,075	2,455	3,313	4,098	400.7
MEAN	29.1	54.1	8.99	23.8	44.5	58.1	123	164	81.8	107	132	13.4
MAX	378	95	14	71	124	251	717	1,170	515	573	1,240	50
MIN	6.0	6.8	6.7	5.9	8.3	7.0	9.9	14	14	11	13	8.1
AC-FT	1,790	3,220	553	1,460	2,470	3,570	7,340	10,070	4,870	6,570	8,130	795

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

MEAN	108	94.2	63.5	88.5	69.2	111	291	676	517	431	357	122
MAX	1,286	927	199	235	325	305	1,335	2,675	2,560	2,130	1,410	755
(WY)	(1985)	(1985)	(1986)	(1984)	(1984)	(1984)	(1984)	(1987)	(1995)	(1995)	(1984)	(1984)
MIN	10.0	9.00	8.79	10.0	8.58	6.81	21.0	33.2	45.1	42.5	35.9	13.4
(WY)	(1989)	(1989)	(1991)	(2002)	(1982)	(1995)	(1991)	(1997)	(2002)	(1994)	(2002)	(2003)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1982 - 2003

ANNUAL TOTAL	16,840.6	25,630.0	
ANNUAL MEAN	46.1	70.2	251
HIGHEST ANNUAL MEAN			825
LOWEST ANNUAL MEAN			50.5
HIGHEST DAILY MEAN	1,080	May 24	4,110
LOWEST DAILY MEAN	5.2	Feb 5	2.1
ANNUAL SEVEN-DAY MINIMUM	7.1	Feb 3	3.7
MAXIMUM PEAK FLOW			14,300
MAXIMUM PEAK STAGE			8.09
ANNUAL RUNOFF (AC-FT)	33,400	50,840	181,900
10 PERCENT EXCEEDS	89	180	599
50 PERCENT EXCEEDS	17	18	64
90 PERCENT EXCEEDS	7.8	7.7	9.3

e Estimated.

394839104570300 SAND CREEK AT MOUTH NEAR COMMERCE CITY, CO

LOCATION.--Lat 39°48'36", long 104°57'00", in SE¹/₄NW¹/₄NW¹/₄ sec.12, T.3 S., R.68 W., Adams County, Hydrologic Unit 10190003, on left bank 800 ft upstream from mouth and 50 ft upstream from confluence of Burlington Ditch and Sand Creek in northeast corner of Metro Wastewater Plant.

DRAINAGE AREA.--184 mi² (revised).

PERIOD OF RECORD.--January 1992 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=394839104570300

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,120 ft above NGVD of 1929, from topographic map. Prior to Mar 1, 2000, at site 400 ft downstream at different datum. Supplementary recorder on Burlington Ditch return flows, 50 ft downstream from gage.

REMARKS.--Records poor. Records include return flows from Burlington ditch. 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	45	16	13	12	12	e89	48	e38	e179	e137	e102	102
2	99	15	13	12	13	e91	37	27	e200	e123	e97	42
3	44	23	14	12	24	e88	30	24	e113	e127	e80	152
4	24	19	13	12	18	e76	37	21	e94	e129	e102	27
5	17	14	12	12	14	e75	29	21	e106	e126	e99	15
6	16	15	12	12	14	e85	51	20	e46	e126	e94	15
7	15	14	13	12	12	e71	32	21	e210	e129	e94	20
8	15	e24	13	11	12	e70	29	20	e38	e123	e107	17
9	14	e13	13	12	11	e66	26	e68	19	e90	e95	12
10	15	13	12	12	12	e67	23	e441	e57	e104	e80	10
11	15	13	12	11	12	e57	22	e200	e16	e87	e52	10
12	15	13	13	12	12	34	22	e136	13	e62	e64	9.4
13	16	13	13	70	12	26	22	e59	14	e65	e13	9.5
14	17	13	13	73	12	13	92	e71	e26	e52	e9.3	9.5
15	16	13	13	13	31	14	89	e35	17	e94	e41	9.8
16	16	14	13	12	39	16	166	e52	16	e116	e56	10
17	17	14	13	12	12	67	94	e62	e66	e117	e31	13
18	17	14	13	12	12	168	24	e127	e203	e126	e106	9.3
19	16	14	12	12	12	58	92	e135	e80	e385	e123	11
20	17	14	12	12	12	149	40	e43	e55	e170	e49	10
21	17	14	12	12	12	322	36	e29	e38	e139	e41	9.9
22	18	14	12	12	12	410	27	e20	e26	e129	e46	9.5
23	17	14	12	12	13	375	331	19	16	e114	e55	8.6
24	16	14	12	11	e13	212	612	18	14	e114	e60	8.5
25	15	15	e12	12	e11	146	110	e30	14	e82	e63	8.4
26	15	15	e12	12	e21	155	57	e49	14	e66	e108	9.1
27	24	14	e12	11	28	159	44	19	13	e126	e144	11
28	17	14	11	12	50	77	33	17	13	e117	147	9.2
29	92	14	12	11	---	53	e41	e28	e91	e109	160	9.4
30	51	13	12	12	---	41	e74	e157	e138	e112	353	8.8
31	21	---	12	12	---	e45	---	e189	---	e102	377	---
TOTAL	769	442	386	487	468	3,375	2,370	2,196	1,945	3,698	3,048.3	605.9
MEAN	24.8	14.7	12.5	15.7	16.7	109	79.0	70.8	64.8	119	98.3	20.2
MAX	99	24	14	73	50	410	612	441	210	385	377	152
MIN	14	13	11	11	11	13	22	17	13	52	9.3	8.4
AC-FT	1,530	877	766	966	928	6,690	4,700	4,360	3,860	7,330	6,050	1,200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	36.8	24.8	19.6	17.6	28.1	44.8	60.9	79.6	77.2	110	102	58.9
MAX	107	49.0	35.5	27.7	102	124	168	150	137	260	204	162
(WY)	(1998)	(1998)	(1998)	(1997)	(1997)	(1997)	(1999)	(2001)	(1995)	(1997)	(1997)	(1997)
MIN	17.8	14.7	12.5	12.9	14.6	13.6	25.2	46.1	33.9	32.0	30.9	16.9
(WY)	(1993)	(2003)	(2003)	(1995)	(1995)	(1995)	(1996)	(1993)	(1996)	(2002)	(2002)	(1992)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1992 - 2003
ANNUAL TOTAL	11,995	19,790.2	
ANNUAL MEAN	32.9	54.2	55.9
HIGHEST ANNUAL MEAN			99.9 1997
LOWEST ANNUAL MEAN			34.8 2002
HIGHEST DAILY MEAN	275	612	1,100 Jul 29, 1997
LOWEST DAILY MEAN	11	8.4	4.0 Jul 4, 1996
ANNUAL SEVEN-DAY MINIMUM	12	9.1	7.2 Jun 28, 1996
MAXIMUM PEAK FLOW		1,190	5,750 Jul 29, 1997
MAXIMUM PEAK STAGE		5.66	12.12 Jul 29, 1997
ANNUAL RUNOFF (AC-FT)	23,790	39,250	40,480
10 PERCENT EXCEEDS	69	128	124
50 PERCENT EXCEEDS	21	20	30
90 PERCENT EXCEEDS	13	12	13

e Estimated.

a From rating curve extended above 500 ft³/s.

b Maximum gage height, 13.18 ft, Jul 31, 1999, backwater from construction, site and datum then in use.

06714800 LEAVENWORTH CREEK AT MOUTH NEAR GEORGETOWN, CO

LOCATION.--Lat 39°41'14", long 105°41'59", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.20, T.4 S., R.74 W., Clear Creek County, Hydrologic Unit 10190004, on left bank 400 ft upstream from confluence of South Clear Creek, 0.3 mi south of Georgetown Reservoir, and 1.3 mi south of Georgetown.

DRAINAGE AREA.--12.0 mi².

PERIOD OF RECORD.--October 1994 to September 2000. October 2000 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=06714800

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,280 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Vidler tunnel (transmountain diversion) imports water from Peru Creek. There is seasonal diversion into Green Lake. 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 RECORD.--Maximum discharge, 168 ft³/s, July 12, 1995, gage height, 4.79 ft; minimum daily, 1.2 ft³/s, Feb. 12, 1995.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, not determined; minimum daily, 1.8 ft³/s, Apr. 20.

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	4.0	e2.0	---	---	---	---	e2.9	2.9	e136	46	e12	9.3
2	5.8	e2.0	---	---	---	---	e2.6	2.7	e113	42	e12	8.9
3	5.5	e2.0	---	---	---	---	e2.1	2.9	e99	36	e12	11
4	4.6	e2.0	---	---	---	---	e2.1	3.0	e87	34	e12	11
5	4.7	e2.0	---	---	---	---	e1.9	2.7	e81	31	13	9.7
6	4.8	e2.0	---	---	---	---	e2.0	2.6	77	29	13	12
7	5.3	e2.0	---	---	---	---	e2.0	2.8	78	27	12	14
8	5.4	e2.0	---	---	---	---	e2.0	2.9	79	25	12	12
9	5.3	e2.0	---	---	---	---	e2.0	2.7	76	24	13	16
10	5.0	e2.0	---	---	---	---	e2.1	2.8	75	22	12	13
11	4.7	e2.0	---	---	---	---	e2.1	2.7	73	21	11	12
12	4.4	e2.0	---	---	---	---	e2.2	3.5	68	20	11	11
13	4.0	e2.0	---	---	---	---	e2.5	5.7	68	18	9.9	11
14	4.2	e2.0	---	---	---	---	2.6	7.4	68	17	9.2	11
15	4.2	e2.0	---	---	---	---	2.5	9.1	68	16	8.8	10
16	4.0	e2.0	---	---	---	---	2.2	10	64	16	9.5	9.5
17	3.9	e2.0	---	---	---	---	2.1	15	65	15	10	9.0
18	3.8	e2.0	---	---	---	---	2.1	16	63	14	12	8.7
19	3.9	e2.0	---	---	---	---	1.9	17	62	17	10	8.6
20	3.5	e1.9	---	---	---	---	1.8	18	58	16	8.5	8.3
21	3.6	e1.9	---	---	---	---	1.9	19	56	13	7.8	8.0
22	e3.5	e1.9	---	---	---	---	2.0	25	54	12	7.6	7.7
23	e3.4	e1.9	---	---	---	---	2.0	36	54	11	7.9	7.2
24	e3.2	e1.9	---	---	---	---	1.9	47	53	e11	8.5	6.9
25	e3.0	e1.9	---	---	---	---	2.0	54	51	e12	9.9	6.5
26	e2.9	e2.1	---	---	---	---	2.4	56	49	e12	8.3	6.4
27	e2.7	e2.2	---	---	---	---	2.8	68	49	e12	7.0	6.3
28	e2.5	e2.2	---	---	---	---	2.9	93	48	e12	6.6	6.0
29	e2.2	e2.4	---	---	---	---	3.2	e112	48	e12	6.8	5.9
30	e2.1	e2.4	---	---	---	---	3.3	e123	47	e12	15	5.5
31	e2.1	---	---	---	---	---	---	e137	---	e12	12	---
TOTAL	122.2	60.7	---	---	---	---	68.1	902.4	2,067	617	320.3	282.4
MEAN	3.94	2.02	---	---	---	---	2.27	29.1	68.9	19.9	10.3	9.41
MAX	5.8	2.4	---	---	---	---	3.3	137	136	46	15	16
MIN	2.1	1.9	---	---	---	---	1.8	2.6	47	11	6.6	5.5
AC-FT	242	120	---	---	---	---	135	1,790	4,100	1,220	635	560

e Estimated.

394308105413800 CLEAR CREEK ABOVE GEORGETOWN LAKE NEAR GEORGETOWN, CO

LOCATION.--Lat 39°43'08", long 105°41'38", in SW¹/₄NE¹/₄, sec.8, T.4 S., R.74 W., Clear Creek County, Hydrologic Unit 10190004, on left bank 300 ft upstream from Georgetown Lake, and 1.0 mi north of Georgetown.

DRAINAGE AREA.--80.0 mi².

PERIOD OF RECORD.--July 1997 to September 1999, October 1999 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=394308105413800

GAGE.--Water-stage recorder. Elevation of gage is 8,460 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. 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 RECORD.--Maximum discharge, 975 ft³/s, May 31, 2003, gage height 6.49 ft; minimum daily, 9.0 ft³/s (estimated), Feb. 5, 1999.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 975 ft³/s, May 31, gage height, 6.49 ft; minimum daily, 12 ft³/s, Oct. 29-31.

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	22	---	---	---	---	e18	e20	32	802	321	89	73
2	29	---	---	---	---	e19	e20	29	665	309	82	63
3	31	---	---	---	---	e20	e21	29	580	294	81	66
4	25	---	---	---	---	e19	e19	30	514	287	80	65
5	23	---	---	---	---	e20	e17	28	477	270	72	62
6	21	---	---	---	---	e20	e17	26	422	247	69	91
7	28	---	---	---	---	e19	e15	28	382	224	70	96
8	23	---	---	---	---	e19	e14	30	333	224	73	91
9	25	---	---	---	---	e20	e17	26	355	210	68	123
10	21	---	---	---	---	e19	e20	28	403	200	67	104
11	22	---	---	---	---	e20	e25	26	440	192	61	97
12	20	---	---	---	---	e20	e27	e28	442	183	58	91
13	17	---	---	---	---	e20	e29	e39	431	180	60	86
14	18	---	---	---	---	e20	e33	e44	430	164	59	78
15	17	---	---	---	---	e19	e37	e57	455	156	52	75
16	19	---	---	---	---	e19	e32	97	454	155	60	70
17	15	---	---	---	---	e20	e29	121	440	154	83	66
18	18	---	---	---	---	e22	e30	141	455	154	92	64
19	15	---	---	---	---	e22	e29	141	464	172	74	e64
20	14	---	---	---	---	e21	e27	136	454	166	63	e63
21	17	---	---	---	---	e21	e26	144	433	146	58	61
22	17	---	---	---	---	e19	e29	178	425	137	57	58
23	15	---	---	---	---	e20	e30	225	411	133	58	54
24	17	---	---	---	---	e21	17	284	394	125	65	53
25	16	---	---	---	---	e21	19	332	360	123	73	49
26	14	---	---	---	---	e20	27	360	344	118	65	47
27	e14	---	---	---	---	e20	32	439	344	114	58	46
28	15	---	---	---	---	e20	34	550	334	111	56	44
29	12	---	---	---	---	e19	36	661	333	109	52	45
30	e12	---	---	---	---	e20	35	725	323	102	89	46
31	e12	---	---	---	---	e20	---	809	---	96	81	---
TOTAL	584	---	---	---	---	617	763	5,823	13,099	5,576	2,125	2,091
MEAN	18.8	---	---	---	---	19.9	25.4	188	437	180	68.5	69.7
MAX	31	---	---	---	---	22	37	809	802	321	92	123
MIN	12	---	---	---	---	18	14	26	323	96	52	44
AC-FT	1,160	---	---	---	---	1,220	1,510	11,550	25,980	11,060	4,210	4,150

e Estimated.

394359105411901 GEORGETOWN LAKE NEAR GEORGETOWN, CO

LOCATION.--Lat 39°43'59", long 105°41'19", in SE $\frac{1}{4}$ NE $\frac{1}{4}$, sec.5, T.4 S., R.74 W., Clear Creek County, Hydrologic Unit 10190004, on left bank 30 ft upstream from spillway on Georgetown Lake, and 2.0 mi north of Georgetown.

DRAINAGE AREA.--82.4 mi².

PERIOD OF RECORD.--October 2002 to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=394359105411901

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,444.82 ft above NAVD of 1988.

REMARKS.--Reservoir is formed by an earth and rock fill dam with concrete spillway. Gage not in operation during period Nov. 20, 2002 to May 22, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum daily reservoir elevation during period of operation, 8,449.60 ft, May 31; minimum daily, 8,446.05 ft, Oct. 28.

ELEVATION OF RESERVOIR WATER SURFACE ABOVE DATUM, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	8,446.56	---	---	---	---	---	---	8,449.59	8,448.79	8,448.37	8,448.11
2	---	8,446.73	---	---	---	---	---	---	8,449.39	8,448.77	8,448.37	8,448.06
3	---	8,446.77	---	---	---	---	---	---	8,449.20	8,448.75	8,448.35	8,448.06
4	8,446.81	8,446.76	---	---	---	---	---	---	8,449.08	8,448.73	8,448.35	8,448.07
5	8,446.89	8,446.76	---	---	---	---	---	---	8,449.04	8,448.71	8,448.34	8,448.04
6	8,447.07	8,446.80	---	---	---	---	---	---	8,448.93	8,448.68	8,448.31	8,448.16
7	8,446.99	8,446.88	---	---	---	---	---	---	8,448.88	8,448.61	8,448.31	8,448.17
8	8,447.04	8,447.05	---	---	---	---	---	---	8,448.79	8,448.61	8,448.33	8,448.15
9	8,447.13	8,447.25	---	---	---	---	---	---	8,448.82	8,448.57	8,448.30	8,448.25
10	8,447.02	8,447.45	---	---	---	---	---	---	8,448.90	8,448.57	8,448.24	8,448.20
11	8,447.05	8,447.61	---	---	---	---	---	---	8,448.97	8,448.56	8,448.29	8,448.18
12	8,447.06	8,447.72	---	---	---	---	---	---	8,448.98	8,448.51	8,448.28	8,448.15
13	8,446.98	8,447.81	---	---	---	---	---	---	8,448.96	8,448.51	8,448.28	8,448.13
14	8,446.98	8,447.87	---	---	---	---	---	---	8,448.96	8,448.48	8,448.27	8,448.11
15	8,446.98	8,447.91	---	---	---	---	---	---	8,449.00	8,448.44	8,448.25	8,448.08
16	8,446.90	8,447.94	---	---	---	---	---	---	8,449.00	8,448.44	8,448.25	8,448.08
17	8,446.85	8,447.95	---	---	---	---	---	---	8,448.98	8,448.48	8,448.35	8,448.06
18	8,446.77	8,447.94	---	---	---	---	---	---	8,449.05	8,448.48	8,448.37	8,448.06
19	8,446.79	8,447.93	---	---	---	---	---	---	8,449.09	8,448.57	8,448.31	8,448.12
20	8,447.01	---	---	---	---	---	---	---	8,449.05	8,448.60	8,448.26	8,448.09
21	8,447.11	---	---	---	---	---	---	---	8,448.97	8,448.54	8,448.23	8,448.09
22	8,447.10	---	---	---	---	---	---	---	8,448.96	8,448.51	8,448.05	8,448.07
23	8,446.93	---	---	---	---	---	---	8,448.53	8,448.94	8,448.47	8,448.05	8,448.07
24	8,446.75	---	---	---	---	---	---	8,448.67	8,448.92	8,448.42	8,448.07	8,448.06
25	8,446.52	---	---	---	---	---	---	8,448.81	8,448.87	8,448.43	8,448.10	8,448.14
26	8,446.25	---	---	---	---	---	---	8,448.86	8,448.84	8,448.41	8,448.08	8,448.10
27	8,446.07	---	---	---	---	---	---	8,448.99	8,448.83	8,448.39	8,448.04	8,448.14
28	8,446.05	---	---	---	---	---	---	8,449.16	8,448.82	8,448.43	8,448.02	8,448.14
29	8,446.13	---	---	---	---	---	---	8,449.39	8,448.82	8,448.45	8,447.99	8,448.14
30	8,446.15	---	---	---	---	---	---	8,449.48	8,448.80	8,448.39	8,448.15	8,448.13
31	8,446.33	---	---	---	---	---	---	8,449.60	---	8,448.36	8,448.15	---
MAX	---	---	---	---	---	---	---	---	8,449.59	8,448.79	8,448.37	8,448.25
MIN	---	---	---	---	---	---	---	---	8,448.79	8,448.36	8,447.99	8,448.04

06715000 CLEAR CREEK ABOVE WEST FORK CLEAR CREEK NEAR EMPIRE, CO

LOCATION.--Lat 39°45'07", long 105°39'41", in NE¹/₄NW¹/₄ sec.34, T.3 S., R.74 W., Clear Creek County, Hydrologic Unit 10190004, on left bank, 1.1 mi west of exit 232 on I-70, 1.3 mi southeast of Empire, and 2.1 mi west of Lawson.

DRAINAGE AREA.--86.1 mi².

PERIOD OF RECORD.--October 1994 to September 2000. October 2000 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=06715000

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,280 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. 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 RECORD.--Maximum discharge, 1030 ft³/s, June 17, 1995 and May 31, 2003, gage height, 6.63 ft and 6.53 ft respectively; minimum daily, 6.6 ft³/s (estimated), March 2-13, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 1030 ft³/s, May 31, gage height, 6.53 ft; minimum daily, 6.6 ft³/s (estimated), Mar. 2-13.

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	---	---	---	---	e6.9	e16	e35	868	319	91	78
2	35	---	---	---	---	e6.6	e17	e31	700	310	87	70
3	35	---	---	---	---	e6.6	e18	e30	593	298	85	69
4	28	---	---	---	---	e6.6	18	e29	504	290	85	71
5	12	---	---	---	---	e6.6	15	e24	477	278	80	63
6	20	---	---	---	---	e6.6	15	e26	412	258	77	85
7	24	---	---	---	---	e6.6	13	e27	382	233	75	93
8	15	---	---	---	---	e6.6	12	e28	333	233	81	90
9	20	---	---	---	---	e6.6	13	e23	344	218	75	116
10	24	---	---	---	---	e6.6	18	e30	385	210	74	99
11	16	---	---	---	---	e6.6	23	e27	418	201	69	94
12	18	---	---	---	---	e6.6	26	e29	427	192	67	88
13	20	---	---	---	---	e6.6	26	e39	416	190	68	82
14	15	---	---	---	---	e6.9	32	e54	408	175	68	78
15	17	---	---	---	---	e7.2	35	e68	434	164	62	74
16	19	---	---	---	---	e7.5	28	e88	436	161	62	69
17	19	---	---	---	---	e7.6	26	e126	417	161	95	64
18	18	---	---	---	---	e8.3	27	e174	431	158	96	61
19	12	---	---	---	---	e8.6	25	e185	444	176	83	62
20	6.6	---	---	---	---	e9.0	22	e188	439	176	72	61
21	14	---	---	---	---	e9.2	21	e196	408	154	71	59
22	19	---	---	---	---	e9.4	23	e217	402	146	67	57
23	22	---	---	---	---	e9.6	e21	225	391	140	66	53
24	23	---	---	---	---	e9.4	e21	261	380	131	73	51
25	24	---	---	---	---	e9.2	e24	329	353	129	77	48
26	24	---	---	---	---	e9.0	e29	358	334	127	76	44
27	22	---	---	---	---	e9.0	e34	422	338	119	67	45
28	14	---	---	---	---	e9.0	e36	528	329	110	64	44
29	10	---	---	---	---	e10	e36	652	328	111	60	44
30	8.7	---	---	---	---	e11	e39	754	320	107	87	45
31	8.0	---	---	---	---	e13	---	859	---	97	87	---
TOTAL	587.3	---	---	---	---	249.0	709	6,062	12,851	5,772	2,347	2,057
MEAN	18.9	---	---	---	---	8.03	23.6	196	428	186	75.7	68.6
MAX	35	---	---	---	---	13	39	859	868	319	96	116
MIN	6.6	---	---	---	---	6.6	12	23	320	97	60	44
AC-FT	1,160	---	---	---	---	494	1,410	12,020	25,490	11,450	4,660	4,080

e Estimated.

06716100 WEST FORK CLEAR CREEK ABOVE MOUTH NEAR EMPIRE, CO

LOCATION.--Lat 39°45'32", long 105°39'34", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.3 S., R.74 W., Clear Creek County, Hydrologic Unit 10190004, on left bank, 75 ft (revised) downstream from frontage road bridge and 1.2 mi east of Empire.

DRAINAGE AREA.--57.6 mi².

PERIOD OF RECORD.--October 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=06716100

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,235 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 transbasin diversions. 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	e18	e14	e10	e11	e11	e17	37	642	195	71	49
2	29	e19	e13	e10	e11	e13	e19	34	446	189	68	52
3	30	e18	e13	e10	e11	e14	e20	33	381	188	73	55
4	28	e18	e12	e10	e11	e12	14	33	333	182	68	53
5	26	e19	e11	e10	e11	e13	13	33	294	175	66	59
6	26	e17	e11	e10	e11	e13	13	31	258	170	e57	65
7	25	e17	e12	e10	e11	e12	12	30	240	166	e62	61
8	26	e16	e11	e10	e11	e11	13	29	222	160	65	58
9	25	e16	e11	e10	e11	e12	14	29	221	155	61	e86
10	23	e15	e11	e10	e11	e12	16	29	240	150	57	e73
11	21	e14	e11	e10	e10	e12	18	27	256	140	53	e70
12	21	e14	e11	e10	e10	e12	20	29	268	130	50	61
13	20	e17	e11	e9.9	e9.8	e12	23	35	267	125	46	64
14	21	e18	e10	e9.8	e9.5	e13	27	43	259	119	52	65
15	21	e16	e10	e9.8	e9.0	e13	28	59	261	115	47	60
16	20	e15	e10	e9.8	e8.8	e13	25	74	262	111	46	59
17	21	e17	e10	e9.9	e8.8	e13	24	106	258	111	60	57
18	25	e16	e11	e10	e8.5	e14	24	121	266	106	71	52
19	e18	e15	e11	e10	e8.4	e14	23	129	263	106	56	54
20	e14	e14	e11	e10	e9.0	e14	22	139	255	123	49	53
21	e17	e14	e11	e10	e8.8	e14	22	163	245	110	49	50
22	e20	e14	e10	e10	e8.8	e13	22	197	242	100	49	47
23	e21	e14	e10	e10	e9.1	e14	23	243	244	95	47	46
24	e21	e14	e10	e11	e9.6	e15	24	323	242	91	47	45
25	e21	e14	e10	e11	e10	e15	24	383	229	91	56	42
26	e20	e14	e10	e11	e10	e15	28	385	216	91	56	41
27	e17	e15	e10	e11	e9.7	e15	32	411	209	86	49	40
28	e15	e15	e10	e11	e9.7	e14	32	458	206	85	45	39
29	e14	e15	e10	e11	---	e14	34	482	205	81	47	39
30	e15	e15	e10	e11	---	e14	37	548	201	74	57	38
31	e16	---	e10	e11	---	e14	---	633	---	79	54	---
TOTAL	660	473	336	317.2	277.5	410	663	5,306	8,131	3,899	1,734	1,633
MEAN	21.3	15.8	10.8	10.2	9.91	13.2	22.1	171	271	126	55.9	54.4
MAX	30	19	14	11	11	15	37	633	642	195	73	86
MIN	14	14	10	9.8	8.4	11	12	27	201	74	45	38
AC-FT	1,310	938	666	629	550	813	1,320	10,520	16,130	7,730	3,440	3,240

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

MEAN	30.3	23.1	18.6	15.8	15.0	15.6	23.4	131	324	189	85.2	44.9
MAX	41.5	30.1	26.1	23.5	20.1	20.0	35.2	199	504	395	199	66.5
(WY)	(2000)	(2001)	(1999)	(1999)	(2000)	(2002)	(2000)	(2000)	(1997)	(1995)	(1999)	(1999)
MIN	21.3	15.8	10.4	9.92	9.91	12.7	15.3	47.2	110	44.5	32.2	20.1
(WY)	(2003)	(2003)	(1995)	(1995)	(2003)	(1998)	(1995)	(1995)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1995 - 2003

ANNUAL TOTAL	12,000	23,839.7	
ANNUAL MEAN	32.9	65.3	76.6
HIGHEST ANNUAL MEAN			96.2 1999
LOWEST ANNUAL MEAN			34.2 2002
HIGHEST DAILY MEAN	164 Jun 3	642 Jun 1	720 Jun 18, 1995
LOWEST DAILY MEAN	e10 Dec 14	e8.4 Feb 19	e8.4 Feb 19, 2003
ANNUAL SEVEN-DAY MINIMUM	e10 Dec 22	e8.7 Feb 16	e8.7 Feb 16, 2003
MAXIMUM PEAK FLOW		855 May 31	855 May 31, 2003
MAXIMUM PEAK STAGE		6.58 May 31	a6.58 May 31, 2003
ANNUAL RUNOFF (AC-FT)	23,800	47,290	55,460
10 PERCENT EXCEEDS	68	207	240
50 PERCENT EXCEEDS	21	21	28
90 PERCENT EXCEEDS	14	10	13

e Estimated.

a Maximum gage height, 6.67 ft, Jun 18, 1995, same site and datum.

06716500 CLEAR CREEK NEAR LAWSON, CO

LOCATION.--Lat 39°45'57", long 105°37'32", in NW¼NW¼ sec.25, T.3 S., R.74 W., Clear Creek County, Hydrologic Unit 10190004, at east edge of Lawson, on left bank, 30 ft downstream from private bridge, and 2.0 mi downstream from West Fork Clear Creek.

DRAINAGE AREA.--147 mi².

PERIOD OF RECORD.--March 1946 to September 1986; October 1994 to current year. Records prior to 1959 include inflow from August P. Gumlick Tunnel (formerly Jones Pass tunnel). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06716500

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,080 ft above NGVD of 1929, from topographic map. Mar. 29, 1946 to Sept. 30, 1967, at site 1.5 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow affected by minor transmountain diversion from Colorado River basin through Berthoud Pass 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	44	27	26	e20	18	19	29	67	1,370	488	179	126
2	56	28	25	e20	18	e22	33	63	1,120	470	167	120
3	56	27	25	e20	19	e24	34	64	974	455	171	122
4	51	27	24	20	e19	e22	31	64	852	440	164	124
5	39	29	24	19	e19	e23	29	58	782	421	152	122
6	40	27	24	19	e19	e23	28	59	679	402	140	158
7	44	26	e25	19	e19	22	26	59	619	381	143	166
8	38	25	e25	18	e19	20	26	61	539	370	153	156
9	40	24	e25	19	e19	22	29	57	545	356	137	216
10	43	23	e25	e19	e19	21	33	62	601	344	133	186
11	36	23	e25	e19	e20	21	39	57	654	330	119	174
12	36	23	e25	18	e19	22	43	58	680	317	113	161
13	38	27	e25	17	e19	22	46	72	674	312	108	156
14	33	28	e24	17	e19	23	53	84	658	298	116	152
15	35	27	22	17	19	22	58	108	687	287	105	140
16	35	24	22	e17	19	22	51	128	695	281	103	131
17	34	28	22	e17	20	24	49	192	672	282	165	122
18	37	28	e23	e17	19	25	49	227	700	276	179	109
19	31	26	e23	e18	18	e26	48	231	717	289	144	112
20	24	26	e23	e18	19	e25	46	232	705	305	119	111
21	29	26	e22	e17	18	e25	45	245	663	280	116	102
22	33	25	e21	17	18	24	47	280	650	265	112	97
23	37	25	e21	17	19	26	48	340	639	255	109	96
24	38	25	e20	16	e19	29	49	429	621	243	117	92
25	39	25	e20	17	e19	28	48	520	576	240	133	91
26	39	e26	e20	16	e18	27	57	557	536	237	133	85
27	37	e26	e20	17	18	26	64	658	529	229	112	84
28	31	e27	e20	17	17	26	65	844	514	223	104	83
29	28	e28	e20	17	---	25	69	1,030	510	220	102	80
30	25	27	e20	17	---	25	70	1,170	495	207	147	80
31	26	---	e20	18	---	25	---	1,320	---	200	147	---
TOTAL	1,152	783	706	554	525	736	1,342	9,396	20,656	9,703	4,142	3,754
MEAN	37.2	26.1	22.8	17.9	18.8	23.7	44.7	303	689	313	134	125
MAX	56	29	26	20	20	29	70	1,320	1,370	488	179	216
MIN	24	23	20	16	17	19	26	57	495	200	102	80
AC-FT	2,280	1,550	1,400	1,100	1,040	1,460	2,660	18,640	40,970	19,250	8,220	7,450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2003, BY WATER YEAR (WY)

MEAN	60.6	43.1	33.9	28.9	27.6	28.2	43.3	199	598	396	170	90.2
MAX	132	79.9	52.2	41.0	37.3	39.0	89.1	431	1,000	943	404	193
(WY)	(1962)	(1985)	(2000)	(1971)	(2000)	(2000)	(1962)	(1958)	(1952)	(1957)	(1984)	(1984)
MIN	35.6	26.1	22.8	17.9	16.8	17.6	26.3	83.4	175	70.0	50.8	40.8
(WY)	(1957)	(2003)	(2003)	(2003)	(1955)	(1951)	(1964)	(1995)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1946 - 2003

ANNUAL TOTAL	20,413	53,449		
ANNUAL MEAN	55.9	146	144	1984
HIGHEST ANNUAL MEAN			225	2002
LOWEST ANNUAL MEAN			60.0	2002
HIGHEST DAILY MEAN	235	Jun 3	1,370	Jun 1
LOWEST DAILY MEAN	e20	Dec 24	16	Jan 24
ANNUAL SEVEN-DAY MINIMUM	e20	Dec 24	e17	Jan 21
MAXIMUM PEAK FLOW			1,540	May 31
MAXIMUM PEAK STAGE			7.04	May 31
ANNUAL RUNOFF (AC-FT)	40,490	106,000	104,300	104,300
10 PERCENT EXCEEDS	124	501	414	414
50 PERCENT EXCEEDS	38	39	50	50
90 PERCENT EXCEEDS	24	19	25	25

e Estimated.

a Site and datum then in use.

06717400 CHICAGO CREEK BELOW DEVILS CANYON, NEAR IDAHO SPRINGS, CO

LOCATION.--Lat 39°42'59", long 105°34'15", in NW¹/₄SW¹/₄ sec.9, T.4 S., R.73 W., Clear Creek County, Hydrologic Unit 10190004, on left bank, 50 ft upstream from Highway 103 bridge, 5.6 mi upstream from intersection of I-70 and Colorado Highway 103, and 3.2 mi southwest of Idaho Springs.

DRAINAGE AREA.--43.7 mi².

PERIOD OF RECORD.--October 1994 to September 1999. October 1999 to current year (seasonal records only). Records for May 14, 1996 (when gage was located 700 ft upstream) to April 10, 1998, may not be equivalent to other records because gage was moved upstream of inflow from Devils Canyon. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06717400

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,040 ft above NGVD of 1929, from topographic map. Prior to May 14, 1996, at site 150 ft downstream at different datum. May 14, 1996 to Apr. 10, 1998, at site 700 ft upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. 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 RECORD.--Maximum daily discharge 275 ft³/s (estimated), June 19, 1995, peak not determined; maximum instantaneous discharge, 183 ft³/s, May 31, 2003, gage height 5.79 ft; minimum daily, 0.30 ft³/s (estimated), Nov. 13, 14, 2000.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 183 ft³/s, May 31, gage height, 5.79 ft; minimum daily, 2.9 ft³/s, Mar. 13 (estimated).

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	7.1	e3.8	---	---	---	---	5.7	23	143	33	11	11
2	8.6	e3.7	---	---	---	---	8.2	21	113	31	10	10
3	8.7	e3.9	---	---	---	---	8.3	21	103	30	11	14
4	7.6	e4.1	---	---	---	---	7.0	21	89	29	12	15
5	7.4	e4.2	---	---	---	---	6.1	19	86	28	10	11
6	7.3	e4.3	---	---	---	---	5.5	18	76	28	9.7	12
7	7.2	e4.7	---	---	---	---	5.3	18	75	27	9.7	28
8	7.4	e4.6	---	---	---	---	5.1	18	64	26	10	24
9	6.4	e4.5	---	---	---	---	6.7	17	62	24	9.5	28
10	6.4	e4.5	---	---	---	---	11	17	65	24	10	22
11	6.1	e4.4	---	---	---	---	13	15	63	23	8.8	21
12	6.2	e4.4	---	---	---	---	15	17	62	22	8.4	20
13	5.7	e4.4	---	---	---	e2.9	19	22	61	21	8.0	20
14	5.7	e4.4	---	---	---	3.1	23	27	60	21	7.3	19
15	5.5	e4.4	---	---	---	3.3	22	34	57	21	7.0	17
16	5.3	e4.2	---	---	---	3.0	19	35	55	18	7.4	15
17	4.3	e4.3	---	---	---	3.0	18	40	55	12	9.3	14
18	4.2	e4.1	---	---	---	---	18	28	57	14	9.6	13
19	4.1	e4.2	---	---	---	---	16	22	56	17	8.3	13
20	4.2	e4.2	---	---	---	---	13	21	54	20	6.9	12
21	4.0	e4.3	---	---	---	---	12	29	53	16	6.6	11
22	4.5	e4.1	---	---	---	---	13	38	51	13	6.7	11
23	4.4	e4.1	---	---	---	---	13	53	50	13	7.3	11
24	4.6	e4.1	---	---	---	---	12	71	48	13	7.9	10
25	4.2	e4.1	---	---	---	---	14	74	39	12	8.7	9.6
26	4.0	e4.1	---	---	---	---	19	78	29	12	7.9	9.2
27	4.7	e4.2	---	---	---	---	23	83	27	14	6.8	9.7
28	4.1	e4.2	---	---	---	---	25	74	27	15	6.7	9.7
29	3.8	e4.1	---	---	---	---	28	101	35	15	6.4	9.6
30	e3.8	e4.2	---	---	---	---	27	127	35	13	23	9.5
31	e3.8	---	---	---	---	3.7	---	136	---	12	16	---
TOTAL	171.3	126.8	---	---	---	---	430.9	1,318	1,850	617	287.9	439.3
MEAN	5.53	4.23	---	---	---	---	14.4	42.5	61.7	19.9	9.29	14.6
MAX	8.7	4.7	---	---	---	---	28	136	143	33	23	28
MIN	3.8	3.7	---	---	---	---	5.1	15	27	12	6.4	9.2
AC-FT	340	252	---	---	---	---	855	2,610	3,670	1,220	571	871

e Estimated.

06718300 CLEAR CREEK ABOVE JOHNSON GULCH NEAR IDAHO SPRINGS, CO

LOCATION.--Lat 39°44'47", long 105°26'08", in NE¹/₄SW¹/₄ sec.34, T.3 S., R.72 W., Clear Creek County, Hydrologic Unit 10190004, on left bank 150 ft downstream from I-70 exit 243 bridge over Clear Creek, and 2 mi east of Idaho Springs.

DRAINAGE AREA.--267 mi².

PERIOD OF RECORD.--October 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=06718300

GAGE.--Water-stage recorder. Elevation of gage is 7,210 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges which are poor. 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	67	45	e33	e28	e26	e26	51	126	1,600	686	223	178
2	83	48	e33	e28	e26	e28	64	119	1,390	667	214	169
3	79	46	e31	e28	e26	e30	68	116	1,270	652	230	195
4	75	46	e31	e28	e26	e29	63	122	1,130	632	230	188
5	66	45	e30	e27	e26	e29	57	109	1,060	606	215	171
6	61	44	e30	e27	e26	e35	55	106	937	580	202	207
7	68	42	e31	e26	e26	e31	49	104	880	541	200	237
8	63	40	e31	e26	e26	e27	48	107	789	524	215	222
9	62	40	e30	e26	e26	e28	54	101	785	502	198	279
10	65	38	e30	e26	e26	e28	65	107	841	480	197	239
11	59	40	e31	e26	e26	e28	75	99	888	458	180	225
12	58	38	e31	e26	e26	e29	83	101	907	435	172	213
13	59	45	e31	e26	e26	e29	91	121	897	427	164	205
14	54	42	e31	e26	e26	e31	107	141	872	406	163	202
15	55	40	e30	e26	e26	e31	113	180	895	387	154	189
16	56	e35	e29	e26	e27	e32	101	199	900	375	146	175
17	54	e39	e29	e26	e27	e36	95	269	881	370	205	170
18	56	e38	e29	e26	e26	e39	96	320	910	359	219	155
19	52	e35	e29	e26	e25	e35	91	329	911	386	193	157
20	44	e36	e29	e26	e25	e38	86	334	897	428	166	158
21	48	e34	e29	e26	e25	e40	82	373	862	385	155	149
22	51	e34	e28	e25	e26	42	85	437	846	349	164	141
23	55	e34	e28	e25	e26	45	88	534	839	334	157	138
24	56	e33	e28	e25	e25	49	88	654	832	311	163	141
25	56	e32	e28	e25	e25	46	89	747	785	307	176	136
26	55	e33	e28	e25	e25	47	106	798	727	312	183	132
27	54	e34	e28	e25	e25	46	119	900	721	296	158	130
28	46	e35	e28	e25	e24	43	123	1,110	708	278	150	129
29	45	e35	e28	e25	---	40	132	1,280	714	274	148	127
30	40	e34	e28	e26	---	41	132	1,440	698	252	230	127
31	44	---	e28	e26	---	43	---	1,540	---	241	210	---
TOTAL	1,786	1,160	918	808	721	1,101	2,556	13,023	27,372	13,240	5,780	5,284
MEAN	57.6	38.7	29.6	26.1	25.8	35.5	85.2	420	912	427	186	176
MAX	83	48	33	28	27	49	132	1,540	1,600	686	230	279
MIN	40	32	28	25	24	26	48	99	698	241	146	127
AC-FT	3,540	2,300	1,820	1,600	1,430	2,180	5,070	25,830	54,290	26,260	11,460	10,480

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

MEAN	100	63.9	48.6	41.3	39.5	44.9	74.5	351	834	540	267	153
MAX	126	83.6	62.6	54.6	54.7	58.8	106	549	1,325	1,398	526	213
(WY)	(1999)	(2000)	(2000)	(1996)	(2000)	(2000)	(2000)	(1996)	(1995)	(1995)	(1999)	(1999)
MIN	57.6	38.7	29.6	26.1	25.8	33.8	49.9	137	215	103	73.9	61.3
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(1995)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1995 - 2003

ANNUAL TOTAL	26,688	73,749		
ANNUAL MEAN	73.1	202		214
HIGHEST ANNUAL MEAN				326
LOWEST ANNUAL MEAN				79.2
HIGHEST DAILY MEAN	290	Jun 4	1,600	Jun 1
LOWEST DAILY MEAN	e25	Feb 27	e24	Feb 28
ANNUAL SEVEN-DAY MINIMUM	e28	Jan 11	e25	Jan 22
MAXIMUM PEAK FLOW			1,810	Jun 1
MAXIMUM PEAK STAGE			7.75	Jun 1
ANNUAL RUNOFF (AC-FT)	52,940	146,300		a7.46
10 PERCENT EXCEEDS	165	702		593
50 PERCENT EXCEEDS	57	64		81
90 PERCENT EXCEEDS	29	26		36

e Estimated.

a Maximum gage height, 8.23 ft, Jun 17, 1995.

06718550 NORTH CLEAR CREEK ABOVE MOUTH NEAR BLACKHAWK, CO

LOCATION.--Lat 39°44'56", long 105°23'57", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.36, T.3 S., R.72 W., Clear Creek County, Hydrologic Unit 10190004, on left bank 150 ft upstream from intersection of Hwy 6 and Hwy 119 bridge over North Clear Creek, 0.2 mi above mouth, and 6.5 mi southeast of Blackhawk.

DRAINAGE AREA.--60.2 mi² (revised).

PERIOD OF RECORD.--October 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=06718550

GAGE.--Water-stage recorder. Elevation of gage is 6,910 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. 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	3.8	4.2	e3.7	e2.5	e2.4	e2.4	6.7	32	136	20	7.7	6.4
2	8.1	4.2	e3.6	e2.6	e2.4	e2.6	7.4	31	127	17	7.4	5.9
3	5.8	4.0	e3.6	e2.5	e2.4	e2.7	7.9	30	114	16	7.2	9.2
4	5.5	3.4	e3.6	e2.4	e2.4	e2.6	7.5	30	97	15	7.2	6.8
5	5.0	2.7	e3.6	e2.3	e2.4	e2.5	7.2	29	88	13	6.8	5.0
6	4.7	3.3	e3.6	e2.3	e2.4	e2.5	7.0	28	73	11	6.7	5.2
7	4.5	4.9	e3.6	e2.2	e2.4	e2.5	6.7	28	70	12	6.3	7.1
8	4.3	3.5	e3.6	e2.3	e2.3	e2.4	6.3	27	57	11	6.2	5.6
9	4.3	3.7	e3.5	e2.3	e2.3	e2.5	6.8	27	55	11	5.8	7.1
10	4.1	3.7	e3.5	e2.1	e2.3	e2.5	7.9	28	53	10	5.8	5.5
11	4.1	4.6	e3.5	e2.0	e2.3	e2.6	11	26	e51	9.6	5.4	5.0
12	4.1	4.5	e3.5	e1.9	e2.3	e2.6	14	27	e49	9.3	5.1	4.7
13	4.0	3.5	e3.3	e1.9	e2.3	e2.7	19	29	e47	9.2	4.7	4.8
14	3.8	3.2	e3.3	e1.9	e2.3	3.0	26	31	e46	9.0	4.4	5.2
15	3.6	3.5	e3.1	e1.8	e2.3	3.0	28	36	e44	8.8	4.3	4.7
16	3.7	4.4	e3.2	e1.8	e2.4	3.1	26	46	e43	9.5	4.0	4.4
17	3.9	3.4	e3.2	e1.8	e2.5	3.3	26	60	e41	9.2	3.9	4.1
18	4.1	3.4	e3.2	e1.9	e2.4	4.2	26	70	e39	9.1	5.7	4.6
19	4.3	3.8	e3.1	e2.0	e2.4	e8.0	26	75	e37	8.9	4.9	4.5
20	4.1	3.0	e3.1	e2.0	e2.4	e5.5	24	73	e36	7.8	4.0	4.3
21	4.0	3.1	e3.1	e1.9	e2.4	e5.0	23	75	34	7.9	3.6	4.1
22	4.0	e3.2	e2.9	e1.9	e2.4	5.0	24	75	32	8.1	3.7	3.8
23	4.0	e3.2	e2.7	e1.9	e2.3	5.9	26	84	31	7.3	3.8	3.6
24	4.4	e3.2	e2.7	e1.9	e2.3	6.3	26	95	31	7.7	4.0	3.6
25	4.1	e3.3	e2.6	e1.9	e2.3	5.0	27	106	31	7.2	3.8	3.6
26	3.9	e3.4	e2.7	e2.0	e2.2	5.6	29	108	28	9.5	3.7	3.4
27	3.9	e3.5	e2.7	e2.0	e2.2	6.3	32	118	27	8.7	3.4	3.5
28	3.9	e3.8	e2.6	e2.1	e2.2	5.4	33	122	25	20	3.3	3.7
29	4.2	e3.9	e2.6	e2.3	---	5.8	36	128	22	13	3.4	3.6
30	4.6	e3.8	e2.5	e2.3	---	4.7	34	135	21	10	23	3.7
31	4.3	---	e2.5	e2.4	---	5.5	---	139	---	8.4	8.1	---
TOTAL	135.1	109.3	98.0	65.1	65.6	123.7	587.4	1,948	1,585	334.2	177.3	146.7
MEAN	4.36	3.64	3.16	2.10	2.34	3.99	19.6	62.8	52.8	10.8	5.72	4.89
MAX	8.1	4.9	3.7	2.6	2.5	8.0	36	139	136	20	23	9.2
MIN	3.6	2.7	2.5	1.8	2.2	2.4	6.3	26	21	7.2	3.3	3.4
AC-FT	268	217	194	129	130	245	1,170	3,860	3,140	663	352	291

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

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
MEAN	5.75	4.43	3.61	3.16	3.16	5.13	14.8	72.6	75.2	19.5	14.6	6.66
MAX	12.3	8.09	6.42	4.92	5.79	8.46	24.5	112	228	49.7	50.8	13.3
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(1998)	(1995)	(1995)	(1995)	(1999)	(1999)
MIN	3.08	2.68	1.68	1.30	1.38	2.21	7.60	11.1	10.8	6.12	3.30	3.62
(WY)	(1995)	(1995)	(1995)	(1995)	(1995)	(1995)	(1995)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1995 - 2003

ANNUAL TOTAL	1,993.8	5,375.4		
ANNUAL MEAN	5.46	14.7		
HIGHEST ANNUAL MEAN			19.1	1995
LOWEST ANNUAL MEAN			5.50	2002
HIGHEST DAILY MEAN	25	Jun 4	139	May 31
LOWEST DAILY MEAN	e2.1	Feb 27	e1.8	Jan 15
ANNUAL SEVEN-DAY MINIMUM	2.3	Sep 2	e1.9	Jan 12
MAXIMUM PEAK FLOW			252	May 27
MAXIMUM PEAK STAGE			5.31	May 27
ANNUAL RUNOFF (AC-FT)	3,950	10,660		13,840
10 PERCENT EXCEEDS	11	36		56
50 PERCENT EXCEEDS	4.0	4.4		5.8
90 PERCENT EXCEEDS	2.7	2.3		2.5

e Estimated.

a Also occurred Aug 8-12, 2000.

b From rating curve extended above 300 ft³/s.

06719505 CLEAR CREEK AT GOLDEN, CO

LOCATION.--Lat 39°45'11", long 105°14'05", in NE¹/₄NW¹/₄ sec.33, T.3 S., R.70 W., Jefferson County, Hydrologic Unit 10190004, on left bank 100 ft downstream from U.S. Highway 6 bridge at west edge of Golden, 0.7 mi downstream from headgate of Church ditch, and 13.3 mi downstream from North Clear Creek.

DRAINAGE AREA.--400 mi².

PERIOD OF RECORD.--October 1974 to current year. Records for station at site 0.8 mi upstream (October 1908 to December 1909, June 1911 to September 1974) are not equivalent due to diversions by Church ditch. Water-quality data available, November 1977 to August 1995. Sediment data available, April to September 1981, and April 1993 to August 1995. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06719505

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,695 ft above NGVD of 1929, from topographic map. Prior to Sept. 12, 1980, at site 80 ft downstream. Prior to Jan. 22, 1987, at datum 2.00 ft higher, at both sites.

REMARKS.--Records fair except for period Nov. 1 to Mar. 25, which is poor. Natural flow of stream affected by minor transmountain diversions from Colorado River basin through Berthoud Pass ditch (see elsewhere in this report) and several small reservoirs upstream from station. Diversion by Welch ditch 1.4 mi upstream from station and by Church Ditch 0.7 mi upstream from station for irrigation of about 5,200 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	55	e40	e28	e30	26	24	76	185	1,530	606	173	136
2	87	e40	e28	e29	25	30	99	171	1,380	578	158	118
3	75	e40	e24	e29	26	26	107	162	1,260	563	173	149
4	74	e40	e23	e29	e13	27	98	165	1,140	540	182	146
5	63	e41	e22	e29	20	28	86	152	1,100	518	156	124
6	49	e42	22	e29	19	24	82	117	971	494	148	148
7	61	e40	21	e29	e13	28	71	104	910	463	153	188
8	60	41	26	e29	14	28	65	104	765	448	162	183
9	55	38	24	26	26	29	68	102	744	430	154	222
10	58	37	21	15	e30	31	86	114	812	419	160	195
11	52	35	24	26	e30	30	108	100	883	397	141	178
12	49	27	22	e30	e30	31	123	100	917	369	136	165
13	51	42	36	e30	e30	32	141	113	898	356	139	152
14	47	45	42	32	e30	33	167	144	850	337	145	156
15	46	42	44	31	e30	35	190	193	871	321	139	143
16	47	35	36	23	30	34	165	214	882	310	125	125
17	47	41	35	23	29	37	153	312	854	306	170	125
18	48	41	28	23	26	e40	152	370	896	298	191	112
19	47	35	15	34	21	e38	150	387	906	314	172	113
20	38	39	e12	36	20	e40	144	382	876	347	142	114
21	37	35	e13	33	25	e50	131	403	831	323	133	108
22	42	35	13	28	25	e40	133	452	805	291	148	110
23	47	36	31	34	18	e54	135	544	789	272	142	107
24	51	37	31	32	19	e58	134	671	787	251	147	113
25	52	e28	34	28	17	60	136	806	734	238	155	109
26	50	e30	26	26	28	66	152	830	665	255	171	105
27	49	e30	e28	27	35	73	177	923	648	239	144	116
28	45	e32	e28	24	32	58	187	1,120	634	246	132	127
29	43	e33	e28	22	---	51	203	1,290	638	249	129	126
30	35	e28	e30	26	---	53	201	1,360	624	210	242	127
31	35	---	e31	25	---	60	---	1,460	---	190	188	---
TOTAL	1,595	1,105	826	867	687	1,248	3,920	13,550	26,600	11,178	4,850	4,140
MEAN	51.5	36.8	26.6	28.0	24.5	40.3	131	437	887	361	156	138
MAX	87	45	44	36	35	73	203	1,460	1,530	606	242	222
MIN	35	27	12	15	13	24	65	100	624	190	125	105
AC-FT	3,160	2,190	1,640	1,720	1,360	2,480	7,780	26,880	52,760	22,170	9,620	8,210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

	85.9	63.0	50.4	44.6	42.8	44.4	77.5	323	767	452	210	127
MEAN	85.9	63.0	50.4	44.6	42.8	44.4	77.5	323	767	452	210	127
MAX	192	115	89.6	74.3	67.3	64.2	131	655	1,522	1,203	535	231
(WY)	(1985)	(1985)	(2000)	(2000)	(2000)	(2000)	(2003)	(1984)	(1995)	(1995)	(1999)	(1984)
MIN	51.5	36.8	26.6	28.0	24.5	31.2	39.0	123	195	86.7	59.3	48.2
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(1976)	(1982)	(1981)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1975 - 2003

ANNUAL TOTAL	25,506	70,566	
ANNUAL MEAN	69.9	193	191
HIGHEST ANNUAL MEAN			321
LOWEST ANNUAL MEAN			78.9
HIGHEST DAILY MEAN	267	Jun 4	2,300
LOWEST DAILY MEAN	e12	Dec 20	e12
ANNUAL SEVEN-DAY MINIMUM	20	Dec 18	19
MAXIMUM PEAK FLOW			1,680
MAXIMUM PEAK STAGE			7.63
ANNUAL RUNOFF (AC-FT)	50,590	140,000	138,400
10 PERCENT EXCEEDS	163	636	537
50 PERCENT EXCEEDS	49	74	79
90 PERCENT EXCEEDS	32	26	37

e Estimated.

a Maximum gage height, 8.10 ft, Jun 21, 1995.

06720500 SOUTH PLATTE RIVER AT HENDERSON, CO

LOCATION.--Lat 39°55'19", long 104°52'04", in SE¹/₄NE¹/₄ sec.34, T.1 S., R.67 W., Adams County, Hydrologic Unit 10190003, on right bank 500 ft upstream from bridge on State Highway 22, and 0.2 mi northwest of Henderson.

DRAINAGE AREA.--4,768 mi² (revised).

PERIOD OF RECORD.--May 1926 to current year. Prior to October 1933, monthly discharge only, published in WSP 1310. Statistical summary computed for 1976 to current year, subsequent to completion of Chatfield Dam. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06720500

REVISED RECORDS.--WSP 1310: 1934-36(M). WSP 1730: Drainage area. WDR C0-88-1: 1986.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4999.12 ft above NGVD of 1929. See WSP 1710 or 1730 for history of changes prior to June 1, 1960. June 1, 1960, to May 10, 1969, water-stage recorder at site 1,200 ft upstream at datum 5.00 ft higher. May 11 to Oct. 2, 1969, nonrecording gage at site 500 ft downstream at datum 3.00 ft higher. Oct. 3, 1969 to Jan. 15, 1986, at present site, at datum 3.00 ft higher.

REMARKS.--Records good except for flows above 2,990 ft³/s, which are fair, and estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, ground-water withdrawals, diversions for irrigation of about 253,000 acres, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	203	216	179	160	290	319	335	675	1,930	703	e221	523
2	644	239	186	163	284	320	344	472	2,010	798	e225	348
3	307	286	176	165	358	331	277	457	1,660	836	e186	494
4	237	287	177	160	374	306	229	389	1,410	629	e187	301
5	177	266	175	163	301	320	221	305	1,410	539	e227	265
6	164	266	177	168	301	323	268	223	1,170	530	247	249
7	164	272	168	167	300	303	261	200	1,660	611	246	255
8	157	275	169	160	309	299	262	216	902	509	261	303
9	154	331	176	164	311	286	256	250	784	368	552	209
10	151	326	170	161	313	286	232	2,840	864	369	252	188
11	150	342	166	165	309	277	217	1,430	956	426	285	159
12	149	337	163	162	306	285	206	925	993	387	509	155
13	154	288	168	184	316	263	194	654	958	375	396	141
14	158	247	174	273	318	219	257	513	935	368	350	155
15	155	256	170	243	319	214	283	371	927	366	334	162
16	152	256	176	240	312	220	616	437	927	376	253	143
17	157	249	171	255	274	272	519	448	949	355	203	126
18	154	255	170	255	271	880	268	596	1,950	341	231	136
19	149	252	166	254	263	416	999	698	1,200	1,080	432	142
20	151	242	167	254	249	651	544	520	1,060	434	228	134
21	156	252	173	250	247	1,030	357	442	995	391	199	128
22	154	241	173	242	258	1,100	455	300	889	382	194	141
23	157	239	170	240	263	1,100	862	255	824	381	189	133
24	158	249	186	252	274	876	2,350	254	738	369	181	132
25	159	271	153	284	266	636	690	395	679	296	194	131
26	155	261	151	292	270	734	430	479	607	236	203	120
27	169	256	164	292	290	750	364	452	539	374	240	113
28	179	238	166	289	272	474	326	597	476	394	252	112
29	277	174	164	287	---	418	502	685	543	426	255	120
30	321	181	169	289	---	363	696	1,220	720	e724	880	109
31	222	---	169	294	---	351	---	1,840	---	e341	2,240	---
TOTAL	5,994	7,850	5,282	6,927	8,218	14,622	13,820	19,538	31,665	14,714	10,852	5,827
MEAN	193	262	170	223	294	472	461	630	1,056	475	350	194
MAX	644	342	186	294	374	1,100	2,350	2,840	2,010	1,080	2,240	523
MIN	149	174	151	160	247	214	194	200	476	236	181	109
AC-FT	11,890	15,570	10,480	13,740	16,300	29,000	27,410	38,750	62,810	29,190	21,520	11,560

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

	352	334	299	324	321	364	525	1,076	1,225	792	631	374
MEAN	352	334	299	324	321	364	525	1,076	1,225	792	631	374
MAX	1,835	1,268	554	592	642	842	1,732	3,923	4,796	3,204	2,074	1,141
(WY)	(1985)	(1985)	(1984)	(1984)	(1984)	(1983)	(1983)	(1983)	(1995)	(1995)	(1984)	(1984)
MIN	144	173	170	155	156	118	140	316	249	197	163	157
(WY)	(1978)	(1978)	(2003)	(1977)	(1977)	(1982)	(1982)	(2002)	(2002)	(2002)	(2002)	(1977)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1976 - 2003

ANNUAL TOTAL	88,281	145,309	
ANNUAL MEAN	242	398	a552
HIGHEST ANNUAL MEAN			1,379 1983
LOWEST ANNUAL MEAN			252 1981
HIGHEST DAILY MEAN	2,160	May 24	2,840 May 10
LOWEST DAILY MEAN	108	Apr 3	109 Sep 30
ANNUAL SEVEN-DAY MINIMUM	118	Aug 15	120 Sep 24
MAXIMUM PEAK FLOW			5,130 May 10
MAXIMUM PEAK STAGE			7.57 May 10
ANNUAL RUNOFF (AC-FT)	175,100	288,200	400,200
10 PERCENT EXCEEDS	362	863	1,040
50 PERCENT EXCEEDS	215	272	337
90 PERCENT EXCEEDS	142	158	179

e Estimated.

a Average discharge for 48 years (water years 1927-74), 366 ft³/s; 265,200 acre-ft/yr, prior to completion of Chatfield Dam.

b Maximum daily discharge for period of record, 13,200 ft³/s, May 7, 1973.

c Minimum daily discharge for period of record, 4.4 ft³/s, Apr 1, 1950.

d Maximum discharge and stage for period of record, 33,000 ft³/s, May 6, 1973, gage height, 11.67 ft, from rating curve extended above 7,200 ft³/s, partly on basis of flow-over-road measurement of peak flow; maximum gage height, 12.93 ft, Jun 17, 1965, site and datum then in use.

f Maximum gage height for statistical period, 9.91 ft, May 17, 1995.

06720820 BIG DRY CREEK AT WESTMINSTER, CO

LOCATION.--Lat 39°54'20", long 105°02'04", in NE¹/₄SE¹/₄ sec.6, T.2 S., R.68 W., Adams County, Hydrologic Unit 10190003, on left bank 0.75 mi upstream from bridge on 120th Ave., and 5.2 mi downstream from outlet of Standley Lake.

DRAINAGE AREA.--43.8 mi².

PERIOD OF RECORD.--July 1987 to September 1995, November 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=06720820

REVISED RECORDS.--WDR CO-91-1: Drainage area.

GAGE.--Water-stage recorder and concrete and steel v-notched control. Elevation of gage is 5,215 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow affected by storage diversions, ground-water withdrawals and diversions for irrigation and return flow from irrigated areas. 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	4.0	1.2	1.6	1.6	2.4	14	14	48	2.0	5.0	38
2	22	3.5	1.2	1.6	1.7	2.4	10	11	62	1.7	4.1	38
3	3.4	5.6	3.1	1.5	4.0	2.6	13	e10	92	2.9	6.0	37
4	2.0	3.4	1.9	1.6	3.0	1.9	14	e8.0	85	0.82	7.0	34
5	1.4	2.1	1.6	1.5	2.1	1.7	8.6	e7.0	68	0.86	6.8	34
6	1.3	1.6	1.5	1.4	1.9	1.8	29	e6.0	64	1.2	7.9	36
7	1.1	1.7	1.2	1.4	1.5	1.6	13	e5.0	69	1.3	8.1	40
8	0.89	1.4	1.1	1.6	1.6	1.5	16	e4.0	32	1.4	11	39
9	0.85	1.5	1.1	1.5	1.8	1.5	15	e6.0	29	1.5	18	34
10	0.75	1.2	1.0	1.5	1.8	1.5	10	e12	31	9.2	9.3	33
11	0.70	1.1	1.3	1.5	1.8	1.4	3.7	e10	40	4.6	8.4	22
12	0.67	1.4	1.1	1.4	1.8	1.4	2.3	e9.0	44	6.7	8.9	3.0
13	0.78	1.8	1.7	1.3	1.7	1.4	1.9	e8.5	44	7.1	13	2.4
14	0.77	1.5	1.6	1.3	1.9	1.4	1.7	e7.5	44	6.2	13	2.5
15	0.70	2.0	1.1	1.3	5.5	1.4	21	e8.0	45	6.0	14	2.7
16	0.70	2.2	1.1	1.3	5.2	1.3	8.7	9.9	48	2.0	14	2.5
17	0.75	1.3	1.0	1.2	4.3	12	3.2	7.3	49	1.6	14	2.4
18	0.79	1.6	1.0	1.3	4.4	29	3.6	5.2	89	1.3	20	2.6
19	0.74	1.5	1.1	1.3	4.3	17	54	6.3	51	2.3	27	3.4
20	0.85	1.6	1.2	1.3	4.4	38	20	7.2	45	1.6	21	3.6
21	0.80	1.4	1.3	1.4	4.2	53	8.6	9.0	73	0.87	18	3.2
22	0.67	1.1	1.3	1.4	3.2	52	11	6.8	49	0.96	16	3.0
23	0.60	1.2	1.4	1.4	2.4	71	36	4.7	51	1.9	16	3.1
24	1.00	1.7	1.3	1.5	1.9	52	62	3.1	51	1.7	16	3.3
25	0.93	2.7	1.1	1.5	1.9	61	27	3.8	52	5.4	16	2.9
26	1.8	1.9	1.0	1.5	1.8	69	15	2.1	50	5.8	16	2.3
27	2.8	1.4	1.3	1.4	2.0	59	11	11	50	8.7	19	2.0
28	2.7	1.3	1.5	1.4	2.4	23	11	28	50	6.9	43	2.0
29	9.6	1.4	1.8	1.4	---	16	8.7	54	54	7.3	46	2.1
30	5.4	1.3	1.7	1.4	---	13	11	54	51	5.5	94	2.4
31	3.5	---	1.6	1.6	---	17	---	58	---	4.4	48	---
TOTAL	72.54	57.4	42.4	44.3	76.1	609.2	464.0	396.4	1,610	111.71	584.5	436.4
MEAN	2.34	1.91	1.37	1.43	2.72	19.7	15.5	12.8	53.7	3.60	18.9	14.5
MAX	22	5.6	3.1	1.6	5.5	71	62	58	92	9.2	94	40
MIN	0.60	1.1	1.0	1.2	1.5	1.3	1.7	2.1	29	0.82	4.1	2.0
AC-FT	144	114	84	88	151	1,210	920	786	3,190	222	1,160	866

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

	4.68	2.84	1.81	1.66	2.00	5.75	10.8	28.1	48.8	34.1	31.2	18.7
MEAN	4.68	2.84	1.81	1.66	2.00	5.75	10.8	28.1	48.8	34.1	31.2	18.7
MAX	12.0	4.80	3.71	3.16	3.85	19.7	34.8	66.4	82.4	79.8	49.6	47.9
(WY)	(2000)	(2001)	(1998)	(1994)	(1993)	(2003)	(1998)	(2000)	(1999)	(1995)	(1999)	(1999)
MIN	1.55	1.33	0.88	0.76	1.00	1.30	1.52	9.98	5.32	3.60	5.17	2.64
(WY)	(1989)	(1989)	(1999)	(1995)	(1988)	(1989)	(1989)	(1989)	(2002)	(2003)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1987 - 2003

ANNUAL TOTAL	1,328.51	4,504.95	
ANNUAL MEAN	3.64	12.3	15.7
HIGHEST ANNUAL MEAN			25.2 1999
LOWEST ANNUAL MEAN			3.79 2002
HIGHEST DAILY MEAN	141	May 24	232 May 5, 2001
LOWEST DAILY MEAN	0.18	Aug 27	0.16 Jan 12, 1995
ANNUAL SEVEN-DAY MINIMUM	0.50	Sep 2	0.37 Jan 6, 1995
MAXIMUM PEAK FLOW			674 Jul 13, 2001
MAXIMUM PEAK STAGE			a5.65 Jul 13, 2001
ANNUAL RUNOFF (AC-FT)	2,640	8,940	11,370
10 PERCENT EXCEEDS	9.5	45	48
50 PERCENT EXCEEDS	1.5	3.0	3.3
90 PERCENT EXCEEDS	0.75	1.2	1.1

e Estimated.

a Maximum gage height, 6.08 ft, Aug 4, 1997.

06720990 BIG DRY CREEK AT MOUTH NEAR FORT LUPTON, CO

LOCATION.--Lat 40°04'09", long 104°49'52", in NE¹/₄SE¹/₄ sec.12, T.1 N., R.67 W., Weld County, Hydrologic Unit 10190003, on right bank 1.0 mi west of State Highway 85, 1.1 mi south of State Highway 52, and 1.2 mi southwest of Ft. Lupton.

DRAINAGE AREA.--107 mi².

PERIOD OF RECORD.--October 1991 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06720990

GAGE.--Water-stage recorder. Elevation of gage is 4,900 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation, and return flow from irrigated areas. 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	42	26	9.9	25	23	e59	e50	19	37	26	25
2	56	42	26	11	26	23	e58	e44	20	33	26	12
3	62	38	26	9.8	28	22	e57	e42	19	31	21	35
4	46	36	28	9.2	31	21	e56	e40	27	25	17	36
5	33	29	26	12	29	22	48	e38	38	22	19	47
6	30	28	e26	19	29	20	54	e37	31	115	21	49
7	32	28	e27	21	28	19	68	e34	44	112	19	47
8	33	28	e27	20	26	22	39	e32	43	92	18	50
9	34	29	e28	20	28	22	36	e30	30	49	23	45
10	35	28	e27	e21	29	17	68	170	22	43	16	43
11	34	28	e28	e21	25	14	61	285	e16	76	9.4	38
12	31	25	e29	e20	20	15	44	146	12	76	9.8	48
13	32	24	e30	19	15	23	41	92	12	71	13	44
14	36	28	e29	17	14	25	35	75	21	63	12	42
15	37	28	e30	15	15	35	33	97	22	60	13	41
16	34	28	e31	16	19	37	27	123	20	59	13	41
17	33	30	29	18	19	37	26	69	18	55	11	40
18	33	33	28	20	18	74	22	42	88	55	11	40
19	32	31	29	20	18	96	40	31	116	62	17	40
20	33	31	29	20	18	104	79	35	66	34	13	40
21	34	30	28	27	16	138	46	32	58	43	9.5	38
22	36	29	23	26	15	162	33	27	34	45	16	34
23	42	28	22	25	16	157	57	24	29	38	27	34
24	46	33	21	27	e16	188	272	21	42	35	43	31
25	44	33	e19	27	e16	135	193	e18	37	37	42	30
26	42	29	e20	28	e16	154	119	e17	33	32	30	30
27	40	27	e19	28	e13	157	93	e16	35	29	29	29
28	40	27	21	25	20	102	75	e17	32	26	34	28
29	38	28	22	17	---	73	e59	25	33	27	36	27
30	56	27	22	26	---	67	e54	20	37	29	74	26
31	50	---	13	26	---	63	---	17	---	27	93	---
TOTAL	1,196	905	789	620.9	588	2,067	1,952	1,746	1,054	1,538	761.7	1,110
MEAN	38.6	30.2	25.5	20.0	21.0	66.7	65.1	56.3	35.1	49.6	24.6	37.0
MAX	62	42	31	28	31	188	272	285	116	115	93	50
MIN	30	24	13	9.2	13	14	22	16	12	22	9.4	12
AC-FT	2,370	1,800	1,560	1,230	1,170	4,100	3,870	3,460	2,090	3,050	1,510	2,200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

MEAN	38.2	28.5	23.5	24.6	23.0	34.1	54.9	57.3	51.9	49.4	41.3	44.2
MAX	64.3	39.1	35.2	46.0	34.6	66.7	79.1	93.8	117	111	75.1	67.0
(WY)	(1995)	(2001)	(1998)	(2001)	(2001)	(2003)	(1999)	(2001)	(1995)	(1995)	(1997)	(1993)
MIN	20.3	15.5	19.6	14.0	12.0	18.4	27.8	26.4	27.2	20.6	10.5	21.2
(WY)	(2002)	(2002)	(1994)	(1995)	(1995)	(1993)	(2002)	(1993)	(2002)	(2002)	(2002)	(2000)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1992 - 2003

ANNUAL TOTAL	9,801.6	14,327.6	
ANNUAL MEAN	26.9	39.3	
HIGHEST ANNUAL MEAN			53.2 1995
LOWEST ANNUAL MEAN			24.1 2002
HIGHEST DAILY MEAN	140	May 25	285 May 11
LOWEST DAILY MEAN	2.1	Aug 15	9.2 Jan 4
ANNUAL SEVEN-DAY MINIMUM	6.4	Aug 9	12 Aug 11
MAXIMUM PEAK FLOW			324 Apr 24
MAXIMUM PEAK STAGE			7.70 Apr 24
ANNUAL RUNOFF (AC-FT)	19,440	28,420	28,480
10 PERCENT EXCEEDS	41	68	70
50 PERCENT EXCEEDS	26	30	29
90 PERCENT EXCEEDS	13	16	16

e Estimated.

06721000 SOUTH PLATTE RIVER AT FORT LUPTON, CO

LOCATION.--Lat 40°06'58", long 104°49'05", in SW¹/₄SE¹/₄ sec.19, T.2 N., R.66 W., Weld County, Hydrologic Unit 10190003, on right bank 2 ft downstream from county road 18 bridge, 3.0 mi downstream from Big Dry Creek, and 2.5 mi north of Fort Lupton.

DRAINAGE AREA.--5,044 mi² (revised). Area at 1957 gage location is 5,007 mi² (revised).

PERIOD OF RECORD.--May to September 1906, April 1929 to September 1957, April to September 2003 (seasonal records only). Prior to October 1933 monthly discharge only, published in WSP 1310. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06721000

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,860 ft above NGVD of 1929, from topographic map. Oct. 3, 1947 to Sept. 30, 1957, water-stage recorder at site 3.9 mi upstream at different datum. See WSP 1730 for history of changes prior to Oct. 3, 1947.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow affected by transmountain diversions, storage reservoirs, ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. 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 RECORD.--Maximum discharge, 9,000 ft³/s, April 26, 1942, from rating curve extended above 6,700 ft³/s; maximum gage height, 7.57 ft, May 9, 1957, site and datum then in use; minimum daily, 4.4 ft³/s, October 29, 1956.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge during period April to September, 3,210 ft³/s, May 11, gage height, 7.52 ft; minimum daily, 101 ft³/s, Aug. 22.

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	---	---	---	---	---	---	---	681	1,610	530	229	638
2	---	---	---	---	---	---	---	545	1,750	518	242	398
3	---	---	---	---	---	---	---	465	1,590	584	191	449
4	---	---	---	---	---	---	---	416	1,420	460	183	300
5	---	---	---	---	---	---	---	330	1,360	312	267	226
6	---	---	---	---	---	---	---	237	1,290	348	267	213
7	---	---	---	---	---	---	---	197	1,570	405	162	212
8	---	---	---	---	---	---	---	191	1,120	405	166	260
9	---	---	---	---	---	---	---	209	853	242	474	212
10	---	---	---	---	---	---	---	1,520	812	182	199	186
11	---	---	---	---	---	---	---	2,000	859	262	158	164
12	---	---	---	---	---	---	---	1,220	906	266	341	184
13	---	---	---	---	---	---	---	884	887	242	328	175
14	---	---	---	---	---	---	---	705	855	235	265	173
15	---	---	---	---	---	---	---	524	836	225	263	178
16	---	---	---	---	---	---	---	561	866	246	198	174
17	---	---	---	---	---	---	---	429	846	247	147	164
18	---	---	---	---	---	---	---	517	1,560	222	147	172
19	---	---	---	---	---	---	---	634	1,290	753	306	174
20	---	---	---	---	---	---	---	560	1,080	361	187	181
21	---	---	---	---	---	---	---	464	1,000	288	127	178
22	---	---	---	---	---	---	---	365	e845	287	101	179
23	---	---	---	---	---	---	---	280	754	283	104	177
24	---	---	---	---	---	---	---	260	714	260	124	170
25	---	---	---	---	---	---	---	311	685	235	141	165
26	---	---	---	---	---	---	---	445	606	157	129	163
27	---	---	---	---	---	---	---	443	494	230	171	161
28	---	---	---	---	---	---	---	495	384	270	185	165
29	---	---	---	---	---	---	---	457	606	356	304	171
30	---	---	---	---	---	---	---	653	881	518	567	169
31	---	---	---	---	---	---	---	1,440	---	332	2,110	---
TOTAL	---	---	---	---	---	---	---	18,815	29,716	10,258	8,877	6,531
MEAN	---	---	---	---	---	---	---	607	991	331	286	218
MAX	---	---	---	---	---	---	---	2,000	1,750	753	2,110	638
MIN	---	---	---	---	---	---	---	191	356	157	101	161
AC-FT	---	---	---	---	---	---	---	37,320	58,940	20,350	17,610	12,950

e Estimated.

06725450 ST. VRAIN CREEK BELOW LONGMONT, CO

LOCATION.--Lat 40°09'30", long 105°00'48", in NW¹/₄NW¹/₄ sec.9, T.2 N., R.68 W., Weld County, Hydrologic Unit 10190005, on right bank 1,750 ft upstream from mouth of Boulder Creek, 1.8 mi downstream from Spring Gulch, and 4.7 mi southeast of Longmont.

DRAINAGE AREA.--424 mi².

PERIOD OF RECORD.--October 1976 to September 1982, August 1984 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06725450

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,852 ft, above NGVD of 1929, from topographic map. Prior to Aug. 15, 1984, at site 150 ft downstream at same datum. Aug. 15, 1984 to Oct. 1, 1997 at site 70 ft downstream at same datum. Oct. 2, 1997 to Apr. 18, 2000 at site 100 ft upstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation, and return flow from irrigated areas. 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	52	43	32	27	27	28	57	63	971	144	81	127
2	75	39	32	28	27	28	65	59	637	117	72	112
3	60	39	32	28	29	29	58	58	441	69	68	115
4	57	36	33	28	28	28	52	59	326	58	66	108
5	53	36	32	28	26	27	44	62	286	67	69	96
6	50	36	32	29	28	28	48	59	244	78	61	89
7	47	36	31	29	31	27	44	56	257	58	75	93
8	46	34	31	28	31	27	51	64	138	47	93	104
9	43	32	32	28	28	26	43	73	88	39	70	99
10	42	32	32	28	27	29	40	252	120	41	57	89
11	40	31	32	28	28	43	42	151	263	48	53	84
12	39	31	31	28	26	44	44	96	343	51	51	82
13	40	31	31	28	27	27	44	85	344	48	52	79
14	40	31	31	29	25	26	46	86	317	51	47	79
15	41	32	30	29	27	26	78	116	358	53	39	75
16	43	32	31	28	27	25	63	263	349	58	37	73
17	49	33	31	28	26	38	48	166	278	66	37	79
18	44	34	31	28	27	89	56	152	354	66	97	96
19	41	36	31	28	26	89	57	147	282	79	81	76
20	42	35	31	28	26	84	50	143	292	80	54	67
21	42	35	31	26	27	76	44	117	279	87	50	63
22	43	36	31	28	26	69	47	106	294	76	48	69
23	41	34	30	28	26	59	69	91	295	75	46	76
24	38	36	30	29	26	63	82	99	291	79	50	63
25	39	37	30	30	27	56	65	93	306	71	51	60
26	37	34	32	28	29	51	63	95	265	83	53	60
27	36	34	30	29	29	47	68	152	161	96	52	61
28	37	35	29	30	30	52	73	333	134	107	60	65
29	46	34	28	28	---	52	71	496	147	90	74	69
30	43	33	28	29	---	46	68	407	149	85	292	78
31	42	---	28	26	---	e50	---	912	---	84	170	---
TOTAL	1,388	1,037	956	874	767	1,389	1,680	5,111	9,009	2,251	2,206	2,486
MEAN	44.8	34.6	30.8	28.2	27.4	44.8	56.0	165	300	72.6	71.2	82.9
MAX	75	43	33	30	31	89	82	912	971	144	292	127
MIN	36	31	28	26	25	25	40	56	88	39	37	60
AC-FT	2,750	2,060	1,900	1,730	1,520	2,760	3,330	10,140	17,870	4,460	4,380	4,930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2003, BY WATER YEAR (WY)

MEAN	69.0	57.6	49.2	44.3	43.4	48.2	84.8	235	356	169	142	99.6
MAX	159	126	91.5	92.8	94.0	111	275	1,155	1,227	485	246	152
(WY)	(1985)	(1985)	(1985)	(1980)	(1980)	(1980)	(1998)	(1980)	(1995)	(1995)	(1999)	(1982)
MIN	44.8	34.5	30.8	25.7	27.4	28.9	27.5	35.8	63.3	71.0	57.9	53.7
(WY)	(2003)	(1979)	(1979)	(1978)	(2003)	(1982)	(1982)	(1977)	(1981)	(2002)	(2002)	(1977)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1977 - 2003

ANNUAL TOTAL	17,542	29,154	117
ANNUAL MEAN	48.1	79.9	257
HIGHEST ANNUAL MEAN			1995
LOWEST ANNUAL MEAN			51.3
HIGHEST DAILY MEAN	119	May 24	971
LOWEST DAILY MEAN	28	Dec 29	25
ANNUAL SEVEN-DAY MINIMUM	29	Dec 25	26
MAXIMUM PEAK FLOW			1,070
MAXIMUM PEAK STAGE			5.47
ANNUAL RUNOFF (AC-FT)	34,790	57,830	84,430
10 PERCENT EXCEEDS	70	150	200
50 PERCENT EXCEEDS	41	48	64
90 PERCENT EXCEEDS	32	28	35

e Estimated.

06730200 BOULDER CREEK AT NORTH 75TH STREET NEAR BOULDER, CO

LOCATION.--Lat 40°03'06", long 105°10'42", in SE¹/₄NW¹/₄ sec.13, T.1 N., R.70 W., Boulder County, Hydrologic Unit 10190005, on left bank, 50 ft downstream (revised) from bridge on North 75th Street, 0.2 mi downstream from Boulder feeder ditch, and 6 mi northeast of Boulder.

DRAINAGE AREA.--304 mi².

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=06730200

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Elevation of gage is 5,106 ft above NGVD of 1929, from topographic map. Prior to Apr. 14, 2003 gage located at site 100 ft upstream at same datum.

REMARKS.--Records poor. Flow is partially regulated by Barker Reservoir, and affected by Boulder feeder ditch, Boulder sewage treatment plant, and Public Service power plant. Starting about Feb. 2003, Boulder Sewage Treatment Plant moved its wastewater discharge (point) to site about 300 ft downstream from current gage location and City of Lafayette began diversions for municipal supply 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	67	55	e25	e26	e28	e10	e21	31	1,300	131	59	60
2	116	43	e25	e26	e20	e14	e69	20	945	120	40	57
3	81	45	e25	e27	e18	e16	e77	25	681	106	39	67
4	70	39	e28	e28	e16	e10	e74	20	468	84	47	51
5	62	34	e28	e29	e13	e5.9	e68	24	354	71	71	35
6	54	34	e27	e27	e14	e3.1	e62	17	215	57	72	28
7	55	32	e26	e27	e17	e2.6	e50	24	204	52	70	37
8	53	32	e25	e26	e16	e5.9	e43	36	126	35	70	45
9	53	28	e25	e28	e15	e11	e32	38	93	27	80	48
10	57	27	e27	e34	e17	e12	e35	213	130	26	84	49
11	56	27	e26	e36	e20	e13	e38	140	182	25	80	38
12	50	25	e24	e36	e24	e15	e48	107	219	26	92	39
13	50	26	e23	e36	e25	e13	e69	84	211	e29	95	24
14	50	23	e23	e34	e27	e14	e106	86	216	e32	97	21
15	50	20	e23	e31	e24	e16	127	123	249	e36	96	25
16	49	21	e23	e30	e21	e14	102	278	260	e40	97	18
17	47	20	e24	e30	e19	e14	101	169	221	46	95	15
18	46	21	e25	e30	e17	e27	106	147	359	50	135	14
19	57	20	e27	e30	e16	e45	146	148	387	66	120	8.8
20	58	19	e28	e30	e16	e61	102	200	332	62	107	9.8
21	59	19	e29	e30	e15	e75	81	185	259	65	95	7.3
22	59	19	e25	e30	e13	e78	83	165	219	55	96	6.9
23	63	17	e28	e32	e12	e58	94	176	243	43	101	8.6
24	59	18	e34	e33	e13	e92	119	252	232	32	93	12
25	53	20	e40	e27	e12	e61	85	259	246	49	79	12
26	48	20	e43	e25	e8.6	e65	79	266	176	72	86	16
27	49	e29	e39	e24	e6.5	e33	82	353	132	66	92	18
28	49	e27	e33	e25	e8.0	e13	79	735	108	64	81	14
29	67	e26	e27	e25	---	e4.8	78	1,060	108	73	65	9.4
30	80	e25	e26	e27	---	e6.0	54	1,700	125	72	161	12
31	67	---	e26	e30	---	e8.3	---	1,600	---	70	92	---
TOTAL	1,834	811	857	909	471.1	816.6	2,310	8,681	9,000	1,782	2,687	805.8
MEAN	59.2	27.0	27.6	29.3	16.8	26.3	77.0	280	300	57.5	86.7	26.9
MAX	116	55	43	36	28	92	146	1,700	1,300	131	161	67
MIN	46	17	23	24	6.5	2.6	21	17	93	25	39	6.9
AC-FT	3,640	1,610	1,700	1,800	934	1,620	4,580	17,220	17,850	3,530	5,330	1,600

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

MEAN	49.5	53.2	49.7	46.1	43.7	48.8	85.0	190	287	201	139	73.2
MAX	77.8	81.7	74.9	68.3	61.3	90.6	236	465	868	492	235	111
(WY)	(1997)	(1998)	(1989)	(1987)	(1996)	(1998)	(1998)	(1995)	(1995)	(1995)	(1999)	(1995)
MIN	31.5	27.0	27.6	28.8	16.8	26.3	37.4	97.3	86.0	57.5	86.7	26.9
(WY)	(1987)	(2003)	(2003)	(2002)	(2003)	(2003)	(1989)	(2002)	(2002)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	21,900		30,964.5			
ANNUAL MEAN	60.0		c84.8		106	
HIGHEST ANNUAL MEAN					198 1995	
LOWEST ANNUAL MEAN					61.0 2002	
HIGHEST DAILY MEAN	208	May 24	1,700	May 30	1,700	May 30, 2003
LOWEST DAILY MEAN	17	Nov 23	e2.6	Mar 7	e2.6	Mar 7, 2003
ANNUAL SEVEN-DAY MINIMUM	19	Nov 19	e7.2	Mar 4	e7.2	Mar 4, 2003
MAXIMUM PEAK FLOW			a2,050	May 30	a2,050	May 30, 2003
MAXIMUM PEAK STAGE			4.97	May 30	b4.97	May 30, 2003
ANNUAL RUNOFF (AC-FT)	43,440		c61,420		76,660	
10 PERCENT EXCEEDS	124		172		215	
50 PERCENT EXCEEDS	51		39		62	
90 PERCENT EXCEEDS	26		14		33	

e Estimated.

a From rating curve extended above 500 ft³/s.

b Maximum gage height, 7.85 ft, May 17, 1995, site and datum then in use.

c Significantly affected by changes in water operations by Cities of Boulder and Lafayette that began about Feb. 2003.

06730400 COAL CREEK NEAR LOUISVILLE, CO

LOCATION.--Lat 39°58'34", long 105°07'00", in NW¹/₄SE¹/₄ sec.9, T.1 S., R.69 W., Boulder County, Hydrologic Unit 10190005, on left bank on upstream side of County road 62 bridge, and 1.1 mi northeast of Louisville.

DRAINAGE AREA.--32.0 mi² (revised).

PERIOD OF RECORD.--July 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=06730400

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,280 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation, and return flow from irrigated areas. 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	2.5	0.29	0.21	0.02	0.11	0.03	11	8.2	5.8	6.3	0.89	0.06
2	5.4	0.31	0.24	0.03	0.08	0.10	10	6.8	4.6	6.0	0.78	0.03
3	1.5	0.36	0.20	0.05	0.09	0.11	9.9	4.4	4.1	5.8	0.70	0.03
4	1.4	0.29	0.17	0.07	0.05	0.03	6.1	4.6	4.0	4.8	0.55	0.04
5	1.3	0.33	0.15	0.09	0.07	0.05	5.0	4.8	3.8	2.6	0.49	0.05
6	1.3	0.38	0.12	0.11	0.05	0.03	8.7	4.2	3.6	1.6	0.54	0.05
7	1.3	0.32	0.09	0.07	0.03	0.11	5.2	4.1	4.7	1.4	0.62	0.08
8	1.4	0.59	0.10	0.08	0.03	0.13	5.0	3.5	2.7	1.4	1.0	0.11
9	1.6	0.84	0.08	0.05	0.03	0.10	6.6	4.5	2.2	1.8	1.7	0.11
10	1.5	0.73	0.05	0.03	0.02	0.16	5.4	14	2.6	1.9	0.84	0.09
11	1.4	0.61	0.04	0.03	0.02	0.21	4.7	4.9	2.3	1.8	0.91	0.07
12	1.3	0.45	0.04	0.03	0.04	0.27	4.2	4.1	2.6	2.1	0.85	0.07
13	1.1	0.51	0.04	0.04	0.04	0.34	5.5	4.0	2.9	2.1	0.70	0.06
14	1.0	0.67	0.04	0.07	0.07	0.37	12	3.9	3.0	1.9	0.53	0.08
15	0.96	0.66	0.04	0.05	0.06	0.44	8.6	3.9	3.4	1.8	0.59	0.10
16	0.87	0.52	0.07	0.03	0.06	0.34	6.3	4.7	3.6	1.8	0.50	0.14
17	0.82	0.55	0.08	0.04	0.06	1.1	4.8	4.8	8.9	1.7	0.26	0.88
18	0.82	0.44	0.07	0.03	0.06	3.0	4.4	3.7	15	1.9	2.0	0.86
19	0.80	0.44	0.04	0.06	0.09	2.7	19	2.9	12	4.3	1.3	0.31
20	0.81	0.50	0.06	0.06	0.07	4.5	13	2.7	6.9	1.8	0.92	0.27
21	0.84	0.53	0.03	0.06	0.08	6.5	7.4	2.9	7.0	1.6	0.86	0.32
22	0.70	0.42	0.03	0.04	0.07	6.0	5.6	3.2	6.4	1.7	0.97	0.34
23	0.53	0.43	0.02	0.07	0.03	6.8	9.3	4.1	7.0	1.7	0.87	0.69
24	0.49	0.32	0.03	0.10	0.03	5.7	18	3.7	7.5	1.7	0.95	1.4
25	0.56	0.29	0.04	0.10	0.02	5.0	8.1	3.3	6.6	1.6	0.95	1.7
26	0.63	0.14	0.08	0.11	0.04	10	7.6	5.5	6.0	1.6	0.66	1.7
27	0.65	0.11	0.03	0.17	0.05	14	8.3	9.1	5.9	1.5	0.72	1.7
28	0.56	0.13	0.02	0.12	0.06	7.6	8.1	8.0	6.0	1.5	0.76	1.6
29	0.86	0.24	0.02	0.10	---	5.4	8.1	16	6.1	1.4	2.0	1.5
30	0.38	0.22	0.02	0.09	---	5.7	12	13	6.4	1.1	9.0	1.6
31	0.30	---	0.02	0.11	---	e10	---	9.0	---	1.3	0.19	---
TOTAL	35.58	12.62	2.27	2.11	1.51	96.82	247.9	176.5	163.6	71.5	34.60	16.04
MEAN	1.15	0.42	0.073	0.068	0.054	3.12	8.26	5.69	5.45	2.31	1.12	0.53
MAX	5.4	0.84	0.24	0.17	0.11	14	19	16	15	6.3	9.0	1.7
MIN	0.30	0.11	0.02	0.02	0.02	0.03	4.2	2.7	2.2	1.1	0.19	0.03
AC-FT	71	25	4.5	4.2	3.0	192	492	350	325	142	69	32

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

	1997	1998	1999	2000	2001	2002	2003
MEAN	2.58	2.17	1.86	1.51	1.43	2.83	12.3
MAX	3.85	3.42	3.23	2.45	2.44	6.17	36.1
(WY)	(1998)	(2000)	(2000)	(2000)	(2000)	(1998)	(1998)
MIN	1.15	0.42	0.073	0.068	0.054	1.28	1.08
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2001)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1997 - 2003

ANNUAL TOTAL	378.55	861.05	
ANNUAL MEAN	1.04	2.36	4.45
HIGHEST ANNUAL MEAN			8.48 1999
LOWEST ANNUAL MEAN			1.48 2002
HIGHEST DAILY MEAN	16	19	277
LOWEST DAILY MEAN	0.01	0.02	a0.01
ANNUAL SEVEN-DAY MINIMUM	0.01	0.02	0.01
MAXIMUM PEAK FLOW		123	b643
MAXIMUM PEAK STAGE		2.23	3.42
ANNUAL RUNOFF (AC-FT)	751	1,710	3,220
10 PERCENT EXCEEDS	1.7	6.8	9.0
50 PERCENT EXCEEDS	1.1	0.82	2.2
90 PERCENT EXCEEDS	0.07	0.04	0.51

e Estimated.

a Also occurred Aug 1, 7, 10-13, 22-23, 2002.

b From rating curve extended above 150 ft³/s.

06730500 BOULDER CREEK AT MOUTH NEAR LONGMONT, CO

LOCATION.--Lat 40°09'08", long 105°00'52", in NW ¼ SW ¼ sec.9, T.2 N., R.68 W., Weld County, Hydrologic Unit 10190005, on left bank 0.6 mi upstream from mouth, 1.0 mi downstream from State Highway 254, and 4.8 mi southeast of Longmont.

DRAINAGE AREA.--439 mi².

PERIOD OF RECORD.--March 1927 to September 1949, May 1951 to September 1955, October 1978 to September 1990, October 1991 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06730500

GAGE.--Water-stage recorder. Elevation of gage is 4,860 ft above NGVD of 1929, from topographic map. Prior to June 10, 1939, at site 0.8 mi upstream at different datum. June 10, 1939 to Sept. 30, 1949, at site 1.0 mi upstream, at different datum. May 1, 1951 to Sept. 30, 1955, at site 1.4 mi upstream, at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain, transbasin, and storage diversions, diversions for irrigation, water-treatment plants, and return flows from irrigated areas. 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	5.3	28	22	22	33	22	74	42	972	116	17	35
2	5.7	26	22	23	26	27	112	38	818	96	12	26
3	5.4	26	22	22	28	28	118	32	619	56	8.6	21
4	4.9	23	22	22	27	27	127	26	410	35	7.9	20
5	5.3	18	22	23	27	26	110	26	326	21	8.0	13
6	4.5	24	21	24	27	25	116	22	233	14	8.1	9.7
7	4.4	24	21	23	29	25	105	17	241	14	9.1	9.3
8	4.4	25	21	23	30	23	99	11	184	17	9.8	9.0
9	4.4	23	23	23	26	22	83	13	127	12	9.7	8.9
10	4.6	21	23	27	27	23	81	223	139	11	11	10
11	4.7	21	21	e26	25	23	82	320	174	9.8	12	8.5
12	4.5	17	21	e25	25	25	123	167	199	9.8	11	7.8
13	4.5	18	20	e25	25	24	148	94	196	9.6	11	7.3
14	4.6	19	20	25	25	24	165	66	207	9.3	10	6.9
15	4.6	20	20	26	26	23	158	63	230	9.2	11	6.6
16	4.4	19	e21	26	25	23	135	278	264	9.0	11	6.4
17	4.3	20	e21	24	25	25	111	204	205	8.6	11	5.8
18	e4.9	20	e22	26	25	68	117	196	388	8.8	13	6.6
19	e4.1	21	e22	27	25	82	168	177	421	19	44	6.3
20	e4.5	21	e22	24	24	96	172	226	337	20	13	5.6
21	e4.6	22	e22	25	23	114	105	199	271	19	12	5.6
22	e5.4	21	e22	24	23	117	80	151	213	13	12	4.8
23	e5.4	20	e22	e24	23	107	92	149	245	9.3	12	4.7
24	e4.9	21	e22	e24	26	133	171	187	244	9.5	12	4.9
25	e4.9	23	e22	24	26	108	145	214	259	10	13	4.8
26	e4.6	23	e22	24	20	110	100	185	218	16	13	4.4
27	e4.6	26	e22	26	16	133	88	276	153	13	13	5.0
28	5.5	23	e22	26	17	93	73	470	114	11	12	4.9
29	6.1	22	21	26	---	65	61	864	99	14	12	4.6
30	16	22	21	33	---	58	52	1,070	100	22	120	4.5
31	30	---	22	34	---	64	---	1,170	---	15	141	---
TOTAL	186.0	657	669	776	704	1,763	3,371	7,176	8,606	656.9	620.2	277.9
MEAN	6.00	21.9	21.6	25.0	25.1	56.9	112	231	287	21.2	20.0	9.26
MAX	30	28	23	34	33	133	172	1,170	972	116	141	35
MIN	4.1	17	20	22	16	22	52	11	99	8.6	7.9	4.4
AC-FT	369	1,300	1,330	1,540	1,400	3,500	6,690	14,230	17,070	1,300	1,230	551

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2003, BY WATER YEAR (WY)

	34.3	43.9	49.1	50.8	50.0	52.4	94.3	172	189	44.0	23.5	23.6
MEAN	34.3	43.9	49.1	50.8	50.0	52.4	94.3	172	189	44.0	23.5	23.6
MAX	127	109	93.8	104	120	148	581	1,101	976	367	164	440
(WY)	(1985)	(1998)	(1939)	(1980)	(1980)	(1983)	(1942)	(1942)	(1947)	(1983)	(1999)	(1938)
MIN	0.70	0.48	1.16	2.94	2.75	2.58	1.15	1.06	1.22	1.09	0.55	0.54
(WY)	(1955)	(1955)	(1940)	(1935)	(1935)	(1935)	(1954)	(1955)	(1954)	(1954)	(1954)	(1954)

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1927 - 2003

ANNUAL TOTAL	6,734.8	25,463.0	
ANNUAL MEAN	18.5	69.8	69.1
HIGHEST ANNUAL MEAN			220
LOWEST ANNUAL MEAN			3.93
HIGHEST DAILY MEAN	106	May 24	1,170
LOWEST DAILY MEAN	1.0	Apr 29	e4.1
ANNUAL SEVEN-DAY MINIMUM	1.1	Apr 26	4.5
MAXIMUM PEAK FLOW			1,240
MAXIMUM PEAK STAGE			4.34
ANNUAL RUNOFF (AC-FT)	13,360	50,510	50,060
10 PERCENT EXCEEDS	51	186	127
50 PERCENT EXCEEDS	5.2	23	35
90 PERCENT EXCEEDS	1.5	5.6	2.0

e Estimated.

a No flow at times many years.

b Site and datum then in use, from rating curve extended above 340 ft³/s, on basis of slope-area measurement of peak flow.

402114105350101 BIG THOMPSON RIVER BELOW MORAINES PARK NEAR ESTES PARK, CO

LOCATION.--Lat 40°21'14", long 105°35'01", in SE¹/₄SW¹/₄ sec.33, T.5 N., R.73 W., Larimer County, Hydrologic Unit 10190006, on left upstream wingwall of bridge at lower Moraine Park parking lot, in Rocky Mountain National Park, and 4.0 mi southwest of Estes Park.

DRAINAGE AREA.--39.8 mi².

PERIOD OF RECORD.--October 1995 to September 1997, April 2001 to current year. Hydrologic Benchmark Network water-quality site. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=402114105350101.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,005 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good, except for estimated daily discharges, which are poor. No diversion or regulation upstream from gage. Water-quality data has been collected at this site as part of the South Platte River Basin National Water-Quality Assessment Program and is available at http://waterdata.usgs.gov/co/nwis/inventory/?site_no=402114105350101.

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	12	e9.9	e6.5	e3.7	e2.8	e2.5	e12	32	658	189	57	46
2	14	e9.9	e6.5	e3.5	e2.8	e2.5	e13	27	504	176	56	39
3	17	e9.9	e6.5	e3.4	e2.8	e2.5	e15	25	425	175	54	44
4	15	e9.8	e6.6	e3.3	e2.8	e2.6	e15	29	346	165	63	46
5	16	e9.9	e6.4	e3.2	e2.7	e2.6	e14	27	272	158	57	38
6	15	e9.7	e6.1	e3.2	e2.7	e2.6	e14	24	229	147	51	36
7	14	e9.5	e5.9	e3.2	e2.7	e2.6	e14	23	197	137	48	39
8	17	e9.5	e5.8	e3.1	e2.7	e2.7	e15	24	176	139	48	45
9	17	e9.5	e5.8	e3.1	e2.7	e2.7	e15	25	196	142	49	44
10	16	e9.4	e5.7	e3.1	e2.7	e2.7	e22	26	259	127	45	39
11	15	e9.3	e5.7	e3.1	e2.7	e2.7	e24	27	305	118	49	36
12	13	e9.2	e5.6	e3.0	e2.7	e2.8	25	25	276	117	44	32
13	12	e9.0	e5.7	e3.0	e2.6	e2.8	29	29	279	117	40	30
14	12	e8.9	e5.7	e3.0	e2.6	e2.8	35	33	300	109	41	28
15	11	e8.4	e5.7	e3.0	e2.6	e2.9	35	51	328	110	43	24
16	11	e8.0	e5.5	e3.0	e2.6	e2.9	30	75	301	108	40	22
17	10	e7.8	e5.4	e3.0	e2.6	e3.0	28	122	273	108	55	21
18	10	e7.6	e5.4	e2.9	e2.6	e3.6	27	157	328	108	71	22
19	9.7	e7.5	e5.3	e2.9	e2.6	e4.6	23	135	313	112	67	21
20	9.7	e7.5	e5.3	e2.9	e2.6	e4.8	20	115	279	114	50	19
21	9.1	e7.4	e5.2	e2.9	e2.6	e5.6	20	113	270	101	42	18
22	9.2	e7.4	e5.0	e2.9	e2.6	e5.2	21	141	237	92	38	17
23	9.7	e7.4	e4.9	e2.9	e2.5	e5.2	23	189	235	90	38	15
24	12	e7.4	e4.8	e2.9	e2.5	e5.1	23	244	239	84	42	14
25	11	e7.3	e4.6	e2.8	e2.5	e5.1	24	271	212	84	44	14
26	10	e7.0	e4.4	e2.8	e2.5	e5.1	29	307	165	89	44	12
27	11	e6.8	e4.2	e2.8	e2.5	e5.8	35	370	162	85	38	12
28	10	e6.8	e4.1	e2.8	e2.5	e6.4	38	481	176	75	36	12
29	9.8	e6.8	e4.0	e2.8	---	e7.2	42	589	185	78	37	12
30	e9.9	e6.6	e3.9	e2.8	---	e11	39	663	195	69	56	12
31	e9.9	---	e3.8	e2.8	---	e12	---	630	---	60	66	---
TOTAL	378.0	251.1	166.0	93.8	73.8	132.6	719	5,029	8,320	3,583	1,509	809
MEAN	12.2	8.37	5.35	3.03	2.64	4.28	24.0	162	277	116	48.7	27.0
MAX	17	9.9	6.6	3.7	2.8	12	42	663	658	189	71	46
MIN	9.1	6.6	3.8	2.8	2.5	2.5	12	23	162	60	36	12
AC-FT	750	498	329	186	146	263	1,430	9,980	16,500	7,110	2,990	1,600

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

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
MEAN	14.9	9.60	5.76	3.58	3.36	4.31	16.2	127	243	95.3	55.1	30.0
MAX	20.9	12.1	6.82	4.68	4.36	6.51	24.0	162	399	133	111	61.8
(WY)	(1997)	(1997)	(1997)	(1997)	(1996)	(1997)	(2003)	(2003)	(1997)	(1997)	(1997)	(1997)
MIN	11.8	8.31	4.21	2.56	2.46	2.26	8.06	53.2	95.8	37.9	18.8	12.6
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1996 - 2003
ANNUAL TOTAL	7,914.3	21,064.3	
ANNUAL MEAN	21.7	57.7	53.4
HIGHEST ANNUAL MEAN			77.0 1997
LOWEST ANNUAL MEAN			21.5 2002
HIGHEST DAILY MEAN	197	663	663 May 30, 2003
LOWEST DAILY MEAN	e2.0	e2.5	e2.0 Mar 3, 2002
ANNUAL SEVEN-DAY MINIMUM	e2.1	e2.5	e2.1 Mar 2, 2002
MAXIMUM PEAK FLOW		828	828 May 31, 2003
MAXIMUM PEAK STAGE		6.86	6.86 May 31, 2003
ANNUAL RUNOFF (AC-FT)	15,700	41,780	38,700
10 PERCENT EXCEEDS	59	180	161
50 PERCENT EXCEEDS	9.9	14	13
90 PERCENT EXCEEDS	2.3	2.8	2.9

e Estimated.

402231105291900 LAKE ESTES NEAR DAM NEAR ESTES PARK, CO

WATER-QUALITY RECORDS

LOCATION.--Lat. 40°22'31", long 105°29'19", in SE¼ NW¼ sec.29, T.5 N., R.72 W., Larimer County, Hydrologic Unit 14010001, 1 mi southeast of Estes Park.

PERIOD OF RECORD.--May 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=402231105291900

REMARKS.--Samples were collected near-surface and near-bottom at estimated deepest point near Olympus Dam.

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

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
NOV						
07...	1103	0.50	9.2	6.9	52	3.5
07...	1104	5.00	9.1	6.9	52	3.4
07...	1105	10.0	9.1	6.9	52	3.4
07...	1106	15.0	9.1	6.9	51	3.4
07...	1107	20.0	9.0	6.9	51	3.4
07...	1108	25.0	9.0	6.9	51	3.4
MAY						
16...	0927	0.50	8.8	7.2	68	9.9
16...	0928	5.00	8.7	7.2	68	9.9
16...	0929	10.0	8.6	7.2	68	9.8
16...	0930	15.0	8.6	7.2	68	9.8
16...	0931	20.0	8.5	7.2	67	9.6
16...	0932	25.0	8.2	7.0	71	8.4
16...	0933	30.0	7.9	6.9	72	8.0
AUG						
28...	0930	0.50	7.0	6.8	44	16.8
28...	0931	5.00	6.7	6.8	39	16.5
28...	0932	10.0	6.6	6.8	38	16.4
28...	0933	15.0	6.6	6.8	37	16.4
28...	0934	20.0	6.3	6.8	36	16.2
28...	0935	25.0	6.2	6.8	36	16.2
28...	0936	30.0	4.1	6.8	30	14.6

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

Date	Time	Sam- pling depth, feet (00003)	Trans- parency Secchi disc, inches (00077)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)
NOV													
07...	1115	0.10	84.0	9.2	6.9	52	3.5	21	6.44	1.26	0.61	0.2	2.53
07...	1120	22.0	--	9.0	6.9	51	3.4	21	6.44	1.26	0.64	0.2	2.54
MAY													
16...	0945	0.10	61.0	8.8	7.2	68	9.9	25	7.18	1.78	0.84	0.4	4.11
16...	1000	30.0	--	7.9	6.9	72	8.0	26	7.55	1.83	0.93	0.4	4.40
AUG													
28...	0950	0.10	76.0	7.0	6.8	44	16.8	--	--	--	--	--	--
28...	1000	30.0	--	4.1	6.8	30	14.6	--	--	--	--	--	--

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

Date	ANC, wat unfltrd 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 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)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)
NOV													
07...	23	1.37	<0.17	3.84	2.8	33	0.04	28	0.26	0.034	0.088	0.003	<0.007
07...	23	1.43	<0.17	3.88	2.8	33	0.05	34	0.25	0.034	0.090	E.002	<0.007
MAY													
16...	18	7.24	0.2	7.06	5.2	46	0.08	62	0.42	<0.015	0.173	0.005	<0.007
16...	19	7.23	0.2	7.11	5.4	47	0.08	58	0.35	0.018	0.186	0.005	<0.007
AUG													
28...	19	0.88	<0.2	--	3.2	--	--	33	0.22	<0.015	E.018	<0.002	<0.007
28...	16	0.87	<0.2	--	2.8	--	--	31	0.33	0.072	0.043	E.002	<0.007

402231105291900 LAKE ESTES NEAR DAM NEAR ESTES PARK, CO—Continued

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

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	Organic carbon, water, unfltrd, mg/L (00680)	E coli, m-TEC MF, col/100 mL (31633)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)
NOV													
07...	E.004	0.013	2.5	E14	2.2	<0.1	6.7	<0.5	<13	<0.2	<0.8	0.038	0.9
07...	0.006	0.013	2.7	--	--	--	6.8	<0.5	<13	<0.2	<0.8	0.035	1.1
MAY													
16...	0.010	0.029	6.3	E7	2.6	<0.1	6.7	<0.5	<13	<0.2	<0.8	0.051	1.2
16...	0.007	0.023	6.1	--	--	--	7.2	<0.5	<13	<0.2	<0.8	0.052	1.2
AUG													
28...	E.004	0.015	3.6	E15	2.6	<0.1	--	<0.4	E5.4	<0.2	<0.8	--	--
28...	<0.004	0.033	2.9	--	--	--	--	<0.4	E5.4	<0.2	<0.8	--	--

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

Date	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium, water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	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)
NOV										
07...	61	E.05	1.2	7.2	0.4	0.27	<0.3	35.0	0.3	2
07...	68	E.05	1.2	7.4	0.4	0.26	<0.3	35.3	0.3	1
MAY										
16...	121	0.11	1.7	1.1	0.5	0.52	<0.3	38.2	0.3	7
16...	130	E.05	1.7	1.9	0.5	0.53	<0.3	39.9	0.2	2
AUG										
28...	--	<0.08	--	0.6	--	--	<0.3	--	--	1
28...	--	E.05	--	15.3	--	--	<0.3	--	--	M

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

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO

LOCATION.--Lat 40°36'00", long 105°10'06", in NW¹/₄SW¹/₄, sec.6, T.7 N., R.69 W., Larimer County, Hydrologic Unit 10190007, on right bank near abutment of Horsetooth Dam on tributaries to Cache la Poudre River, 4.8 mi west of city hall in Fort Collins.

RESERVOIR ELEVATIONS AND CONTENTS RECORDS

PERIOD OF RECORD.--April 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=06737500

GAGE.--Nonrecording gage read at irregular intervals from 1 to 10 days. Datum of gage is 5,430.00 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earth and rockfill dike and dams closing openings in subsequent valleys between hogbacks; storage began Jan. 10, 1951; dams completed July 21, 1949. Usable capacity, 143,500 acre-ft above elevations 5,320 ft, invert of channel from Spring Canyon Dam, 5,310 ft, invert of channel from Dixon Canyon Dam, 5,270 ft, trashrack sill of outlet at Soldier Canyon Dam, and below maximum water-surface elevation, 5,430 ft, 6 ft below crest of Satanka Dike. Dead storage, 7,003 acre-ft. Figures given represent usable contents. Water is diverted from Colorado River basin through Alva B. Adams tunnel for supplemental irrigation supply to Cache la Poudre River. Water-quality sampling at two sites in reservoir.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 148,400 acre-ft, June 26-27, 1995, elevation, 5,429.36 ft; minimum observed, 0 acre-ft, several times in 2001, 2002, and 2003 water years at various elevations during repairs to dam and outlet structure, minimum elevation, 5,286.77 ft, Oct. 6, 2001; minimum contents observed under normal operating conditions, 9 acre-ft, Nov. 16-30, 1977, elevation, 5,270.25 ft; no storage prior to Apr. 18, 1951.

EXTREMES (AT 0800) FOR CURRENT YEAR.--Maximum contents observed, 46,830 acre-ft, Sept. 24, elevation, 5,365.83 ft; minimum observed, 0 acre-ft, Oct. 20, elevation, 5,302.22 ft during repairs to dam and outlet structure when reservoir was drawn down below dead storage.

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	5,312.59	3,930	-
Oct. 31	5,308.42	2,070	-1,860
Nov. 30	5,320.74	8,110	+6,030
Dec. 31	5,326.80	11,710	+3,610
CAL YR 2002	-	-	+2,530
Jan. 31	5,332.86	15,750	+4,040
Feb. 28	5,340.31	21,320	+5,570
Mar. 31	5,350.32	30,110	+8,790
Apr. 30	5,351.05	30,820	+710
May 31	5,354.08	33,840	+3,030
June 30	5,355.89	35,720	+1,880
July 31	5,356.96	36,840	+1,130
Aug. 31	5,359.64	39,740	+2,900
Sept. 30	5,365.01	45,860	+6,110
WTR YR 2003	-	-	+41,930

PLATTE RIVER BASIN

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1969 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06737500

REMARKS.--Samples collected near the north end of reservoir near Soldier Canyon Dam. Note that the bottom sample for the August 27 sample is listed first in the table.

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

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
MAY						
15...	1024	0.50	8.6	7.4	74	12.5
15...	1025	5.00	8.7	7.5	73	11.6
15...	1026	10.0	8.5	7.4	72	11.3
15...	1027	15.0	8.4	7.4	72	11.2
15...	1028	20.0	8.5	7.3	72	11.0
15...	1029	25.0	8.2	7.3	72	10.8
15...	1030	30.0	8.3	7.3	72	10.2
15...	1031	35.0	8.3	7.2	72	10.1
15...	1032	40.0	8.3	7.2	71	9.6
15...	1033	45.0	8.2	7.2	71	9.2
15...	1034	50.0	7.9	7.1	71	9.0
15...	1035	55.0	8.1	7.1	71	8.7
15...	1036	60.0	8.0	7.1	71	8.6
15...	1037	65.0	7.8	7.1	71	8.5
15...	1038	70.0	7.8	7.0	71	8.4
15...	1039	75.0	7.6	7.0	72	8.4
15...	1040	80.0	7.4	7.0	71	8.4
15...	1041	85.0	7.7	7.0	72	8.3
AUG						
27...	0950	0.50	7.1	7.5	54	22.0
27...	0951	5.00	7.1	7.5	54	21.8
27...	0952	10.0	7.1	7.5	54	21.8
27...	0953	15.0	6.8	7.5	54	21.7
27...	0954	20.0	5.3	7.4	53	21.1
27...	0955	25.0	4.8	7.3	47	20.8
27...	0956	30.0	4.4	7.2	43	20.2
27...	0957	35.0	4.4	7.2	41	20.0
27...	0958	40.0	4.4	7.2	40	19.6
27...	0959	45.0	4.4	7.1	39	19.2
27...	1000	50.0	4.2	7.1	39	19.0
27...	1001	55.0	4.2	7.0	40	18.6
27...	1002	60.0	4.0	7.0	40	18.2
27...	1003	65.0	3.6	6.9	44	17.4
27...	1004	70.0	3.4	6.9	45	17.0
27...	1005	75.0	3.2	6.9	48	16.4
27...	1006	80.0	2.9	6.8	52	15.8
27...	1007	85.0	2.6	6.8	55	15.2
27...	1008	90.0	2.4	6.8	57	14.8

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

Date	Time	Sam- pling depth, feet (00003)	Trans- parency Secchi disc, inches (00077)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAY													
15...	1045	0.10	53.0	8.6	7.4	74	12.5	33	10.2	1.73	0.89	0.2	2.64
15...	1100	85.0	--	7.7	7.0	72	8.3	32	10.1	1.73	0.84	0.2	2.56
AUG													
27...	1030	90.0	--	2.4	6.8	57	14.8	30	9.11	1.66	0.80	0.2	2.49
27...	1045	0.10	77.0	7.1	7.5	54	22.0	28	8.54	1.49	0.79	0.2	2.34

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO—Continued

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

Date	ANC, wat unfiltered 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, 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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
MAY 15...	33	1.14	<0.2	3.51	4.2	45	0.07	53	0.27	E.008	0.074	0.003	<0.007
15...	33	1.05	<0.2	3.61	4.2	44	0.07	52	0.27	0.044	0.084	0.003	E.005
AUG 27...	26	1.74	0.2	5.09	3.5			57	0.23	<0.015	0.219	<0.002	0.016
27...	26	1.61	<0.2	3.23	3.4	37	0.05	38	0.20	<0.015	<0.022	<0.002	<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)	Organic carbon, water, unfltrd mg/L (00680)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)
MAY 15...	E.004	0.018	3.3	--	E1.4	<0.1	18.7	<0.5	<13	<0.2	<0.8	0.043	2.6
15...	0.008	0.021	2.8	--	--	--	18.2	<0.5	<13	<0.2	<0.8	0.031	2.5
AUG 27...	0.021	0.017	3.1	--	--	--	15.7	<0.4	E6.1	<0.2	<0.8	0.042	3.0
27...	0.008	0.015	3.2	E2	E4.2	>.1	19.2	<0.4	E6.5	<0.2	<0.8	0.043	2.7

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

Date	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	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)
MAY 15...	E10	<0.08	1.1	2.2	5.1	0.5	0.58	<0.3	50.1	0.3	6
15...	E7	<0.08	1.0	0.5	7.2	0.5	0.55	<0.3	49.8	0.3	2
AUG 27...	17	<0.08	1.1	--	--	0.5	0.43	<0.3	35.8	0.4	M
27...	11	<0.08	1.0	0.3	3.1	0.5	0.38	<0.3	31.3	0.6	<1

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

403147105083800 HORSETOOTH RESERVOIR NEAR SPRING CANYON DAM NEAR FORT COLLINS, CO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 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=403147105083800

REMARKS.--Samples collected near the south end of reservoir near Spring Canyon Dam.

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

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl- uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
MAY						
15...	1117	0.50	8.1	7.3	82	12.8
15...	1118	5.00	8.1	7.3	81	11.9
15...	1119	10.0	8.1	7.2	80	11.2
15...	1120	15.0	8.0	7.2	78	10.8
15...	1121	20.0	8.0	7.2	77	10.5
15...	1122	25.0	7.9	7.1	77	10.2
15...	1123	30.0	7.8	7.1	76	9.9
15...	1124	35.0	7.6	7.1	76	9.7
15...	1125	40.0	7.5	7.1	75	9.3
15...	1126	45.0	7.6	7.0	74	8.9
15...	1127	50.0	7.4	6.9	73	8.6
15...	1128	55.0	7.4	6.9	71	8.1
15...	1129	60.0	7.3	6.9	71	7.7
15...	1130	65.0	7.1	6.9	70	7.5
15...	1131	70.0	7.0	6.9	71	7.5
15...	1132	75.0	6.7	6.8	71	7.4
AUG						
27...	1055	0.50	7.7	7.8	44	21.8
27...	1056	5.00	7.6	7.8	44	21.2
27...	1057	10.0	6.6	7.7	42	20.6
27...	1058	15.0	6.8	7.5	39	19.5
27...	1059	20.0	6.7	7.4	38	18.9
27...	1100	25.0	6.7	7.4	38	18.6
27...	1101	30.0	6.8	7.3	38	18.4
27...	1102	35.0	6.5	7.3	39	17.7
27...	1103	40.0	2.6	7.2	59	12.3
27...	1104	45.0	2.3	7.0	64	10.6
27...	1105	50.0	1.7	7.0	67	9.7
27...	1106	55.0	1.3	6.9	68	9.3
27...	1107	60.0	1.4	6.9	69	9.1
27...	1108	65.0	0.7	6.9	70	9.0
27...	1109	70.0	0.4	6.8	71	8.8
27...	1110	75.0	0.2	6.8	73	8.6
27...	1111	80.0	0.1	6.8	73	8.6
27...	1112	85.0	0.1	6.8	74	8.6

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

Date	Time	Sam- pling depth, feet (00003)	Trans- parency Secchi disc, inches (00077)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl- uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)
MAY													
15...	1140	0.10	84.0	8.1	7.3	82	12.8	34	10.4	1.95	0.99	0.3	3.60
15...	1150	75.0	--	6.7	6.8	71	7.4	31	9.78	1.68	0.86	0.2	2.85
AUG													
27...	1115	0.10	48.0	7.7	7.8	44	21.8	23	7.08	1.25	0.68	0.2	1.99
27...	1130	85.0	--	0.1	6.8	74	8.6	37	11.3	2.06	0.96	0.2	3.10

403147105083800 HORSETOOTH RESERVOIR NEAR SPRING CANYON DAM NEAR FORT COLLINS, CO—Continued

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

Date	ANC, wat unfiltered, 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, 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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
MAY 15...	31	4.20	<0.2	4.02	4.8	49	0.08	59	0.30	0.040	0.092	0.003	<0.007
MAY 15...	32	1.72	<0.2	3.92	3.8	44	0.07	48	0.32	0.102	0.045	0.003	0.007
AUG 27...	21	1.27	0.1	2.72	3.0	31	0.05	38	0.26	<0.015	<0.013	<0.002	<0.007
AUG 27...	34	2.39	0.2	5.88	4.1	52	0.08	58	0.17	<0.015	0.316	<0.002	0.026

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

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	E coli, m-TEC MF, water, col/100 mL (31633)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)
MAY 15...	0.007	0.016	3.7	--	E1.0	<0.1	18.3	<0.5	<13	<0.2	<0.8	0.059	4.3
MAY 15...	0.011	0.021	3.0	--	--	--	15.1	<0.5	<13	<0.2	<0.8	0.040	3.3
AUG 27...	E.004	0.024	3.2	E1	E5.3	<0.1	15.0	<0.4	E5.7	<0.2	<0.8	0.034	2.9
AUG 27...	0.033	0.054	3.1	--	--	--	16.4	<0.4	E6.3	<0.2	<0.8	0.061	3.0

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

Date	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium, water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	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)
MAY 15...	16	<0.08	1.7	10.9	11.2	0.5	0.57	<0.3	54.1	0.3	2
MAY 15...	E8	<0.08	1.3	29.8	42.8	0.5	0.56	<0.3	52.3	0.2	2
AUG 27...	23	<0.08	0.9	0.3	<0.6	0.5	0.33	<0.3	26.4	0.5	<1
AUG 27...	23	<0.08	1.3	62.7	168	0.5	0.53	<0.3	49.1	0.2	1

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

06738000 BIG THOMPSON RIVER AT MOUTH OF CANYON, NEAR DRAKE, CO

LOCATION.--Lat 40°25'18", long 105°13'34", in SW¹/₄SW¹/₄ sec.3, T.5 N., R.70 W., Larimer County, Hydrologic Unit 10190006, on right bank at mouth of canyon, 400 ft upstream from Handy Ditch diversion dam, and 6.0 mi east of Drake.

DRAINAGE AREA.--305 mi².

PERIOD OF RECORD.--August 1887 to September 1892, May 1895 to September 1903, October 1926 to September 1933 (no winter records prior to October 1932, except water years 1927-28), April 1938 to September 1949, March 1951 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as Big Thompson Creek at Arkins 1887-92, Big Thompson Creek near Arkins 1901-3, and as Thompson River at mouth of canyon, near Drake 1927-30, 1938-47. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06738000

REVISED RECORDS.--WSP 1310: 1891, 1927. WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Datum of gage is 5,305.47 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation), Oct. 1, 1949 to Sept. 18, 1977, at present site, datum 8.00 ft lower, Sept. 19, 1977 to July 27, 1980, at present site, datum 7.37 ft lower. See WSP 1710 or 1730 for history of changes prior to Oct. 1, 1949.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation. Diversions from Colorado River basin to Big Thompson River basin upstream from station through Alva B. Adams tunnel began Aug. 10, 1947; since Apr. 15, 1953, this imported water has been diverted from Lake Estes through Olympus tunnel bypassing this station. Part of the natural flow of the Big Thompson River has also been diverted through Olympus tunnel since May 17, 1955, and Dille tunnel since Apr. 20, 1959, and may be returned to the river just downstream from this station.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,200 ft³/s, July 31, 1976, gage height, 19.86 ft from floodmarks, from slope-area measurements of peak flow; no flow at times in 1976 (all flow above station diverted through Olympus and Dille tunnels after flood of July 31, 1976), 1979-80 (all flow above station diverted through Dille tunnel).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,190 ft³/s, May 31, gage height, 4.45 ft; minimum daily, 23 ft³/s, Oct. 24.

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	48	28	e31	e28	e27	e27	53	54	984	95	68	66
2	59	35	e31	e28	e27	e26	63	52	947	96	66	41
3	68	35	e31	e28	e27	e26	71	48	788	79	66	39
4	60	33	e31	e27	e28	e26	68	87	696	73	70	42
5	49	33	e31	e27	e28	e27	61	117	564	70	69	40
6	47	e32	e31	e29	e28	e27	58	125	361	69	68	40
7	44	e31	e30	e28	e25	e27	54	117	245	67	67	42
8	41	e31	e32	e29	e25	e27	51	108	187	67	68	45
9	41	e30	e31	e27	e25	e26	51	109	138	70	70	42
10	39	e30	e31	e28	e25	e28	53	134	131	62	69	41
11	37	e31	e31	e27	e24	e28	55	140	245	62	64	41
12	35	e30	e31	e27	e24	e28	56	152	338	62	64	40
13	33	e32	e30	e27	e25	e27	60	168	311	63	62	40
14	32	e30	e29	e27	e26	e29	67	95	235	61	62	40
15	31	e31	e29	e28	e26	e31	85	77	198	58	53	40
16	26	e32	e29	e29	e26	e31	91	94	196	57	53	43
17	29	e30	e29	e27	e26	e32	88	63	216	55	88	43
18	28	e30	e28	e27	e27	e35	86	46	234	62	106	43
19	24	e29	e29	e27	e28	e34	82	76	248	63	79	42
20	24	e29	e28	e27	e27	e35	81	69	224	66	68	42
21	24	e29	e27	e27	e27	e37	77	59	215	109	70	42
22	32	e30	e27	e27	e27	39	77	56	201	120	65	46
23	28	e30	e27	e28	e27	51	85	59	202	118	67	47
24	23	e28	e27	e28	e26	71	89	97	206	115	70	46
25	26	e30	e37	e27	e24	62	92	171	206	82	72	58
26	29	e29	e37	e27	e24	62	100	201	191	75	70	98
27	30	e31	e26	e27	e25	74	113	e356	135	101	70	78
28	31	e30	e26	e27	e25	60	112	e514	103	80	67	58
29	28	e31	e26	e27	---	51	79	567	93	128	76	58
30	29	e31	e27	e27	---	49	55	e744	88	110	94	59
31	26	---	e27	e27	---	48	---	994	---	72	85	---
TOTAL	1,101	921	917	851	729	1,181	2,213	5,749	9,126	2,467	2,186	1,442
MEAN	35.5	30.7	29.6	27.5	26.0	38.1	73.8	185	304	79.6	70.5	48.1
MAX	68	35	37	29	28	74	113	994	984	128	106	98
MIN	23	28	26	27	24	26	51	46	88	55	53	39
AC-FT	2,180	1,830	1,820	1,690	1,450	2,340	4,390	11,400	18,100	4,890	4,340	2,860
CAL YR	2002	TOTAL 17,360	MEAN 47.6	MAX 215	MIN 23	AC-FT 34,430						
WTR YR	2003	TOTAL 28,883	MEAN 79.1	MAX 994	MIN 23	AC-FT 57,290						

e Estimated.

06741510 BIG THOMPSON RIVER AT LOVELAND, CO

LOCATION.--Lat 40°22'43", long 105°03'38", in SE¼SE¼ sec.24, T.5 N., R.69 W., Larimer County, Hydrologic Unit 10190006, on right bank 690 ft downstream from county road bridge C-13, 1.7 mi south of sugar refinery in Loveland, and 1.9 mi downstream from Farmers Ditch diversion.

DRAINAGE AREA.--535 mi².

PERIOD OF RECORD.--July 1979 to current year. For a complete listing of historical data available for this site see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06741510

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,906 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, power developments, diversions for irrigation, and return flow from irrigated areas. Water-quality data for this site is included in the "Big Thompson Project" 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	30	6.1	4.2	3.3	e3.2	2.5	4.2	4.4	128	101	68	47
2	37	10	4.0	3.3	e3.1	2.6	2.4	4.3	105	96	99	36
3	34	8.5	3.9	3.3	e3.1	2.5	4.7	4.3	129	95	93	33
4	32	7.6	3.9	3.3	e3.1	2.6	4.6	4.1	127	85	77	36
5	29	4.7	3.9	3.3	e3.1	2.7	4.9	4.1	111	81	67	35
6	21	4.1	3.7	3.3	e2.9	2.5	11	3.9	80	91	68	29
7	20	3.1	3.6	3.3	e2.6	2.5	7.3	4.1	87	84	65	21
8	16	3.1	3.6	3.3	e2.3	2.5	5.0	4.4	76	73	70	26
9	18	5.7	3.6	3.3	e2.2	2.5	4.6	6.4	75	54	72	21
10	18	9.4	3.6	3.3	e2.4	2.6	3.4	35	77	50	71	18
11	17	9.7	3.5	3.3	2.5	2.4	3.6	9.5	74	56	61	19
12	21	4.3	3.3	3.3	2.5	2.4	3.7	9.8	79	60	68	15
13	20	3.6	3.5	3.2	2.5	2.5	4.3	12	79	64	67	15
14	24	5.2	3.4	3.3	2.5	2.7	4.3	12	88	78	69	13
15	19	4.3	3.3	3.2	2.7	2.8	5.5	12	76	73	69	6.5
16	16	3.9	3.2	3.2	2.5	2.8	5.9	11	81	75	57	50
17	10	3.9	3.3	3.2	2.5	5.1	3.9	5.8	131	73	50	112
18	9.6	3.8	3.6	3.2	2.5	16	4.2	4.9	326	75	52	72
19	5.5	3.6	3.4	3.2	2.5	12	3.9	4.6	180	67	51	20
20	4.5	4.0	3.3	3.2	2.5	10	3.9	0.93	82	70	68	29
21	3.6	4.3	3.3	3.0	2.5	9.2	3.8	0.48	81	70	55	26
22	1.3	4.2	3.3	3.0	2.5	7.4	4.9	4.6	77	64	45	4.5
23	1.6	4.2	3.3	3.3	2.5	6.1	14	4.7	80	67	39	10
24	1.9	4.8	3.3	3.3	2.7	7.8	19	3.9	99	66	38	8.1
25	2.0	4.8	3.3	3.3	2.6	5.8	8.3	8.0	88	55	43	9.9
26	2.0	4.3	3.4	3.3	2.5	5.1	5.9	17	82	60	42	12
27	1.1	3.9	3.2	3.3	2.5	5.6	4.9	29	83	94	42	18
28	1.5	3.9	3.3	3.3	2.5	5.2	4.2	56	83	99	37	18
29	2.4	3.9	3.3	3.3	---	5.1	4.3	63	104	130	58	10
30	1.5	3.9	3.3	e3.3	---	5.0	4.7	100	108	86	101	11
31	2.4	---	3.3	e3.3	---	e4.8	---	131	---	34	61	---
TOTAL	422.9	150.8	108.1	101.0	73.5	151.3	169.3	575.21	3,076	2,326	1,923	781.0
MEAN	13.6	5.03	3.49	3.26	2.62	4.88	5.64	18.6	103	75.0	62.0	26.0
MAX	37	10	4.2	3.3	3.2	16	19	131	326	130	101	112
MIN	1.1	3.1	3.2	3.0	2.2	2.4	2.4	0.48	74	34	37	4.5
AC-FT	839	299	214	200	146	300	336	1,140	6,100	4,610	3,810	1,550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

	30.1	20.5	12.7	16.6	16.3	12.7	42.1	212	280	114	74.9	36.9
MEAN	30.1	20.5	12.7	16.6	16.3	12.7	42.1	212	280	114	74.9	36.9
MAX	111	95.8	51.9	95.5	129	61.4	292	2,078	1,493	418	153	83.9
(WY)	(1998)	(1985)	(1998)	(1998)	(1998)	(1998)	(1980)	(1980)	(1983)	(1995)	(1981)	(1982)
MIN	6.15	3.10	2.86	2.55	2.42	2.19	3.49	4.07	25.0	29.9	29.0	16.6
(WY)	(1988)	(2001)	(1993)	(1994)	(1993)	(1996)	(2001)	(1981)	(1982)	(1987)	(1997)	(1990)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1979 - 2003

ANNUAL TOTAL	12,191.8	9,858.11	
ANNUAL MEAN	33.4	27.0	72.5
HIGHEST ANNUAL MEAN			321 1980
LOWEST ANNUAL MEAN			27.0 2003
HIGHEST DAILY MEAN	122	326	4,240
LOWEST DAILY MEAN	1.1	0.48	0.48
ANNUAL SEVEN-DAY MINIMUM	1.6	1.6	0.89
MAXIMUM PEAK FLOW		679	6,970
MAXIMUM PEAK STAGE		3.92	a,b10.10
ANNUAL RUNOFF (AC-FT)	24,180	19,550	52,550
10 PERCENT EXCEEDS	78	81	125
50 PERCENT EXCEEDS	16	5.1	18
90 PERCENT EXCEEDS	3.6	2.5	3.3

e Estimated.

a From high-water mark.

b Maximum gage height, 10.48 ft, Apr 30, 1999.

06742500 CARTER LAKE NEAR BERTHOUD, CO

LOCATION.--Lat 40°19'28", long 105°12'41", in SE¹/₄, sec.10, T.4 N., R.70 W., Larimer County, Hydrologic Unit 10190006, in hoist house 293 ft from right abutment of Carter Lake Dam on Dry Creek, 7.0 mi west of Berthoud, and 8.9 mi upstream from mouth. Water-quality sampling site near center of reservoir.

RESERVOIR ELEVATIONS AND CONTENTS RECORDS

PERIOD OF RECORD.--March 1954 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06742500

GAGE.--Nonrecording gage read at irregular intervals from 1 to 13 days. Datum of gage is 5,763.00 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earth and rockfill dike enlarging the natural basin of Carter Lake. Storage began in February 1954. Usable capacity, 113,500 acre-ft between elevations 5,618.00 ft, trashrack sill at outlet, and 5,763.00 ft, maximum water surface, 6 ft below crest of dam. Dead storage, 3,306 acre-ft. Figures given represent usable contents. Water diverted from Colorado River basin through Alva B. Adams tunnel is pumped from Flatiron Reservoir into Carter Lake for supplemental irrigation supply to Little Thompson River and St. Vrain and Boulder Creek basins. Water above elevation 5,620 ft may be released for return to Flatiron Reservoir where pump turbines can operate in reverse to generate power and water can be used for irrigation in Big Thompson or Cache la Poudre River basins.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 109,100 acre-ft, Apr. 27-29, 1971, elevation, 5,759.12 ft; minimum observed since appreciable storage was attained, 960 acre-ft, Oct. 25, 1954, elevation, 5,621.40 ft.

EXTREMES (AT 0800) FOR CURRENT YEAR.--Maximum contents, 101,600 acre-ft, Feb. 18, elevation, 5,752.53 ft; minimum contents, 47,370 acre-ft, Nov. 11, elevation, 5,698.25 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	5,705.54	53,830	-
Oct. 31	5,699.06	48,080	-5,760
Nov. 30	5,712.22	59,990	+11,910
Dec. 31	5,731.65	79,180	+19,190
CAL YR 2002	-	-	+19,580
Jan. 31	5,747.72	96,280	+17,100
Feb. 28	5,752.04	101,100	+4,780
Mar. 31	5,750.72	95,590	-1,470
Apr. 30	5,747.76	96,330	-3,270
May 31	5,743.39	91,570	-4,760
June 30	5,738.72	86,570	-4,990
July 31	5,728.39	75,840	-10,730
Aug. 31	5,709.72	57,650	-18,190
Sept. 30	5,700.42	49,260	-8,390
WTR YR 2003	-	-	-4,570

06742500 CARTER LAKE NEAR BERTHOUD, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1970 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06742500

REMARKS.--Samples collected near the southeast end of reservoir.

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

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl- uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
NOV						
07...	0853	0.50	8.1	7.2	71	8.9
07...	0854	5.00	8.1	7.2	70	8.9
07...	0855	10.0	7.9	7.2	68	8.9
07...	0856	15.0	7.9	7.2	68	8.9
07...	0857	20.0	7.9	7.2	68	8.9
07...	0858	25.0	7.8	7.2	67	8.8
07...	0859	30.0	7.8	7.2	67	8.8
07...	0900	35.0	7.8	7.2	67	8.8
07...	0901	40.0	7.7	7.2	67	8.8
07...	0902	45.0	7.7	7.2	67	8.8
07...	0903	50.0	7.7	7.2	66	8.8
07...	0904	55.0	7.6	7.2	66	8.8
07...	0905	60.0	7.5	7.2	66	8.8
07...	0906	65.0	7.6	7.2	66	8.8
07...	0907	70.0	7.6	7.2	66	8.8
07...	0908	75.0	7.6	7.2	66	8.7
07...	0909	80.0	7.6	7.2	66	8.7
07...	0910	85.0	7.7	7.2	66	8.7
07...	0911	90.0	7.7	7.2	66	8.7
MAY						
16...	1111	0.50	8.5	7.3	59	12.9
16...	1112	5.00	8.6	7.4	59	12.6
16...	1113	10.0	8.6	7.5	59	12.3
16...	1114	15.0	8.5	7.6	59	12.3
16...	1115	20.0	8.7	7.6	59	11.4
16...	1116	25.0	9.2	7.6	58	8.6
16...	1117	30.0	9.2	7.4	58	6.6
16...	1118	35.0	9.2	7.3	58	6.3
16...	1119	40.0	9.0	7.2	58	6.2
16...	1120	45.0	8.9	7.2	58	6.1
16...	1121	50.0	8.8	7.2	58	6.0
16...	1122	55.0	8.7	7.1	58	5.8
16...	1123	60.0	8.8	7.1	58	5.8
16...	1124	65.0	8.7	7.0	58	5.6
16...	1125	70.0	8.6	7.0	58	5.6
16...	1126	75.0	8.5	7.0	58	5.5
16...	1127	80.0	8.5	7.0	58	5.4
16...	1128	85.0	8.4	7.0	58	5.3
16...	1129	90.0	8.3	7.0	58	5.2
16...	1130	100	8.2	7.0	58	5.2
16...	1131	110	8.3	7.0	58	5.2
16...	1132	120	8.3	7.0	58	5.1

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

Date	Time	Sam- pling depth, feet (00003)	Trans- parency Secchi disc, inches (00077)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl- uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)
NOV													
07...	0915	0.10	108	8.1	7.2	71	8.9	30	9.80	1.38	0.60	0.2	2.07
07...	0920	90.0	--	7.7	7.2	66	8.7	30	9.89	1.39	0.64	0.2	2.07
MAY													
16...	1140	0.10	162	8.5	7.3	59	12.9	28	8.84	1.32	0.69	0.2	2.03
16...	1150	120	--	8.3	7.0	58	5.1	29	9.22	1.37	0.74	0.2	2.15

06742500 CARTER LAKE NEAR BERTHOUD, CO—Continued

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

Date	ANC, wat unfiltered, 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, 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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
NOV 07...	32	0.33	<0.17	2.44	2.9	39	0.05	39	0.17	<0.015	E.015	<0.002	<0.007
07...	32	0.29	<0.17	2.49	2.9	39	0.05	37	0.16	<0.015	E.016	<0.002	<0.007
MAY 16...	30	0.75	<0.2	1.89	2.9	37	0.06	45	0.25	<0.015	<0.022	<0.002	<0.007
16...	30	0.80	<0.2	2.59	2.9	38	0.06	45	0.21	0.028	E.017	<0.002	<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)	Organic carbon, water, unfltrd mg/L (00680)	E coli, m-TEC MF, water, col/100 mL (31633)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)
NOV 07...	E.003	0.010	3.2	<1	1.6	<0.1	20.9	<0.5	<13	<0.2	<0.8	0.026	1.8
07...	0.004	0.007	2.8	--	--	--	21.4	<0.5	<13	<0.2	<0.8	0.029	2.1
MAY 16...	E.003	0.006	3.0	<1	E1.0	<0.1	15.2	<0.5	<13	<0.2	<0.8	0.026	1.8
16...	E.003	0.006	2.9	--	--	--	15.7	<0.5	<13	<0.2	<0.8	0.029	1.8

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

Date	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium, water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	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)
NOV 07...	E8	<0.08	1.2	0.5	13.2	0.4	0.39	<0.3	41.3	0.4	1
07...	<10	<0.08	1.1	0.5	14.3	0.4	0.38	<0.3	41.3	0.4	1
MAY 16...	<10	<0.08	0.9	0.4	E4.4	0.4	0.47	<0.3	44.1	0.1	M
16...	<10	<0.08	0.9	0.5	E3.9	0.4	0.46	<0.3	45.1	0.1	M

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

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

06746095 JOE WRIGHT CREEK ABOVE JOE WRIGHT RESERVOIR, CO

LOCATION.--Lat 40°32'24", long 105°52'56", in SE¹/₄SE¹/₄ sec.26, T.7 N., R.76 W., Larimer County, Hydrologic Unit 10190007, on left bank 150 ft downstream from unnamed tributary and Colorado Highway 14 culvert crossing, 1.5 mi northeast of Cameron Pass, 1.5 mi southwest of Joe Wright Dam, and 8 mi east of Gould.

DRAINAGE AREA.--3.01 mi².

PERIOD OF RECORD.--October 1978 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06746095

GAGE.--Water-stage recorder. Elevation of gage is 9,990 ft above NGVD of 1929, from topographic map. Prior to Aug. 7, 1989, at datum 3.40 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. 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	0.65	e1.3	e1.3	e1.00	e0.71	e0.63	e0.72	e1.0	134	79	e14	e7.6
2	0.78	e1.3	e1.2	e0.92	e0.71	e0.63	e0.72	e1.1	121	75	e13	e7.6
3	0.85	e1.3	e1.2	e0.92	e0.71	e0.63	e0.72	e1.1	101	71	e12	e7.3
4	1.1	e1.3	e1.2	e0.91	e0.71	e0.62	e0.72	e1.1	86	65	e12	e6.9
5	0.91	e1.3	e1.2	e0.91	e0.71	e0.62	e0.76	e1.1	75	62	e13	e6.7
6	0.85	e1.3	e1.2	e0.91	e0.71	e0.62	e0.76	e1.1	64	57	e12	e6.5
7	1.0	e1.3	e1.2	e0.91	e0.71	e0.65	e0.76	e1.1	55	51	e12	e6.2
8	1.0	e1.3	e1.2	e0.91	e0.71	e0.65	e0.77	e1.1	53	48	e11	e6.0
9	1.0	e1.3	e1.2	e0.91	e0.68	e0.65	e0.77	e1.1	59	46	e11	e5.7
10	0.92	e1.3	e1.2	e0.85	e0.66	e0.65	e0.82	e1.1	79	43	e11	e5.5
11	0.88	e1.3	e1.2	e0.85	e0.66	e0.65	e0.79	e1.2	104	39	e10	e5.4
12	0.97	e1.3	e1.2	e0.85	e0.66	e0.65	e0.83	e1.3	99	36	e10	e5.4
13	0.96	e1.3	e1.2	e0.85	e0.66	e0.65	e0.86	e1.4	90	34	e9.9	e5.3
14	0.99	e1.3	e1.2	e0.82	e0.66	e0.65	e0.89	e1.4	100	32	e9.5	e5.2
15	0.76	e1.3	e1.2	e0.82	e0.66	e0.65	e0.89	e4.9	112	30	e9.1	e5.2
16	0.74	e1.3	e1.1	e0.82	e0.66	e0.68	e0.90	e9.5	111	28	e9.1	e5.2
17	0.69	e1.3	e1.1	e0.82	e0.66	e0.68	e0.92	e21	112	28	e10	e5.0
18	e0.74	e1.3	e1.1	e0.82	e0.66	e0.68	e0.94	e22	121	28	e11	e4.9
19	e0.76	e1.3	e1.1	e0.82	e0.66	e0.68	e0.94	e21	119	26	e11	e4.8
20	0.82	e1.3	e1.1	e0.82	e0.66	e0.69	e0.95	e22	112	26	e9.9	e4.7
21	0.78	e1.3	e1.1	e0.82	e0.66	e0.69	e0.95	e26	103	25	e8.0	e4.5
22	0.85	e1.3	e1.1	e0.77	e0.66	e0.69	e0.95	e32	98	23	e8.3	e4.5
23	e0.88	e1.3	e1.1	e0.77	e0.66	e0.69	e0.95	e38	97	22	e8.1	e4.3
24	e0.88	e1.3	e1.00	e0.77	e0.65	e0.69	e0.96	e44	94	21	e8.2	e4.2
25	e1.3	e1.3	e1.00	e0.77	e0.65	e0.69	e0.96	e53	86	20	e8.3	e4.2
26	e1.3	e1.3	e1.00	e0.76	e0.65	e0.69	e0.97	e60	74	19	e8.0	e3.9
27	e1.3	e1.3	e1.00	e0.74	e0.63	e0.72	e0.98	e72	76	18	e8.1	e3.8
28	e1.3	e1.3	e1.00	e0.74	e0.63	e0.72	e0.99	e105	78	17	e7.8	e3.6
29	e1.3	e1.3	e1.00	e0.72	---	e0.72	e1.0	e97	82	17	e7.7	e3.6
30	e1.3	e1.3	e1.00	e0.72	---	e0.72	e1.0	94	82	15	e7.9	e3.6
31	e1.3	---	e1.00	e0.72	---	e0.72	---	131	---	e15	e8.1	---
TOTAL	29.86	39.0	34.90	25.74	18.81	20.75	26.14	868.6	2,777	1,116	309.0	157.3
MEAN	0.96	1.30	1.13	0.83	0.67	0.67	0.87	28.0	92.6	36.0	9.97	5.24
MAX	1.3	1.3	1.3	1.0	0.71	0.72	1.0	131	134	79	14	7.6
MIN	0.65	1.3	1.0	0.72	0.63	0.62	0.72	1.0	53	15	7.7	3.6
AC-FT	59	77	69	51	37	41	52	1,720	5,510	2,210	613	312

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	2.93	1.51	1.05	0.86	0.74	0.72	1.12	14.7	53.5	26.6	8.35	4.40														
MAX	10.5	3.51	2.50	2.39	1.79	1.50	3.39	34.6	92.6	90.8	21.5	17.3														
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1994)	(1994)	(1994)	(2003)	(1995)	(1995)	(1997)														
MIN	0.54	0.36	0.28	0.25	0.20	0.20	0.39	3.58	25.5	2.35	0.82	0.59														
(WY)	(1981)	(1979)	(1981)	(1981)	(1979)	(1979)	(1979)	(1982)	(1989)	(2002)	(2002)	(2002)														

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1979 - 2003

ANNUAL TOTAL	1,498.18	5,423.10	
ANNUAL MEAN	4.10	14.9	9.72
HIGHEST ANNUAL MEAN			16.9 1995
LOWEST ANNUAL MEAN			4.42 2002
HIGHEST DAILY MEAN	59 Jun 2	134 Jun 1	150 Jul 11, 1995
LOWEST DAILY MEAN	0.38 Sep 2	e0.62 Mar 4	a,e0.20 Jan 30, 1979
ANNUAL SEVEN-DAY MINIMUM	0.38 Sep 2	e0.63 Feb 28	e0.20 Jan 30, 1979
MAXIMUM PEAK FLOW		165 May 31	238 Jul 7, 1983
MAXIMUM PEAK STAGE		b5.66 May 31	c5.60 Jul 7, 1983
ANNUAL RUNOFF (AC-FT)	2,970	10,760	7,040
10 PERCENT EXCEEDS	13	63	30
50 PERCENT EXCEEDS	1.1	1.2	1.6
90 PERCENT EXCEEDS	0.65	0.68	0.50

e Estimated.

a Also occurred Jan 31 to Apr 4, 1979, and Feb 9 to Apr 9, 1981.

b Maximum gage height, 9.82 ft, May 18, backwater from ice.

c Maximum gage height, 10.64 ft, May 15, 1993, present datum, backwater from ice.

06746110 JOE WRIGHT CREEK BELOW JOE WRIGHT RESERVOIR, CO

LOCATION.--Lat 40°33'43", long 105°51'48", in SE¼NE¼ sec.24, T.7 N., R.76 W., Larimer County, Hydrologic Unit 10190007, on left bank 500 ft downstream from unnamed tributary, 2,000 ft downstream from Joe Wright Dam, and 3 mi southwest of Chambers Lake.

DRAINAGE AREA.--6.90 mi².

PERIOD OF RECORD.--June 1978 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06746110

GAGE.--Water-stage recorder. Elevation of gage is 9,710 ft above NGVD of 1929, from topographic map. Prior to Aug. 7, 1989, at datum 0.50 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Joe Wright Reservoir, 2000 ft upstream. 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	e1.2	e1.3	e1.2	e1.1	e1.3	e1.4	1.5	27	82	3.7	5.7
2	1.6	e1.2	e1.3	e1.2	e1.1	e1.3	e1.4	1.5	38	81	3.9	4.7
3	1.6	e1.1	e1.3	e1.2	e1.1	e1.3	e1.4	1.6	38	82	4.0	2.4
4	1.7	e1.1	e1.3	e1.2	e1.1	e1.3	e1.4	1.7	65	80	6.2	2.1
5	1.6	e1.1	e1.3	e1.1	e1.2	e1.2	e1.4	1.6	84	71	12	2.1
6	1.5	e1.1	e1.3	e1.1	e1.2	e1.2	e1.4	1.5	84	66	12	2.1
7	1.5	e1.1	e1.3	e1.1	e1.2	e1.2	e1.4	1.5	86	57	33	2.1
8	1.4	e1.1	e1.3	e1.1	e1.2	e1.2	e1.4	1.5	86	53	67	2.1
9	1.4	e1.1	e1.3	e1.1	e1.2	e1.2	e1.4	1.5	87	53	65	2.1
10	1.4	e1.2	e1.3	e1.1	e1.2	e1.2	1.4	1.5	89	48	56	2.2
11	1.4	e1.2	e1.3	e1.1	e1.2	e1.2	1.5	1.5	90	42	50	2.3
12	1.4	e1.2	e1.3	e1.1	e1.2	e1.2	1.5	1.6	90	42	48	2.1
13	1.3	e1.2	e1.3	e1.1	e1.2	e1.3	1.6	1.7	89	42	43	2.1
14	1.2	e1.2	e1.2	e1.1	e1.2	e1.4	1.7	1.9	90	43	47	2.1
15	1.2	e1.2	e1.2	e1.1	e1.2	e1.4	1.6	2.2	91	44	49	2.1
16	1.2	e1.2	e1.2	e1.1	e1.2	e1.4	1.6	2.6	91	44	50	2.1
17	1.2	e1.2	e1.2	e1.1	e1.2	e1.4	1.5	3.4	92	42	50	2.1
18	1.2	e1.2	e1.2	e1.1	e1.2	e1.4	1.5	3.9	92	32	52	2.1
19	1.2	e1.3	e1.2	e1.1	e1.2	e1.4	1.4	3.8	103	28	57	2.1
20	1.2	e1.3	e1.2	e1.1	e1.2	e1.4	1.4	4.0	128	43	42	2.1
21	1.2	e1.3	e1.2	e1.1	e1.2	e1.4	1.4	4.3	128	80	2.6	2.1
22	1.2	e1.3	e1.2	e1.1	e1.2	e1.4	1.4	4.7	128	80	2.6	2.1
23	1.2	e1.3	e1.2	e1.1	e1.2	e1.4	1.4	5.5	128	81	3.2	2.1
24	1.2	e1.3	e1.2	e1.1	e1.2	e1.4	1.5	6.4	127	81	4.6	2.1
25	1.2	e1.3	e1.2	e1.1	e1.2	e1.4	1.5	8.4	180	79	4.8	2.1
26	1.2	e1.3	e1.2	e1.1	e1.2	e1.4	1.6	9.5	144	75	5.5	2.1
27	1.2	e1.3	e1.2	e1.1	e1.2	e1.4	1.7	12	107	71	5.7	2.1
28	1.2	e1.3	e1.2	e1.1	e1.2	e1.4	1.7	14	97	71	5.7	2.1
29	e1.2	e1.3	e1.2	e1.1	---	e1.4	1.7	15	81	71	5.7	2.1
30	e1.2	e1.3	e1.2	e1.1	---	e1.4	1.7	16	82	50	5.8	2.1
31	e1.2	---	e1.2	e1.1	---	e1.4	---	16	---	3.9	5.7	---
TOTAL	41.0	36.5	38.5	34.5	33.2	41.3	44.9	153.8	2,842	1,817.9	802.7	69.8
MEAN	1.32	1.22	1.24	1.11	1.19	1.33	1.50	4.96	94.7	58.6	25.9	2.33
MAX	1.7	1.3	1.3	1.2	1.2	1.4	1.7	16	180	82	67	5.7
MIN	1.2	1.1	1.2	1.1	1.1	1.2	1.4	1.5	27	3.9	2.6	2.1
AC-FT	81	72	76	68	66	82	89	305	5,640	3,610	1,590	138

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

MEAN	4.16	2.75	1.04	0.92	0.89	0.92	1.09	12.5	60.6	36.8	30.0	30.4
MAX	20.8	37.8	2.91	2.60	2.66	2.65	3.14	48.0	100	90.8	84.7	61.8
(WY)	(1995)	(2001)	(2001)	(2002)	(2002)	(2002)	(2001)	(1998)	(1996)	(1993)	(1991)	(1995)
MIN	0.54	0.34	0.21	0.24	0.22	0.23	0.29	1.21	8.67	2.49	6.44	1.13
(WY)	(1989)	(1995)	(1993)	(1993)	(1995)	(1995)	(1991)	(1980)	(2002)	(1989)	(1981)	(1991)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1979 - 2003

ANNUAL TOTAL	2,550.5		5,956.1			
ANNUAL MEAN	6.99		16.3			
HIGHEST ANNUAL MEAN					15.2	1997
LOWEST ANNUAL MEAN					24.4	1980
HIGHEST DAILY MEAN	61		180		3.69	1980
LOWEST DAILY MEAN	e1.1		e1.1		245	Jul 1, 1993
ANNUAL SEVEN-DAY MINIMUM	e1.1		e1.1		0.17	Apr 3, 1991
MAXIMUM PEAK FLOW			233		0.18	Mar 31, 1991
MAXIMUM PEAK STAGE			2.64		284	Aug 18, 1991
ANNUAL RUNOFF (AC-FT)	5,060		11,810		a2.71	Aug 18, 1991
10 PERCENT EXCEEDS	19		73		56	
50 PERCENT EXCEEDS	2.6		1.4		2.0	
90 PERCENT EXCEEDS	1.2		1.1		0.35	

e Estimated.

a Maximum gage height, 2.78 ft, Jul 10, 1997.

06751150 NORTH FORK CACHE LA POUDE RIVER BELOW HALLIGAN RESERVOIR NEAR VIRGINIA DALE, CO

LOCATION.--Lat 40°52'42", long 105°20'15", in NE¹/₄SW¹/₄ sec.34, T.11 N., R.71 W., Larimer County, Hydrologic Unit 10190007, on left bank 500 ft downstream from Halligan Dam, 4.0 mi west of Highway 287, and 5.0 mi south of Virginia Dale.

DRAINAGE AREA.--355 mi².

PERIOD OF RECORD.--March 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=06751150

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,310 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow affected by transbasin diversions, storage reservoirs, and irrigation. 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	9.3	1.7	3.7	1.5	2.1	2.2	1.5	261	534	103	107	96
2	5.6	1.5	3.7	4.5	1.9	2.2	1.5	239	502	92	106	56
3	4.7	1.4	3.7	5.5	2.4	2.2	1.5	220	470	81	106	54
4	4.7	1.4	3.7	4.7	2.4	3.0	1.2	211	455	73	105	65
5	4.7	1.4	3.7	4.7	2.4	3.5	1.1	207	455	67	104	68
6	4.7	1.9	3.7	4.6	2.4	3.3	1.1	195	410	70	107	67
7	4.9	2.5	3.6	4.5	2.4	3.1	1.2	187	401	75	108	66
8	4.9	2.7	3.5	4.1	2.4	3.2	1.1	186	381	68	107	66
9	4.9	2.7	2.9	3.8	2.4	3.2	1.1	188	318	62	106	66
10	4.6	2.7	2.4	3.3	2.4	3.7	1.1	215	299	66	106	66
11	4.5	2.7	2.4	2.7	2.4	3.5	1.2	210	299	73	105	58
12	4.7	2.7	2.7	2.8	2.3	1.6	1.2	254	307	78	104	48
13	4.7	2.7	2.7	2.8	2.2	0.15	36	298	292	81	103	47
14	4.7	2.8	2.3	2.5	2.3	2.2	79	299	285	81	103	47
15	4.7	e2.8	1.8	2.5	2.5	3.7	80	319	261	90	102	47
16	4.7	e3.2	1.6	2.3	2.5	3.7	101	358	242	96	102	46
17	4.9	e3.2	1.4	2.1	2.5	2.9	124	401	232	99	102	35
18	4.9	3.2	3.3	2.1	2.3	2.4	133	425	218	99	103	28
19	4.8	3.2	4.1	2.0	2.5	2.4	137	422	207	98	102	28
20	4.7	3.1	3.5	2.2	2.6	1.9	137	390	203	96	102	28
21	4.6	3.1	2.9	2.4	2.7	1.9	141	371	201	96	102	28
22	4.5	3.2	2.7	2.4	2.7	2.0	143	362	185	95	100	28
23	4.5	3.2	2.6	2.4	2.7	2.0	142	366	173	94	99	28
24	4.5	3.5	2.2	2.2	2.7	2.0	143	380	164	94	105	28
25	4.4	3.4	1.9	1.8	2.6	2.0	143	387	127	94	106	28
26	3.9	3.5	2.1	1.8	2.5	2.0	146	386	138	93	107	28
27	3.8	3.6	2.3	1.3	2.5	1.7	232	378	140	93	106	28
28	4.4	3.7	2.4	1.9	2.4	1.6	272	401	123	107	106	28
29	4.5	3.7	2.4	1.9	---	1.6	282	472	116	110	105	28
30	3.8	3.7	2.2	1.9	---	1.6	280	537	112	110	104	28
31	2.6	---	1.8	2.3	---	1.6	---	566	---	108	103	---
TOTAL	145.8	84.1	85.9	87.5	68.1	74.05	2,765.8	10,091	8,250	2,742	3,233	1,362
MEAN	4.70	2.80	2.77	2.82	2.43	2.39	92.2	326	275	88.5	104	45.4
MAX	9.3	3.7	4.1	5.5	2.7	3.7	282	566	534	110	108	96
MIN	2.6	1.4	1.4	1.3	1.9	0.15	1.1	186	112	62	99	28
AC-FT	289	167	170	174	135	147	5,490	20,020	16,360	5,440	6,410	2,700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

MEAN	7.83	3.89	7.43	16.1	26.3	48.1	72.4	264	181	84.7	77.1	52.4
MAX	22.1	5.71	17.9	37.2	46.3	80.7	131	641	369	129	120	105
(WY)	(2000)	(2000)	(1999)	(2000)	(1999)	(1999)	(1998)	(1999)	(1999)	(1999)	(1999)	(1999)
MIN	3.69	2.80	2.77	2.82	2.43	2.39	2.67	35.9	45.3	34.5	21.2	14.6
(WY)	(1999)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1998 - 2003

ANNUAL TOTAL	6,756.5		28,989.25		67.9	
ANNUAL MEAN	18.5		79.4		135 1999	
HIGHEST ANNUAL MEAN					18.6 2002	
LOWEST ANNUAL MEAN					1,500 May 1, 1999	
HIGHEST DAILY MEAN	99	Sep 1	566	May 31	0.15	Mar 13, 2003
LOWEST DAILY MEAN	1.2	Apr 16	0.15	Mar 13	1.1	Apr 4, 2003
ANNUAL SEVEN-DAY MINIMUM	1.3	Apr 10	1.1	Apr 4	1,840	Apr 30, 1999
MAXIMUM PEAK FLOW			592	May 31	6.47	Apr 30, 1999
MAXIMUM PEAK STAGE			4.66	May 31		
ANNUAL RUNOFF (AC-FT)	13,400		57,500		49,190	
10 PERCENT EXCEEDS	73		265		139	
50 PERCENT EXCEEDS	3.7		4.7		34	
90 PERCENT EXCEEDS	2.3		1.9		2.8	

e Estimated.

06751490 NORTH FORK CACHE LA POUDE RIVER AT LIVERMORE, CO

LOCATION.--Lat 40°47'15", long 105°15'06", in SW¹/₄SE¹/₄ sec.32, T.10 N., R.70 W., Larimer County, Hydrologic Unit 10190007, on left bank 30 ft downstream from bridge on Colorado State Highway 200, 2.0 mi west of Livermore, and 2.9 mi downstream from Stonewall Creek.

DRAINAGE AREA.--539 mi².

PERIOD OF RECORD.--October 1986 to current year. May 1929 to September 1931, May 1947 to September 1965 (published as "near Livermore", station 06751500); records are not considered equivalent. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06751490

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,715 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow affected by transbasin diversions, storage reservoirs, and irrigation. 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	11	5.6	5.5	3.6	4.1	e4.2	e99	243	433	119	5.3	5.2
2	8.9	4.8	5.4	3.6	4.5	e4.3	136	209	399	108	5.4	3.4
3	6.9	3.9	5.1	e3.7	4.4	e4.4	147	174	368	95	4.6	3.2
4	5.6	3.4	5.1	e4.0	e4.3	e4.6	133	145	358	86	4.7	5.6
5	4.8	3.0	5.3	e5.0	e4.3	e4.8	114	132	374	74	4.0	5.2
6	4.5	2.8	5.3	e6.0	e4.4	e5.2	101	113	327	63	4.2	5.3
7	4.8	2.5	5.2	6.6	e4.4	7.6	87	101	308	31	5.4	6.9
8	4.6	2.5	5.1	6.0	e4.6	6.3	76	103	281	23	5.9	7.0
9	4.7	3.2	5.1	5.6	e4.7	5.6	79	102	220	13	5.6	6.7
10	4.8	3.6	5.1	4.3	e4.8	5.5	97	164	183	8.7	5.2	6.4
11	4.4	3.5	4.6	4.3	e4.4	6.0	115	181	187	7.3	4.8	6.3
12	4.1	3.4	4.3	4.3	e4.4	5.9	139	251	189	6.5	4.9	7.0
13	4.2	3.4	4.1	4.7	4.4	5.8	166	327	186	6.3	4.4	9.7
14	4.3	3.6	4.3	5.0	4.2	5.5	194	309	183	7.7	4.2	9.9
15	4.3	3.4	4.2	4.8	4.4	4.8	161	300	163	7.1	3.8	9.9
16	4.4	3.6	3.8	4.8	4.6	4.7	176	309	137	7.3	4.6	6.3
17	4.5	3.4	3.3	5.1	e4.4	8.3	155	344	123	4.9	4.7	5.3
18	4.6	4.0	3.3	5.0	4.3	12	140	369	152	5.6	5.7	6.2
19	4.6	4.5	3.2	5.0	4.3	16	122	350	185	5.6	5.9	6.1
20	4.8	4.4	3.3	4.8	4.2	9.6	112	313	190	6.0	4.8	5.8
21	4.9	4.5	3.4	4.8	4.3	11	101	286	196	4.9	4.6	5.7
22	5.0	4.4	3.4	4.7	4.4	11	96	265	174	3.9	5.1	5.6
23	5.3	4.3	3.4	4.8	e4.3	14	114	260	184	5.2	4.6	5.7
24	5.6	4.6	3.4	5.3	e4.2	38	166	266	191	5.5	5.1	5.5
25	5.4	4.7	3.4	5.3	e4.0	44	187	276	168	6.0	5.9	6.0
26	5.8	4.6	3.4	4.7	e4.0	82	209	276	154	6.2	6.2	5.4
27	5.1	4.9	3.4	4.4	e4.3	120	232	265	164	6.0	5.0	5.7
28	4.6	5.2	3.4	4.1	e4.1	86	286	272	142	6.0	4.1	6.4
29	5.5	5.6	3.4	3.7	---	65	283	338	132	6.1	3.9	6.9
30	5.7	5.0	3.6	3.7	---	58	272	415	126	6.0	6.4	6.9
31	5.6	---	3.6	3.8	---	e71	---	452	---	5.6	5.8	---
TOTAL	163.3	120.3	128.4	145.5	121.7	731.1	4,495	7,910	6,577	746.4	154.8	187.2
MEAN	5.27	4.01	4.14	4.69	4.35	23.6	150	255	219	24.1	4.99	6.24
MAX	11	5.6	5.5	6.6	4.8	120	286	452	433	119	6.4	9.9
MIN	4.1	2.5	3.2	3.6	4.0	4.2	76	101	123	3.9	3.8	3.2
AC-FT	324	239	255	289	241	1,450	8,920	15,690	13,050	1,480	307	371

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

MEAN	11.6	15.7	11.0	13.0	16.1	20.2	65.8	179	192	26.8	15.9	9.57
MAX	41.0	98.8	34.3	46.2	48.2	55.5	244	904	857	133	52.5	23.6
(WY)	(1998)	(1998)	(1998)	(1999)	(1996)	(1990)	(1990)	(1999)	(1995)	(1995)	(1991)	(1997)
MIN	4.85	4.01	3.58	3.60	4.35	6.35	4.57	5.66	4.97	2.16	2.45	3.92
(WY)	(1989)	(2003)	(1988)	(1988)	(2003)	(1995)	(1995)	(2002)	(2002)	(2002)	(2002)	(2001)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1987 - 2003

ANNUAL TOTAL	1,971.1	21,480.7	
ANNUAL MEAN	5.40	58.9	
HIGHEST ANNUAL MEAN			48.0
LOWEST ANNUAL MEAN			141
HIGHEST DAILY MEAN			6.24
LOWEST DAILY MEAN	21	Sep 2	2,760
ANNUAL SEVEN-DAY MINIMUM	1.3	Jul 20	a1.3
MAXIMUM PEAK FLOW	1.6	Jul 14	3.0
MAXIMUM PEAK STAGE			480
ANNUAL RUNOFF (AC-FT)	3,910		9.71
10 PERCENT EXCEEDS	8.1		201
50 PERCENT EXCEEDS	5.1		5.5
90 PERCENT EXCEEDS	2.3		3.8

e Estimated.

a Also occurred Sep 5, 2002.

06752000 CACHE LA POUVRE RIVER AT MOUTH OF CANYON, NEAR FORT COLLINS, CO

LOCATION.--Lat 40°39'52", long 105°13'26", in NW¼ sec.15, T.8 N., R.70 W., Larimer County, Hydrologic Unit 10190007, on left bank at mouth of canyon, 0.5 mi downstream from headgate of Poudre Valley Canal, 1.2 mi upstream from Lewstone Creek, and 9.3 mi northwest of courthouse in Fort Collins.

DRAINAGE AREA.--1,056 mi².

PERIOD OF RECORD.--June to August 1881, May to July 1883, October 1883 to current year. Monthly discharge only for some periods, published in WSP 1310. Records for March 23 to April 30 and July 4 to August 20, 1883, published in WSP 9, have been found to be unreliable and should not be used. Prior to 1902, published as Cache la Poudre Creek or River at or near Fort Collins. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06752000

REVISED RECORDS.--WSP 1310: 1885-87, 1889, 1892, 1894-96, 1934. WSP 1730: 1960, drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,220 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 transbasin and transmountain diversions (see elsewhere in this report), diversions upstream from station for irrigation of about 50,000 acres, most of which is downstream from station, and diversions for municipal use.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	11	32	e21	e21	e21	49	303	3,010	1,080	383	142
2	45	18	29	e24	e22	e18	74	249	2,620	1,050	366	116
3	42	42	21	e22	e20	e16	73	183	2,300	1,030	404	107
4	47	28	23	e22	e13	e19	83	142	2,050	976	431	121
5	45	29	e19	e23	e12	e15	59	124	1,800	885	334	97
6	44	28	e25	e20	e8.8	e21	42	92	1,580	858	306	86
7	44	24	e22	e23	e17	e20	36	70	1,480	782	283	104
8	44	30	e18	e15	e1.6	e25	35	59	1,330	678	239	150
9	46	28	e26	e15	e30	e24	34	62	1,270	649	244	143
10	38	22	e18	e14	e50	e26	37	142	1,420	663	271	133
11	40	15	e25	e5.0	e32	e26	62	122	1,840	651	256	129
12	37	16	e28	e22	e30	31	85	174	1,640	622	277	126
13	36	18	35	e39	e20	30	85	260	1,300	607	293	132
14	24	30	36	e34	e22	32	136	275	1,340	580	266	145
15	14	23	31	e28	e20	36	290	234	1,390	503	201	141
16	25	14	31	e20	e18	35	367	302	1,430	462	185	135
17	25	14	22	e19	e14	38	344	394	1,470	500	216	128
18	21	31	29	e22	e22	45	316	532	1,570	572	264	123
19	19	21	e18	e21	e25	26	283	595	1,650	622	241	113
20	14	19	e26	e21	e18	4.1	256	503	1,580	650	216	95
21	10	29	e19	e21	e19	43	235	490	1,530	576	203	85
22	12	26	e23	e20	e24	57	238	508	1,480	603	153	77
23	16	26	e25	e20	e23	53	283	635	1,480	575	129	80
24	15	28	e21	e26	e15	53	350	920	1,580	551	127	80
25	22	27	e23	e21	e8.6	44	377	1,040	1,580	486	128	78
26	25	35	e21	e23	e47	47	415	1,260	1,440	517	123	75
27	23	e36	e25	e27	e22	62	438	1,270	1,310	611	118	53
28	19	e35	e23	e35	e26	44	514	1,740	1,070	559	113	48
29	21	35	e23	e17	---	35	529	1,980	1,080	511	101	48
30	14	33	e21	e19	---	33	489	2,680	1,110	508	132	47
31	9.3	---	e22	e23	---	48	---	2,720	---	474	141	---
TOTAL	873.3	771	760	682.0	601.0	1,027.1	6,614	20,060	47,730	20,391	7,144	3,137
MEAN	28.2	25.7	24.5	22.0	21.5	33.1	220	647	1,591	658	230	105
MAX	47	42	36	39	50	62	529	2,720	3,010	1,080	431	150
MIN	9.3	11	18	5.0	1.6	4.1	34	59	1,070	462	101	47
AC-FT	1,730	1,530	1,510	1,350	1,190	2,040	13,120	39,790	94,670	40,450	14,170	6,220

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1881 - 2003, BY WATER YEAR (WY)

	89.5	61.1	44.5	40.9	43.3	53.2	149	918	1,811	777	326	162
MEAN	89.5	61.1	44.5	40.9	43.3	53.2	149	918	1,811	777	326	162
MAX	270	177	125	158	138	149	743	2,807	4,812	2,225	792	443
(WY)	(1943)	(1998)	(1984)	(1984)	(1984)	(1980)	(1900)	(1900)	(1884)	(1983)	(1884)	(1938)
MIN	21.7	8.14	12.6	9.00	10.2	10.6	19.5	160	401	137	61.2	27.3
(WY)	(1995)	(1939)	(1965)	(1930)	(1967)	(1939)	(1991)	(2002)	(2002)	(2002)	(1954)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1881 - 2003

ANNUAL TOTAL	31,552.3	109,790.4	
ANNUAL MEAN	86.4	301	
HIGHEST ANNUAL MEAN			891
LOWEST ANNUAL MEAN			1983
HIGHEST DAILY MEAN	685	Jun 10	89.5
LOWEST DAILY MEAN	9.3	Oct 31	2002
ANNUAL SEVEN-DAY MINIMUM	15	Oct 18	7,550
MAXIMUM PEAK FLOW			Jun 16, 1923
MAXIMUM PEAK STAGE			Nov 20, 1948
ANNUAL RUNOFF (AC-FT)	62,580	217,800	a1.6
10 PERCENT EXCEEDS	218	1,070	3.9
50 PERCENT EXCEEDS	34	48	b21,000
90 PERCENT EXCEEDS	19	18	Jun 1

e Estimated.

a Also occurred Nov 28, 1948, caused by diversion of Poudre Valley Canal, 0.5 mi upstream, and Feb 8, 2003 (flow estimated), due to diversions.

b Maximum discharge determined, caused by failure of Chambers Lake Dam, from reports of State Engineers Office. A greater discharge, but not determined, occurred May 20, 1904.

06752258 CACHE LA POWDRE RIVER AT SHIELDS STREET, AT FORT COLLINS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°36'11", long 105°05'43", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.7 N., R.69 W., Larimer County, Hydrologic Unit 10190007, at Shields Street bridge, 0.8 mi downstream from Larimer-Weld Canal, and 1.0 mi northwest of Fort Collins.

DRAINAGE AREA.--1,119 mi².

PERIOD OF RECORD.--October 1979 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06752258

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)	Specific conductance, wat unfltrd 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)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)
OCT 17...	0845	4.5	10.3	8.4	446	8.5	210	59.1	15.0	--	--	E151	--
NOV 15...	1025	1.1	8.4	7.5	463	6.0	230	61.6	18.2	--	--	172	--
DEC 17...	0845	20	11.2	8.6	428	2.0	210	60.9	13.9	--	--	E146	--
JAN 29...	1320	8.7	12.1	8.6	453	4.0	220	62.9	14.5	0.3	9.74	144	3.53
FEB 27...	0845	7.2	11.4	8.4	456	1.0	220	65.0	14.7	--	--	E163	--
APR 03...	1100	2.9	8.7	7.7	534	10.5	250	67.6	19.1	--	--	145	--
29...	0930	7.5	9.1	8.3	262	12.5	110	29.1	8.86	--	--	88	--
MAY 20...	1220	178	10.2	8.5	128	9.0	51	15.0	3.33	--	--	45	--
JUL 02...	0915	462	8.3	7.8	65	16.0	26	7.58	1.74	--	--	25	--
15...	1345	22	7.9	8.6	126	20.5	50	14.1	3.68	0.3	4.10	46	1.88
AUG 05...	1315	49	8.1	8.3	105	21.5	47	14.0	2.98	--	--	38	--
SEP 17...	1450	29	9.8	8.5	204	17.0	87	25.6	5.69	--	--	71	--

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

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat fltr mg/L (70300)	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)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)
OCT 17...	--	--	--	--	<0.04	<0.022	<0.008	<0.02	<0.04	--	--	--	--
NOV 15...	--	--	--	--	<0.04	<0.022	<0.008	<0.02	<0.04	--	--	--	--
DEC 17...	--	--	--	--	<0.04	0.185	<0.008	<0.02	<0.04	--	--	--	--
JAN 29...	0.43	5.5	88.6	288	<0.04	0.068	<0.008	<0.02	<0.04	2	<2	<0.2	<0.8
FEB 27...	--	--	--	--	<0.04	0.189	<0.008	<0.02	<0.04	--	--	--	--
APR 03...	--	--	--	--	<0.04	0.453	E.005	<0.02	<0.04	--	--	--	--
29...	--	--	--	--	<0.04	0.227	<0.008	<0.02	<0.04	--	--	--	--
MAY 20...	--	--	--	--	<0.04	0.203	<0.008	<0.02	<0.04	--	--	--	--
JUL 02...	--	--	--	--	<0.04	0.052	<0.008	<0.02	<0.04	--	--	--	--
15...	0.2	7.34	12.3	82	<0.04	0.071	<0.008	<0.02	<0.04	13	<2	<0.04	<0.8
AUG 05...	--	--	--	--	<0.015	0.085	<0.008	<0.007	<0.04	--	--	--	--
SEP 17...	--	--	--	--	<0.015	0.022	<0.008	<0.007	<0.04	--	--	--	--

06752258 CACHE LA POUVRE RIVER AT SHIELDS STREET, AT FORT COLLINS, CO—Continued

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

Date	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 17...	1.2	26	130	--	--	--	--	--	<0.3	--
NOV 15...	0.9	14	120	--	--	--	--	--	<0.3	--
DEC 17...	1.1	24	80	--	--	--	--	--	<0.3	--
JAN 29...	1.1	22	160	<1	27	<0.02	<4.0	0.6	<0.3	M
FEB 27...	1.2	24	150	--	--	--	--	--	<0.3	--
APR 03...	1.7	39	170	--	--	--	--	--	<0.3	--
APR 29...	1.6	27	290	--	--	--	--	--	<0.3	--
MAY 20...	1.2	60	1,340	--	--	--	--	--	<0.3	--
JUL 02...	0.7	56	200	--	--	--	--	--	<0.3	--
JUL 15...	1.0	37	130	<0.08	18	<0.02	0.65	<0.5	<0.20	M
AUG 05...	1.2	29	200	--	--	--	--	--	<0.20	--
SEP 17...	0.8	35	80	--	--	--	--	--	<0.20	--

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

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

06752260 CACHE LA POUDE RIVER AT FORT COLLINS, CO

LOCATION.--Lat 40°35'21", long 105°04'09", in SE¹/₄NW¹/₄ sec.12, T.7 N., R.69 W., Larimer County, Hydrologic Unit 10190007, on left bank 100 ft upstream from Lincoln Street Bridge in Fort Collins.

DRAINAGE AREA.--1,127 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1975 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06752260

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,940 ft above NGVD of 1929, from topographic map. Prior to May 22, 1987, at site 300 ft downstream, at different datum. May 22, 1987 to Nov. 10, 1988 at site 4,300 ft upstream, at different datum. Nov. 10, 1988 to Oct. 16, 1996, at site 100 ft upstream, at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, diversion for municipal supply, diversions upstream from station for irrigation, 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	6.3	4.6	9.9	11	11	e5.0	6.2	52	1,310	352	49	73
2	8.3	2.3	18	10	11	3.2	7.1	66	1,050	296	60	29
3	9.4	2.3	17	10	13	2.5	6.0	14	851	286	56	20
4	6.9	2.4	14	10	e11	2.4	6.0	7.5	683	237	91	23
5	7.8	3.3	15	9.3	e9.0	2.3	5.8	4.8	484	147	71	21
6	6.3	2.1	18	9.5	e8.6	2.3	8.3	3.2	263	26	39	21
7	7.5	2.3	16	9.4	8.4	2.3	4.7	2.3	356	16	37	20
8	3.9	3.3	15	11	6.8	2.2	2.3	2.0	329	23	30	28
9	2.2	2.1	12	11	4.7	2.0	1.1	6.2	266	23	65	31
10	2.4	1.8	12	14	4.0	1.6	1.0	114	285	41	73	26
11	2.0	2.1	12	22	5.0	e1.0	1.2	155	550	70	27	20
12	1.5	0.59	11	16	8.1	e1.0	1.9	141	413	72	28	63
13	2.0	0.72	12	12	8.9	e1.0	2.6	171	70	76	23	39
14	2.5	0.87	12	13	9.2	e1.0	2.4	163	76	75	22	61
15	2.0	0.75	13	11	9.7	e1.0	5.1	55	148	33	36	56
16	2.0	0.91	12	9.8	9.6	e1.0	3.9	112	176	51	48	44
17	2.4	1.4	15	11	8.7	e6.0	79	133	247	105	54	34
18	2.2	1.6	12	11	8.2	6.9	148	114	288	119	60	35
19	2.4	1.9	11	10	8.2	19	108	177	397	108	53	25
20	5.3	2.0	16	10	8.0	4.3	105	154	334	136	29	20
21	4.2	2.0	12	10	7.9	9.9	107	214	286	31	20	15
22	7.4	3.0	13	9.5	7.8	8.1	103	221	211	91	53	13
23	4.3	2.4	10	18	7.2	8.1	74	277	223	78	63	12
24	3.8	2.5	11	9.8	7.1	9.0	36	399	314	67	62	10
25	3.6	2.6	15	9.6	e6.0	7.6	18	386	347	60	27	10
26	5.3	2.5	14	9.4	e5.5	11	15	609	260	101	29	8.7
27	2.9	2.4	12	9.3	e5.5	15	14	535	221	153	28	7.8
28	2.3	2.4	8.5	9.6	e5.3	8.8	14	668	314	65	35	7.4
29	2.8	2.3	8.9	9.0	---	6.2	9.2	689	431	24	69	7.4
30	3.4	2.3	12	10	---	5.3	9.9	1,160	376	41	107	7.2
31	3.7	---	12	9.2	---	5.3	---	1,120	---	62	100	---
TOTAL	129.0	63.74	401.3	344.4	223.4	162.3	905.7	7,925.0	11,559	3,065	1,544	787.5
MEAN	4.16	2.12	12.9	11.1	7.98	5.24	30.2	256	385	98.9	49.8	26.2
MAX	9.4	4.6	18	22	13	19	148	1,160	1,310	352	107	73
MIN	1.5	0.59	8.5	9.0	4.0	1.0	1.0	2.0	70	16	20	7.2
AC-FT	256	126	796	683	443	322	1,800	15,720	22,930	6,080	3,060	1,560

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

	25.7	28.6	24.8	31.0	32.5	32.9	99.3	437	872	228	72.1	34.7
MEAN	25.7	28.6	24.8	31.0	32.5	32.9	99.3	437	872	228	72.1	34.7
MAX	182	183	97.3	123	135	136	652	2,720	4,771	1,450	301	207
(WY)	(1998)	(1998)	(1985)	(1984)	(1984)	(1980)	(1983)	(1980)	(1983)	(1983)	(1997)	(1997)
MIN	1.76	1.79	1.91	2.29	1.30	1.91	0.37	14.9	158	34.9	12.8	4.79
(WY)	(2002)	(1978)	(1978)	(1978)	(1987)	(1988)	(1988)	(1976)	(1989)	(2002)	(1988)	(1987)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1975 - 2003

ANNUAL TOTAL	12,192.94	27,110.34	
ANNUAL MEAN	33.4	74.3	162
HIGHEST ANNUAL MEAN			779 1983
LOWEST ANNUAL MEAN			33.3 2002
HIGHEST DAILY MEAN	416 Jun 3	1,310 Jun 1	6,080 Jun 21, 1983
LOWEST DAILY MEAN	0.59 Nov 12	0.59 Nov 12	a0.00 Aug 18, 1987
ANNUAL SEVEN-DAY MINIMUM	0.98 Nov 12	0.98 Nov 12	0.00 Mar 24, 1988
MAXIMUM PEAK FLOW		2,100 May 30	7,710 Apr 30, 1999
MAXIMUM PEAK STAGE		6.42 May 30	10.46 Apr 30, 1999
ANNUAL RUNOFF (AC-FT)	24,180	53,770	117,000
10 PERCENT EXCEEDS	74	229	329
50 PERCENT EXCEEDS	14	12	25
90 PERCENT EXCEEDS	1.9	2.3	2.8

e Estimated.

a Also occurred Aug 19, Sep 4, 18-19, 1987, and many days in 1988.

06752260 CACHE LA POUDDRE RIVER AT FORT COLLINS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1975 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06752260

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)	Specific conductance, wat unfltrd 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)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)
OCT 17...	1030	1.9	10.5	8.3	529	8.5	240	65.8	17.9	--	--	E151	--
NOV 15...	1210	0.87	10.2	8.2	681	7.5	310	86.5	23.2	--	--	242	--
DEC 17...	1020	16	11.3	8.5	468	2.5	230	67.5	15.8	--	--	E155	--
JAN 29...	1155	8.6	12.7	8.6	497	4.5	240	68.2	15.9	0.4	12.9	156	6.78
FEB 27...	1000	8.6	11.6	8.4	521	1.5	250	70.5	17.2	--	--	E178	--
APR 03...	1245	6.2	13.0	8.3	984	12.5	440	114	37.3	--	--	201	--
29...	1030	9.1	10.7	8.1	582	14.5	250	65.1	20.5	--	--	136	--
MAY 20...	1340	163	9.3	8.2	146	9.5	59	17.3	3.90	--	--	49	--
JUL 02...	1115	313	8.5	8.2	70	17.5	28	8.08	1.89	--	--	26	--
15...	1145	31	8.4	8.3	145	20.5	58	16.2	4.27	0.3	5.25	50	3.47
AUG 05...	1200	55	8.4	8.2	117	20.0	51	15.1	3.34	--	--	42	--
SEP 17...	1300	32	9.5	8.3	231	17.5	99	28.7	6.68	--	--	79	--

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

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	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)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)
OCT 17...	--	--	--	--	<0.04	0.224	E.005	<0.02	<0.04	--	--	--	--
NOV 15...	--	--	--	--	<0.04	0.299	0.011	<0.02	<0.04	--	--	--	--
DEC 17...	--	--	--	--	<0.04	0.155	E.004	<0.02	<0.04	--	--	--	--
JAN 29...	0.44	5.4	94.3	311	<0.04	0.064	<0.008	<0.02	<0.04	E1	<2	<0.2	<0.8
FEB 27...	--	--	--	--	<0.04	0.188	<0.008	<0.02	<0.04	--	--	--	--
APR 03...	--	--	--	--	E.03	0.351	0.008	E.01	E.03	--	--	--	--
29...	--	--	--	--	<0.04	0.211	E.005	<0.02	<0.04	--	--	--	--
MAY 20...	--	--	--	--	<0.04	0.216	<0.008	<0.02	<0.04	--	--	--	--
JUL 02...	--	--	--	--	<0.04	0.054	<0.008	<0.02	<0.04	--	--	--	--
15...	0.2	7.67	14.8	85	<0.04	0.095	<0.008	<0.02	<0.04	10	<2	<0.04	<0.8
AUG 05...	--	--	--	--	<0.015	0.099	<0.008	<0.007	<0.04	--	--	--	--
SEP 17...	--	--	--	--	<0.015	0.036	<0.008	<0.007	<0.04	--	--	--	--

PLATTE RIVER BASIN

06752260 CACHE LA POUFRE RIVER AT FORT COLLINS, CO—Continued

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

Date	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 17...	1.3	19	140	--	--	--	--	--	<0.3	--
NOV 15...	1.4	23	160	--	--	--	--	--	<0.3	--
DEC 17...	1.1	25	120	--	--	--	--	--	<0.3	--
JAN 29...	1.2	37	140	<1	32	<0.02	<2.0	0.6	<0.3	1
FEB 27...	1.3	32	170	--	--	--	--	--	<0.3	--
APR 03...	2.2	51	320	--	--	--	--	--	<0.3	--
APR 29...	2.6	31	300	--	--	--	--	--	<0.3	--
MAY 20...	1.2	58	1,830	--	--	--	--	--	<0.3	--
JUL 02...	0.7	54	190	--	--	--	--	--	<0.3	--
JUL 15...	0.9	43	170	<0.08	24	<0.02	0.70	<0.5	<0.20	1
AUG 05...	1.1	31	200	--	--	--	--	--	<0.20	--
SEP 17...	0.8	46	100	--	--	--	--	--	<0.20	--

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

06752270 CACHE LA POUDE RIVER BELOW FORT COLLINS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°34'01", long 105°01'36", in NW¼NE¼ sec.20, T.7 N., R.68 W., Larimer County, Hydrologic Unit 10190007, 1.4 mi west of Interstate 25 on Prospect Street in Fort Collins.

DRAINAGE AREA.--1,240 mi².

PERIOD OF RECORD.--January 1978 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06752270

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)	Specific conductance, wat unfltrd 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)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)
OCT 17...	1235	9.0	11.5	8.7	803	10.0	350	95.1	26.8	--	--	E200	--
NOV 15...	1410	3.1	14.4	8.6	1,230	8.0	590	159	47.7	--	--	233	--
DEC 17...	1200	3.5	13.4	8.2	1,120	3.5	550	149	42.3	--	--	E191	--
JAN 29...	1035	3.3	11.4	8.5	1,110	4.0	550	150	41.5	0.8	45.5	261	23.1
FEB 27...	1100	3.2	12.2	8.5	1,210	3.5	570	152	46.4	--	--	E225	--
APR 03...	1405	6.7	13.4	8.1	1,180	13.0	550	148	44.0	--	--	220	--
29...	1120	6.4	12.8	8.4	1,190	15.5	560	151	44.0	--	--	228	--
MAY 20...	1035	41	9.5	8.5	484	10.5	200	56.1	15.4	--	--	103	--
JUL 02...	1310	336	8.5	8.2	130	18.0	51	14.5	3.50	--	--	36	--
15...	1545	42	8.7	8.6	355	22.5	150	39.8	11.2	0.5	14.2	87	8.71
AUG 05...	1045	83	9.0	8.5	205	20.5	88	25.1	6.15	--	--	56	--
SEP 17...	1100	44	12.3	8.8	399	16.6	36	10.5	2.25	--	--	105	--

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

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat fltrd mg/L (70300)	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)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)
OCT 17...	--	--	--	--	<0.04	2.99	0.026	0.68	0.67	--	--	--	--
NOV 15...	--	--	--	--	<0.04	1.06	0.014	0.02	0.04	--	--	--	--
DEC 17...	--	--	--	--	E.03	1.28	0.012	E.01	<0.04	--	--	--	--
JAN 29...	0.77	9.3	322	824	<0.04	1.35	0.013	<0.02	<0.04	<2	<2	<0.2	<0.8
FEB 27...	--	--	--	--	<0.04	1.11	E.005	<0.02	<0.04	--	--	--	--
APR 03...	--	--	--	--	<0.04	1.12	0.015	<0.02	<0.04	--	--	--	--
29...	--	--	--	--	<0.04	0.984	0.020	<0.02	<0.04	--	--	--	--
MAY 20...	--	--	--	--	<0.04	0.514	E.006	E.01	E.02	--	--	--	--
JUL 02...	--	--	--	--	<0.04	0.165	<0.008	E.01	E.02	--	--	--	--
15...	0.3	8.29	74.2	223	<0.04	0.539	E.005	0.06	0.07	11	<2	<0.04	<0.8
AUG 05...	--	--	--	--	E.010	0.299	E.005	0.038	0.04	--	--	--	--
SEP 17...	--	--	--	--	<0.015	0.704	E.006	0.215	0.23	--	--	--	--

PLATTE RIVER BASIN

06752270 CACHE LA POUDDRE RIVER BELOW FORT COLLINS, CO—Continued

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

Date	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 17...	3.3	35	120	--	--	--	--	--	<0.3	--
NOV 15...	1.5	24	130	--	--	--	--	--	<0.3	--
DEC 17...	2.0	14	140	--	--	--	--	--	<0.5	--
JAN 29...	1.8	15	160	<1	50	<0.02	8.3	4.4	<0.3	2
FEB 27...	2.5	15	140	--	--	--	--	--	<0.3	--
APR 03...	1.9	14	360	--	--	--	--	--	<0.3	--
APR 29...	3.3	17	270	--	--	--	--	--	<0.3	--
MAY 20...	2.1	50	390	--	--	--	--	--	<0.3	--
JUL 02...	0.8	52	250	--	--	--	--	--	<0.3	--
JUL 15...	1.2	31	160	E.05	21	<0.02	1.53	1.0	<0.20	2
AUG 05...	1.2	26	280	--	--	--	--	--	<0.20	--
SEP 17...	0.4	--	160	--	--	--	--	--	<0.20	--

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

06752280 CACHE LA POUDDRE RIVER ABOVE BOXELDER CREEK NEAR TIMNATH, CO

LOCATION.--Lat 40 33'07", long 105 00'39", in NE¹/₄NW¹/₄ sec.28, T.7 N., R.68 W., Larimer County, Hydrologic Unit 10190007, on left bank 4,000 ft upstream from Boxelder Creek, 2.0 mi upstream from Interstate Highway 25 bridge, and 3.8 mi southeast of intersection of College Avenue and Prospect Street in Fort Collins.

DRAINAGE AREA.--1,245 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06752280

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,860 ft above NGVD of 1929, from topographic map. Prior to March 24, 1994, at site 1,900 ft downstream at different datum.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, diversion for municipal supply, diversions upstream from station for irrigation, 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	1.2	2.0	1.8	1.8	2.3	2.3	5.4	4.8	870	313	17	65
2	1.8	1.6	2.1	1.8	2.7	2.0	5.0	4.6	729	273	23	11
3	2.1	1.4	2.2	1.8	2.7	2.2	4.6	4.3	573	257	21	2.4
4	2.7	1.3	2.3	1.9	2.3	2.3	4.5	3.8	462	199	31	e1.6
5	1.5	1.1	2.2	1.8	2.3	2.2	4.5	3.5	338	123	30	e2.1
6	1.3	1.2	2.3	1.9	2.1	2.1	4.6	2.4	241	24	e1.9	e1.2
7	1.3	1.6	2.1	1.8	1.9	2.3	4.6	2.3	301	9.2	e0.61	e1.3
8	1.5	1.7	2.3	2.1	1.9	2.3	4.1	2.2	291	2.6	e0.59	e4.4
9	1.3	1.6	2.3	2.3	2.1	2.3	3.9	2.4	228	0.70	10	11
10	1.3	1.9	2.3	2.3	2.0	2.4	3.9	35	233	3.0	16	7.7
11	1.5	1.6	2.3	2.3	1.8	2.8	4.1	22	426	23	e4.3	2.1
12	1.7	1.7	2.3	2.6	1.9	3.0	4.0	9.9	354	30	e0.74	32
13	1.8	1.8	2.2	2.6	1.8	2.9	3.7	8.2	49	36	e0.74	17
14	1.9	1.8	2.3	2.6	1.9	2.9	3.9	25	42	41	e0.74	38
15	2.0	1.8	2.3	2.9	1.9	2.9	3.9	3.5	108	18	e3.3	41
16	2.2	1.8	2.3	2.6	2.3	3.2	3.9	3.5	115	14	9.9	25
17	2.1	1.7	2.3	2.8	2.1	3.7	11	10	211	50	12	14
18	2.3	1.7	2.2	2.7	2.2	8.1	50	9.6	238	80	28	18
19	2.2	2.0	2.1	2.7	2.3	7.5	20	37	338	68	16	8.8
20	2.4	2.0	2.3	2.6	2.2	4.9	18	27	293	104	e2.1	4.4
21	2.4	2.1	2.3	2.6	2.2	9.3	15	44	256	27	e0.92	e1.5
22	2.1	1.8	2.3	2.6	2.3	11	10	69	169	47	e11	e1.4
23	2.2	2.0	2.1	2.5	2.2	10	29	107	180	42	20	e1.3
24	2.3	2.0	1.9	2.6	2.2	11	29	201	259	31	14	e1.2
25	2.4	2.0	1.9	2.6	2.1	8.1	8.5	177	296	25	e8.4	e1.1
26	2.3	1.7	1.7	2.5	2.2	8.7	6.4	366	236	47	e1.1	e1.0
27	2.1	1.6	1.8	2.6	2.2	9.3	5.6	306	192	98	e0.92	e1.0
28	1.8	1.8	1.8	2.5	2.1	6.8	5.4	423	231	38	e0.93	e1.0
29	2.4	1.7	1.7	2.6	---	6.1	5.1	431	342	16	23	e1.0
30	2.1	1.8	1.8	2.7	---	5.6	4.8	736	332	7.4	136	e1.0
31	2.5	---	1.8	2.4	---	5.5	---	788	---	18	136	---
TOTAL	60.7	51.8	65.6	74.1	60.2	155.7	286.4	3,869.0	8,933	2,064.90	581.19	319.5
MEAN	1.96	1.73	2.12	2.39	2.15	5.02	9.55	125	298	66.6	18.7	10.7
MAX	2.7	2.1	2.3	2.9	2.7	11	50	788	870	313	136	65
MIN	1.2	1.1	1.7	1.8	1.8	2.0	3.7	2.2	42	0.70	0.59	1.0
AC-FT	120	103	130	147	119	309	568	7,670	17,720	4,100	1,150	634

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

MEAN	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003
MEAN	21.0	30.9	25.9	26.7	26.0	28.6	102	416	830	191	48.3	28.9
MAX	162	179	114	139	156	159	633	2,729	4,430	1,288	278	182
(WY)	(1998)	(1998)	(1998)	(1984)	(1984)	(1980)	(1980)	(1980)	(1983)	(1983)	(1997)	(1997)
MIN	1.96	1.73	2.02	2.39	2.15	2.59	1.93	8.66	85.8	5.94	4.27	1.99
(WY)	(2003)	(2003)	(2002)	(2003)	(2003)	(2002)	(2002)	(1982)	(1989)	(1987)	(1987)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1980 - 2003

ANNUAL TOTAL	5,680.92	16,522.09	
ANNUAL MEAN	15.6	45.3	
HIGHEST ANNUAL MEAN			700 1983
LOWEST ANNUAL MEAN			15.8 2002
HIGHEST DAILY MEAN	326 Jun 4	870 Jun 1	5,750 May 1, 1999
LOWEST DAILY MEAN	0.03 Aug 12	e0.59 Aug 8	0.03 Aug 12, 2002
ANNUAL SEVEN-DAY MINIMUM	0.34 Aug 15	e1.0 Sep 24	0.34 Aug 15, 2002
MAXIMUM PEAK FLOW		1,190 May 30	a7,200 May 1, 1999
MAXIMUM PEAK STAGE		7.38 May 30	b11.13 May 1, 1999
ANNUAL RUNOFF (AC-FT)	11,270	32,770	
10 PERCENT EXCEEDS	20	178	267
50 PERCENT EXCEEDS	2.3	2.6	10
90 PERCENT EXCEEDS	1.3	1.6	3.5

e Estimated.

a From slope-area measurement of peak flow.

b From highwater marks.

06752280 CACHE LA POUDE RIVER ABOVE BOXELDER CREEK NEAR TIMNATH, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06752280

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 unfltrd 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)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)
OCT 17...	1415	2.0	11.0	8.3	1,780	11.5	880	227	76.8	--	--	E154	--
NOV 15...	1545	1.9	11.8	8.3	1,830	6.0	990	258	84.5	--	--	222	--
DEC 17...	1245	2.4	11.8	8.4	1,770	3.0	950	250	79.5	--	--	E187	--
JAN 29...	0920	2.6	10.8	8.3	1,570	1.5	800	212	65.0	1	71.6	226	24.3
FEB 27...	1225	2.0	12.2	8.4	1,690	2.5	870	227	73.8	--	--	E224	--
APR 03...	0920	4.5	8.8	7.7	1,860	9.5	920	231	84.2	--	--	209	--
29...	1235	4.9	11.2	8.2	1,810	17.5	880	227	76.9	--	--	204	--
MAY 20...	0900	6.9	8.0	8.3	760	10.0	330	90.2	26.2	--	--	112	--
JUL 02...	1445	293	8.1	8.3	149	20.0	60	16.8	4.25	--	--	39	--
15...	0915	18	--	8.5	457	20.5	200	52.2	15.9	0.6	20.0	85	8.58
AUG 05...	0845	33	7.7	8.2	293	20.0	120	34.0	9.10	--	--	63	--
SEP 17...	0915	12	--	8.2	575	15.0	240	63.9	19.6	--	--	117	--

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

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	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)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)
OCT 17...	--	--	--	--	<0.04	0.582	0.015	<0.02	<0.04	--	--	--	--
NOV 15...	--	--	--	--	<0.04	1.10	0.021	<0.02	<0.04	--	--	--	--
DEC 17...	--	--	--	--	0.04	1.37	0.018	<0.02	<0.04	--	--	--	--
JAN 29...	0.95	8.1	662	1,310	E.03	1.24	0.016	<0.02	<0.04	<2	<2	<0.2	<0.8
FEB 27...	--	--	--	--	0.06	1.29	0.010	<0.02	E.03	--	--	--	--
APR 03...	--	--	--	--	E.03	0.804	0.017	<0.02	<0.04	--	--	--	--
29...	--	--	--	--	0.05	0.576	0.019	<0.02	E.02	--	--	--	--
MAY 20...	--	--	--	--	0.07	0.403	0.010	E.01	<0.04	--	--	--	--
JUL 02...	--	--	--	--	<0.04	0.156	<0.008	E.01	E.03	--	--	--	--
15...	0.4	8.79	115	288	<0.04	0.309	0.010	0.04	0.06	8	<2	<0.04	<0.8
AUG 05...	--	--	--	--	0.015	0.321	0.009	0.041	0.04	--	--	--	--
SEP 17...	--	--	--	--	<0.015	0.587	0.009	0.114	0.12	--	--	--	--

06752280 CACHE LA POUFRE RIVER ABOVE BOXELDER CREEK NEAR TIMNATH, CO—Continued

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

Date	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 17...	4.2	21	110	--	--	--	--	--	<0.3	--
NOV 15...	2.7	26	80	--	--	--	--	--	<0.3	--
DEC 17...	3.4	14	90	--	--	--	--	--	<0.3	--
JAN 29...	2.6	E9	90	<1	37	<0.02	<2.0	7.1	<0.3	2
FEB 27...	4.6	14	140	--	--	--	--	--	<0.3	--
APR 03...	5.1	45	290	--	--	--	--	--	<0.5	--
APR 29...	5.8	42	390	--	--	--	--	--	<0.3	--
MAY 20...	3.3	49	360	--	--	--	--	--	<0.3	--
JUL 02...	0.8	56	310	--	--	--	--	--	<0.3	--
JUL 15...	1.1	32	460	<0.08	49	<0.02	2.02	1.2	<0.20	1
AUG 05...	1.2	26	380	--	--	--	--	--	<0.20	--
SEP 17...	1.2	41	220	--	--	--	--	--	<0.20	--

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

E -- Estimated laboratory analysis value.

06753990 LONETREE CREEK NEAR GREELEY, CO

LOCATION.--Lat 40°26'33", Long 104°35'18", in NE¹/₄NW¹/₄ sec.31, T.6 N., R.64 W., Weld County, Hydrologic Unit 10190008, on right bank 50 ft downstream from bridge on Weld County Road 62 1/2, 5.5 mi east of Greeley.

DRAINAGE AREA.--567 mi².

PERIOD OF RECORD.--March 1993 to September 1995, April 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=06753990

REVISED RECORDS.--WDR CO-95-1: 1994.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,630 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Natural flow effected by diversions upstream to New Poudre Irrigation Company. Water-quality data has been collected at this site as part of the South Platte River Basin National Water-Quality Assessment Program and is available at http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06753990

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10	2.5	1.9	6.9
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26	2.5	1.6	4.7
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37	2.3	1.3	4.1
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33	3.1	1.0	3.2
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30	3.2	1.8	2.6
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11	3.1	2.2	2.5
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21	3.1	2.3	2.5
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	2.8	2.3	2.5
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12	2.8	2.4	2.2
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.9	13	3.1	2.6	1.9
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	10	2.8	2.5	1.7
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.5	2.1	2.9	1.8
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.8	2.2	3.2	1.6
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.8	2.0	3.3	1.6
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.6	1.5	2.9	1.7
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	1.2	2.8	1.5
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23	1.3	2.5	1.5
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56	1.1	2.3	1.2
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46	1.3	2.3	0.98
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	45	1.5	2.2	0.88
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15	41	1.3	2.0	0.73
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	29	1.8	2.1	0.66
23	0.00	0.00	0.00	0.00	0.00	0.00	0.46	2.1	26	2.5	1.9	0.57
24	0.00	0.00	0.00	0.00	0.00	0.00	10	6.0	18	2.9	e1.3	0.46
25	0.00	0.00	0.00	0.00	0.00	0.00	0.01	8.0	25	2.5	e1.0	0.82
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	28	2.1	e1.0	0.87
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.5	10	2.0	e1.0	0.71
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.8	6.5	1.6	e0.95	0.70
29	0.00	0.00	0.00	0.00	---	0.00	0.00	5.1	4.8	1.7	e1.7	0.67
30	0.00	0.00	0.00	0.00	---	0.00	0.00	2.9	4.3	1.9	14	0.36
31	0.00	---	0.00	0.00	---	0.00	---	5.3	---	2.0	11	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	10.47	85.55	619.7	67.8	84.25	54.11
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.35	2.76	20.7	2.19	2.72	1.80
MAX	0.00	0.00	0.00	0.00	0.00	0.00	10	15	56	3.2	14	6.9
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.3	1.1	0.95	0.36
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	21	170	1,230	134	167	107

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	4.89	5.15	3.99	3.44	3.03	3.10	3.02	15.0	23.5	19.9	5.50	9.88
MAX	11.8	9.97	8.10	6.79	6.52	7.27	5.63	35.0	52.2	70.7	12.7	28.7
(WY)	(1994)	(1994)	(1994)	(1994)	(1994)	(1994)	(1993)	(1993)	(1995)	(1995)	(1995)	(1995)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.35	0.30	3.44	2.19	0.099	0.000
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2003)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1993 - 2003

ANNUAL TOTAL	450.79	921.88	
ANNUAL MEAN	1.24	2.53	7.96
HIGHEST ANNUAL MEAN			17.9 1995
LOWEST ANNUAL MEAN			1.81 2002
HIGHEST DAILY MEAN	e167 Jul 6	56 Jun 18	250 May 29, 1993
LOWEST DAILY MEAN	e,a0.00 May 8	0.00 Oct 1	a0.00 May 8, 2002
ANNUAL SEVEN-DAY MINIMUM	0.00 Aug 30	0.00 Oct 1	0.00 Aug 30, 2002
MAXIMUM PEAK FLOW		152 Jun 17	b429 May 28, 1993
MAXIMUM PEAK STAGE		7.54 Jun 17	10.85 May 28, 1993
ANNUAL RUNOFF (AC-FT)	894	1,830	5,770
10 PERCENT EXCEEDS	1.6	6.6	14
50 PERCENT EXCEEDS	0.25	0.00	3.6
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated.

a No flow many days in 2002, 2003.

b On basis of indirect measurement of peak flow.

06754000 SOUTH PLATTE RIVER NEAR KERSEY, CO

LOCATION (REVISED).--Lat 40°24'42", long 104°33'42", in NW¼SW¼ sec.9, T.5 N., R.64W., Weld County, Hydrologic Unit 10190003, on downstream side of bridge on State Highway 37, 1.9 mi north of railroad in Kersey, and 2.5 mi downstream from Cache la Poudre River.

DRAINAGE AREA.--9,659 mi² (revised).

PERIOD OF RECORD.--May 1901 to December 1903, March 1905 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "at Kersey" 1901-03. Statistical summary computed for 1976 to current year, subsequent to completion of Chatfield Dam. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06754000

REVISED RECORDS.--WSP 1310: 1902, 1906, 1935(M). WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,575.77 ft above NGVD of 1929. See WSP 1710 or 1730 for history of changes prior to July 3, 1935.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 888,000 acres, and return flow from irrigated areas. Water-quality data has been collected at this site as part of the South Platte River Basin National Water-Quality Assessment Program and is available at http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06754000

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

**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	187	574	482	502	598	586	580	782	4,040	392	224	2,350
2	190	563	476	477	585	604	551	748	4,330	389	199	1,160
3	346	558	476	465	589	624	534	581	3,790	359	194	873
4	492	567	464	477	628	634	502	500	3,050	341	189	808
5	455	583	464	466	674	614	463	429	2,730	268	178	678
6	369	572	450	465	634	618	414	354	2,470	201	173	571
7	322	569	442	466	595	603	392	274	2,200	194	160	509
8	321	566	436	467	593	581	378	218	2,480	221	166	488
9	300	558	437	454	614	546	345	204	1,730	209	161	501
10	293	559	435	444	599	527	337	671	1,190	158	243	469
11	285	561	423	433	604	515	376	e2,880	1,090	159	195	443
12	265	563	430	437	601	507	390	2,440	1,240	159	171	424
13	265	562	444	456	593	499	412	1,620	1,310	160	184	427
14	271	556	440	470	603	481	378	1,150	1,240	155	169	425
15	279	540	440	514	606	449	288	943	1,210	141	156	429
16	297	535	449	510	610	434	366	869	1,210	145	147	422
17	307	537	455	522	620	442	485	1,030	1,200	149	142	411
18	326	535	468	526	582	553	518	845	1,490	144	141	457
19	300	530	454	531	574	e760	486	815	2,520	173	163	470
20	286	526	449	541	563	e820	636	850	2,070	336	195	444
21	280	518	459	539	548	916	600	789	1,730	229	161	439
22	290	515	455	540	536	926	481	678	1,460	184	154	435
23	311	516	456	521	538	1,040	703	538	1,200	171	141	432
24	329	505	449	549	530	e1,440	e1,240	442	1,030	174	137	413
25	346	518	430	552	542	e1,370	e2,400	505	916	163	132	382
26	362	535	410	554	582	e1,090	e1,290	513	871	155	144	357
27	416	552	453	566	587	e1,080	871	587	687	167	142	341
28	391	546	510	583	592	e1,150	711	645	485	184	137	325
29	451	551	513	595	---	e980	602	1,080	370	217	157	301
30	510	515	503	583	---	e820	649	1,660	352	205	307	279
31	596	---	508	591	---	e680	---	2,830	---	290	1,840	---
TOTAL	10,438	16,385	14,160	15,796	16,520	22,889	18,378	28,470	51,691	6,592	7,002	16,463
MEAN	337	546	457	510	590	738	613	918	1,723	213	226	549
MAX	596	583	513	595	674	1,440	2,400	2,880	4,330	392	1,840	2,350
MIN	187	505	410	433	530	434	288	204	352	141	132	279
AC-FT	20,700	32,500	28,090	31,330	32,770	45,400	36,450	56,470	102,500	13,080	13,890	32,650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	862	930	842	824	840	913	1,046	2,348	3,101	977	795	776																	
MAX	3,388	2,585	1,337	1,434	1,641	1,852	3,894	13,060	14,520	5,784	2,783	2,079																	
(WY)	(1985)	(1985)	(1985)	(1984)	(1984)	(1983)	(1983)	(1980)	(1983)	(1983)	(1984)	(1984)																	
MIN	337	488	457	503	540	473	144	199	113	115	85.5	156																	
(WY)	(2003)	(1978)	(2003)	(1982)	(1978)	(1982)	(1982)	(2002)	(1977)	(2002)	(2002)	(2002)																	

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1976 - 2003

ANNUAL TOTAL	124,608	224,784	
ANNUAL MEAN	341	616	a1,187
HIGHEST ANNUAL MEAN			3,631
LOWEST ANNUAL MEAN			395
HIGHEST DAILY MEAN	1,530	May 25	4,330
LOWEST DAILY MEAN	57	May 5	132
ANNUAL SEVEN-DAY MINIMUM	66	May 3	141
MAXIMUM PEAK FLOW			4,690
MAXIMUM PEAK STAGE			7.14
ANNUAL RUNOFF (AC-FT)	247,200	445,900	860,300
10 PERCENT EXCEEDS	622	1,150	1,950
50 PERCENT EXCEEDS	300	501	751
90 PERCENT EXCEEDS	77	182	285

e Estimated.

a Average discharge for 71 years (water years 1902-03, 1906-74), 777 ft³/s; 562,900 acre-ft/yr, prior to completion of Chatfield Dam.

b Maximum daily discharge for period of record, 31,000 ft³/s, Jun 7, 1921.

c Minimum daily discharge for period of record, 28 ft³/s, Apr 30, 1955.

d Maximum discharge and stage for period of record, 31,500 ft³/s, May 8, 1973, gage height, 11.73 ft.

f Maximum gage height for statistical period, 11.50 ft, May 1, 1999.

06758500 SOUTH PLATTE RIVER NEAR WELDONA, CO

LOCATION.--Lat 40°19'19", long 103°55'17", in SW¹/₄SW¹/₄ sec.7, T.4 N., R.58 W., Morgan County, Hydrologic Unit 10190003, on left bank 500 ft downstream from bridge on State Highway 144, 2.8 mi southeast of Weldona, and 4.2 mi upstream from Bijou Creek.

DRAINAGE AREA.--13,190 mi² (revised).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to current year. Statistical summary computed for 1976 to current year, subsequent to completion of Chatfield Dam. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06758500

REVISED RECORDS.--WSP 1710: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,307.80 ft above NGVD of 1929. Prior to May 2, 1991, gage located 100 ft upstream, at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, ground-water withdrawals, and diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	163	614	133	152	214	226	523	404	1,220	183	189	1,110
2	198	321	123	148	216	220	530	537	2,060	235	176	1,440
3	208	194	114	146	216	217	526	509	2,220	320	142	446
4	202	124	108	142	216	223	506	373	1,810	281	176	464
5	314	131	99	147	219	217	494	247	1,460	265	233	417
6	337	210	99	146	216	220	443	188	1,480	220	244	383
7	282	138	96	146	214	218	364	154	1,230	163	220	408
8	248	106	89	147	229	217	299	177	930	145	273	408
9	232	105	84	147	244	217	217	220	1,060	190	262	420
10	238	93	81	144	216	216	218	301	785	191	252	457
11	256	91	78	152	211	218	227	880	590	162	282	439
12	254	114	72	146	213	228	227	1,880	676	148	297	409
13	240	113	68	142	226	237	222	1,270	846	170	297	366
14	242	101	68	143	227	e258	219	998	881	221	292	319
15	249	96	68	142	223	253	202	960	818	243	274	333
16	269	90	68	143	222	249	166	944	789	221	258	338
17	284	90	68	146	218	244	212	924	802	215	252	331
18	296	90	68	146	216	200	324	1,020	930	206	244	318
19	318	115	67	147	216	191	391	868	1,000	205	253	322
20	330	148	73	145	215	345	367	861	1,010	198	287	291
21	345	142	68	140	213	401	427	924	1,030	244	292	278
22	374	136	67	175	214	314	420	829	807	233	291	271
23	383	131	66	239	216	464	302	564	676	265	211	255
24	408	133	75	213	207	753	502	479	690	301	170	224
25	419	138	76	205	254	852	1,080	392	766	297	154	210
26	430	142	123	205	280	733	1,230	361	768	285	158	194
27	476	141	188	209	296	524	745	380	648	270	154	172
28	467	142	149	213	241	500	414	366	369	244	161	158
29	520	143	80	213	---	504	357	388	168	213	165	153
30	556	141	57	214	---	483	348	638	194	255	175	156
31	573	---	138	213	---	444	---	912	---	193	258	---
TOTAL	10,111	4,473	2,811	5,156	6,308	10,586	12,502	19,948	28,713	6,982	7,092	11,490
MEAN	326	149	90.7	166	225	341	417	643	957	225	229	383
MAX	573	614	188	239	296	852	1,230	1,880	2,220	320	297	1,440
MIN	163	90	57	140	207	191	166	154	168	145	142	153
AC-FT	20,060	8,870	5,580	10,230	12,510	21,000	24,800	39,570	56,950	13,850	14,070	22,790

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

MEAN	541	499	575	711	662	521	753	1,726	2,288	744	620	651
MAX	3,119	2,298	1,266	1,443	1,562	1,494	3,226	10,130	12,310	5,121	2,208	2,118
(WY)	(1985)	(1985)	(1986)	(1984)	(1984)	(1983)	(1983)	(1980)	(1983)	(1995)	(1984)	(1984)
MIN	134	100	90.7	166	225	132	119	183	101	173	77.5	107
(WY)	(1977)	(1977)	(2003)	(2003)	(2003)	(1978)	(1982)	(1981)	(1977)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1976 - 2003

ANNUAL TOTAL	73,959	126,172	
ANNUAL MEAN	203	346	a857
HIGHEST ANNUAL MEAN			2,995
LOWEST ANNUAL MEAN			229
HIGHEST DAILY MEAN	1,040	2,220	Jun 3
LOWEST DAILY MEAN	28	57	Dec 30
ANNUAL SEVEN-DAY MINIMUM	48	68	Dec 13
MAXIMUM PEAK FLOW		2,330	Jun 3
MAXIMUM PEAK STAGE		4.75	Jun 3
ANNUAL RUNOFF (AC-FT)	146,700	250,300	620,800
10 PERCENT EXCEEDS	446	794	1,500
50 PERCENT EXCEEDS	153	232	456
90 PERCENT EXCEEDS	70	115	150

e Estimated.

a Average discharge for 22 years (water years 1953-74), 572 ft³/s; 414,400 acre-ft/yr, prior to completion of Chatfield Dam.

b Maximum daily discharge for period of record, 20,800 ft³/s, May 9, 1973.

c Also occurred Apr 14, 2002.

d Maximum discharge and stage for period of record, 26,800 ft³/s, May 8, 1973, gage height, 11.68 ft, from rating curve extended above 16,000 ft³/s.

06758500 SOUTH PLATTE RIVER NEAR WELDONA, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1967 to September 1968, October 1971 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06758500

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)	Specific conductance, wat unfltrd 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 unfltrd fixed end pt, lab, mg/L as CaCO3 (90410)
DEC 16...	1045	52	14.4	8.6	1,660	4.0	620	155	55.9	7.17	3	151	E248
APR 04...	1020	507	11.7	8.4	1,460	10.0	470	113	44.6	7.47	2	121	218
SEP 05...	0940	335	7.9	8.2	1,360	18.5	460	114	42.0	8.29	2	119	218

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 fltr 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)
DEC 16...	81.9	1.03	14.0	534	--	--	--	1,230	0.40	E.012	4.24	0.037	0.104
APR 04...	90.7	1.02	11.0	401	948	1.39	1,400	1,020	0.84	0.024	5.41	0.015	0.450
SEP 05...	75.3	1.0	13.1	378	901	1.32	875	967	0.86	E.014	3.79	0.015	0.293

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)	Boron, water, fltrd, ug/L (01020)	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)
DEC 16...	0.113	0.137	E6	43.4	<0.5	293	<0.2	<0.8	0.975	3.0	<10	0.21	37.9
APR 04...	0.47	0.62	E8	36.3	<0.5	246	E.2	<0.8	1.01	3.8	<10	0.25	31.8
SEP 05...	0.33	0.41	>320	41.9	<0.4	242	<0.2	<0.8	0.889	5.6	--	0.28	31.9

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

Date	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)
DEC 16...	36.4	4.9	5.83	4	<0.2	1,610	1.6	5
APR 04...	14.5	7.6	3.56	3	<0.2	1,330	2.8	8
SEP 05...	40.1	8.4	3.85	3	<0.2	1,290	3.3	7

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

06759500 SOUTH PLATTE RIVER AT FORT MORGAN, CO

LOCATION.--Lat 40°16'07"(revised), long 103°47'56", in SW ¼ NE ¼ sec.31, T.4 N., R.57 W., Morgan County, Hydrologic Unit 10190012, on right bank 0.1 mi downstream from bridge on State Highway 52, 0.3 mi north of Interstate Highway 76, and 0.7 mi north of Fort Morgan.

DRAINAGE AREA.--14,627 mi² (revised).

PERIOD OF RECORD.--November 1943 to September 1958, December 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=06759500

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,260 ft above NGVD of 1929, from topographic map. Prior to Dec. 7, 2001, at site 0.1 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, ground-water withdrawals, and return flow from irrigated areas. 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 OUTSIDE PERIOD OF RECORD.--Maximum flood known, 84,300 ft³/s, May 31, 1935, by slope-area determination of peak flow 1 mi upstream; flood came principally from Bijou Creek.

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	75	851	186	215	266	274	531	232	860	148	149	600
2	126	601	172	216	268	265	560	369	1,920	192	135	1,720
3	156	350	156	219	256	256	569	581	2,380	249	108	471
4	159	214	146	218	249	240	544	487	1,980	229	119	373
5	234	185	140	217	248	241	531	339	1,540	210	167	337
6	326	295	139	216	245	244	490	263	1,520	172	163	313
7	259	258	139	215	236	263	399	84	1,310	134	137	334
8	202	163	135	217	244	260	335	64	905	131	173	345
9	177	160	131	219	281	257	303	96	1,040	141	174	352
10	180	141	129	201	263	255	288	218	801	121	171	370
11	213	131	128	195	248	255	286	617	571	107	191	369
12	212	144	124	207	251	287	261	1,850	574	103	207	347
13	222	150	119	219	267	292	255	1,300	704	106	208	308
14	239	139	121	222	270	304	236	910	777	138	206	271
15	252	134	120	224	274	296	191	789	708	161	202	271
16	266	127	118	197	283	301	195	827	740	146	207	288
17	294	125	120	218	266	287	193	754	742	134	201	293
18	311	127	119	218	270	279	247	909	828	129	191	269
19	344	132	117	219	286	253	322	713	897	122	196	286
20	365	180	107	216	286	329	311	725	972	117	215	265
21	376	173	119	214	276	482	337	804	980	150	199	242
22	514	171	120	217	282	356	366	768	781	150	207	238
23	565	170	113	246	254	454	353	479	611	186	176	213
24	534	173	110	255	235	740	418	333	540	210	164	165
25	510	179	105	260	270	843	989	264	601	209	148	127
26	499	173	126	259	316	897	1,440	216	579	199	128	111
27	525	182	219	262	355	664	874	209	490	233	123	111
28	543	192	218	263	296	578	379	199	286	196	122	100
29	661	196	163	259	---	571	290	211	140	170	127	100
30	723	193	129	257	---	502	235	319	144	200	139	105
31	770	---	174	259	---	462	---	565	---	181	161	---
TOTAL	10,832	6,409	4,262	7,039	7,541	11,987	12,728	16,494	26,921	5,074	5,214	9,694
MEAN	349	214	137	227	269	387	424	532	897	164	168	323
MAX	770	851	219	263	355	897	1,440	1,850	2,380	249	215	1,720
MIN	75	125	105	195	235	240	191	64	140	103	108	100
AC-FT	21,490	12,710	8,450	13,960	14,960	23,780	25,250	32,720	53,400	10,060	10,340	19,230

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

	226	233	275	339	320	370	369	968	1,302	329	292	212
MEAN	226	233	275	339	320	370	369	968	1,302	329	292	212
MAX	527	521	770	686	829	1,319	969	5,082	7,615	1,351	874	362
(WY)	(1948)	(1946)	(1958)	(1946)	(1948)	(1948)	(1958)	(1958)	(1949)	(1947)	(1951)	(1957)
MIN	91.3	136	124	183	160	166	150	110	108	129	82.5	71.8
(WY)	(1951)	(1955)	(1951)	(1956)	(1956)	(1957)	(2002)	(1954)	(2002)	(1954)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1944 - 2003
ANNUAL TOTAL	72,641	124,195	
ANNUAL MEAN	199	340	451
HIGHEST ANNUAL MEAN			956
LOWEST ANNUAL MEAN			151
HIGHEST DAILY MEAN	851	2,380	16,600
LOWEST DAILY MEAN	35	64	25
ANNUAL SEVEN-DAY MINIMUM	47	113	28
MAXIMUM PEAK FLOW		2,520	a33,800
MAXIMUM PEAK STAGE		12.47	b12.90
ANNUAL RUNOFF (AC-FT)	144,100	246,300	326,500
10 PERCENT EXCEEDS	452	731	740
50 PERCENT EXCEEDS	143	244	220
90 PERCENT EXCEEDS	58	127	118

a From rating curve extended above 15,000 ft³/s.

b Site and datum then in use.

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO

LOCATION.--Lat 40°58'46", long 102°15'15", in NW¼NE¼ and NE¼SE¼ (three channels) sec.33, T.12 N., R.44 W., Sedgwick County, Hydrologic Unit 10190018, on left bank of channel no. 4 (left channel) 215 ft downstream from bridge, on right bank of channel no. 2, 5 ft downstream from bridge on U.S. Highway 385, and on left bank of channel no. 1, 5 ft upstream from bridge on U.S. Highway 385, 0.9 mi southeast of Julesburg, 3.0 mi upstream from Colorado-Nebraska State line, and 8 mi downstream from Lodgepole Creek.

DRAINAGE AREA.--22,821 mi² (revised).

PERIOD OF RECORD.--April 1902 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Julesburg" 1903-8, 1915-16, and as "at Ovid" 1922-24. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06764000

REVISED RECORDS.--WSP 1310: 1902, 1906-7, 1948(P). WSP 1440: 1903-4. WDR CO-86-1: Drainage area.

GAGE.--Three water-stage recorders with satellite telemetry. Datum of channel no. 4 gage is 3,446.76 ft above NGVD of 1929. See WSP 1710 or 1730 for history of changes prior to Oct. 1, 1956. Since Oct. 1, 1956, water-stage recorders on channels nos. 2 and 4. Channel no. 2: Oct. 1, 1956 to Sept. 22, 1965, at site 300 ft downstream at present datum. Channel no. 4: Oct. 1, 1956 to Dec. 10, 1958, at site 135 ft downstream at present datum. Since May 11, 1973, supplementary water-stage recorder on channel no. 2 at bridge 800 ft upstream at same datum. Since Aug. 16, 1996, water-stage recorder on channel no. 1; satellite telemetry installed Oct. 24, 1996.

REMARKS.--Records good except for periods Nov. 26 to Mar. 10, and July 15 to Aug. 12, which are fair, and estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 1,200,000 acres upstream from station, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	16	14	21	64	e84	44	138	31	27	20	17
2	27	20	14	27	57	e112	55	152	33	25	24	18
3	24	17	14	36	53	116	61	157	32	25	24	16
4	28	16	14	54	51	104	71	149	33	24	24	e17
5	31	16	14	33	50	86	84	140	32	25	24	15
6	29	16	17	35	47	81	110	134	34	21	26	15
7	26	e16	15	27	44	72	138	127	47	26	26	17
8	26	e16	13	27	46	42	149	141	61	38	26	19
9	26	e16	15	25	47	34	116	146	104	26	25	35
10	27	e15	17	27	44	32	150	147	103	21	23	34
11	27	e16	20	e29	44	30	141	120	108	e20	22	38
12	26	e16	16	e37	44	29	137	114	132	e20	21	42
13	26	16	17	38	44	26	114	84	107	e18	20	44
14	26	16	17	39	44	25	93	78	98	e18	19	51
15	26	16	17	44	43	24	89	69	78	17	18	56
16	29	15	19	e38	42	24	98	69	61	16	18	62
17	19	15	21	e39	43	25	94	69	55	16	18	68
18	18	14	20	e40	44	30	96	67	56	15	e18	79
19	17	15	19	51	49	33	94	67	56	16	19	93
20	16	14	21	56	46	29	92	65	50	17	19	101
21	17	14	20	66	43	27	89	57	42	16	16	107
22	16	14	22	e63	46	27	90	47	38	15	15	108
23	17	15	e29	e64	e39	28	92	43	38	15	15	107
24	16	15	e38	e65	e60	29	101	40	38	21	14	105
25	19	15	e38	e65	e59	29	103	36	36	22	14	111
26	18	15	e49	67	61	27	124	37	34	19	12	116
27	20	15	e48	87	63	27	139	34	31	24	12	114
28	16	14	e48	96	67	26	115	33	31	30	e16	103
29	26	14	e37	91	---	49	104	31	34	25	15	95
30	20	14	35	76	---	44	115	32	30	22	14	91
31	16	---	26	75	---	40	---	30	---	20	14	---
TOTAL	696	462	724	1,538	1,384	1,391	3,098	2,653	1,663	660	591	1,894
MEAN	22.5	15.4	23.4	49.6	49.4	44.9	103	85.6	55.4	21.3	19.1	63.1
MAX	31	20	49	96	67	116	150	157	132	38	26	116
MIN	16	14	13	21	39	24	44	30	30	15	12	15
AC-FT	1,380	916	1,440	3,050	2,750	2,760	6,140	5,260	3,300	1,310	1,170	3,760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 2003, BY WATER YEAR (WY)

	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	313	353	415	530	610	550	545	1,054	1,474	303	186	247																																																																																										
MAX	2,427	2,358	1,371	1,571	1,864	2,200	2,808	9,922	12,200	5,059	1,882	1,964																																																																																										
(WY)	(1985)	(1985)	(1985)	(1998)	(1930)	(1939)	(1983)	(1980)	(1983)	(1983)	(1997)	(1984)																																																																																										
MIN	5.85	15.4	18.8	49.6	49.4	44.9	17.3	24.1	8.33	2.15	2.52	5.60																																																																																										
(WY)	(1904)	(2003)	(1912)	(2003)	(2003)	(2003)	(1904)	(1911)	(1910)	(1903)	(1902)	(1903)																																																																																										

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1902 - 2003	
ANNUAL TOTAL	33,705		16,754			
ANNUAL MEAN	92.3		45.9		551	
HIGHEST ANNUAL MEAN					2,882	
LOWEST ANNUAL MEAN					45.9	
HIGHEST DAILY MEAN	550	Feb 5	157	May 3	30,800	Jun 16, 1921
LOWEST DAILY MEAN	13	Dec 8	12	Aug 26	a0.00	Aug 18, 1902
ANNUAL SEVEN-DAY MINIMUM	14	Nov 28	14	Aug 24	0.00	Jul 25, 1903
MAXIMUM PEAK FLOW					37,600	Jun 20, 1965
MAXIMUM PEAK STAGE					b3.46	May 2
ANNUAL RUNOFF (AC-FT)	66,850		33,230		399,500	
10 PERCENT EXCEEDS	279		104		1,170	
50 PERCENT EXCEEDS	26		31		227	
90 PERCENT EXCEEDS	16		15		28	

e Estimated.

a Also occurred Aug 19-20, 1902, and Jul 25 to Aug 7, 1903.

b Gage height recorded for channel #1.

c From floodmarks in gage well.

06821360 ARIKAREE RIVER ABOVE SPRING CANYON NEAR IDALIA, CO

LOCATION.--Lat 39°45'07", long 102°24'42", in NW¹/₄SE¹/₄ sec.33, T.3 S., R.45 W., Yuma County, Hydrologic Unit 10250002, on right bank 1.2 mi upstream from Spring Canyon, 2.7 mi east of Rd U, 6.0 mi north of U.S. Hwy 36, and 5.0 mi northwest of Idalia.

DRAINAGE AREA.--1,111 mi².

PERIOD OF RECORD.--August 2002 to September 2003 (discontinued). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06821360

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,820 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow may be affected by irrigation well pumping throughout the basin upstream of the 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	0.03
2	---	---	---	---	---	---	---	---	---	---	---	0.03
3	---	---	---	---	---	---	---	---	---	---	---	0.02
4	---	---	---	---	---	---	---	---	---	---	---	0.02
5	---	---	---	---	---	---	---	---	---	---	---	0.01
6	---	---	---	---	---	---	---	---	---	---	---	0.01
7	---	---	---	---	---	---	---	---	---	---	---	0.01
8	---	---	---	---	---	---	---	---	---	---	---	0.00
9	---	---	---	---	---	---	---	---	---	---	---	0.02
10	---	---	---	---	---	---	---	---	---	---	---	0.05
11	---	---	---	---	---	---	---	---	---	---	---	0.05
12	---	---	---	---	---	---	---	---	---	---	---	0.06
13	---	---	---	---	---	---	---	---	---	---	---	e0.06
14	---	---	---	---	---	---	---	---	---	---	---	e0.07
15	---	---	---	---	---	---	---	---	---	---	---	e0.09
16	---	---	---	---	---	---	---	---	---	---	---	e0.10
17	---	---	---	---	---	---	---	---	---	---	---	e0.12
18	---	---	---	---	---	---	---	---	---	---	---	e0.15
19	---	---	---	---	---	---	---	---	---	---	---	e0.15
20	---	---	---	---	---	---	---	---	---	---	---	e0.15
21	---	---	---	---	---	---	---	---	---	---	---	e0.16
22	---	---	---	---	---	---	---	---	---	---	0.00	e0.18
23	---	---	---	---	---	---	---	---	---	---	0.00	e0.18
24	---	---	---	---	---	---	---	---	---	---	0.00	e0.19
25	---	---	---	---	---	---	---	---	---	---	0.00	e0.19
26	---	---	---	---	---	---	---	---	---	---	0.00	e0.19
27	---	---	---	---	---	---	---	---	---	---	0.01	e0.19
28	---	---	---	---	---	---	---	---	---	---	0.04	e0.18
29	---	---	---	---	---	---	---	---	---	---	0.11	e0.18
30	---	---	---	---	---	---	---	---	---	---	0.06	e0.18
31	---	---	---	---	---	---	---	---	---	---	0.04	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	3.02
MEAN	---	---	---	---	---	---	---	---	---	---	---	0.10
MAX	---	---	---	---	---	---	---	---	---	---	---	0.19
MIN	---	---	---	---	---	---	---	---	---	---	---	0.00
AC-FT	---	---	---	---	---	---	---	---	---	---	---	6.0

e Estimated.

06821360 ARIKAREE RIVER ABOVE SPRING CANYON NEAR IDALIA, CO—Continued

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	e0.17	0.51	1.4	2.4	3.1	3.3	4.2	4.1	3.1	0.35	0.01	0.00
2	e0.17	0.57	1.4	2.5	3.1	3.4	4.1	3.9	2.8	0.28	0.01	0.00
3	e0.16	0.55	1.4	2.6	3.2	3.5	4.0	3.8	2.6	0.21	0.01	0.00
4	e0.16	0.64	1.5	2.8	3.1	3.5	3.9	3.7	2.8	0.18	0.00	0.00
5	e0.16	0.67	1.5	2.9	3.2	3.4	4.0	3.5	3.1	0.14	0.00	0.00
6	e0.16	0.69	1.5	3.0	3.1	3.6	4.4	3.4	2.9	0.11	0.00	0.00
7	e0.16	0.70	1.6	3.1	3.0	3.5	4.7	3.4	3.5	0.10	0.00	0.00
8	e0.16	0.73	1.7	3.1	3.0	3.5	4.9	3.4	3.3	0.09	0.00	0.00
9	e0.16	0.77	1.7	3.0	3.0	3.3	5.1	3.5	2.8	0.07	0.00	0.00
10	e0.16	0.81	1.7	2.9	3.1	3.3	4.8	5.2	2.3	0.07	0.00	0.00
11	e0.16	0.79	1.8	2.7	3.1	3.5	4.6	6.4	2.7	0.06	0.00	0.00
12	e0.17	0.81	1.8	2.8	3.2	3.5	4.4	5.1	2.8	0.06	0.00	0.00
13	e0.17	0.79	1.9	2.8	3.2	3.3	4.3	4.3	3.0	0.05	0.00	0.00
14	e0.17	0.76	1.9	2.9	3.3	3.3	4.2	3.8	2.7	0.03	0.00	0.00
15	e0.17	0.81	2.0	2.9	3.2	3.3	4.2	3.8	2.2	0.03	0.00	0.00
16	e0.18	0.85	2.0	e2.8	3.2	3.4	4.3	7.4	1.9	0.03	0.00	0.00
17	0.18	0.89	2.0	2.7	3.2	3.4	4.2	6.6	1.7	0.02	0.00	0.00
18	0.20	0.88	2.0	2.7	3.2	4.3	4.2	5.1	2.5	0.02	0.00	0.00
19	0.22	0.91	2.0	2.9	3.1	7.8	4.2	4.6	3.1	0.02	0.00	0.00
20	0.23	0.98	2.0	2.9	3.2	6.6	4.2	4.3	3.1	0.02	0.00	0.00
21	0.24	1.0	2.1	2.9	3.2	4.9	4.1	4.0	2.4	0.02	0.00	0.00
22	0.25	1.1	2.0	2.7	3.2	4.3	4.0	3.7	1.9	0.02	0.00	0.00
23	0.35	1.1	2.0	2.7	3.2	4.1	4.0	3.6	1.6	0.01	0.00	0.00
24	0.36	1.1	2.1	2.9	3.1	3.9	4.7	3.4	1.3	0.01	0.00	0.00
25	0.39	1.1	2.1	3.0	3.3	3.9	4.6	3.8	1.1	0.01	0.00	0.00
26	0.42	1.2	e2.0	3.0	3.2	3.9	4.3	5.8	0.89	0.01	0.00	0.00
27	0.45	e1.2	2.0	3.1	3.3	4.0	4.1	4.6	0.71	0.01	0.00	0.00
28	0.49	e1.2	2.1	3.1	3.3	4.0	3.9	3.7	0.57	0.01	0.00	0.00
29	0.64	e1.3	2.3	3.1	---	4.0	3.9	3.1	0.55	0.01	0.00	0.00
30	0.49	e1.3	2.3	3.1	---	4.1	4.2	2.7	0.44	0.01	0.00	0.00
31	0.50	---	2.4	3.0	---	4.1	---	2.8	---	0.01	0.00	---
TOTAL	8.05	26.71	58.2	89.0	88.6	121.9	128.7	130.5	66.36	2.07	0.03	0.00
MEAN	0.26	0.89	1.88	2.87	3.16	3.93	4.29	4.21	2.21	0.067	0.001	0.000
MAX	0.64	1.3	2.4	3.1	3.3	7.8	5.1	7.4	3.5	0.35	0.01	0.00
MIN	0.16	0.51	1.4	2.4	3.0	3.3	3.9	2.7	0.44	0.01	0.00	0.00
AC-FT	16	53	115	177	176	242	255	259	132	4.1	0.06	0.00

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

MEAN	0.26	0.89	1.88	2.87	3.16	3.93	4.29	4.21	2.21	0.067	0.001	0.000
MAX	0.26	0.89	1.88	2.87	3.16	3.93	4.29	4.21	2.21	0.067	0.001	0.000
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	0.26	0.89	1.88	2.87	3.16	3.93	4.29	4.21	2.21	0.067	0.001	0.000
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2003 WATER YEAR

ANNUAL TOTAL	720.12
ANNUAL MEAN	1.97
HIGHEST DAILY MEAN	7.8 Mar 19
LOWEST DAILY MEAN	a.00 Aug 4
ANNUAL SEVEN-DAY MINIMUM	a.00 Aug 4
MAXIMUM PEAK FLOW	8.7 May 16
MAXIMUM PEAK STAGE	b6.61 May 16
ANNUAL RUNOFF (AC-FT)	1430
10 PERCENT EXCEEDS	4.1
50 PERCENT EXCEEDS	2.0
90 PERCENT EXCEEDS	0.00

e Estimated.

a No flow many days each year.

b Maximum gage height, 6.62 ft, Mar 19, 2003.

07079300 EAST FORK ARKANSAS RIVER AT HIGHWAY 24 NEAR LEADVILLE, CO

LOCATION.--Lat 39°16'21", long 106°18'21", in NW¹/₄NW¹/₄ sec.14, T.9 S., R.80 W., Lake County, Hydrologic Unit 11020001, on right bank 20 ft downstream from U.S. Highway 24, 0.4 mi downstream from Leadville Mine Drainage Tunnel, 1.5 mi northwest of Leadville, and 2.2 mi upstream from Tennessee Creek.

DRAINAGE AREA.--49.9 mi².

PERIOD OF RECORD.--May 1990 to current year. Daily record for water temperature, specific conductance, and pH available, May 1990 to September 1996. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07079300

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,900 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions (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	12	e10	e9.2	e8.7	e7.0	9.0	15	314	83	28	29
2	14	12	e10	e9.0	e8.6	e6.9	9.0	13	315	81	27	26
3	15	11	e10	e8.8	e9.0	e6.8	8.8	14	292	78	28	25
4	15	11	e10	e8.7	e9.0	e6.7	8.7	15	248	73	34	25
5	14	11	e10	e8.7	e9.5	e6.6	8.6	15	219	69	29	24
6	14	e11	e10	e8.7	e9.3	e6.5	8.7	15	168	66	27	29
7	13	e11	e9.9	e8.6	e9.1	e6.6	8.9	15	155	60	27	37
8	13	e11	e9.8	e8.5	e9.0	e6.5	9.4	15	145	57	26	37
9	13	e11	e9.8	e8.4	e9.0	e6.6	9.4	15	150	55	26	38
10	12	e11	e9.7	e8.4	e8.9	e6.7	11	15	146	50	25	41
11	12	e11	e9.6	e8.3	e8.8	e6.9	12	14	162	48	25	39
12	12	e11	e9.5	e8.3	e8.6	e7.2	12	14	167	45	26	35
13	11	e11	e9.5	e8.4	e8.4	e7.4	13	18	170	44	24	33
14	11	e11	e9.5	e8.5	e7.9	e7.3	13	21	158	43	24	31
15	11	e11	e9.4	e8.5	e7.9	e7.3	12	30	156	42	23	29
16	11	e11	e9.3	e8.6	e7.7	7.3	11	35	154	42	23	28
17	11	e11	e9.3	e8.7	e7.6	7.7	12	53	140	42	25	26
18	11	e11	e9.3	e8.7	e7.4	7.8	11	65	137	41	27	26
19	11	e11	e9.3	e8.6	e7.4	7.5	11	66	130	41	26	25
20	11	e11	e9.3	e8.6	e7.4	e7.8	11	66	126	40	23	25
21	11	e11	e9.3	e8.5	e7.5	e8.0	11	75	118	39	22	23
22	11	e11	e9.3	e8.5	e7.4	7.8	12	105	107	36	21	23
23	12	e11	e9.3	e8.4	e7.4	7.9	12	144	106	34	23	23
24	12	e11	e9.3	e8.4	e7.4	7.9	12	187	103	33	26	22
25	12	e11	e9.2	e8.5	e7.1	8.2	14	249	101	32	27	21
26	12	e11	e9.2	e8.6	e7.3	8.1	15	241	88	33	29	21
27	12	e11	e9.2	e8.7	e7.2	8.3	15	325	89	34	26	21
28	12	e11	e9.2	e8.8	e7.1	e8.4	14	460	89	38	25	21
29	11	e10	e9.2	e8.8	---	e8.5	14	459	89	35	23	20
30	11	e10	e9.2	e8.7	---	e8.6	15	209	84	32	27	20
31	12	---	e9.2	e8.7	---	e8.7	---	236	---	29	33	---
TOTAL	376	330	294.8	266.8	227.6	231.5	343.5	3,219	4,626	1,475	805	823
MEAN	12.1	11.0	9.51	8.61	8.13	7.47	11.4	104	154	47.6	26.0	27.4
MAX	15	12	10	9.2	9.5	8.7	15	460	315	83	34	41
MIN	11	10	9.2	8.3	7.1	6.5	8.6	13	84	29	21	20
AC-FT	746	655	585	529	451	459	681	6,380	9,180	2,930	1,600	1,630

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

	18.5	14.4	12.0	10.3	9.91	10.1	13.8	95.1	206	88.0	38.5	24.4
MEAN	18.5	14.4	12.0	10.3	9.91	10.1	13.8	95.1	206	88.0	38.5	24.4
MAX	23.4	18.1	15.4	13.0	13.3	13.0	19.8	205	404	266	75.1	32.2
(WY)	(2000)	(1996)	(1996)	(1996)	(1997)	(1997)	(1996)	(1996)	(1996)	(1995)	(1995)	(1995)
MIN	12.1	10.8	9.51	8.61	7.10	7.47	10.5	38.4	39.0	14.7	10.8	10.9
(WY)	(2003)	(1992)	(2003)	(2003)	(1993)	(2003)	(1993)	(1995)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1990 - 2003

ANNUAL TOTAL	5,828.9	13,018.2	
ANNUAL MEAN	16.0	35.7	45.7
HIGHEST ANNUAL MEAN			73.0 1996
LOWEST ANNUAL MEAN			16.8 2002
HIGHEST DAILY MEAN	69	May 21	811 Jun 8, 1997
LOWEST DAILY MEAN	e7.3	Mar 6	6.0 Dec 9, 1994
ANNUAL SEVEN-DAY MINIMUM	e7.5	Mar 1	e6.6 Mar 4, 2003
MAXIMUM PEAK FLOW		760	May 29
MAXIMUM PEAK STAGE		4.07	May 29
ANNUAL RUNOFF (AC-FT)	11,560	25,820	33,090
10 PERCENT EXCEEDS	36	89	124
50 PERCENT EXCEEDS	11	12	16
90 PERCENT EXCEEDS	8.8	7.9	9.3

e Estimated.

a From rating curve extended above 517 ft³/s.

b Maximum gage height, 4.41 ft, Jun 26, 1999.

07081200 ARKANSAS RIVER NEAR LEADVILLE, CO

LOCATION.--Lat 39°15'26", long 106°20'35", in NW¼NW¼ sec.21, T.9 S., R.80 W., Lake County, Hydrologic Unit 11020001, on right bank 500 ft downstream from confluence of East Fork Arkansas River and Tennessee Creek, 0.5 mi downstream from highway bridge, and 2.8 mi northwest of Leadville.

DRAINAGE AREA.--98.8 mi².

PERIOD OF RECORD.--October 1967 to September 1983, April 1990 to current year. Daily record of water temperature, specific conductance, and pH available, May 1990 to September 1996. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07081200

REVISED RECORDS.--WDR CO-91-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,730 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 (see elsewhere in this report) and diversions for irrigation and municipal use. Several measurements of water temperature and specific conductance 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	22	18	e16	e13	e12	e13	15	57	723	136	40	35
2	24	18	e16	e14	e12	e12	16	53	579	126	37	30
3	28	17	e15	e14	e12	e12	15	51	464	122	36	29
4	28	16	e16	e14	e12	e12	14	55	404	116	41	30
5	25	16	e16	e14	e13	e12	13	48	370	109	37	29
6	24	15	e16	e14	e13	e12	13	41	309	102	36	37
7	24	15	e15	e14	e12	13	13	39	283	96	36	45
8	22	16	e15	e13	e12	12	24	40	250	91	37	46
9	21	16	e15	e13	e12	12	15	40	250	87	36	47
10	20	17	e14	e13	e12	12	19	39	277	81	35	52
11	20	17	e14	e13	e12	12	22	35	283	76	33	51
12	19	e17	e14	e13	e12	13	24	38	268	73	33	46
13	19	e17	e15	e13	e12	13	26	55	300	70	31	41
14	18	e17	e15	e13	e12	13	29	64	252	68	31	39
15	20	e16	e15	e13	e12	13	27	86	248	65	28	36
16	19	e16	e15	e13	e12	13	27	96	251	64	28	34
17	18	e17	e15	e12	e12	13	31	136	224	64	37	32
18	18	e17	e14	e12	e12	13	31	163	223	61	41	31
19	18	e16	e14	e12	e12	13	29	180	225	61	37	30
20	17	e16	e14	e12	e12	e13	28	164	229	59	31	30
21	17	e16	e14	e12	e12	13	29	164	205	60	28	28
22	17	e17	e14	e11	e13	13	33	206	192	54	28	28
23	19	e16	e14	e12	e13	14	33	265	183	51	33	27
24	18	e17	e13	e12	e12	14	29	312	173	48	38	25
25	17	e17	e13	e12	e12	14	32	354	163	47	42	25
26	17	e17	e13	e12	e12	13	42	337	150	51	43	24
27	19	e17	e13	e12	e12	e14	55	376	149	59	35	24
28	19	e17	e13	e12	e13	e14	63	536	146	56	33	24
29	18	e17	e13	e12	---	e14	70	634	145	50	31	23
30	17	e17	e13	e12	---	e15	70	751	143	48	33	23
31	18	---	e13	e12	---	e15	---	622	---	43	40	---
TOTAL	620	498	445	393	341	404	887	6,037	8,061	2,294	1,085	1,001
MEAN	20.0	16.6	14.4	12.7	12.2	13.0	29.6	195	269	74.0	35.0	33.4
MAX	28	18	16	14	13	15	70	751	723	136	43	52
MIN	17	15	13	11	12	12	13	35	143	43	28	23
AC-FT	1,230	988	883	780	676	801	1,760	11,970	15,990	4,550	2,150	1,990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

	26.6	21.2	16.6	14.7	14.4	15.2	30.8	169	336	132	59.2	34.3
MEAN	26.6	21.2	16.6	14.7	14.4	15.2	30.8	169	336	132	59.2	34.3
MAX	38.3	28.9	21.7	19.0	20.5	20.8	52.9	412	707	382	138	55.8
(WY)	(1971)	(1971)	(1983)	(1996)	(1973)	(1971)	(1989)	(1996)	(1997)	(1995)	(1997)	(1982)
MIN	16.5	11.6	11.6	9.15	7.93	8.82	12.7	55.3	72.7	23.8	12.4	14.8
(WY)	(1978)	(1977)	(1978)	(1977)	(1978)	(1974)	(1970)	(1981)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1968 - 2003

ANNUAL TOTAL	10,432.7	22,066	
ANNUAL MEAN	28.6	60.5	73.3
HIGHEST ANNUAL MEAN			120
LOWEST ANNUAL MEAN			29.5
HIGHEST DAILY MEAN	128	Jun 1	751
LOWEST DAILY MEAN	8.8	Sep 5	11
ANNUAL SEVEN-DAY MINIMUM	9.1	Sep 2	12
MAXIMUM PEAK FLOW			955
MAXIMUM PEAK STAGE			4.04
ANNUAL RUNOFF (AC-FT)	20,690	43,770	53,110
10 PERCENT EXCEEDS	71	164	203
50 PERCENT EXCEEDS	17	21	25
90 PERCENT EXCEEDS	13	12	13

e Estimated.

a Also occurred Feb 4-20, 1978.

b From rating curve extended above 964 ft³/s.

c Maximum gage height, 4.47 ft, Jun 15, 1978.

391504106225200 DINERO MINE DRAINAGE TUNNEL BELOW TURQUOISE LAKE NEAR LEADVILLE, CO

LOCATION.--Lat 39°15'04", long 106°22'52", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.9 S., R.80 W., Lake County, Hydrologic Unit 11020001, on left bank 8 ft downstream from mine drainage tunnel, 0.5 mi southwest of Sugarloaf Dam, and 4.5 mi west of Leadville.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--March 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=391504106225200

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,800 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Flow consists entirely of discharge from the Dinero Mine Drainage Tunnel.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 0.24 ft³/s, Aug. 2, 3, gage height, 10.39 ft; minimum daily, 0.11 ft³/s, on many days in April.

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	---	---	---	---	---	e0.12	0.13	0.12	0.16	0.17	0.21	0.18
2	---	---	---	---	---	e0.12	0.13	0.12	0.16	0.17	0.22	0.18
3	---	---	---	---	---	e0.12	0.12	0.13	0.15	0.16	0.22	0.17
4	---	---	---	---	---	e0.12	0.12	0.13	0.14	0.16	0.21	0.17
5	---	---	---	---	---	e0.12	0.12	0.12	0.14	0.16	0.21	0.17
6	---	---	---	---	---	e0.12	0.12	0.12	0.15	0.16	0.21	0.16
7	---	---	---	---	---	e0.12	0.11	0.13	0.15	0.16	0.21	0.16
8	---	---	---	---	---	e0.12	0.11	0.13	0.15	0.15	0.21	0.17
9	---	---	---	---	---	e0.12	0.12	0.13	0.15	0.15	0.21	0.17
10	---	---	---	---	---	e0.12	0.12	0.13	0.16	0.16	0.21	0.17
11	---	---	---	---	---	e0.12	0.12	0.12	0.16	0.16	0.21	0.16
12	---	---	---	---	---	e0.12	0.12	0.13	0.16	0.17	0.20	0.17
13	---	---	---	---	---	e0.12	0.12	0.13	0.16	0.17	0.19	0.17
14	---	---	---	---	---	0.13	0.12	0.13	0.15	0.17	0.19	0.17
15	---	---	---	---	---	0.13	0.12	e0.13	0.14	0.17	0.19	0.16
16	---	---	---	---	---	0.13	0.11	e0.12	0.14	0.18	0.18	0.17
17	---	---	---	---	---	0.13	0.12	0.12	0.14	0.17	0.17	0.16
18	---	---	---	---	---	0.13	0.12	0.12	0.14	0.18	0.17	0.16
19	---	---	---	---	---	0.12	0.11	0.12	e0.16	0.20	0.17	0.16
20	---	---	---	---	---	0.12	0.11	0.12	0.17	0.19	0.17	0.16
21	---	---	---	---	---	0.12	0.12	0.12	0.17	0.19	0.18	0.17
22	---	---	---	---	---	0.12	0.12	0.12	0.17	0.19	0.18	0.17
23	---	---	---	---	---	0.13	0.12	0.13	0.17	0.19	0.18	0.17
24	---	---	---	---	---	0.13	0.12	0.13	0.17	0.19	0.18	0.17
25	---	---	---	---	---	0.12	0.12	0.13	0.17	0.19	0.18	0.17
26	---	---	---	---	---	0.13	0.12	0.13	0.17	0.19	0.18	0.17
27	---	---	---	---	---	0.13	0.11	0.13	0.17	0.19	0.19	0.17
28	---	---	---	---	---	0.12	0.12	0.13	0.17	0.18	0.17	0.17
29	---	---	---	---	---	0.12	0.12	0.14	0.17	0.19	0.17	0.17
30	---	---	---	---	---	0.12	0.12	0.14	0.18	0.20	0.17	0.17
31	---	---	---	---	---	0.13	---	0.15	---	0.21	0.17	---
TOTAL	---	---	---	---	---	3.82	3.56	3.95	4.74	5.47	5.91	5.04
MEAN	---	---	---	---	---	0.12	0.12	0.13	0.16	0.18	0.19	0.17
MAX	---	---	---	---	---	0.13	0.13	0.15	0.18	0.21	0.22	0.18
MIN	---	---	---	---	---	0.12	0.11	0.12	0.14	0.15	0.17	0.16
AC-FT	---	---	---	---	---	7.6	7.1	7.8	9.4	11	12	10

e Estimated.

07086000 ARKANSAS RIVER AT GRANITE, CO

LOCATION.--Lat 39°02'34", long 106°15'55", in SE¹/₄SW¹/₄ sec.31, T.11 S., R.79 W., Chaffee County, Hydrologic Unit 11020001, on right bank at Granite, 100 ft east of U.S. Highway 24, 100 ft downstream from county bridge, and 200 ft upstream from Cache Creek.

DRAINAGE AREA.--427 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to October 1895, May to December 1897, August to September 1898, March to October 1899, April to May 1901 (gage heights and discharge measurements only in 1895, 1899, and 1901), April 1910 to current year. Monthly discharge only for some periods, published in WSP 1311. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07086000

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1711: 1952, 1956(M).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,914.86 ft above NGVD of 1929, supplementary adjustment of 1960. Prior to Apr. 6, 1910, nonrecording gages near present site at different datums. Apr. 6, 1910 to Oct. 25, 1917, water-stage recorder or nonrecording gage at site 832 ft upstream at different datum. Oct. 26, 1917 to Oct. 26, 1960, water-stage recorder at site 168 ft downstream at present datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power developments, transmountain diversions from Colorado River Basin (see elsewhere in this report), diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Flow partly regulated by Turquoise Lake and Twin Lakes Reservoir, on tributaries upstream from station, combined capacity, about 269,700 acre-ft.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	84	116	e67	e69	e57	e48	106	201	2,150	544	431	152
2	90	114	e68	e70	e58	e45	157	210	2,080	511	415	141
3	108	107	e66	e80	e52	e42	180	207	1,770	478	408	139
4	109	107	e64	e90	e48	e43	167	210	1,350	461	299	137
5	100	110	e60	e90	e45	e46	160	214	1,160	454	169	130
6	91	106	e60	e80	e45	e47	157	217	1,100	445	171	151
7	90	103	e58	e50	e42	e48	161	213	943	478	169	175
8	90	107	e60	e53	e40	e47	165	214	797	496	260	177
9	88	114	e59	e56	e41	e47	165	215	787	490	519	182
10	89	104	e58	e53	e42	e47	183	216	902	486	518	205
11	102	111	e57	e53	e48	e60	206	209	1,060	476	445	234
12	102	e109	e58	e50	e50	e80	211	203	1,200	464	340	240
13	95	e105	e59	e51	e60	e82	206	220	1,380	457	232	231
14	97	e99	e60	e52	e68	e78	220	249	1,350	455	191	227
15	99	e90	e62	e55	e58	e69	205	300	1,320	454	146	183
16	102	e85	e60	e53	e45	67	169	290	1,280	453	138	105
17	103	e92	e61	e53	e50	66	179	289	1,110	465	149	121
18	103	e82	e59	e52	e51	e66	178	423	983	484	162	208
19	102	e80	e60	e55	e50	e60	171	633	924	483	171	209
20	97	e82	e66	e58	e49	e60	167	615	1,080	482	155	206
21	96	e79	e70	e59	e51	77	180	512	1,040	487	142	204
22	99	e76	e70	e60	e53	e69	223	536	1,080	476	137	191
23	109	e72	e69	e62	e50	79	213	632	997	471	146	154
24	114	e73	e70	e60	e49	86	205	769	715	488	158	120
25	108	e71	e69	e58	e50	88	219	782	580	493	170	98
26	105	e67	e70	e56	e49	e82	226	885	533	510	166	89
27	107	e67	e70	e58	e49	e80	233	1,100	476	528	158	87
28	105	e68	e73	e58	e49	e75	241	1,270	451	491	157	83
29	107	e68	e78	e53	---	e77	225	1,530	447	407	148	84
30	102	e69	e74	e58	---	e76	205	1,930	508	420	152	85
31	115	---	e67	e60	---	e82	---	2,070	---	432	164	---
TOTAL	3,108	2,733	2,002	1,865	1,399	2,019	5,683	17,564	31,553	14,719	7,186	4,748
MEAN	100	91.1	64.6	60.2	50.0	65.1	189	567	1,052	475	232	158
MAX	115	116	78	90	68	88	241	2,070	2,150	544	519	240
MIN	84	67	57	50	40	42	106	201	447	407	137	83
AC-FT	6,160	5,420	3,970	3,700	2,770	4,000	11,270	34,840	62,590	29,200	14,250	9,420

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2003, BY WATER YEAR (WY)

	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	155	129	110	108	113	129	237	693	1,268	887	528	241																																																																																		
MAX	356	337	448	419	526	500	667	1,711	2,146	2,367	1,239	546																																																																																		
(WY)	(1977)	(1983)	(1983)	(1983)	(1985)	(1985)	(1962)	(1984)	(1984)	(1983)	(1984)	(1961)																																																																																		
MIN	82.4	64.3	48.5	39.8	45.0	55.0	97.1	191	262	150	151	93.8																																																																																		
(WY)	(1932)	(1945)	(1977)	(1918)	(1919)	(1919)	(1933)	(1935)	(2002)	(2002)	(1934)	(2002)																																																																																		

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1910 - 2003

ANNUAL TOTAL	52,644	94,579	
ANNUAL MEAN	144	259	385
HIGHEST ANNUAL MEAN			687
LOWEST ANNUAL MEAN			157
HIGHEST DAILY MEAN	393	May 23	2,150
LOWEST DAILY MEAN	e57	Dec 11	e40
ANNUAL SEVEN-DAY MINIMUM	e58	Dec 7	e43
MAXIMUM PEAK FLOW			2,220
MAXIMUM PEAK STAGE			5.26
ANNUAL RUNOFF (AC-FT)	104,400	187,600	278,700
10 PERCENT EXCEEDS	222	558	1,040
50 PERCENT EXCEEDS	141	109	170
90 PERCENT EXCEEDS	72	52	74

e Estimated.

07086000 ARKANSAS RIVER AT GRANITE, CO—Continued

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

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	167	159	164	167	155	160	128	122	125	137	126	132
2	168	158	165	173	157	165	122	113	116	129	123	125
3	168	163	166	174	151	164	116	105	111	128	125	127
4	171	161	166	170	150	163	115	108	111	130	126	128
5	172	160	166	176	154	166	113	106	110	132	120	126
6	168	157	161	173	155	167	113	111	112	122	118	120
7	172	148	164	170	158	167	112	108	110	120	117	119
8	173	149	164	170	165	168	117	98	107	122	119	120
9	174	164	171	174	165	170	118	104	111	121	119	120
10	173	151	166	177	165	171	119	108	111	122	118	120
11	170	152	164	179	170	174	115	107	110	119	116	118
12	171	163	168	181	170	174	115	109	112	121	116	118
13	170	163	166	183	169	175	122	113	117	125	116	119
14	168	159	162	177	168	173	125	119	121	126	112	119
15	166	158	162	180	170	175	133	121	125	122	112	117
16	171	154	165	180	173	176	133	126	129	131	115	121
17	171	157	165	178	173	176	130	124	127	143	130	138
18	166	158	162	173	170	172	130	124	127	142	100	127
19	179	156	167	172	168	170	129	121	125	101	96	99
20	173	146	164	168	162	165	129	122	126	108	96	101
21	165	154	162	167	156	162	131	115	125	130	106	119
22	163	156	159	165	157	161	123	108	114	130	117	123
23	167	155	162	162	151	156	133	118	127	152	115	129
24	163	155	159	157	151	155	141	126	135	262	150	178
25	161	153	157	154	146	150	140	132	136	288	127	191
26	162	153	156	147	139	142	132	118	122	144	98	116
27	161	148	156	139	129	134	123	119	121	98	92	94
28	166	151	157	129	123	126	126	118	121	97	88	93
29	---	---	---	125	122	124	144	116	124	88	79	84
30	---	---	---	126	121	123	144	131	136	87	77	81
31	---	---	---	130	121	125	---	---	---	81	74	77
MONTH	179	146	163	183	121	160	144	98	120	288	74	119
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	79	74	76	102	94	99	98	90	95	160	154	157
2	76	75	75	105	99	101	93	90	92	156	151	153
3	80	75	77	105	97	102	93	90	92	152	150	151
4	84	79	82	99	95	97	143	91	112	154	150	152
5	85	83	84	98	95	96	148	143	145	153	150	151
6	85	84	84	98	95	96	151	144	148	173	151	165
7	92	84	89	97	90	93	150	140	144	186	168	178
8	92	91	92	96	90	93	143	109	133	178	168	173
9	93	90	92	97	93	95	109	106	107	179	166	172
10	93	85	89	98	94	96	116	109	113	181	170	175
11	88	80	84	95	91	94	121	114	117	180	150	164
12	83	78	81	92	91	91	124	116	119	150	141	146
13	88	78	82	92	91	92	142	120	131	141	138	139
14	79	76	78	92	91	91	162	140	150	139	137	138
15	77	76	77	96	91	94	163	154	160	186	135	150
16	77	74	76	103	96	98	154	147	150	196	186	191
17	81	77	79	103	93	98	161	148	156	211	144	190
18	88	80	84	94	91	93	169	159	163	144	131	136
19	92	81	87	95	92	94	170	163	166	131	129	130
20	84	80	82	95	92	93	172	161	165	130	129	129
21	82	80	81	97	92	95	166	160	162	130	127	128
22	82	78	80	97	93	95	161	156	158	142	127	131
23	83	78	80	97	95	96	158	152	155	168	141	149
24	98	81	91	96	94	95	157	152	154	192	168	174
25	100	95	99	95	90	93	157	153	154	192	184	189
26	107	98	103	92	89	91	161	151	155	192	189	190
27	108	103	105	96	90	93	161	155	157	191	186	189
28	107	103	105	102	94	97	161	155	157	189	185	187
29	106	102	104	107	102	104	159	151	156	190	186	188
30	106	93	99	104	99	103	158	152	154	203	187	193
31	---	---	---	100	94	98	162	157	159	---	---	---
MONTH	108	74	87	107	89	96	172	90	141	211	127	162

07086000 ARKANSAS RIVER AT GRANITE, 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
1	10.6	5.0	8.2	4.0	0.4	2.5	0.3	0.0	0.0	---	---	---
2	10.5	5.7	7.8	4.8	1.3	2.8	0.7	0.0	0.1	---	---	---
3	7.8	4.4	6.0	3.6	0.0	1.3	0.1	0.0	0.0	---	---	---
4	9.0	2.6	5.8	3.8	0.0	1.3	0.1	0.0	0.0	---	---	---
5	11.1	4.6	7.3	2.6	0.0	0.7	0.4	0.0	0.1	---	---	---
6	11.2	3.5	7.2	4.4	0.0	1.5	0.0	0.0	0.0	---	---	---
7	11.5	3.6	7.6	4.8	0.0	1.8	0.1	0.0	0.0	---	---	---
8	11.8	4.1	8.0	4.5	1.4	2.9	0.1	0.0	0.0	---	---	---
9	11.3	4.1	7.8	2.9	0.1	1.4	0.0	0.0	0.0	0.2	0.0	0.0
10	10.9	3.3	7.3	---	---	---	0.0	0.0	0.0	0.3	0.0	0.1
11	11.1	4.5	7.7	---	---	---	0.1	0.0	0.0	0.9	0.0	0.2
12	9.9	3.9	6.9	---	---	---	0.1	0.0	0.0	1.0	0.0	0.2
13	9.8	1.6	5.6	1.8	0.0	0.5	0.1	0.0	0.0	0.5	0.0	0.1
14	10.0	2.4	6.0	2.4	0.0	0.7	0.1	0.0	0.0	0.6	0.0	0.1
15	9.5	2.0	5.8	2.5	0.0	0.6	0.1	0.0	0.0	0.1	0.0	0.0
16	9.4	2.9	6.0	0.6	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0
17	9.6	1.7	5.6	1.6	0.0	0.3	0.1	0.0	0.0	0.1	0.0	0.0
18	9.5	2.0	5.8	1.4	0.0	0.3	---	---	---	0.1	0.0	0.0
19	9.1	2.1	5.6	0.4	0.0	0.1	---	---	---	0.1	0.0	0.0
20	8.1	1.6	4.9	1.9	0.0	0.3	---	---	---	0.1	0.0	0.0
21	7.1	1.4	4.5	2.4	0.0	0.5	---	---	---	0.4	0.0	0.1
22	7.1	1.7	4.6	2.0	0.0	0.5	---	---	---	0.8	0.0	0.1
23	7.3	2.8	5.0	1.5	0.0	0.3	---	---	---	1.5	0.0	0.4
24	6.5	2.9	4.8	2.5	0.0	0.9	---	---	---	1.7	0.0	0.6
25	6.9	1.8	4.4	1.7	0.0	0.3	---	---	---	1.9	0.0	0.5
26	6.2	1.6	4.1	0.1	0.0	0.0	---	---	---	1.7	0.0	0.3
27	5.9	3.9	4.8	0.1	0.0	0.0	---	---	---	2.9	0.0	0.8
28	6.9	2.4	4.6	0.1	0.0	0.0	---	---	---	1.5	0.0	0.4
29	5.7	1.2	3.2	0.4	0.0	0.1	---	---	---	2.1	0.0	0.4
30	3.3	0.2	1.8	0.5	0.0	0.1	---	---	---	2.4	0.0	0.6
31	5.5	0.9	3.2	---	---	---	---	---	---	3.4	0.0	0.9
MONTH	11.8	0.2	5.7	---	---	---	---	---	---	---	---	---
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3.4	0.0	1.0	0.7	0.0	0.1	8.3	0.8	4.4	10.8	2.2	6.5
2	2.1	0.0	0.6	0.7	0.0	0.1	7.0	1.0	3.8	10.1	3.5	7.0
3	1.6	0.0	0.3	1.3	0.0	0.2	5.9	0.6	3.1	9.6	4.5	7.4
4	0.1	0.0	0.0	2.5	0.0	0.4	5.7	0.3	2.7	10.9	4.3	7.1
5	0.1	0.0	0.0	2.5	0.0	0.5	5.0	0.7	2.6	11.2	4.0	6.9
6	0.0	0.0	0.0	1.5	0.0	0.2	5.7	0.7	2.8	11.4	3.7	7.4
7	0.1	0.0	0.0	4.1	0.0	0.9	5.1	0.0	2.2	9.5	4.4	6.8
8	0.1	0.0	0.0	4.7	0.0	1.2	7.4	0.0	2.9	10.6	4.6	7.4
9	0.1	0.0	0.0	4.8	0.0	1.1	9.0	0.2	4.3	11.2	5.1	7.8
10	0.1	0.0	0.0	5.1	0.0	1.4	9.2	1.4	5.0	8.0	3.8	6.1
11	0.1	0.0	0.0	4.7	0.0	1.5	9.2	1.9	5.2	11.6	2.8	7.1
12	0.1	0.0	0.0	5.3	0.0	1.6	7.4	2.0	4.7	13.2	4.5	8.7
13	0.2	0.0	0.1	5.5	0.0	1.5	9.9	1.8	5.5	11.8	5.8	8.9
14	0.3	0.0	0.1	3.4	0.0	1.4	9.5	2.1	5.7	12.9	5.5	9.4
15	1.1	0.0	0.3	6.4	0.1	3.1	5.8	2.7	4.3	10.0	7.4	8.9
16	1.5	0.0	0.3	4.3	1.4	2.9	9.7	0.8	4.8	14.6	6.6	10.3
17	2.4	0.0	0.6	4.2	0.2	2.1	7.2	2.2	4.9	14.2	7.0	10.4
18	2.1	0.0	0.5	2.2	0.0	0.9	9.1	2.4	5.3	12.8	7.0	9.6
19	1.6	0.0	0.2	4.1	0.0	1.7	6.7	2.2	4.3	12.5	7.0	9.8
20	0.7	0.0	0.1	5.3	0.0	2.4	10.4	1.8	5.6	11.4	6.8	8.8
21	0.8	0.0	0.1	7.2	1.1	3.6	7.7	3.2	5.4	13.0	5.8	9.3
22	1.2	0.0	0.2	8.0	0.0	3.7	8.1	3.7	5.6	13.6	6.8	10.3
23	0.4	0.0	0.1	9.0	0.9	4.6	5.2	2.1	3.6	13.5	7.5	10.7
24	2.6	0.0	0.5	6.9	1.1	3.8	8.4	1.2	4.6	12.4	7.6	10.4
25	1.8	0.0	0.4	7.6	0.1	3.5	11.0	2.1	6.3	10.5	7.3	9.1
26	1.0	0.0	0.2	5.8	1.1	3.2	11.4	3.2	7.1	11.2	6.0	8.9
27	1.6	0.0	0.4	3.4	0.0	1.3	10.7	3.4	7.0	13.9	8.0	10.9
28	0.5	0.0	0.1	4.5	0.0	1.4	11.3	3.1	7.0	13.9	8.3	11.3
29	---	---	---	2.8	0.0	0.7	12.7	3.2	7.5	13.4	8.0	10.9
30	---	---	---	5.6	0.0	2.1	10.8	3.8	7.4	12.2	9.1	10.8
31	---	---	---	9.4	0.1	3.5	---	---	---	13.0	8.5	10.6
MONTH	3.4	0.0	0.2	9.4	0.0	1.8	12.7	0.0	4.9	14.6	2.2	8.9

ARKANSAS RIVER BASIN

07086000 ARKANSAS RIVER AT GRANITE, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.5	9.3	10.2	16.0	11.4	13.6	19.0	14.3	16.4	18.9	11.3	15.0
2	12.5	8.1	10.3	17.6	11.3	14.3	19.4	14.7	16.7	17.6	11.0	14.4
3	13.2	8.8	11.0	17.2	11.4	14.3	18.7	15.5	17.0	15.8	11.6	13.5
4	12.9	8.7	10.9	17.3	11.6	14.4	19.3	15.1	16.9	16.9	10.6	13.6
5	11.2	9.0	10.2	15.6	11.5	14.0	19.3	12.2	15.8	16.3	10.4	13.3
6	11.7	7.7	9.8	15.4	11.7	13.8	17.3	12.4	15.2	15.6	11.5	13.2
7	12.7	8.5	10.4	16.3	11.6	14.2	17.7	11.9	14.8	13.2	11.1	12.1
8	13.4	7.6	10.6	17.4	12.5	14.9	19.8	12.9	15.6	16.5	8.6	12.3
9	12.1	8.8	10.7	17.6	12.7	15.3	18.3	15.1	16.6	12.6	10.2	11.4
10	13.8	8.8	11.1	17.6	12.5	15.1	18.5	14.9	16.5	12.7	8.7	10.3
11	14.0	9.3	11.7	17.2	12.4	15.0	18.3	15.1	16.3	11.9	7.7	9.8
12	13.0	10.0	11.5	17.1	13.2	15.2	17.8	14.2	15.8	15.1	8.0	11.2
13	12.1	8.8	10.5	16.9	13.3	15.3	18.1	13.4	15.4	12.9	9.7	11.0
14	13.5	9.5	11.6	16.7	13.3	14.9	19.5	11.5	15.2	14.3	7.4	10.6
15	14.1	10.3	12.2	16.5	12.9	14.5	19.8	11.1	15.2	14.4	7.4	10.8
16	12.1	10.3	11.2	17.2	13.0	14.6	16.9	11.9	14.3	13.9	6.0	9.9
17	12.6	9.0	10.9	17.9	12.8	15.0	16.5	11.7	13.8	14.3	8.0	11.0
18	12.9	9.9	11.2	18.4	13.5	15.7	16.0	11.6	13.6	13.4	7.2	10.1
19	12.1	9.8	10.9	17.9	13.9	15.7	18.1	10.1	13.8	13.8	7.4	10.5
20	12.3	9.7	11.1	17.0	13.6	15.4	19.9	11.0	15.2	14.0	8.2	10.8
21	14.1	9.5	11.8	18.3	13.6	15.8	17.0	12.2	14.8	14.0	7.8	10.7
22	14.6	10.3	12.5	18.7	13.9	16.2	16.3	12.4	14.5	14.5	7.8	10.8
23	14.0	10.8	12.5	18.2	14.2	15.8	16.1	12.6	14.4	14.6	7.2	10.7
24	14.3	9.7	11.9	18.0	14.0	16.0	17.6	10.9	14.2	14.5	6.5	10.2
25	14.5	9.5	11.9	18.0	14.6	16.2	17.0	12.4	14.6	13.3	5.6	9.4
26	16.0	9.6	12.6	18.6	14.7	16.4	18.5	11.4	14.6	13.5	5.4	9.4
27	16.4	9.7	13.1	18.1	15.0	16.3	17.4	12.2	14.8	13.7	5.7	9.7
28	15.3	10.1	12.9	18.9	14.4	16.2	16.3	12.7	14.2	14.0	6.0	9.9
29	15.7	10.5	13.1	18.3	13.8	15.7	18.4	10.8	14.3	13.5	5.7	9.6
30	15.2	10.9	13.2	18.5	14.0	16.3	15.7	11.7	13.5	13.5	6.4	9.7
31	---	---	---	17.4	14.4	15.9	18.7	11.5	14.5	---	---	---
MONTH	16.4	7.6	11.4	18.9	11.3	15.2	19.9	10.1	15.1	18.9	5.4	11.2

07087050 ARKANSAS RIVER BELOW GRANITE, CO

LOCATION.--Lat 38°59'42", long 106°13'11", in SW¹/₄NW¹/₄ sec.22, T.12 S., R.79 W., Chaffee County, Hydrologic Unit 11020001, on right bank 500 ft east of U.S. Highway 24, 1.0 mi downstream from Pine Creek, and 4.8 mi southeast of Granite.

DRAINAGE AREA.--546 mi².

PERIOD OF RECORD.--March 1999 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=07087050

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,620 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 storage reservoirs, power developments, transmountain diversions (see elsewhere in this report), diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. 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 RECORD (seasonal only).--Maximum discharge, 3,280 ft³/s, May 31, 2000, gage height, 8.06 ft; minimum daily, 101 ft³/s, Sept. 15, 22-23, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 3,230 ft³/s, June 1-2, gage height, 8.01 ft; minimum daily, 125 ft³/s (estimated), Apr. 1.

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	---	---	---	---	---	---	e125	224	3,150	819	631	240
2	---	---	---	---	---	---	168	240	3,020	776	616	254
3	---	---	---	---	---	---	191	235	2,640	733	606	220
4	---	---	---	---	---	---	176	234	2,140	707	581	209
5	---	---	---	---	---	---	168	238	1,830	692	513	203
6	---	---	---	---	---	---	168	240	1,550	646	560	226
7	---	---	---	---	---	---	173	236	1,210	671	581	263
8	---	---	---	---	---	---	176	236	1,040	697	435	267
9	---	---	---	---	---	---	177	236	1,100	682	661	286
10	---	---	---	---	---	---	195	236	1,360	675	656	361
11	---	---	---	---	---	---	218	231	1,510	668	581	379
12	---	---	---	---	---	---	221	228	1,670	643	453	374
13	---	---	---	---	---	---	219	244	1,890	675	313	357
14	---	---	---	---	---	---	237	279	1,760	686	257	348
15	---	---	---	---	---	---	226	351	1,680	691	201	304
16	---	---	---	---	---	---	189	384	1,870	688	187	217
17	---	---	---	---	---	---	198	404	1,620	698	202	223
18	---	---	---	---	---	---	195	578	1,410	713	218	304
19	---	---	---	---	---	---	190	840	1,340	706	229	291
20	---	---	---	---	---	---	185	718	1,530	700	207	287
21	---	---	---	---	---	---	196	597	1,480	708	197	285
22	---	---	---	---	---	---	245	663	1,500	693	195	271
23	---	---	---	---	---	---	236	889	1,410	687	207	224
24	---	---	---	---	---	---	228	1,160	1,090	697	222	187
25	---	---	---	---	---	---	244	1,220	898	699	258	165
26	---	---	---	---	---	---	254	1,320	784	718	299	145
27	---	---	---	---	---	---	260	1,610	740	745	277	139
28	---	---	---	---	---	---	269	1,960	724	709	266	135
29	---	---	---	---	---	---	255	2,310	726	614	230	133
30	---	---	---	---	---	---	229	2,800	784	624	235	133
31	---	---	---	---	---	---	---	2,990	---	629	250	---
TOTAL	---	---	---	---	---	---	6,211	24,131	45,456	21,489	11,324	7,430
MEAN	---	---	---	---	---	---	207	778	1,515	693	365	248
MAX	---	---	---	---	---	---	269	2,990	3,150	819	661	379
MIN	---	---	---	---	---	---	125	224	724	614	187	133
AC-FT	---	---	---	---	---	---	12,320	47,860	90,160	42,620	22,460	14,740

e Estimated.

07091200 ARKANSAS RIVER NEAR NATHROP, CO

LOCATION.--Lat 38°39'08", long 106°03'02", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.23, T.51 N., R.8 E., Chaffee County, Hydrologic Unit 11020001, on right bank 300 ft upstream from end of Chaffee County Road 194 in Browns Canyon, 3.7 mi downstream from Browns Creek, 6.7 mi south of Nathrop, and 9 mi north of Salida.

DRAINAGE AREA.--1,060 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to September 1982. April 1989 to September 1993. October 1993 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=07091200

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,350 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 storage reservoirs, power developments, transbasin and transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (occurred during period of seasonal record), 5,540 ft³/s, July 14, 1995, gage height, 8.63 ft, from rating curve extended above 5,500 ft³/s; maximum gage height, 8.94 ft, Aug. 31, 1972 (backwater from unnamed tributary); minimum daily, 95 ft³/s, Feb. 25-27, 1977.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 3,310 ft³/s, June 2, gage height, 7.35 ft; minimum daily, 179 ft³/s, Apr. 1.

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	---	---	---	---	---	---	179	286	3,140	923	674	327
2	---	---	---	---	---	---	203	298	3,070	899	657	330
3	---	---	---	---	---	---	253	301	2,800	846	642	317
4	---	---	---	---	---	---	245	293	2,350	820	642	326
5	---	---	---	---	---	---	230	295	2,060	796	543	311
6	---	---	---	---	---	---	229	300	1,800	760	576	323
7	---	---	---	---	---	---	225	286	1,430	746	614	361
8	---	---	---	---	---	---	233	287	1,200	775	530	411
9	---	---	---	---	---	---	236	291	1,180	762	619	380
10	---	---	---	---	---	---	242	288	1,490	743	665	471
11	---	---	---	---	---	---	270	287	1,630	741	644	496
12	---	---	---	---	---	---	278	282	1,770	706	551	474
13	---	---	---	---	---	---	275	287	1,900	719	438	468
14	---	---	---	---	---	---	287	308	1,860	737	e375	451
15	---	---	---	---	---	---	297	361	1,790	710	e300	438
16	---	---	---	---	---	---	256	421	1,890	710	e275	348
17	---	---	---	---	---	---	256	431	1,720	715	e300	327
18	---	---	---	---	---	---	257	549	1,560	727	306	370
19	---	---	---	---	---	---	254	836	1,400	718	335	380
20	---	---	---	---	---	---	252	821	1,640	715	318	374
21	---	---	---	---	---	---	249	675	1,590	724	302	370
22	---	---	---	---	---	---	293	731	1,550	711	300	375
23	---	---	---	---	---	---	307	953	1,550	691	306	e337
24	---	---	---	---	---	---	289	1,230	1,260	709	334	e307
25	---	---	---	---	---	---	301	1,490	1,020	709	353	e286
26	---	---	---	---	---	---	309	1,430	951	739	380	e271
27	---	---	---	---	---	---	312	1,810	884	779	374	e259
28	---	---	---	---	---	---	314	2,210	866	819	367	e253
29	---	---	---	---	---	---	320	2,510	862	668	354	e249
30	---	---	---	---	---	---	288	2,940	866	663	370	e247
31	---	---	---	---	---	---	---	3,070	---	666	352	---
TOTAL	---	---	---	---	---	---	7,939	26,557	49,079	23,146	13,796	10,637
MEAN	---	---	---	---	---	---	265	857	1,636	747	445	355
MAX	---	---	---	---	---	---	320	3,070	3,140	923	674	496
MIN	---	---	---	---	---	---	179	282	862	663	275	247
AC-FT	---	---	---	---	---	---	15,750	52,680	97,350	45,910	27,360	21,100

e Estimated.

ARKANSAS RIVER BASIN

07091200 ARKANSAS RIVER NEAR NATHROP, 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
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	11.3	5.9	8.9	12.1	7.4	9.4
2	---	---	---	---	---	---	10.6	6.7	8.8	11.8	7.7	9.8
3	---	---	---	---	---	---	9.6	5.4	7.6	12.4	8.6	10.5
4	---	---	---	---	---	---	8.5	3.8	6.2	12.2	8.1	9.8
5	---	---	---	---	---	---	6.9	3.7	5.5	12.0	7.7	10.0
6	---	---	---	---	---	---	7.2	3.5	5.5	13.6	7.9	10.7
7	---	---	---	---	---	---	7.1	3.1	5.3	12.3	7.6	9.9
8	---	---	---	---	---	---	9.2	2.5	5.7	11.7	7.2	9.6
9	---	---	---	---	---	---	11.1	3.9	7.5	12.7	7.9	10.2
10	---	---	---	---	---	---	12.1	5.8	9.1	12.7	7.3	10.0
11	---	---	---	---	---	---	12.4	6.5	9.6	13.4	6.4	10.1
12	---	---	---	---	---	---	11.5	6.9	9.2	15.2	8.0	11.6
13	---	---	---	---	---	---	12.7	6.3	9.6	15.4	9.5	12.5
14	---	---	---	---	---	---	12.0	7.1	9.9	15.3	9.6	12.6
15	---	---	---	---	---	---	11.3	7.5	8.9	14.8	11.2	12.3
16	---	---	---	---	---	---	11.0	4.7	7.7	16.0	9.2	12.5
17	---	---	---	---	---	---	10.5	6.4	8.6	15.8	11.3	13.6
18	---	---	---	---	---	---	11.5	6.3	8.7	13.9	11.2	12.3
19	---	---	---	---	---	---	10.7	6.5	7.6	14.5	10.6	12.3
20	---	---	---	---	---	---	11.3	5.7	8.2	12.1	9.8	10.6
21	---	---	---	---	---	---	12.1	7.2	9.6	14.5	8.9	11.4
22	---	---	---	---	---	---	11.6	8.1	10.0	15.2	10.2	12.7
23	---	---	---	---	---	---	10.2	5.8	7.4	14.9	10.8	12.9
24	---	---	---	---	---	---	10.1	3.9	6.7	14.9	11.1	13.1
25	---	---	---	---	---	---	13.1	6.0	9.5	13.0	10.6	11.7
26	---	---	---	---	---	---	14.0	7.9	11.1	12.4	9.3	11.0
27	---	---	---	---	---	---	12.9	8.2	10.8	14.3	10.2	12.2
28	---	---	---	---	---	---	13.0	7.5	10.4	14.4	11.0	12.8
29	---	---	---	---	---	---	14.0	7.9	11.1	13.7	11.0	12.4
30	---	---	---	---	---	---	14.0	8.4	11.0	12.8	11.2	12.0
31	---	---	---	---	---	---	---	---	---	12.2	10.4	11.4
MONTH	---	---	---	---	---	---	14.0	2.5	8.5	16.0	6.4	11.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	12.2	11.0	11.6	17.2	13.4	15.3	18.0	14.6	16.3	18.5	13.6	16.1
2	13.2	10.0	11.6	17.9	13.5	15.7	19.6	15.2	17.2	18.0	13.6	16.0
3	13.5	10.4	12.1	18.1	14.2	16.2	19.4	16.2	17.7	16.8	13.7	14.6
4	13.5	10.6	12.1	18.3	14.0	16.2	19.5	15.8	17.6	18.0	12.2	14.9
5	12.6	10.5	11.4	16.8	13.7	15.5	19.7	15.2	17.4	17.2	13.6	15.5
6	12.3	9.7	10.9	16.1	13.4	14.9	17.9	15.2	16.8	16.8	13.3	14.9
7	13.4	10.4	11.8	17.8	13.1	15.5	17.9	14.7	16.4	15.0	12.9	13.9
8	14.3	10.0	12.1	18.7	13.9	16.3	19.1	15.3	17.1	15.8	11.1	13.5
9	13.7	10.9	12.3	18.8	14.3	16.5	18.7	15.6	17.3	14.7	12.4	13.1
10	13.3	10.4	12.0	18.8	13.9	16.4	18.3	15.5	17.0	12.8	10.6	11.6
11	14.8	10.8	12.8	18.1	14.3	16.3	19.0	15.6	17.3	13.4	9.2	11.2
12	13.9	11.5	12.9	18.1	14.5	16.3	18.3	15.1	16.8	14.7	9.3	11.9
13	13.0	11.0	11.9	18.6	14.6	16.5	19.6	14.8	17.1	13.5	10.1	11.6
14	14.7	10.9	12.8	17.6	14.2	15.9	19.2	14.4	16.9	13.5	8.7	11.0
15	15.3	12.0	13.8	16.6	13.9	15.5	19.1	14.5	16.9	14.3	9.0	11.7
16	14.3	12.3	13.2	17.3	14.0	15.7	18.3	14.8	16.7	15.0	9.7	12.3
17	13.1	10.8	12.0	18.9	14.2	16.5	17.2	13.7	15.7	15.4	11.0	13.1
18	14.0	11.3	12.6	19.6	15.3	17.4	16.5	13.5	15.1	14.2	9.3	11.9
19	14.7	11.0	12.8	17.7	15.8	16.9	17.6	12.8	15.2	14.1	8.7	11.4
20	13.2	11.2	12.4	17.4	15.0	16.3	18.5	13.8	16.3	14.1	9.9	12.0
21	15.0	10.7	12.9	18.1	14.9	16.5	17.9	14.9	16.4	14.1	9.3	11.7
22	15.3	11.6	13.6	18.5	14.9	16.5	18.2	14.5	16.4	14.3	8.9	11.7
23	15.5	12.0	13.9	18.1	15.5	16.8	17.2	14.4	15.8	14.5	9.3	12.0
24	15.4	11.7	13.6	19.6	14.9	17.0	17.1	14.2	15.7	14.6	9.3	12.0
25	15.8	11.8	13.8	18.1	15.6	16.9	16.3	14.3	15.3	14.4	9.6	12.2
26	16.3	11.9	14.1	18.9	15.2	17.0	16.9	13.5	15.1	14.7	9.2	12.0
27	17.0	12.5	14.8	17.8	15.9	16.9	17.9	13.9	15.7	14.2	9.8	12.2
28	17.2	12.7	14.9	18.3	14.8	16.7	16.3	14.5	15.2	14.0	9.4	11.8
29	16.1	13.0	14.9	18.8	15.5	16.9	17.6	12.9	15.0	14.1	9.1	11.7
30	17.3	13.0	15.0	18.7	15.0	16.8	16.6	13.9	15.1	13.7	9.6	11.8
31	---	---	---	18.1	15.2	16.5	18.1	13.5	15.6	---	---	---
MONTH	17.3	9.7	12.9	19.6	13.1	16.3	19.7	12.8	16.3	18.5	8.7	12.7

07093700 ARKANSAS RIVER NEAR WELLSVILLE, CO

LOCATION.--Lat 38°30'10", long 105°56'21", in SW¹/₄NE¹/₄ sec.14, T.49 N., R.9 E., Chaffee County, Hydrologic Unit 11020001, on right bank 50 ft upstream from Chaffee-Fremont County line, 2.0 mi northwest of Wellsville, 2.8 mi downstream from South Arkansas River, and 3.5 mi southeast of Salida.

DRAINAGE AREA.--1,485 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1961 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07093700

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,883.4 ft above NGVD of 1929 (river-profile survey).

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin and transmountain diversions, storage reservoirs, power developments, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	228	245	223	214	221	207	190	237	3,320	903	679	341
2	240	240	222	206	221	209	205	239	3,240	884	668	330
3	265	237	224	217	221	198	243	247	2,960	822	649	332
4	267	227	216	237	205	205	250	242	2,440	802	644	344
5	255	224	217	239	200	210	230	239	2,120	779	579	328
6	246	217	216	239	213	202	221	244	1,860	755	578	336
7	229	211	212	e220	e202	203	221	236	1,490	720	616	377
8	230	209	212	e210	e198	202	227	232	1,210	755	585	441
9	232	237	205	215	195	197	225	235	1,150	744	554	402
10	228	238	205	e213	196	189	224	233	1,430	721	665	475
11	205	224	203	e218	217	188	245	234	1,580	723	662	528
12	196	221	197	e218	212	194	256	228	1,710	695	589	499
13	184	225	207	e214	226	193	257	228	1,840	696	479	489
14	181	238	214	213	233	188	263	246	1,830	721	390	482
15	182	238	210	215	225	194	274	300	1,750	700	345	459
16	186	222	209	201	217	196	252	374	1,810	700	313	393
17	184	221	212	200	212	192	234	402	1,700	706	314	347
18	197	228	209	198	214	206	238	495	1,560	716	326	368
19	207	220	189	213	212	190	237	733	e1,380	717	389	394
20	207	219	188	213	205	178	235	805	e1,610	740	390	390
21	206	228	e212	217	207	185	216	651	1,580	742	366	382
22	218	230	e210	213	217	191	233	665	1,510	731	367	385
23	226	228	e210	215	207	192	255	878	1,520	711	382	363
24	238	228	e207	218	197	201	245	1,170	1,250	723	413	327
25	239	231	e202	217	217	199	246	1,580	990	719	439	299
26	234	216	e200	212	219	192	254	1,600	944	737	466	283
27	230	206	e202	212	210	196	262	2,010	865	778	461	262
28	231	213	230	218	214	193	269	2,550	844	819	430	256
29	228	221	229	213	---	188	308	2,920	844	706	416	251
30	234	228	229	208	---	185	273	3,180	830	670	392	249
31	236	---	218	216	---	185	---	3,310	---	677	366	---
TOTAL	6,869	6,770	6,539	6,672	5,933	6,048	7,288	26,943	49,167	23,012	14,912	11,112
MEAN	222	226	211	215	212	195	243	869	1,639	742	481	370
MAX	267	245	230	239	233	210	308	3,310	3,320	903	679	528
MIN	181	206	188	198	195	178	190	228	830	670	313	249
AC-FT	13,620	13,430	12,970	13,230	11,770	12,000	14,460	53,440	97,520	45,640	29,580	22,040

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

MEAN	405	417	380	354	348	336	387	1,034	2,064	1,428	868	500
MAX	750	581	636	576	729	647	896	2,344	3,930	3,521	1,889	1,031
(WY)	(1985)	(1983)	(1983)	(1983)	(1985)	(1993)	(1962)	(1984)	(1980)	(1995)	(1984)	(1970)
MIN	222	226	211	207	208	195	215	380	417	278	260	218
(WY)	(2003)	(2003)	(2003)	(1977)	(1977)	(2003)	(1977)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1961 - 2003

ANNUAL TOTAL	104,744	171,265	
ANNUAL MEAN	287	469	716
HIGHEST ANNUAL MEAN			a1,135 1984
LOWEST ANNUAL MEAN			318 2002
HIGHEST DAILY MEAN	564 May 23	3,320 Jun 1	5,980 Jun 12, 1980
LOWEST DAILY MEAN	179 Sep 16	178 Mar 20	110 Jan 12, 1963
ANNUAL SEVEN-DAY MINIMUM	187 Oct 12	187 Oct 12	147 Jan 11, 1963
MAXIMUM PEAK FLOW		3,540 May 31	6,240 Jun 12, 1980
MAXIMUM PEAK STAGE		6.95 May 31	b8.02 Jun 12, 1980
ANNUAL RUNOFF (AC-FT)	207,800	339,700	518,700
10 PERCENT EXCEEDS	383	880	1,600
50 PERCENT EXCEEDS	265	236	439
90 PERCENT EXCEEDS	210	198	258

e Estimated.

a Highest annual mean, also occurred 1995 water year.

b Maximum gage height, 8.40 ft, Jun 23, 1995.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1961 to January 1962, February to October 1964, December 1968, April 1969 to September 1975, March 1978 to February 1980, April to October 1987, April 1990 to March 1993, January 2002 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07093700

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
NOV 14...	1345	250	214	4.5
DEC 06...	1200	234	222	0.5
FEB 07...	1345	220	235	0.0
MAR 26...	1245	193	219	7.5
MAY 09...	1530	236	135	15.5
JUN 03...	1630	2,900	90	13.5
JUL 02...	1330	886	131	17.5
AUG 21...	1530	364	206	17.5
SEP 05...	1000	328	213	15.5

07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, CO

LOCATION.--Lat 38°39'32", long 105°48'48", in SE¹/₄SE¹/₄ sec.13, T.51 N., R.10 E., Fremont County, Hydrologic Unit 11020001, on left bank 0.1 mi downstream from County Road 2, 1.0 mi upstream from Steer Creek, 14.3 mi north of Howard, and 14.6 mi upstream from mouth.

DRAINAGE AREA.--106 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1980 to September 1986, October 1986 to current year (seasonal records only). Records prior to October 1988 not equivalent because of seepage between sites. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07093740

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,790 ft above NGVD of 1929, from topographic map. Prior to Oct. 28, 1988, at site 0.2 mi downstream at different datum. Mar. 24, 1989 to June 30, 1994, at site 0.1 mi downstream at different datum. July 1, 1994 to Aug. 1, 1996, at site 60 ft upstream at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream may be affected by erosion- control or livestock-watering reservoirs.

AVERAGE DISCHARGE.--5 years (water years 1981-86), 5.89 ft³/s; 4,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,360 ft³/s, Aug. 14, 1983, from slope-area measurement of peak flow, gage height, 8.22 ft, site and datum then in use; no flow, July 17-23, 1989.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 11 ft³/s, Aug. 22, gage height, 2.56 ft, from rating curve extended above 6.9 ft³/s on basis of slope-area measurement of peak flow at gage height 3.76 ft; minimum daily, 0.04 ft³/s, on several days.

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	0.12	---	---	---	---	---	e4.0	0.21	0.26	0.07	0.05	0.20
2	0.28	---	---	---	---	---	e3.0	0.22	0.24	0.06	0.04	0.19
3	0.43	---	---	---	---	---	2.5	0.22	0.17	0.06	0.04	0.20
4	0.42	---	---	---	---	---	0.88	0.20	0.15	0.05	0.04	0.23
5	0.27	---	---	---	---	---	0.53	0.19	0.17	0.05	0.04	0.23
6	0.25	---	---	---	---	---	0.46	0.17	0.21	0.05	0.04	0.64
7	0.22	---	---	---	---	---	0.46	0.15	0.16	0.05	0.05	0.49
8	0.22	---	---	---	---	---	0.53	0.17	0.14	0.04	0.05	0.31
9	0.23	---	---	---	---	---	0.79	0.15	0.11	0.04	0.06	0.25
10	0.23	---	---	---	---	---	1.0	0.15	0.10	0.04	0.05	0.25
11	0.24	---	---	---	---	---	1.1	0.31	0.10	0.04	0.06	0.23
12	0.24	---	---	---	---	---	1.2	0.12	0.09	0.04	0.06	0.21
13	0.26	---	---	---	---	---	0.96	0.21	0.10	0.04	0.06	0.20
14	0.29	---	---	---	---	---	1.1	0.20	0.12	0.04	0.06	0.21
15	0.29	---	---	---	---	---	0.96	0.36	0.12	0.04	0.05	0.21
16	0.30	---	---	---	---	---	0.69	0.80	0.13	0.05	0.06	0.20
17	0.30	---	---	---	---	---	0.67	0.38	0.20	0.05	0.07	0.19
18	0.31	---	---	---	---	---	0.66	0.32	0.20	0.04	0.07	0.19
19	0.31	---	---	---	---	---	0.56	0.33	0.40	0.04	0.07	0.19
20	e0.30	---	---	---	---	---	0.58	0.27	0.41	0.05	0.06	0.19
21	e0.30	---	---	---	---	---	0.61	0.22	0.30	0.04	0.07	0.20
22	e0.30	---	---	---	---	---	0.65	0.15	0.19	0.04	0.44	0.21
23	e0.28	---	---	---	---	---	0.62	0.16	0.14	0.05	0.23	0.21
24	e0.28	---	---	---	---	---	0.54	0.16	0.11	0.05	0.12	0.22
25	e0.25	---	---	---	---	---	0.44	0.18	0.10	0.05	0.17	0.22
26	e0.25	---	---	---	---	---	0.40	0.34	0.09	0.05	0.18	0.23
27	e0.25	---	---	---	---	---	0.32	0.20	0.08	0.06	0.15	0.22
28	e0.25	---	---	---	---	---	0.31	0.18	0.08	0.06	0.15	0.24
29	e0.25	---	---	---	---	---	0.29	0.23	0.08	0.06	0.15	0.25
30	e0.25	---	---	---	---	---	0.25	0.23	0.07	0.05	0.17	0.25
31	e0.25	---	---	---	---	---	---	0.24	---	0.05	0.23	---
TOTAL	8.42	---	---	---	---	---	27.06	7.42	4.82	1.50	3.14	7.26
MEAN	0.27	---	---	---	---	---	0.90	0.24	0.16	0.048	0.10	0.24
MAX	0.43	---	---	---	---	---	4.0	0.80	0.41	0.07	0.44	0.64
MIN	0.12	---	---	---	---	---	0.25	0.12	0.07	0.04	0.04	0.19
AC-FT	17	---	---	---	---	---	54	15	9.6	3.0	6.2	14

e Estimated.

07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1981 to September 1986, October 1986 to current year (seasonal records only). Prior to March 1989, at site 1,000 ft downstream, not equivalent because of seepage inflow between sites. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07093740

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: March 1995 to current year (seasonal records only).

SUSPENDED-SEDIMENT DISCHARGE: June 1981 to current year (seasonal records only).

INSTRUMENTATION.--Pumping sediment sampler and water-temperature probe with satellite telemetry.

REMARKS.--Daily water temperature records are good. Daily water-temperature data that are not published during period of operation are either missing or of unacceptable quality.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE (seasonal only): Maximum, 30.7°C, July 28, 1995, July 18, 1998; minimum, 0.0°C, on many days.

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 25,800 mg/L, Aug. 20, 1982; minimum daily mean, 4 mg/L, Aug. 31, Sept. 1, 4, 1988, Aug. 31, 1990.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 15,600 tons, Aug. 14, 1983; minimum daily, 0.0 ton, on many days during 1989-90, 2002, 2003.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE (seasonal only): Maximum, 28.9°C, July 17; minimum, 0.0°C, on many days.

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 1,680 mg/L, Aug. 23; minimum daily mean, 6 mg/L, May 12, 14.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 9.8 tons (estimated) Apr. 1; minimum daily, 0.0 ton, on many days.

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT						
16...	1145	0.28	397	3.5	11	0.01
NOV						
04...	1500	0.23	389	4.3	12	0.01
APR						
01...	1800	2.6	344	6.2	637	4.5
09...	1200	0.36	388	7.0	49	0.05
19...	1230	0.38	388	--	--	--
21...	1330	0.65	399	9.9	24	0.04
MAY						
06...	1430	0.17	373	--	--	--
06...	1500	0.17	373	15.0	8	0.00
19...	1300	0.41	407	--	--	--
22...	1200	0.15	--	--	18	0.01
JUN						
13...	1200	0.10	402	--	--	--
13...	1245	0.11	402	14.0	28	0.01
24...	1630	0.08	378	20.7	52	0.01
JUL						
10...	1315	0.04	390	--	--	--
10...	1400	0.04	396	26.0	244	0.03
28...	1130	0.06	416	--	--	--
28...	1200	0.06	416	18.5	117	0.02
AUG						
05...	1445	0.04	371	--	--	--
21...	1130	0.06	403	--	--	--
21...	1145	0.07	403	14.5	85	0.02
SEP						
11...	1130	0.25	430	--	--	--
11...	1200	0.24	430	8.5	101	0.07

07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, 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	16.2	3.1	8.5	---	---	---	---	---	---	---	---	---
2	11.2	5.7	8.1	---	---	---	---	---	---	---	---	---
3	9.4	2.4	5.6	---	---	---	---	---	---	---	---	---
4	13.2	1.5	6.4	---	---	---	---	---	---	---	---	---
5	14.5	3.3	8.0	---	---	---	---	---	---	---	---	---
6	15.3	2.2	7.9	---	---	---	---	---	---	---	---	---
7	15.4	2.0	8.0	---	---	---	---	---	---	---	---	---
8	15.1	2.2	8.0	---	---	---	---	---	---	---	---	---
9	15.2	2.5	8.1	---	---	---	---	---	---	---	---	---
10	13.6	1.1	6.9	---	---	---	---	---	---	---	---	---
11	14.1	2.2	7.2	---	---	---	---	---	---	---	---	---
12	12.2	2.1	6.2	---	---	---	---	---	---	---	---	---
13	12.7	0.1	5.4	---	---	---	---	---	---	---	---	---
14	12.8	0.1	5.3	---	---	---	---	---	---	---	---	---
15	11.8	0.1	4.8	---	---	---	---	---	---	---	---	---
16	11.5	0.1	4.5	---	---	---	---	---	---	---	---	---
17	11.4	0.0	4.6	---	---	---	---	---	---	---	---	---
18	11.1	0.1	4.4	---	---	---	---	---	---	---	---	---
19	10.3	0.0	4.1	---	---	---	---	---	---	---	---	---
20	10.2	0.0	4.2	---	---	---	---	---	---	---	---	---
21	11.4	0.0	4.6	---	---	---	---	---	---	---	---	---
22	9.5	0.1	4.1	---	---	---	---	---	---	---	---	---
23	10.5	1.0	5.3	---	---	---	---	---	---	---	---	---
24	9.1	0.8	4.8	---	---	---	---	---	---	---	---	---
25	8.7	0.1	3.8	---	---	---	---	---	---	---	---	---
26	7.0	0.1	3.3	---	---	---	---	---	---	---	---	---
27	7.2	0.1	3.4	---	---	---	---	---	---	---	---	---
28	6.7	0.8	3.6	---	---	---	---	---	---	---	---	---
29	4.9	0.1	2.0	---	---	---	---	---	---	---	---	---
30	3.3	0.0	1.0	---	---	---	---	---	---	---	---	---
31	4.2	0.0	1.4	---	---	---	---	---	---	---	---	---
MONTH	16.2	0.0	5.3	---	---	---	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	6.7	0.0	2.6	13.6	0.0	6.2
2	---	---	---	---	---	---	6.4	0.0	2.3	13.7	2.3	7.7
3	---	---	---	---	---	---	6.6	0.0	2.6	14.7	1.6	7.4
4	---	---	---	---	---	---	6.4	0.0	2.6	15.4	0.9	6.9
5	---	---	---	---	---	---	7.3	0.0	2.9	15.8	0.5	6.9
6	---	---	---	---	---	---	7.8	0.1	3.0	17.5	0.2	7.7
7	---	---	---	---	---	---	6.5	0.1	2.7	14.5	0.0	6.7
8	---	---	---	---	---	---	10.5	0.1	4.0	17.6	0.1	7.7
9	---	---	---	---	---	---	12.9	0.1	5.9	15.4	0.7	7.0
10	---	---	---	---	---	---	14.5	0.4	7.0	13.5	0.0	4.9
11	---	---	---	---	---	---	14.8	1.4	7.5	17.4	0.0	6.9
12	---	---	---	---	---	---	12.2	1.7	6.5	20.3	0.0	8.9
13	---	---	---	---	---	---	16.5	1.0	7.7	17.7	0.5	8.4
14	---	---	---	---	---	---	15.2	2.4	7.7	20.0	1.2	10.0
15	---	---	---	---	---	---	8.8	2.0	5.3	11.6	4.4	7.4
16	---	---	---	---	---	---	16.9	0.0	6.7	22.2	4.1	11.9
17	---	---	---	---	---	---	13.7	1.2	6.5	20.8	4.8	11.9
18	---	---	---	---	---	---	15.6	0.9	7.0	18.9	5.6	11.2
19	---	---	---	---	---	---	6.6	1.4	3.6	16.2	3.8	9.5
20	---	---	---	---	---	---	17.8	0.8	6.7	10.7	3.4	6.5
21	---	---	---	---	---	---	13.9	2.6	6.8	20.8	1.6	10.3
22	---	---	---	---	---	---	14.0	3.3	7.6	23.3	3.2	12.2
23	---	---	---	---	---	---	6.9	0.0	3.5	23.5	4.1	12.8
24	---	---	---	---	---	---	14.0	0.0	5.6	19.8	5.3	11.5
25	---	---	---	---	---	---	19.5	0.0	8.0	17.3	5.5	10.1
26	---	---	---	---	---	---	19.2	0.8	8.8	19.8	4.9	11.7
27	---	---	---	---	---	---	16.8	0.2	7.2	23.1	6.8	13.8
28	---	---	---	---	---	---	16.3	0.1	7.3	24.5	6.8	14.7
29	---	---	---	---	---	---	16.8	1.6	8.3	26.1	6.8	14.7
30	---	---	---	---	---	---	17.5	0.7	7.9	23.5	8.3	14.1
31	---	---	---	---	---	---	---	---	---	20.1	7.8	12.4
MONTH	---	---	---	---	---	---	19.5	0.0	5.7	26.1	0.0	9.7

07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, 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
1	18.5	7.6	11.9	22.5	8.3	15.6	22.3	9.6	15.6	22.6	10.1	15.5
2	24.1	5.2	13.2	27.5	7.7	16.7	26.6	9.3	16.2	20.0	8.9	14.3
3	24.4	5.3	13.7	28.1	9.3	17.4	24.4	13.0	17.5	14.7	10.0	12.2
4	25.0	7.6	13.6	28.0	8.1	16.8	22.4	11.1	16.5	21.0	9.7	14.3
5	15.8	6.8	10.0	25.0	8.2	15.7	25.5	9.9	16.7	17.4	8.5	13.2
6	19.4	6.0	11.8	22.6	8.1	15.1	20.8	10.1	15.3	16.1	10.4	12.7
7	19.9	6.6	11.7	26.4	7.3	15.4	22.0	9.6	15.2	15.3	10.3	12.2
8	23.5	6.2	13.2	28.0	7.9	16.8	22.6	12.8	16.5	20.0	7.0	12.8
9	23.1	5.6	12.7	28.0	7.3	16.6	21.6	10.9	16.1	12.8	9.1	11.0
10	22.1	5.3	12.8	28.6	7.4	16.7	21.0	9.5	15.3	14.7	6.7	10.2
11	24.9	5.1	14.1	27.0	8.0	16.3	22.7	9.8	15.3	14.5	4.2	8.9
12	20.1	6.6	13.1	23.4	9.0	16.2	22.2	9.5	15.2	18.2	4.1	10.4
13	16.4	7.1	11.8	25.6	9.4	16.7	23.5	9.4	15.5	10.9	6.1	7.8
14	22.9	5.6	13.4	22.1	8.3	14.7	24.4	7.3	14.8	16.2	3.6	9.1
15	27.6	6.3	14.5	25.2	8.2	15.2	25.0	7.8	15.2	16.4	2.9	9.2
16	20.1	7.9	12.0	26.7	9.8	15.9	19.0	9.1	13.3	16.4	3.6	9.7
17	21.8	5.0	11.3	28.9	10.2	18.1	20.5	8.9	13.9	17.2	6.8	11.2
18	17.9	6.5	11.1	27.9	9.9	17.8	19.0	9.3	13.5	15.8	5.3	9.7
19	18.5	7.6	11.4	25.7	11.6	17.3	23.1	8.0	14.6	15.5	2.4	8.7
20	19.6	8.1	13.1	21.9	11.1	16.3	24.7	8.4	15.2	14.8	3.7	8.9
21	23.3	6.8	14.1	26.3	9.7	16.9	19.9	9.7	14.7	15.5	2.8	8.7
22	23.9	6.6	14.2	24.9	9.6	15.6	22.9	9.3	14.0	15.8	2.1	8.7
23	23.1	6.2	13.7	26.6	9.4	15.9	22.2	10.6	15.3	16.1	2.9	9.1
24	22.9	6.9	13.6	26.7	9.2	16.8	20.5	10.1	15.0	15.9	2.9	8.9
25	24.3	7.0	14.4	26.7	10.6	16.9	16.0	11.7	14.2	15.5	3.3	9.1
26	26.7	9.4	16.0	23.6	10.8	16.0	17.3	10.6	13.7	16.5	3.2	9.3
27	26.2	7.0	15.4	24.3	13.2	16.9	20.0	9.4	14.2	16.1	4.7	9.9
28	27.3	7.7	15.8	23.0	11.0	16.5	16.5	12.2	14.1	14.6	3.2	8.6
29	21.6	8.7	13.9	25.3	10.4	16.3	17.0	9.1	13.1	15.1	2.8	8.5
30	26.3	8.3	15.5	24.4	9.2	16.1	16.6	11.2	13.5	13.2	3.4	8.1
31	---	---	---	22.6	9.4	15.4	19.0	10.5	14.1	---	---	---
MONTH	27.6	5.0	13.2	28.9	7.3	16.3	26.6	7.3	14.9	22.6	2.1	10.4

07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	e4.0	---	e9.8	0.21	9	0.00	0.26	76	0.05
2	e3.0	---	e6.8	0.22	11	0.00	0.24	---	e0.04
3	2.5	259	1.9	0.22	---	e0.00	0.17	53	0.02
4	0.88	---	e0.28	0.20	10	0.00	0.15	42	0.02
5	0.53	---	e0.13	0.19	11	0.00	0.17	39	0.02
6	0.46	59	0.07	0.17	9	0.00	0.21	51	0.03
7	0.46	---	e0.07	0.15	13	0.00	0.16	---	e0.02
8	0.53	---	e0.07	0.17	---	e0.00	0.14	46	0.02
9	0.79	64	0.16	0.15	18	0.00	0.11	42	0.01
10	1.0	113	0.35	0.15	22	0.00	0.10	53	0.01
11	1.1	114	0.36	0.31	32	0.37	0.10	59	0.02
12	1.2	104	0.35	0.12	6	0.00	0.09	---	e0.01
13	0.96	---	e0.27	0.21	---	e0.00	0.10	36	0.00
14	1.1	91	0.26	0.20	6	0.00	0.12	37	0.01
15	0.96	69	0.18	0.36	21	0.03	0.12	51	0.02
16	0.69	75	0.14	0.80	88	0.21	0.13	60	0.02
17	0.67	69	0.13	0.38	46	0.05	0.20	---	e0.03
18	0.66	---	e0.10	0.32	---	e0.03	0.20	57	0.03
19	0.56	37	0.06	0.33	23	0.02	0.40	92	0.12
20	0.58	28	0.04	0.27	19	0.01	0.41	153	0.17
21	0.61	29	0.05	0.22	22	0.01	0.30	92	0.08
22	0.65	37	0.06	0.15	22	0.00	0.19	---	e0.03
23	0.62	---	e0.06	0.16	---	e0.01	0.14	46	0.02
24	0.54	37	0.05	0.16	37	0.02	0.11	43	0.01
25	0.44	44	0.05	0.18	35	0.02	0.10	56	0.02
26	0.40	29	0.03	0.34	82	0.07	0.09	59	0.01
27	0.32	23	0.02	0.20	85	0.04	0.08	---	e0.01
28	0.31	---	e0.01	0.18	---	e0.04	0.08	55	0.01
29	0.29	12	0.00	0.23	63	0.04	0.08	65	0.01
30	0.25	8	0.00	0.23	58	0.04	0.07	80	0.02
31	---	---	---	0.24	74	0.05	---	---	---
TOTAL	27.06	---	21.85	7.42	---	1.06	4.82	---	0.89
		JULY			AUGUST			SEPTEMBER	
1	0.07	94	0.02	0.05	---	e0.02	0.20	130	0.07
2	0.06	---	e0.02	0.04	122	0.01	0.19	134	0.07
3	0.06	82	0.01	0.04	128	0.01	0.20	125	0.07
4	0.05	68	0.00	0.04	144	0.02	0.23	120	0.07
5	0.05	101	0.01	0.04	155	0.02	0.23	---	e0.06
6	0.05	122	0.02	0.04	---	e0.02	0.64	329	1.9
7	0.05	---	e0.01	0.05	108	0.01	0.49	260	0.79
8	0.04	95	0.01	0.05	110	0.02	0.31	145	0.12
9	0.04	120	0.01	0.06	117	0.02	0.25	115	0.08
10	0.04	235	0.02	0.05	121	0.02	0.25	---	e0.06
11	0.04	257	0.03	0.06	---	e0.02	0.23	94	0.06
12	0.04	---	e0.02	0.06	102	0.02	0.21	96	0.05
13	0.04	186	0.02	0.06	82	0.01	0.20	90	0.05
14	0.04	161	0.02	0.06	103	0.02	0.21	108	0.06
15	0.04	202	0.02	0.05	115	0.02	0.21	---	e0.06
16	0.05	211	0.03	0.06	---	e0.02	0.20	89	0.05
17	0.05	---	e0.03	0.07	72	0.01	0.19	95	0.05
18	0.04	180	0.02	0.07	64	0.01	0.19	146	0.07
19	0.04	169	0.02	0.07	92	0.02	0.19	144	0.07
20	0.05	196	0.02	0.06	117	0.02	0.19	---	e0.06
21	0.04	221	0.03	0.07	91	0.02	0.20	90	0.05
22	0.04	---	e0.02	0.44	1,030	6.4	0.21	---	e0.05
23	0.05	120	0.02	0.23	1,680	1.1	0.21	105	0.06
24	0.05	110	0.01	0.12	848	0.28	0.22	117	0.07
25	0.05	175	0.02	0.17	777	0.40	0.22	---	e0.06
26	0.05	218	0.03	0.18	---	e0.35	0.23	78	0.05
27	0.06	---	e0.03	0.15	394	0.16	0.22	91	0.05
28	0.06	118	0.02	0.15	184	0.08	0.24	185	0.12
29	0.06	133	0.02	0.15	143	0.06	0.25	140	0.10
30	0.05	160	0.02	0.17	119	0.06	0.25	---	e0.07
31	0.05	172	0.02	0.23	---	e0.07	---	---	---
TOTAL	1.50	---	0.60	3.14	---	9.32	7.26	---	4.55

e Estimated.

07093775 BADGER CREEK, LOWER STATION, NEAR HOWARD, CO

LOCATION.--Lat 38°28'02", long 105°51'34", in SW¹/₄SW¹/₄ sec.27, T.49 N., R.10 E., Fremont County, Hydrologic Unit 11020001, on left bank 660 ft upstream from Denver and Rio Grande Railroad bridge, 960 ft upstream from mouth, and 1.9 mi northwest of Howard.

DRAINAGE AREA.--211 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1980 to September 1996, October 1996 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=07093775

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,780 ft above NGVD of 1929, from topographic map. Prior to May 19, 1983, at site 360 ft downstream at datum 5.07 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream may be affected by erosion-control and livestock-watering reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,900 ft³/s, July 8, 1996, from slope-area measurement of peak flow, gage height, 10.73 ft, from floodmarks; minimum daily, 0.56 ft³/s, Feb. 4-5, 1982.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 86 ft³/s, July 22, gage height, 4.80 ft, from floodmarks; minimum daily, 3.0 ft³/s, Aug. 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	4.4	---	---	---	---	---	6.6	6.4	6.2	3.7	3.1	3.6
2	5.3	---	---	---	---	---	7.9	6.5	5.9	3.6	3.1	3.5
3	6.0	---	---	---	---	---	8.2	6.3	5.7	3.5	3.2	3.9
4	5.5	---	---	---	---	---	7.8	6.3	5.7	3.5	3.0	4.0
5	5.0	---	---	---	---	---	7.5	6.4	5.9	3.5	3.2	3.8
6	4.8	---	---	---	---	---	7.3	6.3	5.7	3.5	3.2	4.0
7	4.6	---	---	---	---	---	7.2	6.2	5.6	3.6	3.2	4.5
8	4.4	---	---	---	---	---	7.0	6.2	5.4	3.5	3.2	4.1
9	4.4	---	---	---	---	---	7.0	6.1	5.2	3.3	3.3	4.2
10	4.4	---	---	---	---	---	7.4	6.1	5.3	3.3	3.9	4.3
11	4.3	---	---	---	---	---	8.0	6.1	5.2	3.3	3.5	4.1
12	4.3	---	---	---	---	---	8.2	5.9	5.1	3.4	3.4	3.9
13	4.4	---	---	---	---	---	8.1	5.7	5.0	3.3	3.3	4.0
14	4.3	---	---	---	---	---	8.3	5.6	5.2	3.3	3.2	4.0
15	4.3	---	---	---	---	---	8.6	6.4	5.1	3.5	3.1	3.7
16	4.3	---	---	---	---	---	8.0	6.7	5.3	3.9	3.3	3.6
17	4.4	---	---	---	---	---	7.7	6.3	5.4	3.9	3.5	3.5
18	4.3	---	---	---	---	---	7.5	6.1	7.9	3.4	3.5	3.6
19	4.2	---	---	---	---	---	7.7	6.2	5.8	3.5	3.5	3.7
20	4.2	---	---	---	---	---	7.6	6.6	5.6	4.1	3.2	3.6
21	4.2	---	---	---	---	---	7.6	6.4	5.2	3.5	3.1	3.6
22	4.4	---	---	---	---	---	7.8	6.0	5.0	6.3	3.3	3.6
23	4.8	---	---	---	---	---	7.8	5.7	4.8	e3.2	3.8	3.5
24	4.9	---	---	---	---	---	7.4	5.6	4.5	e3.1	3.6	3.5
25	4.8	---	---	---	---	---	7.3	6.2	4.4	3.1	3.7	3.5
26	4.8	---	---	---	---	---	7.2	6.3	4.4	3.2	3.7	3.4
27	5.0	---	---	---	---	---	7.1	6.1	4.5	5.1	3.6	3.5
28	4.9	---	---	---	---	---	6.9	5.8	4.4	6.2	3.8	3.5
29	4.8	---	---	---	---	---	6.7	5.6	4.2	4.0	3.8	3.6
30	4.9	---	---	---	---	---	6.6	6.2	3.9	3.2	3.8	3.6
31	4.8	---	---	---	---	---	---	6.2	---	3.1	3.7	---
TOTAL	144.1	---	---	---	---	---	226.0	190.5	157.5	114.6	105.8	112.9
MEAN	4.65	---	---	---	---	---	7.53	6.15	5.25	3.70	3.41	3.76
MAX	6.0	---	---	---	---	---	8.6	6.7	7.9	6.3	3.9	4.5
MIN	4.2	---	---	---	---	---	6.6	5.6	3.9	3.1	3.0	3.4
AC-FT	286	---	---	---	---	---	448	378	312	227	210	224

e Estimated.

07093775 BADGER CREEK, LOWER STATION, NEAR HOWARD, 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
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	17.6	2.9	8.4	16.7	3.4	8.8
2	---	---	---	---	---	---	12.3	3.3	7.0	16.6	5.8	10.0
3	---	---	---	---	---	---	14.2	2.5	6.7	18.7	6.3	10.5
4	---	---	---	---	---	---	13.3	1.5	5.9	17.9	5.4	9.5
5	---	---	---	---	---	---	10.7	2.8	5.8	16.4	5.0	8.9
6	---	---	---	---	---	---	14.3	2.3	6.5	15.5	5.0	9.2
7	---	---	---	---	---	---	8.2	1.6	4.6	16.7	5.2	9.4
8	---	---	---	---	---	---	16.1	0.8	6.8	15.3	4.8	9.0
9	---	---	---	---	---	---	17.8	1.7	8.0	17.2	4.6	9.7
10	---	---	---	---	---	---	17.7	2.9	8.8	18.3	3.7	9.3
11	---	---	---	---	---	---	17.8	3.7	8.9	18.6	3.2	9.8
12	---	---	---	---	---	---	15.3	3.8	8.5	20.9	4.5	11.3
13	---	---	---	---	---	---	18.3	3.8	9.5	19.6	5.7	11.1
14	---	---	---	---	---	---	17.0	3.9	9.2	20.9	6.2	12.2
15	---	---	---	---	---	---	10.2	4.4	7.4	15.8	8.3	10.6
16	---	---	---	---	---	---	17.6	3.2	8.7	22.8	6.7	13.3
17	---	---	---	---	---	---	15.9	4.0	8.6	20.6	8.3	13.4
18	---	---	---	---	---	---	15.8	3.9	8.2	16.2	8.3	11.8
19	---	---	---	---	---	---	9.3	4.7	6.5	20.0	7.1	11.9
20	---	---	---	---	---	---	16.5	4.6	9.1	11.3	6.9	8.6
21	---	---	---	---	---	---	14.7	5.7	8.9	22.0	5.2	12.0
22	---	---	---	---	---	---	14.8	6.8	9.2	23.2	7.2	13.7
23	---	---	---	---	---	---	10.3	3.6	6.7	21.6	8.0	13.7
24	---	---	---	---	---	---	16.5	3.3	8.1	24.2	8.7	14.7
25	---	---	---	---	---	---	18.7	3.9	9.9	20.4	9.1	13.1
26	---	---	---	---	---	---	19.2	5.0	10.7	22.8	8.2	13.7
27	---	---	---	---	---	---	17.0	4.9	9.5	19.4	9.4	13.6
28	---	---	---	---	---	---	19.2	5.2	10.3	25.8	9.6	16.0
29	---	---	---	---	---	---	18.6	5.2	10.2	25.6	10.1	15.6
30	---	---	---	---	---	---	16.2	4.9	8.9	23.9	10.9	14.7
31	---	---	---	---	---	---	---	---	---	20.1	10.4	13.6
MONTH	---	---	---	---	---	---	19.2	0.8	8.2	25.8	3.2	11.7
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.8	10.5	13.3	26.7	11.1	17.4	23.4	14.7	18.8	26.8	12.6	17.6
2	23.9	8.2	14.4	26.9	10.8	17.5	25.4	15.0	19.4	25.9	11.2	16.7
3	24.0	8.8	15.0	27.0	11.2	17.6	23.3	16.4	19.5	19.0	12.6	14.6
4	23.6	10.4	14.9	28.2	10.8	17.7	24.9	16.0	19.6	26.0	10.8	16.1
5	15.3	9.3	11.8	25.5	10.9	17.1	29.0	15.2	19.5	23.9	11.5	15.4
6	19.7	8.5	13.2	24.4	11.1	16.7	28.0	12.5	17.9	23.8	12.2	15.9
7	19.3	9.6	12.5	25.6	11.0	16.8	27.2	12.3	17.5	20.4	11.9	14.5
8	23.8	7.2	14.1	28.2	11.2	17.9	27.2	14.5	18.6	24.2	9.3	14.8
9	21.7	9.1	14.0	28.4	10.8	17.8	26.5	13.5	17.9	14.3	11.4	12.7
10	21.4	8.9	14.0	28.5	11.2	18.2	27.1	12.5	17.7	18.9	9.3	12.1
11	23.6	8.8	14.3	28.1	11.0	17.5	26.4	12.4	17.5	18.3	6.4	11.2
12	23.2	9.2	14.5	26.5	11.9	17.9	25.5	12.7	18.0	22.7	6.7	12.8
13	18.3	9.4	13.4	27.1	12.1	18.3	27.7	12.8	18.3	13.4	8.1	10.1
14	21.2	8.7	14.0	27.3	11.3	17.6	26.3	11.3	17.2	20.7	5.5	11.4
15	26.2	9.2	15.3	26.8	11.9	17.0	26.9	11.9	17.6	21.2	5.6	11.8
16	20.1	10.8	13.8	27.9	12.0	17.3	26.7	12.5	17.2	22.3	6.7	12.4
17	23.8	9.0	13.6	28.5	12.6	19.0	23.5	11.6	16.2	22.4	9.1	13.6
18	24.1	3.8	12.9	28.6	12.6	19.0	19.8	11.9	15.0	19.7	8.2	11.7
19	22.3	9.5	13.6	28.4	13.6	18.4	25.4	10.9	16.9	21.2	5.4	11.3
20	18.7	10.2	13.8	24.0	13.2	17.1	27.5	11.7	17.9	20.2	6.5	11.4
21	23.1	8.8	14.5	28.3	12.5	18.2	23.1	12.5	16.7	21.1	6.1	11.7
22	23.8	8.9	14.8	29.2	9.2	16.6	25.8	11.9	16.9	22.0	5.7	11.8
23	23.5	8.9	15.0	26.2	12.5	17.3	27.1	12.7	17.3	21.4	6.3	12.1
24	24.3	9.3	15.3	28.5	12.1	18.8	28.1	12.2	17.7	22.0	6.3	12.0
25	24.6	10.0	15.8	27.4	13.3	19.0	23.6	13.6	16.4	22.1	6.8	12.5
26	25.5	11.5	16.8	28.6	13.5	18.6	25.7	13.2	16.6	22.4	6.4	12.5
27	26.5	10.2	16.9	25.2	14.8	17.5	27.5	12.2	17.5	21.0	7.4	12.2
28	25.4	10.6	16.1	21.0	13.8	16.8	20.4	13.7	16.1	20.3	6.6	11.5
29	23.5	10.7	15.8	24.5	14.9	18.8	25.6	11.1	16.5	21.6	6.1	11.8
30	25.6	11.8	16.9	24.9	14.9	19.3	19.9	13.6	15.4	18.9	6.8	11.1
31	---	---	---	22.7	15.1	18.2	24.7	12.9	16.5	---	---	---
MONTH	26.5	3.8	14.5	29.2	9.2	17.8	29.0	10.9	17.5	26.8	5.4	12.9

07094500 ARKANSAS RIVER AT PARKDALE, CO

LOCATION.--Lat 38°29'14", long 105°22'23", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.18, T.18 S., R.71 W., Fremont County, Hydrologic Unit 11020001, on left bank at Parkdale, 100 ft upstream from Bumback Gulch, 300 ft upstream from bridge on U.S. Highway 50, and 0.9 mi upstream from Copper Gulch.

DRAINAGE AREA.--2,548 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to September 1955, October 1964 to September 1994, April 1995 to current year (seasonal records only). Monthly discharge only for October 1945 to May 1946, published in WSP 1311. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07094500

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,720 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1964, at site 600 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transbasin and transmountain diversions, storage reservoirs, power development, ground-water withdrawals, diversions for irrigation and municipal use, return flows from irrigated areas, and flows from sewage-treatment plants.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (occurred during period of seasonal record), 6,830 ft³/s, June 18, 1995, gage height, 8.82 ft, from rating curve extended above 6,050 ft³/s; maximum gage height, 9.13 ft, June 9, 1985; minimum daily (occurred during period of seasonal record), 187 ft³/s, Sept. 17, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 3,910 ft³/s, May 31, gage height, 6.59 ft; minimum daily, 235 ft³/s, Apr. 1.

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	---	---	---	---	---	---	235	269	3,680	981	771	395
2	---	---	---	---	---	---	243	251	3,730	986	756	353
3	---	---	---	---	---	---	259	261	3,430	929	733	370
4	---	---	---	---	---	---	302	261	2,820	894	719	371
5	---	---	---	---	---	---	288	256	2,380	866	692	367
6	---	---	---	---	---	---	268	258	2,120	847	625	357
7	---	---	---	---	---	---	261	257	1,730	807	658	394
8	---	---	---	---	---	---	260	247	1,410	818	675	481
9	---	---	---	---	---	---	266	245	1,280	815	571	468
10	---	---	---	---	---	---	261	247	1,420	804	750	489
11	---	---	---	---	---	---	264	247	1,660	793	756	600
12	---	---	---	---	---	---	289	246	1,790	784	696	584
13	---	---	---	---	---	---	293	238	1,920	760	601	551
14	---	---	---	---	---	---	286	244	2,040	787	482	560
15	---	---	---	---	---	---	300	278	1,900	786	412	528
16	---	---	---	---	---	---	308	372	1,890	779	363	484
17	---	---	---	---	---	---	264	415	1,970	793	345	383
18	---	---	---	---	---	---	261	486	1,750	784	352	354
19	---	---	---	---	---	---	262	684	1,610	786	385	417
20	---	---	---	---	---	---	272	895	1,760	813	437	418
21	---	---	---	---	---	---	259	800	1,770	827	411	406
22	---	---	---	---	---	---	240	709	1,650	823	398	394
23	---	---	---	---	---	---	268	863	1,670	809	426	395
24	---	---	---	---	---	---	279	1,160	1,480	801	449	347
25	---	---	---	---	---	---	259	1,550	1,200	787	476	317
26	---	---	---	---	---	---	269	1,500	1,110	814	511	296
27	---	---	---	---	---	---	275	1,820	1,020	851	527	281
28	---	---	---	---	---	---	282	2,340	975	924	486	267
29	---	---	---	---	---	---	300	2,770	955	873	491	258
30	---	---	---	---	---	---	327	3,370	958	765	448	250
31	---	---	---	---	---	---	---	3,720	---	744	424	---
TOTAL	---	---	---	---	---	---	8,200	27,259	55,078	25,630	16,826	12,135
MEAN	---	---	---	---	---	---	273	879	1,836	827	543	404
MAX	---	---	---	---	---	---	327	3,720	3,730	986	771	600
MIN	---	---	---	---	---	---	235	238	955	744	345	250
AC-FT	---	---	---	---	---	---	16,260	54,070	109,200	50,840	33,370	24,070

ARKANSAS RIVER BASIN

07094500 ARKANSAS RIVER AT PARKDALE, 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
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	13.8	7.9	10.8	15.8	11.3	13.2
2	---	---	---	---	---	---	13.7	8.5	10.9	16.2	11.2	13.4
3	---	---	---	---	---	---	12.2	8.3	9.8	17.5	12.2	14.4
4	---	---	---	---	---	---	10.8	6.8	8.7	15.3	11.6	13.1
5	---	---	---	---	---	---	8.3	6.2	7.5	15.6	10.4	12.9
6	---	---	---	---	---	---	10.2	7.0	8.4	15.6	10.7	12.9
7	---	---	---	---	---	---	9.0	6.4	7.5	15.6	12.0	13.6
8	---	---	---	---	---	---	11.0	4.6	7.8	15.5	11.1	13.1
9	---	---	---	---	---	---	12.8	6.2	9.6	15.5	10.9	13.2
10	---	---	---	---	---	---	14.7	8.5	11.5	13.1	10.3	11.8
11	---	---	---	---	---	---	14.3	10.0	12.2	15.7	10.0	12.8
12	---	---	---	---	---	---	13.6	10.1	11.8	17.2	11.3	14.3
13	---	---	---	---	---	---	14.9	9.1	12.2	17.1	12.8	14.9
14	---	---	---	---	---	---	13.5	11.1	12.5	16.5	12.6	15.1
15	---	---	---	---	---	---	13.1	10.2	11.9	17.9	14.4	15.5
16	---	---	---	---	---	---	13.7	8.0	10.9	18.3	12.7	15.7
17	---	---	---	---	---	---	13.4	9.2	11.6	18.8	15.3	17.1
18	---	---	---	---	---	---	14.6	9.5	12.1	18.2	15.1	16.7
19	---	---	---	---	---	---	11.8	9.7	10.5	15.5	13.5	14.4
20	---	---	---	---	---	---	12.9	8.6	10.7	13.5	10.5	11.7
21	---	---	---	---	---	---	13.8	10.5	11.6	15.4	9.5	12.5
22	---	---	---	---	---	---	14.8	10.5	12.4	18.0	13.0	15.5
23	---	---	---	---	---	---	12.4	8.0	10.8	18.0	14.9	16.7
24	---	---	---	---	---	---	12.6	6.8	9.2	17.5	14.6	16.3
25	---	---	---	---	---	---	14.8	8.3	11.6	16.6	14.5	15.7
26	---	---	---	---	---	---	16.6	11.1	13.8	15.3	12.8	14.1
27	---	---	---	---	---	---	16.0	11.9	13.7	15.7	13.4	14.5
28	---	---	---	---	---	---	16.1	11.6	13.8	16.5	13.9	15.3
29	---	---	---	---	---	---	16.9	12.5	14.5	16.0	14.4	15.2
30	---	---	---	---	---	---	16.1	12.1	14.0	15.4	13.7	14.5
31	---	---	---	---	---	---	---	---	---	14.4	13.0	13.6
MONTH	---	---	---	---	---	---	16.9	4.6	11.1	18.8	9.5	14.3
	JUNE			JULY			AUGUST			SEPTEMBER		
1	14.0	12.1	13.1	20.3	17.0	18.7	19.4	17.3	18.6	21.3	17.4	19.2
2	15.0	11.8	13.4	20.8	17.3	19.1	21.4	17.6	19.4	21.6	17.5	19.3
3	15.5	12.9	14.1	21.4	17.6	19.5	23.1	19.0	20.7	19.2	16.8	18.0
4	15.6	13.6	14.6	20.9	17.5	19.4	22.3	18.9	20.6	19.9	15.1	17.5
5	14.4	12.6	13.1	20.3	17.9	19.3	22.6	18.9	20.7	19.7	16.7	18.2
6	14.6	11.5	13.0	20.0	17.7	18.8	22.1	18.7	20.4	19.6	17.3	18.3
7	13.8	11.7	12.7	20.0	16.1	18.1	21.0	18.6	19.9	18.4	16.8	17.3
8	16.2	12.3	14.2	21.8	16.8	19.1	21.7	18.8	20.1	18.4	15.1	16.9
9	16.5	14.4	15.5	21.4	18.0	19.7	22.0	19.2	20.6	17.5	15.3	16.3
10	15.8	14.0	15.0	22.5	18.1	20.1	20.9	18.4	19.9	16.0	13.5	14.7
11	16.8	13.5	15.2	20.6	18.1	19.6	21.6	18.1	19.6	14.3	11.5	13.1
12	17.0	14.3	15.7	20.5	18.3	19.3	22.5	18.3	20.3	15.9	11.6	13.9
13	16.2	14.1	14.7	20.5	17.9	19.2	22.8	18.6	20.5	15.2	11.0	12.9
14	15.6	12.7	14.3	20.9	18.1	19.5	21.9	18.1	19.9	14.4	9.7	12.1
15	17.5	14.4	15.9	21.0	17.7	19.2	21.9	17.9	19.8	15.2	11.7	13.6
16	16.9	15.0	15.8	21.0	17.4	19.0	22.1	17.9	19.3	15.8	12.3	14.3
17	16.0	13.4	14.8	22.0	17.5	19.7	22.0	17.7	19.4	16.9	13.6	15.2
18	15.5	13.0	14.4	22.9	18.5	20.6	19.7	17.4	18.4	14.9	12.4	13.7
19	16.5	13.6	15.1	22.9	19.5	21.1	20.6	16.2	18.4	14.8	11.3	13.2
20	16.1	13.7	15.0	21.3	19.0	19.9	22.1	17.8	20.0	14.6	11.5	13.3
21	16.8	13.4	15.1	21.2	17.9	19.6	22.3	18.5	20.1	15.4	11.9	13.8
22	17.9	14.0	16.0	21.9	18.3	20.0	20.7	17.2	18.9	15.3	12.0	13.8
23	17.8	14.3	16.3	20.0	18.1	19.2	20.9	17.5	19.1	16.0	12.4	14.3
24	18.1	14.7	16.4	22.6	17.9	20.1	22.7	17.4	19.8	15.5	12.1	14.1
25	18.0	14.6	16.4	22.6	19.3	21.2	20.6	18.6	19.1	16.1	12.3	14.3
26	18.6	15.5	17.0	22.2	19.0	20.6	20.0	17.7	18.9	16.2	12.4	14.5
27	19.0	16.2	17.7	20.8	18.6	19.5	20.3	17.1	18.7	16.3	12.7	14.5
28	19.9	16.8	18.3	19.7	17.8	18.9	19.5	17.8	18.8	15.7	12.1	13.8
29	18.8	16.2	17.8	20.8	17.6	19.0	20.0	16.1	17.9	15.4	11.2	13.3
30	20.1	17.0	18.5	21.5	18.2	19.8	18.0	17.0	17.4	15.1	11.7	13.3
31	---	---	---	20.2	18.3	19.3	18.5	16.0	17.3	---	---	---
MONTH	20.1	11.5	15.3	22.9	16.1	19.6	23.1	16.0	19.4	21.6	9.7	15.0

07096000 ARKANSAS RIVER AT CANON CITY, CO

LOCATION.--Lat 38°26'02". long 105°15'24", in SE¹/₄SE¹/₄ sec.31, T.18 S., R.70 W., Fremont County, Hydrologic Unit 11020002, on right bank 800 ft upstream from Sand Creek, 0.7 mi downstream from Grape Creek, and 0.7 mi upstream from First Street Bridge at Canon City.

DRAINAGE AREA.--3,117 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1888 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as "near Canyon" 1900-1906. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07096000

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1311: 1897-98.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,342.13 ft above NGVD of 1929. See WSP 1711 or 1731 for history of changes prior to Oct. 1, 1957. Oct. 1, 1957 to Nov. 15, 1962, water-stage recorder at present site at datum 1.49 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	137	221	222	e220	223	236	231	196	3,460	755	569	299
2	156	226	224	e220	228	231	273	173	3,540	751	559	255
3	163	221	224	e215	231	223	359	166	3,180	709	542	264
4	177	214	226	e215	223	217	348	165	2,720	668	525	271
5	175	205	219	e220	209	224	324	164	2,330	644	519	276
6	166	199	223	e220	216	225	272	166	2,050	640	464	264
7	161	210	222	e215	e215	216	264	165	1,650	608	492	292
8	157	226	223	223	e210	218	264	159	1,280	604	522	367
9	157	210	234	e225	e220	223	268	153	1,100	632	439	373
10	154	221	232	e225	e240	218	250	151	1,240	639	577	367
11	138	199	211	e230	260	213	205	132	1,520	633	580	470
12	117	190	e214	e220	263	208	205	123	1,660	646	557	460
13	111	190	e218	e220	274	215	198	119	1,790	620	484	436
14	98	215	e220	e215	287	200	194	126	1,900	632	396	442
15	102	204	e220	e220	266	192	212	131	1,790	609	331	415
16	128	191	e225	e220	243	209	245	220	1,780	595	288	393
17	132	176	232	e210	231	228	198	279	1,860	611	262	295
18	136	169	e230	e210	233	248	159	328	1,630	602	268	271
19	143	175	e215	e210	236	248	160	489	1,510	587	285	316
20	154	170	e210	e210	221	220	166	706	1,640	612	329	326
21	157	162	e215	e220	219	236	160	636	1,680	614	312	307
22	156	174	e220	e225	223	233	139	510	1,540	616	283	292
23	162	184	e230	e220	234	237	131	595	1,550	602	337	294
24	165	186	e230	224	219	245	149	906	1,350	592	361	263
25	176	190	e225	225	e230	254	151	1,320	1,020	584	375	236
26	172	190	e225	221	e230	250	143	1,430	894	603	404	214
27	180	205	e230	215	e240	256	144	1,680	800	620	424	209
28	169	220	e230	219	235	242	172	2,190	768	704	396	205
29	165	217	e235	223	---	227	232	2,610	750	709	390	206
30	189	220	e230	218	---	218	257	3,080	748	623	351	204
31	216	---	e225	219	---	215	---	3,450	---	546	334	---
TOTAL	4,769	5,980	6,939	6,792	6,559	7,025	6,473	22,718	50,730	19,610	12,955	9,282
MEAN	154	199	224	219	234	227	216	733	1,691	633	418	309
MAX	216	226	235	230	287	256	359	3,450	3,540	755	580	470
MIN	98	162	210	210	209	192	131	119	748	546	262	204
AC-FT	9,460	11,860	13,760	13,470	13,010	13,930	12,840	45,060	100,600	38,900	25,700	18,410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 2003, BY WATER YEAR (WY)

MEAN	370	377	370	348	344	353	421	1,102	2,263	1,456	845	445
MAX	1,195	620	623	609	781	711	1,120	2,667	4,286	5,541	2,134	1,411
(WY)	(1912)	(1924)	(1983)	(1983)	(1985)	(1989)	(1942)	(1984)	(1980)	(1957)	(1957)	(1909)
MIN	154	180	204	195	217	176	108	243	300	200	168	142
(WY)	(2003)	(1940)	(1940)	(1979)	(1978)	(1904)	(1940)	(1977)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1889 - 2003

ANNUAL TOTAL	89,669	159,832	
ANNUAL MEAN	246	438	727
HIGHEST ANNUAL MEAN			1,299
LOWEST ANNUAL MEAN			280
HIGHEST DAILY MEAN	472	May 17	9,480
LOWEST DAILY MEAN	98	Oct 14	69
ANNUAL SEVEN-DAY MINIMUM	118	Oct 12	87
MAXIMUM PEAK FLOW		3,680	a19,000
MAXIMUM PEAK STAGE		8.99	b,c10.70
ANNUAL RUNOFF (AC-FT)	177,900	317,000	526,300
10 PERCENT EXCEEDS	380	760	1,690
50 PERCENT EXCEEDS	222	230	412
90 PERCENT EXCEEDS	153	162	237

e Estimated.

a Site and datum then in use, from rating curve extended above 5,000 ft³/s.

b From floodmark.

c Maximum gage height, 10.90 ft, Jun 18, 1995.

07096000 ARKANSAS RIVER AT CANON CITY, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1963 to September 1968, October 1970 to January 1977, April 1990 to March 1993, October 1993 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07096000

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1993 to current year.

WATER TEMPERATURE: October 1993 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Daily specific-conductance records are fair. Daily water-temperature records are good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 739 microsiemens/cm, Aug. 16, 2000; minimum, 94 microsiemens/cm, June 9, 1996.

WATER TEMPERATURE: Maximum, 25.7°C, July 12, 2002; minimum, 0.0°C, on many days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 570 microsiemens/cm, May 25; minimum, 112 microsiemens/cm, June 3-4.

WATER TEMPERATURE: Maximum, 23.6°C, July 19; minimum, 0.0 °C, on many days.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	299	292	295	283	277	280	294	282	288	284	272	278
2	295	284	288	286	277	280	293	281	287	288	280	284
3	286	281	283	284	279	280	295	283	289	289	277	283
4	290	284	286	285	279	282	298	286	293	290	277	282
5	290	286	287	287	279	284	299	291	294	279	265	269
6	287	282	284	291	282	287	302	289	294	265	253	259
7	288	282	285	298	285	292	301	286	292	260	251	256
8	295	284	288	304	291	297	303	286	294	270	260	264
9	302	291	296	303	296	299	308	288	297	277	270	273
10	302	295	299	299	284	290	309	295	301	295	275	285
11	299	292	296	284	277	282	306	293	301	294	280	288
12	304	295	298	288	276	283	305	294	299	293	282	288
13	309	300	304	288	277	282	306	292	299	288	278	285
14	311	302	307	300	279	290	303	286	295	286	281	284
15	311	301	306	292	279	288	295	282	288	289	273	283
16	308	301	305	285	276	280	289	285	287	286	276	281
17	307	299	303	286	275	279	292	286	288	291	283	286
18	308	299	304	292	276	285	297	287	292	303	284	298
19	310	303	307	292	282	288	300	291	295	308	287	298
20	308	296	301	291	280	285	313	300	308	299	278	290
21	302	296	299	298	279	290	323	311	316	288	276	283
22	301	293	297	302	284	293	327	310	318	288	275	283
23	298	287	291	292	281	286	318	301	310	287	275	281
24	294	289	291	291	278	285	316	306	311	287	278	283
25	291	284	287	289	279	284	316	304	310	288	282	284
26	286	281	283	289	279	283	324	309	317	286	281	283
27	285	278	282	290	278	285	333	307	321	288	283	285
28	286	278	283	294	279	287	323	302	313	290	284	288
29	285	275	281	293	281	288	309	289	300	290	286	287
30	284	274	280	289	280	285	294	274	286	287	282	284
31	284	279	281	---	---	---	284	277	281	291	283	287
MONTH	311	274	293	304	275	286	333	274	299	308	251	282

ARKANSAS RIVER BASIN

07096000 ARKANSAS RIVER AT CANON CITY, 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
1	14.8	11.8	13.5	3.1	1.6	2.3	2.1	0.3	1.1	0.5	0.0	0.1
2	13.5	10.8	12.0	4.2	1.8	3.0	2.3	0.6	1.4	0.4	0.0	0.1
3	12.7	10.0	11.0	5.8	3.3	4.2	2.0	1.4	1.7	0.4	0.0	0.1
4	12.3	9.2	10.7	5.4	3.5	4.3	2.4	1.3	1.9	0.6	0.0	0.2
5	13.1	9.7	11.2	5.3	3.4	4.2	2.3	0.9	1.5	0.6	0.0	0.2
6	12.9	10.2	11.5	5.5	3.0	4.1	1.5	0.1	0.6	1.0	0.1	0.3
7	14.0	10.3	12.1	5.5	3.2	4.4	1.0	0.0	0.3	1.2	0.0	0.3
8	14.4	10.7	12.5	6.4	3.8	5.1	1.1	0.0	0.3	1.7	0.0	0.4
9	15.0	11.5	13.2	8.0	5.5	6.5	0.5	0.0	0.1	0.8	0.0	0.1
10	14.7	11.0	12.9	6.3	4.4	5.4	0.5	0.0	0.1	0.3	0.0	0.0
11	14.1	10.5	12.3	4.8	2.6	3.7	0.2	0.0	0.1	0.1	0.0	0.1
12	13.4	10.5	11.5	3.5	1.2	2.3	0.1	0.0	0.1	0.6	0.0	0.1
13	12.3	8.3	10.2	4.2	2.0	3.2	0.2	0.0	0.1	0.9	0.0	0.2
14	12.6	8.5	10.1	4.9	3.4	4.1	0.5	0.0	0.1	0.9	0.0	0.2
15	11.4	7.6	9.4	4.7	2.8	3.9	0.8	0.0	0.2	1.5	0.0	0.3
16	10.8	7.4	8.9	3.3	1.6	2.4	1.0	0.0	0.2	0.7	0.0	0.1
17	10.7	6.7	8.6	3.8	1.9	2.7	1.4	0.0	0.5	0.5	0.0	0.1
18	11.2	7.3	9.0	3.9	2.0	2.8	0.8	0.0	0.3	0.1	0.0	0.0
19	10.6	7.3	8.9	3.6	1.8	2.6	0.5	0.0	0.1	0.2	0.0	0.0
20	10.7	7.3	8.8	4.0	2.0	2.9	0.2	0.0	0.1	0.7	0.0	0.2
21	10.6	7.4	8.8	4.4	2.3	3.3	0.2	0.0	0.0	1.0	0.0	0.2
22	9.9	7.4	8.5	4.6	2.7	3.5	0.1	0.0	0.0	0.2	0.0	0.0
23	7.8	6.1	6.8	4.5	2.9	3.6	0.1	0.0	0.1	0.9	0.0	0.2
24	6.9	5.6	6.2	3.5	1.5	2.6	0.1	0.0	0.0	2.3	0.1	1.3
25	8.4	5.7	7.0	2.5	1.2	1.7	0.1	0.0	0.1	3.3	1.2	2.1
26	8.5	6.5	7.6	1.7	0.0	1.0	0.1	0.0	0.1	2.8	0.7	1.8
27	9.0	7.0	8.1	0.6	0.0	0.1	0.2	0.0	0.1	4.5	2.2	3.3
28	10.2	7.5	8.6	0.7	0.0	0.2	0.1	0.0	0.1	4.4	2.4	3.4
29	8.5	5.1	7.1	1.3	0.1	0.5	0.1	0.0	0.1	4.3	2.7	3.3
30	5.1	3.1	4.2	1.5	0.0	0.5	0.4	0.0	0.1	4.0	2.0	3.1
31	3.1	2.0	2.6	---	---	---	0.3	0.0	0.1	4.8	2.5	3.8
MONTH	15.0	2.0	9.5	8.0	0.0	3.0	2.4	0.0	0.4	4.8	0.0	0.8
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.4	3.3	4.3	4.3	1.6	2.8	13.9	8.1	10.9	15.6	12.2	13.8
2	6.2	4.0	4.9	5.4	1.8	3.4	13.1	8.9	10.9	15.7	11.8	13.8
3	4.9	2.7	3.8	5.9	2.4	4.1	11.2	7.2	9.2	17.3	12.4	14.7
4	3.0	1.2	2.0	4.6	1.6	3.1	10.8	6.8	8.5	15.5	12.3	13.6
5	1.8	0.1	1.1	4.1	0.8	2.1	7.9	6.1	7.1	15.8	11.1	13.3
6	0.3	0.0	0.1	5.7	1.6	3.6	10.3	6.5	8.0	15.4	11.5	13.5
7	0.2	0.0	0.1	7.3	3.3	5.3	9.0	6.0	7.5	15.8	12.0	13.7
8	0.2	0.0	0.1	8.4	4.9	6.5	10.9	4.6	7.6	15.6	11.7	13.6
9	0.1	0.0	0.1	9.1	5.4	7.2	12.9	6.2	9.4	16.0	11.2	13.4
10	0.3	0.0	0.1	9.4	5.7	7.5	14.3	8.1	11.0	12.8	11.0	11.9
11	0.2	0.0	0.1	10.2	6.2	8.1	15.2	9.9	12.3	15.6	9.8	12.5
12	0.5	0.0	0.2	10.6	7.1	8.7	13.9	10.1	12.0	17.3	11.4	14.2
13	0.8	0.1	0.3	11.3	7.0	9.0	15.6	9.8	12.5	17.3	12.7	15.1
14	2.0	0.1	1.1	11.9	7.8	10.0	14.0	11.5	12.8	17.1	13.5	15.3
15	2.7	1.0	1.6	11.7	8.5	10.2	13.4	10.4	11.9	17.3	14.5	15.4
16	4.0	2.3	3.2	10.2	8.5	9.3	14.3	9.0	11.2	18.9	13.4	15.9
17	5.6	2.7	4.0	9.3	6.5	7.9	13.5	10.0	11.9	19.1	15.5	17.3
18	5.0	3.4	4.5	6.5	4.5	5.7	14.9	10.1	12.3	19.0	15.5	17.0
19	4.7	2.0	3.3	6.0	3.9	4.6	12.7	10.3	11.2	16.5	13.7	14.5
20	4.8	2.3	3.4	7.4	2.9	5.4	12.9	9.1	10.9	14.2	10.9	12.1
21	4.9	2.0	3.2	7.5	5.9	6.6	13.6	10.6	11.8	15.1	9.8	12.5
22	4.6	1.8	3.1	10.5	4.8	7.6	14.4	10.8	12.6	17.7	13.6	15.7
23	3.0	1.2	2.1	11.9	7.1	9.4	13.4	8.9	11.5	18.5	15.8	17.3
24	1.2	0.0	0.2	11.9	7.7	9.8	13.3	8.0	10.2	18.0	15.5	17.0
25	0.1	0.0	0.1	12.8	8.8	10.6	15.1	8.7	11.7	17.0	15.5	16.2
26	0.5	0.0	0.1	11.7	8.4	10.1	17.1	11.7	14.2	15.8	13.3	14.8
27	2.5	0.0	0.9	10.6	6.7	8.6	16.4	12.4	14.2	16.4	14.0	15.3
28	3.3	1.9	2.7	7.6	4.6	6.2	16.0	12.6	14.4	17.3	14.3	15.9
29	---	---	---	8.1	3.6	5.7	17.7	13.0	15.1	16.6	14.9	15.8
30	---	---	---	9.5	3.6	6.6	17.2	12.9	14.6	16.0	13.9	15.1
31	---	---	---	11.9	6.3	8.0	---	---	---	14.8	13.5	14.2
MONTH	6.2	0.0	1.8	12.8	0.8	6.9	17.7	4.6	11.3	19.1	9.8	14.7

07096250 FOURMILE CREEK BELOW CRIPPLE CREEK NEAR VICTOR, CO

LOCATION (REVISED).--Lat 38°39'50", long 105°13'39", in SW¹/₄SE¹/₄ sec.9, T.16 S., R.70 W., Teller County, Hydrologic Unit 11020002, on left bank 500 ft from Teller County Route 88, 0.2 mi downstream from Cripple Creek, and 5.5 mi southwest of Victor.

DRAINAGE AREA.--272 mi².

PERIOD OF RECORD.--October 1992 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07096250

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 6,870 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 small diversions for irrigation, flows from Cripple Creek sewage treatment plant, and releases from Wrights 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	0.23	0.85	0.56	0.91	0.20	0.55	17	12	18	26	11	5.6
2	0.40	0.92	0.55	0.86	0.20	0.61	24	13	19	24	14	5.5
3	0.33	1.2	0.56	0.67	0.18	0.61	26	14	26	23	15	5.9
4	0.28	0.98	0.52	0.42	0.17	0.55	20	15	31	21	13	6.2
5	0.27	0.81	0.42	0.35	0.20	0.58	13	14	41	21	11	5.4
6	0.28	0.78	0.42	0.21	0.31	0.56	8.9	13	37	22	10	6.5
7	0.29	0.81	0.42	0.15	0.30	0.60	6.4	12	35	23	10	8.7
8	0.25	0.93	0.44	0.15	0.48	0.64	4.9	11	32	23	9.8	9.0
9	0.25	1.1	0.38	0.15	0.52	0.72	7.7	11	30	21	11	7.1
10	0.26	1.2	0.36	0.16	0.51	0.81	10	11	30	20	15	6.6
11	0.25	0.82	0.33	0.19	0.38	1.0	12	11	29	18	13	6.3
12	0.27	0.65	0.28	0.20	0.38	1.2	9.5	10	27	19	13	6.1
13	0.33	0.82	0.26	0.19	0.46	1.4	8.3	10	30	23	11	6.2
14	0.33	0.88	0.27	0.14	0.54	1.6	9.6	11	30	22	11	6.6
15	0.32	0.83	0.31	0.15	0.61	1.7	7.9	10	28	22	9.8	5.9
16	0.31	0.61	0.33	0.15	0.56	1.4	6.9	15	28	24	9.4	5.3
17	0.31	0.69	0.30	0.18	0.60	1.2	8.7	9.4	35	23	7.3	5.0
18	0.31	0.65	0.24	0.21	0.63	1.2	10	8.2	41	22	6.0	5.0
19	0.32	0.58	0.21	0.25	0.63	1.0	11	9.8	47	16	5.6	5.0
20	0.35	0.62	0.22	0.28	0.54	1.2	11	15	51	13	4.9	4.9
21	0.34	0.61	0.22	0.28	0.55	2.2	12	14	46	12	4.5	4.7
22	0.34	0.62	0.19	0.23	0.58	2.0	13	12	40	10	4.3	4.5
23	0.44	0.63	0.17	0.23	0.51	3.4	14	11	36	10	7.8	4.3
24	0.44	0.54	0.17	0.20	0.44	5.5	16	10	33	10	8.0	4.2
25	0.38	0.58	0.25	0.21	0.56	8.3	15	12	29	10	6.4	4.2
26	0.37	0.35	0.57	0.23	0.52	e8.4	13	14	35	11	6.7	4.1
27	0.55	0.39	0.62	0.27	0.51	e8.0	11	12	33	13	5.5	4.2
28	1.0	0.48	0.59	0.25	0.54	6.9	9.5	9.7	30	16	6.7	4.3
29	1.2	0.56	0.82	0.21	---	5.2	11	11	29	16	7.8	4.1
30	0.99	0.54	1.1	0.23	---	4.7	12	12	27	13	6.7	4.1
31	0.88	---	1.2	0.20	---	5.2	---	17	---	12	6.1	---
TOTAL	12.87	22.03	13.28	8.51	12.61	78.93	359.3	370.1	983	559	281.3	165.5
MEAN	0.42	0.73	0.43	0.27	0.45	2.55	12.0	11.9	32.8	18.0	9.07	5.52
MAX	1.2	1.2	1.2	0.91	0.63	8.4	26	17	51	26	15	9.0
MIN	0.23	0.35	0.17	0.14	0.17	0.55	4.9	8.2	18	10	4.3	4.1
AC-FT	26	44	26	17	25	157	713	734	1,950	1,110	558	328

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	12.9	9.83	7.17	6.64	6.11	7.94	19.1	52.9	42.2	25.3	26.8	17.1
MAX	21.5	21.8	16.6	15.4	12.1	17.1	40.2	149	128	75.8	101	44.9
(WY)	(2000)	(1995)	(1996)	(1996)	(2000)	(2000)	(1994)	(1994)	(1995)	(1995)	(1999)	(1998)
MIN	0.42	0.73	0.43	0.27	0.45	2.55	9.11	1.45	11.8	11.2	0.19	0.25
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(1996)	(1993)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1993 - 2003

ANNUAL TOTAL	1,762.14	2,866.43	
ANNUAL MEAN	4.83	7.85	19.6
HIGHEST ANNUAL MEAN			38.2
LOWEST ANNUAL MEAN			6.54
HIGHEST DAILY MEAN	34	51	373
LOWEST DAILY MEAN	0.00	0.14	a0.00
ANNUAL SEVEN-DAY MINIMUM	0.05	0.17	0.05
MAXIMUM PEAK FLOW		183	b647
MAXIMUM PEAK STAGE		3.82	4.62
ANNUAL RUNOFF (AC-FT)	3,500	5,690	14,180
10 PERCENT EXCEEDS	11	23	45
50 PERCENT EXCEEDS	2.0	4.3	11
90 PERCENT EXCEEDS	0.22	0.25	3.9

e Estimated.

a Also occurred Sept. 7-8, 2002.

b From rating curve extended above 187 ft³/s.

07097000 ARKANSAS RIVER AT PORTLAND, CO

LOCATION.--Lat 38°23'18", long 105°00'56", in NE¹/₄NE¹/₄ sec.20, T.19 S., R.68 W., Fremont County, Hydrologic Unit 11020002, on right bank at upstream side of bridge on State Highway 120 at Portland, and 1 mi downstream from Hardscrabble Creek.

DRAINAGE AREA.--4,024 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1939 to September 1952, October 1974 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07097000

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,021.59 ft above NGVD of 1929. Prior to Oct. 1, 1974, at site 400 ft downstream at datum 0.03 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by U.S. Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 21, 1965, reached a discharge of 23,900 ft³/s, from rating curve extended above 7,400 ft³/s on basis of slope-area measurement of peak flow, gage height, 11.85 ft.

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	135	221	237	242	184	217	205	198	3,660	850	590	296
2	169	240	232	227	188	211	244	170	3,740	862	596	255
3	205	232	232	224	193	208	366	156	3,460	806	569	256
4	221	226	234	237	200	191	356	165	2,980	747	548	273
5	222	218	226	250	186	200	373	159	2,560	720	536	269
6	198	217	228	258	186	198	323	155	2,280	719	464	285
7	187	213	229	252	e165	197	311	157	1,850	695	478	279
8	171	228	215	228	e161	197	314	157	1,450	656	523	339
9	173	227	232	212	e150	206	310	142	1,220	667	467	372
10	171	227	231	200	e173	193	304	150	1,360	680	540	354
11	154	228	204	203	e177	194	254	154	1,650	661	581	466
12	135	212	205	209	197	188	251	151	1,770	695	594	470
13	139	207	198	208	209	186	264	144	1,900	669	496	442
14	130	221	214	206	230	189	237	150	2,060	670	372	456
15	119	239	220	203	222	182	221	162	1,930	681	281	421
16	118	227	220	196	206	183	266	245	1,900	655	258	403
17	123	209	214	174	196	211	215	317	2,060	658	236	323
18	134	201	215	169	195	264	179	359	1,870	629	250	277
19	128	208	205	176	213	252	186	526	1,770	610	249	298
20	140	209	e168	183	200	207	189	855	1,790	638	283	325
21	149	204	e177	192	198	213	171	818	1,880	641	276	302
22	149	209	e198	200	198	212	168	648	1,710	656	250	296
23	168	216	e225	192	207	209	164	751	1,680	635	248	298
24	184	224	e230	191	e188	223	190	1,420	1,510	601	351	268
25	199	227	e220	177	e170	237	180	1,540	1,180	600	320	238
26	191	230	e225	173	e198	221	171	1,630	1,000	624	392	223
27	202	216	e215	165	e203	230	171	1,740	918	675	390	210
28	191	206	256	169	210	222	187	2,230	882	810	378	211
29	192	226	279	178	---	209	195	2,690	857	772	367	213
30	206	227	268	184	---	199	254	3,190	855	724	345	200
31	217	---	234	186	---	195	---	3,600	---	582	331	---
TOTAL	5,220	6,595	6,886	6,264	5,403	6,444	7,219	24,929	55,732	21,288	12,559	9,318
MEAN	168	220	222	202	193	208	241	804	1,858	687	405	311
MAX	222	240	279	258	230	264	373	3,600	3,740	862	596	470
MIN	118	201	168	165	150	182	164	142	855	582	236	200
AC-FT	10,350	13,080	13,660	12,420	10,720	12,780	14,320	49,450	110,500	42,220	24,910	18,480

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

MEAN	384	414	377	358	349	363	487	1,175	2,433	1,531	914	440
MAX	1,083	748	693	626	774	683	1,869	2,680	4,429	4,472	2,380	1,008
(WY)	(1985)	(1985)	(1983)	(1983)	(1985)	(1989)	(1942)	(1984)	(1980)	(1995)	(1984)	(1982)
MIN	136	191	212	199	162	147	135	245	292	201	144	134
(WY)	(1978)	(1978)	(1978)	(1979)	(1978)	(1978)	(1981)	(1977)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1939 - 2003

ANNUAL TOTAL	85,141	167,857	
ANNUAL MEAN	233	460	775
HIGHEST ANNUAL MEAN			1,387
LOWEST ANNUAL MEAN			264
HIGHEST DAILY MEAN	673	Jul 6	3,740
LOWEST DAILY MEAN	91	Sep 18	118
ANNUAL SEVEN-DAY MINIMUM	119	Sep 16	127
MAXIMUM PEAK FLOW			3,820
MAXIMUM PEAK STAGE			5.93
ANNUAL RUNOFF (AC-FT)	168,900	332,900	561,300
10 PERCENT EXCEEDS	344	870	1,840
50 PERCENT EXCEEDS	224	227	447
90 PERCENT EXCEEDS	134	169	219

e Estimated.

a From rating curve extended above 5,300 ft³/s.

07097000 ARKANSAS RIVER AT PORTLAND, CO—Continued

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

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	485	442	467	514	454	472	552	484	519	572	479	508
2	482	441	461	533	460	481	512	474	493	613	526	562
3	468	444	455	532	428	493	514	439	463	668	543	600
4	468	432	453	521	443	496	468	431	457	632	526	594
5	472	451	461	504	457	482	445	422	434	634	581	606
6	482	445	459	518	464	485	456	426	440	659	569	612
7	548	451	481	519	468	488	467	425	450	650	574	601
8	556	474	521	499	466	484	456	444	450	629	594	611
9	---	---	---	504	465	480	463	427	451	698	603	650
10	---	---	---	498	471	484	479	440	455	663	544	624
11	546	468	494	502	469	485	499	460	475	652	590	621
12	516	448	478	502	482	490	488	461	474	651	604	624
13	498	431	464	508	481	494	532	454	477	674	615	639
14	473	410	437	515	485	499	475	437	457	673	585	625
15	449	421	436	547	468	510	492	465	476	653	548	613
16	477	436	451	527	492	505	465	418	443	600	496	535
17	500	452	465	527	453	495	511	434	459	520	466	479
18	502	461	475	668	492	585	579	488	523	474	418	452
19	491	437	465	659	514	558	581	493	531	418	339	389
20	499	464	482	631	554	585	587	506	544	341	283	311
21	509	474	491	601	532	555	615	533	563	307	280	291
22	521	455	493	591	497	556	589	556	570	330	297	308
23	513	458	481	560	522	540	613	538	566	317	285	299
24	486	463	475	615	503	532	557	513	524	647	253	327
25	523	466	490	574	492	530	565	523	541	335	225	255
26	521	454	470	566	502	521	587	532	563	229	215	223
27	513	446	470	551	480	522	569	539	549	230	199	217
28	517	457	476	530	508	520	586	514	551	200	171	185
29	---	---	---	528	510	520	575	488	520	178	163	170
30	---	---	---	536	509	521	521	468	490	256	152	166
31	---	---	---	529	475	511	---	---	---	160	145	152
MONTH	---	---	---	668	428	512	615	418	497	698	145	447
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	148	130	143	295	269	283	339	319	331	522	477	503
2	146	137	142	271	261	267	337	318	329	533	482	505
3	148	137	142	277	262	270	343	324	332	787	462	511
4	---	---	---	277	265	273	340	327	331	511	457	479
5	175	150	161	278	264	273	339	327	333	477	460	468
6	179	167	175	292	271	282	364	337	352	485	343	459
7	198	178	187	309	288	298	368	342	354	493	371	464
8	224	198	211	311	287	297	356	335	342	466	425	444
9	242	217	226	299	278	291	1,650	335	422	439	411	424
10	431	209	236	307	290	298	451	322	354	440	417	428
11	224	191	201	308	295	303	332	300	313	417	381	397
12	193	159	181	316	303	312	333	294	314	395	368	380
13	178	153	170	321	306	317	355	310	326	391	371	380
14	176	170	173	320	303	315	378	355	360	389	373	380
15	---	---	---	543	295	340	404	376	393	400	369	384
16	---	---	---	393	328	351	411	384	400	410	377	389
17	357	169	188	344	313	328	---	---	---	453	399	417
18	264	177	198	341	327	332	480	446	464	469	422	437
19	893	222	280	332	320	326	483	436	456	468	422	440
20	304	225	252	336	310	321	462	402	428	447	405	425
21	242	209	218	326	310	317	441	403	422	443	396	418
22	212	205	209	324	305	314	445	409	425	434	389	418
23	219	197	208	326	302	315	472	415	440	442	388	414
24	210	188	202	322	315	318	438	391	418	436	392	420
25	246	209	223	316	306	312	442	393	428	481	421	443
26	263	244	253	429	299	317	519	392	429	497	442	466
27	287	261	270	344	305	319	445	396	417	506	429	480
28	290	272	282	617	287	334	412	390	399	528	455	494
29	287	280	283	316	296	306	470	410	440	530	464	501
30	298	281	288	342	276	319	497	439	463	531	469	508
31	---	---	---	345	325	335	493	454	475	---	---	---
MONTH	---	---	---	617	261	309	---	---	---	787	343	443

ARKANSAS RIVER BASIN

07097000 ARKANSAS RIVER AT PORTLAND, 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
1	18.2	11.8	15.2	5.8	3.0	4.2	5.8	0.4	3.3	---	---	---
2	15.4	12.3	13.7	7.0	3.5	5.2	6.4	2.4	4.4	---	---	---
3	16.7	11.3	13.3	8.2	4.3	6.1	4.2	2.8	3.4	5.4	1.4	3.4
4	15.9	9.8	13.0	7.2	4.1	5.7	4.6	2.9	3.7	5.2	2.3	3.5
5	15.9	10.4	13.2	8.5	3.9	6.2	5.3	2.3	3.8	4.0	1.5	2.9
6	16.5	10.6	13.6	9.1	3.7	6.5	5.1	1.3	2.7	5.4	2.7	3.9
7	17.0	10.3	13.7	8.3	4.1	6.3	---	---	---	5.0	0.9	3.0
8	17.6	11.3	14.5	9.1	5.3	7.3	---	---	---	5.6	1.4	3.6
9	18.0	12.2	15.2	11.2	6.6	8.8	4.6	1.5	3.2	3.5	0.6	2.3
10	18.0	12.3	15.2	9.2	5.4	7.2	3.9	0.0	2.0	2.6	0.0	1.2
11	17.7	11.7	14.8	7.5	4.2	5.7	3.9	0.0	2.2	2.2	0.0	1.1
12	15.9	11.4	13.5	7.1	2.6	4.9	3.4	0.3	1.9	4.7	1.1	3.0
13	15.1	9.1	12.2	8.1	3.8	6.2	4.4	0.0	2.3	4.9	0.9	3.1
14	15.0	9.6	12.4	8.1	4.9	6.8	4.8	0.7	2.9	3.7	0.7	2.5
15	14.2	8.4	11.5	7.5	4.9	6.1	4.4	1.8	3.1	4.2	0.3	2.4
16	13.6	8.2	11.0	6.9	2.9	5.2	4.4	1.1	3.0	3.3	0.0	1.6
17	13.5	7.5	10.6	8.0	3.8	6.0	4.8	1.8	3.4	3.6	0.0	1.6
18	14.5	8.5	11.5	7.6	3.7	5.8	3.4	0.7	2.2	2.7	0.0	1.1
19	13.5	8.0	11.0	7.4	2.9	5.3	2.9	0.0	1.4	5.1	0.0	2.4
20	14.0	8.2	11.2	8.2	3.7	5.9	1.7	0.0	0.5	5.4	0.7	3.3
21	13.5	8.5	10.5	8.4	3.6	5.3	2.4	0.0	0.9	4.2	1.0	2.9
22	12.7	8.0	10.4	---	---	---	1.5	0.0	0.3	2.0	0.4	1.2
23	9.7	7.6	8.4	---	---	---	0.0	0.0	0.0	3.4	0.2	1.8
24	---	---	---	---	---	---	0.0	0.0	0.0	4.5	0.3	2.6
25	11.5	6.9	9.2	---	---	---	0.0	0.0	0.0	5.9	1.3	3.6
26	10.8	6.8	9.1	4.6	1.5	2.9	0.2	0.0	0.0	6.6	1.4	4.2
27	11.9	7.8	10.1	4.2	0.0	2.2	1.8	0.0	0.7	8.0	3.5	5.9
28	12.6	7.6	10.2	4.8	0.0	2.7	2.9	0.2	1.7	7.8	3.9	6.0
29	10.0	5.9	8.5	6.2	2.3	4.2	3.9	0.4	2.1	7.4	3.1	5.4
30	6.2	4.7	5.5	4.9	1.4	3.3	3.2	0.0	1.6	7.0	2.7	4.9
31	5.0	3.7	4.4	---	---	---	---	---	---	7.8	4.0	5.9
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.4	4.1	6.3	8.8	3.0	5.6	16.4	9.3	13.0	18.2	12.3	15.3
2	8.6	4.9	6.6	9.1	3.2	5.9	16.5	10.0	12.9	18.2	12.1	15.3
3	7.4	3.9	5.5	9.7	2.9	6.5	14.7	8.7	11.4	19.6	12.4	15.6
4	6.3	1.3	4.0	6.7	2.7	4.7	12.5	7.4	10.0	18.5	12.0	14.7
5	4.2	1.5	3.2	7.7	1.9	4.4	9.9	7.2	8.6	18.8	10.9	14.5
6	3.5	0.3	1.5	9.8	2.5	6.1	11.5	6.6	8.7	19.1	12.0	15.2
7	1.3	0.0	0.2	11.4	4.1	7.9	12.1	7.6	9.6	19.1	12.8	15.6
8	1.5	0.0	0.4	12.1	5.6	8.9	13.5	6.0	9.7	18.2	11.4	14.8
9	1.0	0.0	0.2	12.7	5.5	9.2	15.6	7.1	11.3	19.3	11.6	15.1
10	3.4	0.0	1.3	13.6	6.3	9.9	17.3	9.1	13.1	16.7	11.4	13.8
11	4.5	0.0	2.3	14.2	6.7	10.5	18.2	10.4	14.3	18.5	9.0	13.9
12	6.0	0.0	3.2	14.8	7.8	11.5	17.3	11.1	14.3	20.0	11.1	15.8
13	5.9	2.5	4.3	15.6	8.2	12.0	18.9	10.8	14.8	19.1	12.4	15.9
14	7.7	3.0	5.3	16.0	9.0	12.4	16.5	11.7	14.5	20.7	13.0	17.1
15	5.5	3.4	4.3	16.3	9.6	12.9	15.2	10.7	13.1	18.3	14.3	15.7
16	5.5	2.4	3.9	13.6	9.9	11.8	16.9	8.4	12.6	22.0	13.0	17.4
17	8.8	3.1	6.0	11.3	8.8	9.8	16.9	9.9	13.3	21.6	15.0	18.5
18	6.8	4.7	5.9	8.9	6.9	7.8	17.2	10.0	13.6	19.0	15.3	17.4
19	8.2	1.4	5.5	7.4	4.2	6.1	13.9	10.7	12.1	17.1	13.0	15.2
20	7.5	1.4	4.6	12.2	5.1	9.0	16.4	9.7	12.9	13.6	11.6	12.7
21	8.7	2.8	5.4	9.8	7.8	8.8	17.0	11.0	13.8	17.4	10.1	13.5
22	7.6	2.8	5.2	14.2	6.3	10.2	18.1	11.6	14.5	20.6	12.9	16.6
23	5.5	2.1	3.8	15.1	8.2	11.7	15.3	9.4	12.4	21.2	15.4	18.1
24	3.8	0.0	1.4	14.7	8.9	11.7	17.3	8.4	12.5	19.9	8.4	16.2
25	2.3	0.0	0.8	16.5	10.0	13.0	18.4	10.1	14.3	18.7	16.1	16.7
26	4.1	0.0	2.0	14.6	9.3	12.0	19.6	11.2	15.2	17.3	14.6	16.0
27	6.9	0.8	3.8	12.5	7.8	9.8	18.8	12.0	15.4	18.4	14.6	16.3
28	6.8	2.1	4.4	12.2	6.0	8.7	19.8	13.1	16.0	18.3	15.3	16.7
29	---	---	---	10.9	4.6	7.7	19.8	12.2	15.9	18.0	15.0	16.3
30	---	---	---	12.9	5.1	9.0	19.4	12.9	16.2	17.4	13.0	15.5
31	---	---	---	15.3	7.4	9.9	---	---	---	16.5	14.8	15.3
MONTH	8.8	0.0	3.6	16.5	1.9	9.2	19.8	6.0	13.0	22.0	8.4	15.7

07097000 ARKANSAS RIVER AT PORTLAND, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.1	13.3	14.2	23.8	18.6	20.9	23.6	18.6	20.9	19.5	13.9	16.6
2	15.7	13.4	14.6	24.2	18.5	21.2	24.7	18.6	21.3	23.6	14.7	18.5
3	16.7	14.0	15.3	24.9	19.1	21.8	25.7	19.4	22.1	21.4	18.5	19.9
4	---	---	---	24.7	19.4	21.5	26.4	20.7	23.2	23.3	16.4	19.8
5	15.5	13.4	14.3	24.5	18.8	21.1	25.7	20.2	22.8	24.1	17.5	20.6
6	16.2	12.7	14.3	22.9	18.3	20.5	25.8	20.0	22.5	23.0	15.9	19.7
7	14.7	12.7	13.4	22.7	17.9	20.1	25.3	19.5	22.2	21.4	16.5	19.3
8	18.1	12.7	15.2	24.1	17.9	20.9	24.8	20.1	22.3	22.5	16.8	19.6
9	19.0	15.1	16.7	24.3	18.7	21.3	24.6	20.2	22.3	19.7	16.9	18.3
10	19.2	15.4	16.6	25.1	18.4	21.6	25.3	19.9	22.3	19.9	15.5	17.4
11	19.1	14.4	16.8	24.2	19.1	21.7	25.3	20.0	22.3	19.2	13.6	16.1
12	18.2	15.9	17.2	24.0	19.4	21.6	25.2	19.5	22.0	19.8	13.0	16.2
13	17.7	15.0	16.3	24.6	19.3	21.8	25.4	19.8	22.3	16.6	12.5	14.2
14	17.5	14.2	15.8	24.3	19.2	21.7	25.2	18.7	21.9	17.0	10.9	13.7
15	---	---	---	24.7	19.1	21.3	25.7	18.7	22.1	18.8	12.2	15.4
16	---	---	---	25.4	19.5	21.9	25.8	18.9	21.0	20.0	13.4	16.5
17	18.4	9.6	15.3	25.3	19.5	22.1	---	---	---	20.1	14.4	16.9
18	17.5	10.7	16.2	26.0	19.9	22.8	24.1	17.9	20.6	17.9	13.1	15.4
19	18.7	15.4	16.6	26.2	20.8	23.0	24.8	17.7	21.2	18.1	11.5	14.8
20	17.7	14.5	16.5	24.7	20.3	22.2	25.8	18.9	22.2	18.3	12.5	15.4
21	18.8	14.8	16.7	25.2	19.4	22.1	25.0	19.2	22.2	19.4	13.3	16.4
22	19.7	15.7	17.5	25.1	19.8	22.1	26.0	19.3	22.4	19.2	13.2	16.2
23	19.7	16.6	18.1	23.1	19.6	21.2	26.1	18.9	22.0	19.9	13.5	16.7
24	20.3	16.5	18.2	25.7	18.8	22.0	25.5	18.5	21.8	19.1	13.8	16.4
25	20.6	16.4	18.2	26.4	20.4	22.9	23.6	19.4	21.4	19.8	13.2	16.4
26	21.4	16.8	18.8	26.3	20.4	22.9	23.2	18.7	20.7	19.8	13.6	16.8
27	22.8	17.0	19.6	23.6	20.5	21.8	24.5	18.1	21.1	19.1	13.7	16.4
28	23.6	17.4	20.1	21.6	19.3	20.4	21.7	19.4	20.5	18.3	12.6	15.5
29	21.9	17.8	19.7	23.8	18.7	20.9	19.8	13.4	17.9	18.3	12.2	15.3
30	23.7	18.0	20.7	24.1	17.3	21.0	17.1	14.9	15.8	17.6	12.7	15.0
31	---	---	---	22.7	19.1	20.8	17.1	14.4	15.4	---	---	---
MONTH	---	---	---	26.4	17.3	21.6	---	---	---	24.1	10.9	16.8

07099050 BEAVER CREEK ABOVE UPPER BEAVER CEMETERY NEAR PENROSE, CO

LOCATION.--Lat 38°33'42", long 105°01'17", in NW¹/₄NE¹/₄ sec.20, T.17 S., R.68 W., Fremont County, Hydrologic Unit 11020002, on left bank 40 ft upstream from bridge on Fremont County Road 132, 1 mi downstream from Banta Gulch, 1.3 mi northeast of Upper Beaver Cemetery, and 9.2 mi north of Penrose.

DRAINAGE AREA.--122 mi².

PERIOD OF RECORD.--March 1991 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=07099050

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,020 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for Oct. 21-23, 25-28, Nov. 4-7, July 20-21, and estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation, and diversions for municipal use by the City of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 659 ft³/s, June 10, 1997, gage height, 5.57 ft, from rating curve extended above 602 ft³/s; maximum gage height, 6.70 ft, Sept. 4, 1991; minimum daily, 0.75 ft³/s, Sept. 8, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 113 ft³/s, June 20, gage height, 3.74 ft; minimum daily, 0.93 ft³/s, Oct. 22.

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	1.3	1.8	---	---	---	2.9	6.8	14	34	39	11	10
2	1.8	1.8	---	---	---	3.0	9.2	13	33	36	11	9.3
3	2.0	2.4	---	---	---	3.2	9.9	13	37	33	10	9.7
4	1.7	1.6	---	---	---	3.2	8.9	12	63	35	11	10
5	1.6	1.8	---	---	---	3.0	7.7	11	66	34	10	9.4
6	1.6	1.7	---	---	---	3.4	6.9	10	65	38	10	17
7	1.5	1.9	---	---	---	3.6	6.3	9.4	64	44	9.8	20
8	1.1	e2.0	---	---	---	3.6	5.6	8.8	63	34	9.7	19
9	1.1	e2.1	---	---	---	3.7	6.2	8.5	58	26	9.7	18
10	1.0	e2.0	---	---	---	3.8	9.0	34	42	21	10	18
11	0.97	e1.9	---	---	---	4.3	11	34	39	22	9.8	19
12	0.97	e1.0	---	---	---	4.8	13	34	26	28	11	25
13	1.1	1.6	---	---	---	5.4	14	33	26	28	10	25
14	1.1	1.6	---	---	---	5.9	16	33	27	28	9.4	26
15	1.1	1.5	---	---	---	6.5	14	33	27	29	9.2	25
16	1.1	1.2	---	---	---	6.5	13	33	23	30	8.9	25
17	1.2	1.4	---	---	---	6.5	14	32	13	29	9.0	24
18	1.1	1.5	---	---	---	6.6	13	31	e80	29	9.4	24
19	1.1	e1.5	---	---	---	6.1	13	31	e60	30	9.3	24
20	1.2	e1.5	---	---	---	6.3	12	32	107	26	8.7	24
21	1.0	e1.5	---	---	---	7.0	11	31	e70	22	8.3	24
22	0.93	e1.5	---	---	---	5.8	12	29	e65	14	8.1	24
23	1.1	e1.5	---	---	---	6.4	15	29	e60	12	9.1	24
24	e1.3	e1.6	---	---	---	7.4	11	28	e55	12	9.7	24
25	1.2	e1.6	---	---	---	8.9	13	28	48	11	9.3	23
26	1.1	e1.6	---	---	---	9.0	16	29	48	11	9.2	18
27	2.0	e1.6	---	---	---	9.4	16	31	54	15	9.0	18
28	2.2	e1.7	---	---	---	9.0	16	29	48	14	9.3	17
29	2.5	e1.7	---	---	---	7.6	16	30	41	15	9.9	17
30	2.2	e1.7	---	---	---	6.9	14	31	38	19	11	17
31	1.9	---	---	---	---	6.8	---	34	---	12	12	---
TOTAL	43.07	49.8	---	---	---	176.5	349.5	788.7	1,480	776	301.8	587.4
MEAN	1.39	1.66	---	---	---	5.69	11.7	25.4	49.3	25.0	9.74	19.6
MAX	2.5	2.4	---	---	---	9.4	16	34	107	44	12	26
MIN	0.93	1.0	---	---	---	2.9	5.6	8.5	13	11	8.1	9.3
AC-FT	85	99	---	---	---	350	693	1,560	2,940	1,540	599	1,170

e Estimated.

07099060 BEAVER CREEK ABOVE HIGHWAY 115 NEAR PENROSE, CO

LOCATION.--Lat 38°29'21", long 104°59'49", in NE¹/₄NE¹/₄ sec.16, T.18 S., R.68 W., Fremont County, Hydrologic Unit 11020002, on left bank 300 ft downstream from Beaver Park Irrigation Company diversion dam, 1.8 mi upstream from State Highway 115, and 4.7 mi north of Penrose.

DRAINAGE AREA.--138 mi².

PERIOD OF RECORD.--March 1991 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=07099060

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,660 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs, diversions for municipal use by Colorado Springs, and diversions for irrigation. Flows are regulated to some extent by Beaver Park Irrigation Company diversion dam 300 ft upstream. Several measurements of specific conductance and water temperature, when obtained, are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 1,260 ft³/s, Sept. 6, 2003, gage height, 7.51 ft, from rating curve extended above 422 ft³/s on basis of flow over dam computation of peak flow; no flow on many days.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 1,260 ft³/s, Sept. 6, gage height, 7.51 ft, from rating curve extended above 422 ft³/s on basis of flow over dam computation of peak flow; no flow on many days.

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	0.00	0.00	---	---	---	0.00	e0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	---	---	---	0.00	0.00	0.00	6.4	0.00	0.00	0.00
5	0.00	0.00	---	---	---	0.00	0.00	0.00	11	0.00	0.00	0.00
6	0.00	0.00	---	---	---	0.00	0.00	0.00	9.7	0.00	0.00	56
7	0.00	0.00	---	---	---	0.00	0.00	0.00	8.4	0.24	0.00	11
8	0.00	0.00	---	---	---	0.00	0.00	0.00	6.8	0.00	0.00	0.04
9	0.00	0.00	---	---	---	0.00	0.00	0.00	5.2	0.00	0.00	0.00
10	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	---	---	---	0.02	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	e0.00	---	---	---	0.00	0.00	0.00	25	0.00	0.00	0.00
20	0.00	e0.00	---	---	---	10	0.00	0.00	70	1.2	0.00	0.00
21	0.00	e0.00	---	---	---	0.00	0.00	0.00	52	3.1	0.00	0.00
22	0.00	e0.00	---	---	---	0.00	0.00	0.00	36	0.00	0.00	0.00
23	0.00	e0.00	---	---	---	0.00	0.00	0.00	27	0.00	0.00	0.00
24	0.00	e0.00	---	---	---	0.00	0.00	0.00	16	0.00	0.00	0.00
25	0.00	e0.00	---	---	---	0.00	0.00	0.00	5.8	0.00	0.00	0.00
26	0.00	e0.00	---	---	---	0.00	0.00	0.00	1.9	0.00	0.00	0.00
27	0.00	e0.00	---	---	---	0.00	0.00	0.00	6.8	0.00	0.00	0.00
28	0.00	e0.00	---	---	---	0.00	0.00	0.00	1.3	0.00	0.00	0.00
29	0.00	e0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	e0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	e0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	---	---	---	10.02	0.00	0.00	289.30	4.54	0.00	67.04
MEAN	0.000	0.000	---	---	---	0.32	0.000	0.000	9.64	0.15	0.000	2.23
MAX	0.00	0.00	---	---	---	10	0.00	0.00	70	3.1	0.00	56
MIN	0.00	0.00	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	---	---	---	20	0.00	0.00	574	9.0	0.00	133

e Estimated.

07099080 RED CREEK BELOW SULLIVAN PARK AT FORT CARSON, CO

LOCATION.--Lat 38°29'59", long 104°54'48", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.8, T.18 S., R.67 W., Pueblo County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, on right bank 0.8 mi downstream from Sullivan Park outflow, 1.5 mi south of Camp Red Devil, 1.5 mi east of State Highway 115, and 4.9 mi northeast of Penrose.

DRAINAGE AREA.--26.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 2000 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=07099080

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,783 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. Natural flow of stream affected by erosion-control and livestock-watering reservoirs.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 2,320 ft³/s, Aug. 8, 2003, gage height, 5.81 ft, from rating curve based on slope-conveyance computation; no flow on most days.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 2,320 ft³/s, Aug. 8, gage height, 5.81 ft, from rating curve based on slope-conveyance computation; no flow on most days.

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	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	114	0.00
9	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	12	0.00
10	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	---	---	---	---	---	0.00	0.00	0.00	93	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.00	0.00	18	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	---	---	---	---	---	0.00	0.00	48	0.00	0.00	0.00
20	0.00	---	---	---	---	---	0.00	0.00	4.0	0.00	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	---	---	---	---	---	0.00	39	0.00	0.00	0.00	0.00
26	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	0.00	---	---	---	---	---	0.00	39.00	52.00	111.00	126.00	0.00
MEAN	0.000	---	---	---	---	---	0.000	1.26	1.73	3.58	4.06	0.000
MAX	0.00	---	---	---	---	---	0.00	39	48	93	114	0.00
MIN	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	---	---	---	---	---	0.00	77	103	220	250	0.00

07099080 RED CREEK BELOW SULLIVAN PARK AT FORT CARSON, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---
		APRIL		MAY				JUNE	
1	0.00	---	---	0.00	---	---	0.00	---	---
2	0.00	---	---	0.00	---	---	0.00	---	---
3	0.00	---	---	0.00	---	---	0.00	---	---
4	0.00	---	---	0.00	---	---	0.00	---	---
5	0.00	---	---	0.00	---	---	0.00	---	---
6	0.00	---	---	0.00	---	---	0.00	---	---
7	0.00	---	---	0.00	---	---	0.00	---	---
8	0.00	---	---	0.00	---	---	0.00	---	---
9	0.00	---	---	0.00	---	---	0.00	---	---
10	0.00	---	---	0.00	---	---	0.00	---	---
11	0.00	---	---	0.00	---	---	0.00	---	---
12	0.00	---	---	0.00	---	---	0.00	---	---
13	0.00	---	---	0.00	---	---	0.00	---	---
14	0.00	---	---	0.00	---	---	0.00	---	---
15	0.00	---	---	0.00	---	---	0.00	---	---
16	0.00	---	---	0.00	---	---	0.00	---	---
17	0.00	---	---	0.00	---	---	0.00	---	---
18	0.00	---	---	0.00	---	---	0.00	---	---
19	0.00	---	---	0.00	---	---	48	---	e232
20	0.00	---	---	0.00	---	---	4.0	---	e3.3
21	0.00	---	---	0.00	---	---	0.00	---	---
22	0.00	---	---	0.00	---	---	0.00	---	---
23	0.00	---	---	0.00	---	---	0.00	---	---
24	0.00	---	---	0.00	---	---	0.00	---	---
25	0.00	---	---	39	---	e285	0.00	---	---
26	0.00	---	---	0.00	---	---	0.00	---	---
27	0.00	---	---	0.00	---	---	0.00	---	---
28	0.00	---	---	0.00	---	---	0.00	---	---
29	0.00	---	---	0.00	---	---	0.00	---	---
30	0.00	---	---	0.00	---	---	0.00	---	---
31	---	---	---	0.00	---	---	---	---	---
TOTAL	0.00	---	---	39.00	---	---	52.00	---	---

07099080 RED CREEK BELOW SULLIVAN PARK AT FORT CARSON, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	0.00	---	---	0.00	---	---	0.00	---	---
2	0.00	---	---	0.00	---	---	0.00	---	---
3	0.00	---	---	0.00	---	---	0.00	---	---
4	0.00	---	---	0.00	---	---	0.00	---	---
5	0.00	---	---	0.00	---	---	0.00	---	---
6	0.00	---	---	0.00	---	---	0.00	---	---
7	0.00	---	---	0.00	---	---	0.00	---	---
8	0.00	---	---	114	3,390	4,800	0.00	---	---
9	0.00	---	---	12	---	e34	0.00	---	---
10	0.00	---	---	0.00	---	---	0.00	---	---
11	0.00	---	---	0.00	---	---	0.00	---	---
12	0.00	---	---	0.00	---	---	0.00	---	---
13	0.00	---	---	0.00	---	---	0.00	---	---
14	0.00	---	---	0.00	---	---	0.00	---	---
15	93	---	e2,710	0.00	---	---	0.00	---	---
16	18	---	e42	0.00	---	---	0.00	---	---
17	0.00	---	---	0.00	---	---	0.00	---	---
18	0.00	---	---	0.00	---	---	0.00	---	---
19	0.00	---	---	0.00	---	---	0.00	---	---
20	0.00	---	---	0.00	---	---	0.00	---	---
21	0.00	---	---	0.00	---	---	0.00	---	---
22	0.00	---	---	0.00	---	---	0.00	---	---
23	0.00	---	---	0.00	---	---	0.00	---	---
24	0.00	---	---	0.00	---	---	0.00	---	---
25	0.00	---	---	0.00	---	---	0.00	---	---
26	0.00	---	---	0.00	---	---	0.00	---	---
27	0.00	---	---	0.00	---	---	0.00	---	---
28	0.00	---	---	0.00	---	---	0.00	---	---
29	0.00	---	---	0.00	---	---	0.00	---	---
30	0.00	---	---	0.00	---	---	0.00	---	---
31	0.00	---	---	0.00	---	---	---	---	---
TOTAL	111.00	---	---	126.00	---	---	0.00	---	---

e Estimated.

07099080 RED CREEK BELOW SULLIVAN PARK AT FORT CARSON, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 1999 to current year (seasonal records only). Air-temperature data available, October 2000 to current year, in files of district office. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07099080

GAGE.--Tipping-bucket rain gage with satellite telemetry. April 28, 1999 to July 25, 2000, at site 1.5 mi upstream.

REMARKS.--Records during estimated periods may be less accurate than the rest of the published records. Daily precipitation estimated using method based on NOAA Technical Memo NWS HYDRO 14, 1972.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 4.52 inches, Aug. 4, 1999, site then in use.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.08 inches, Sept. 6.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.12	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	e0.07	---	---	---	---	---	0.00	0.00	0.00	0.00	0.14	0.00
3	e0.05	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.22
4	e0.00	---	---	---	---	---	0.00	0.00	0.10	0.00	0.00	0.00
5	e0.00	---	---	---	---	---	0.00	0.00	0.33	0.00	0.00	0.00
6	e0.00	---	---	---	---	---	0.03	0.00	0.00	0.00	0.00	1.08
7	e0.00	---	---	---	---	---	0.02	0.00	0.03	0.00	0.00	0.09
8	e0.07	---	---	---	---	---	0.03	0.00	0.00	0.00	1.02	0.01
9	e0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.01
10	e0.00	---	---	---	---	---	0.00	0.00	0.03	0.00	0.00	0.00
11	e0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00
12	e0.00	---	---	---	---	---	0.00	0.00	0.14	0.00	0.00	0.00
13	e0.00	---	---	---	---	---	0.00	0.00	0.11	0.00	0.00	0.14
14	e0.00	---	---	---	---	---	0.00	0.00	0.11	0.00	0.00	0.00
15	e0.00	---	---	---	---	---	0.00	0.39	0.00	0.73	0.00	0.00
16	e0.00	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00	0.00
17	e0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
18	e0.00	---	---	---	---	---	0.00	0.00	0.42	0.00	0.07	0.00
19	e0.00	---	---	---	---	---	0.16	0.01	0.50	0.20	0.00	0.00
20	e0.00	---	---	---	---	---	0.01	0.01	0.08	0.50	0.00	0.00
21	e0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	e0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	e0.01	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	e0.03	---	---	---	---	---	0.00	0.02	0.00	0.00	0.00	0.00
25	e0.00	---	---	---	---	---	0.00	0.30	0.00	0.00	0.00	0.00
26	e0.28	---	---	---	---	---	0.00	0.02	0.00	0.54	0.01	0.00
27	e0.48	---	---	---	---	---	0.00	0.08	0.00	0.02	0.00	0.00
28	e0.00	---	---	---	---	---	0.00	0.00	0.05	0.00	0.19	0.00
29	e0.13	---	---	---	---	---	0.00	0.00	0.00	0.03	0.00	0.00
30	e0.00	---	---	---	---	---	0.00	0.31	0.00	0.00	0.18	0.00
31	e0.00	---	---	---	---	---	---	0.00	---	0.00	0.05	---
TOTAL	1.24	---	---	---	---	---	0.25	1.15	1.90	2.02	1.67	1.55
MAX	0.48	---	---	---	---	---	0.16	0.39	0.50	0.73	1.02	1.08

e Estimated.

07099200 ARKANSAS RIVER NEAR PORTLAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°20'14", long 104°56'18", in NW¹/₄SW¹/₄ sec.6, T.20 S., R.67 W., Fremont County, Hydrologic Unit 11020002, on left bank at Hobson Ranch, 1.4 mi downstream from Willow Creek, and 5.4 mi southeast of Portland.

DRAINAGE AREA.--4,280 mi².

PERIOD OF RECORD.--October 1964 to September 1979, May to August 1987, March 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=07099200

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)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	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)	Phosphorus, water, unfltrd, mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)
APR 23...	1100	168	11.5	8.6	644	12.5	E.014	0.215	0.007	0.050	0.061	0.093	2.7
JUN 18...	1120	e1800	8.5	7.9	204	17.0	<0.015	0.138	<0.002	0.009	0.015	0.072	2.1
JUL 31...	1040	618	7.3	7.9	337	21.0	0.051	0.331	0.008	0.051	0.063	0.33	2.5
AUG 26...	0845	358	7.4	8.1	452	19.0	0.042	0.313	0.007	0.053	0.065	0.34	2.6
SEP 29...	1130	230	10.0	8.4	559	15.0	<0.015	0.037	E.002	0.039	0.051	0.072	2.6

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

07099215 TURKEY CREEK NEAR FOUNTAIN, CO

LOCATION.--Lat 38°36'42", long 104°53'39", in NW¹/₄SE¹/₄ sec.33, T.16 S., R.67 W., El Paso County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, on left bank 100 ft downstream from State Highway 115 bridge, 0.7 mi downstream from Turkey Canyon, 0.8 mi upstream from Turkey Creek Ranch, and 9.4 mi southwest of Fountain.

DRAINAGE AREA.--13.0 mi².

PERIOD OF RECORD.--May 1978 to September 1989, May 1995 to September 1998, April 1999 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=07099215

REVISED RECORDS.--WDR CO-80-1: 1978-79 (M). WDR CO-96-1: 1980 (M), 1982-86 (M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,420 ft above NGVD of 1929, from topographic map. Prior to June 14, 2001, at datum 1.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair except for May 21 to June 30, which are poor. Natural flow of stream affected by upstream diversions for irrigation and livestock. Several measurements of specific conductance and water temperature, when obtained, are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 850 ft³/s, June 10, 1997, from slope-area measurement of peak flow, gage height, 6.56 ft, from floodmarks; no flow on many days during many years.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 1.7 ft³/s, Apr. 2, gage height, 1.76 ft; no flow on many days.

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	0.00	---	---	---	---	---	0.61	0.29	0.09	0.26	0.00	0.00
2	---	---	---	---	---	---	0.82	0.27	0.10	0.25	0.00	0.00
3	---	---	---	---	---	---	0.62	0.26	0.09	0.25	0.00	0.00
4	---	---	---	---	---	---	0.51	0.26	0.09	0.25	0.00	0.00
5	---	---	---	---	---	---	0.48	0.23	0.10	0.22	0.00	0.00
6	---	---	---	---	---	---	0.43	0.21	0.09	0.22	0.00	0.00
7	---	---	---	---	---	---	0.32	0.20	0.11	0.21	0.00	0.00
8	---	---	---	---	---	---	0.27	0.19	0.17	0.20	0.00	0.00
9	---	---	---	---	---	---	0.25	0.18	0.15	0.18	0.00	0.00
10	---	---	---	---	---	---	0.22	0.16	0.12	0.04	0.00	0.00
11	---	---	---	---	---	---	0.31	0.15	0.13	0.00	0.00	0.00
12	---	---	---	---	---	---	0.38	0.15	0.13	0.00	0.00	0.00
13	---	---	---	---	---	---	0.43	0.15	0.14	0.00	0.00	0.00
14	---	---	---	---	---	---	0.48	0.14	0.18	0.00	0.00	0.00
15	---	---	---	---	---	---	0.45	0.15	0.18	0.02	0.00	0.00
16	---	---	---	---	---	---	0.39	0.15	0.18	0.00	0.00	0.00
17	---	---	---	---	---	---	0.42	0.17	0.19	0.00	0.00	0.00
18	---	---	---	---	---	---	0.37	0.17	0.19	0.00	0.00	0.00
19	---	---	---	---	---	---	0.31	0.17	0.21	0.00	0.00	0.00
20	---	---	---	---	---	---	0.25	0.19	0.20	0.02	0.00	0.00
21	---	---	---	---	---	---	0.23	0.20	0.22	0.00	0.00	0.00
22	---	---	---	---	---	---	0.25	0.19	0.22	0.00	0.00	0.00
23	---	---	---	---	---	---	0.21	0.16	0.20	0.00	0.00	0.00
24	---	---	---	---	---	---	0.18	0.14	0.22	0.00	0.00	0.00
25	---	---	---	---	---	---	0.24	0.15	0.22	0.00	0.00	0.00
26	---	---	---	---	---	---	0.27	0.15	0.25	0.00	0.00	0.00
27	---	---	---	---	---	---	0.29	0.16	0.24	0.00	0.00	0.00
28	---	---	---	---	---	---	0.29	0.17	0.23	0.00	0.00	0.00
29	---	---	---	---	---	---	0.32	0.17	0.24	0.00	0.00	0.00
30	---	---	---	---	---	---	0.30	0.13	0.27	0.00	0.00	0.00
31	---	---	---	---	---	---	---	0.10	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	10.90	5.56	5.15	2.12	0.00	0.00
MEAN	---	---	---	---	---	---	0.36	0.18	0.17	0.068	0.000	0.000
MAX	---	---	---	---	---	---	0.82	0.29	0.27	0.26	0.00	0.00
MIN	---	---	---	---	---	---	0.18	0.10	0.09	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	22	11	10	4.2	0.00	0.00

07099230 TURKEY CREEK ABOVE TELLER RESERVOIR NEAR STONE CITY, CO

LOCATION.--Lat 38°27'54", long 104°49'36" (revised), in SW¹/₄SW¹/₄ sec.19, T.18 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, on left bank 0.7 mi northwest of intersection of military roads 9 and 1, 2.2 mi upstream from Teller Reservoir Dam, and 2.2 mi northeast of Stone City.

DRAINAGE AREA.--62.3 mi².

REVISED RECORDS.--WDR CO-89-1: Drainage area.

PERIOD OF RECORD.--May 1978 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07099230

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,520 ft above NGVD of 1929, from topographic map. Prior to July 21, 1989, at site 0.6 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by diversions for irrigation. Several measurements of specific conductance and water temperature, when obtained, 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

	1978	1979	1985	1985	1985	1985	1985	1985	1985	1985	1985	1985
MEAN	2.46	1.73	0.89	0.70	0.66	0.67	2.43	15.6	9.45	2.63	6.22	1.38
MAX	44.6	26.7	6.47	2.69	2.58	2.75	21.8	124	60.1	17.1	79.2	18.1
(WY)	(1985)	(1985)	(1985)	(1985)	(1985)	(1985)	(1999)	(1999)	(1997)	(1985)	(1999)	(1982)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(1979)	(1979)	(1979)	(1979)	(1979)	(1979)	(1979)	(1979)	(1989)	(1978)	(1990)	(1978)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1978 - 2003
ANNUAL TOTAL	0.00	0.02	
ANNUAL MEAN	0.000	0.000	3.82
HIGHEST ANNUAL MEAN			21.2 1999
LOWEST ANNUAL MEAN			0.000 2002
HIGHEST DAILY MEAN	0.00 Jan 1	0.02 May 25	836 Aug 5, 1999
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	a0.00 May 18, 1978
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 May 18, 1978
MAXIMUM PEAK FLOW		0.56 May 25	b3,640 Aug 20, 1982
MAXIMUM PEAK STAGE		3.31 May 25	c11.51 Aug 20, 1982
ANNUAL RUNOFF (AC-FT)	0.00	0.04	2,770
10 PERCENT EXCEEDS	0.00	0.00	5.0
50 PERCENT EXCEEDS	0.00	0.00	0.38
90 PERCENT EXCEEDS	0.00	0.00	0.00

a No flow many days during many years.
 b From rating curve extended above 95 ft³/s on basis of slope-area measurements at gage heights 7.64 ft and 11.27 ft, site and datum then in use.
 c Maximum gage height, 11.88 ft, June 8, 1987, site and datum then in use.

07099233 TELLER RESERVOIR NEAR STONE CITY, CO

LOCATION.--Lat 38°26'33", long 104°49'33" (revised), in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.31, T.18 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, at left upstream end of dam on Turkey Creek, 1.4 mi upstream from Booth Gulch, and 2.0 mi east of Stone City.

DRAINAGE AREA.--71.5 mi².

PERIOD OF RECORD.--September 1978 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07099233

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,453 ft above NGVD of 1929, from topographic map.

REMARKS.--Reservoir is formed by an earthfill dam completed 1908. All figures represent total contents from area-capacity table effective Oct. 1, 2001, and based on a 1980 survey and adjusted for sedimentation from a partial area-capacity resurvey during May 2002. Total capacity, 2,603 acre-ft at elevation of about 92 ft. Capacity at spillway crest, 1,115 acre-ft at elevation of about 84 ft (since 1996). Capacity at uncontrolled tower outlet invert, 1,765 acre-ft at elevation of about 88 ft. Elevation of no contents, about 65.2 ft. There is a controlled outlet from reservoir; however, considerable leakage occurs along dam margins. Dead storage unknown. Reservoir is used by the Fort Carson Military Reservation for recreation and amphibious training.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,210 acre-ft, June 21, 1980, elevation, 90.15 ft, from capacity curve extended above 88 ft; no contents during many years.

EXTREMES FOR CURRENT YEAR.--No contents during year.

Capacity table
(Elevation, in feet, and contents, in acre-feet, effective Oct. 1, 2001)

Elevation	Capacity	Elevation	Capacity
65.20	0.0	80.00	637
67.50	13	82.50	921
70.00	76	85.00	1,270
72.50	167	87.50	1,680
75.00	280	90.00	2,160
77.50	428	92.00	2,600

RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
2	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
3	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
4	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
5	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
6	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
7	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
8	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
9	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
10	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
11	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
12	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
13	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
14	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
15	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
16	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
17	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
18	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
19	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
20	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
21	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
22	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
23	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
24	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
25	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
26	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
27	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
28	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
29	e0.00	e0.00	e0.00	e0.00	---	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
30	e0.00	e0.00	e0.00	e0.00	---	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00
31	e0.00	---	e0.00	e0.00	---	e0.00	---	e0.00	---	e0.00	e0.00	---
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

e Estimated.

382629104493000 TURKEY CREEK EAST SEEPAGE BELOW TELLER RESERVOIR NEAR STONE CITY, CO

LOCATION.--Lat 38°26'29", long 104°49'33" (revised), in SW¹/₄NW¹/₄ sec.31, T.18 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, at base of left downstream end of Teller Dam on Turkey Creek, and 2.0 mi east of Stone City.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 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=382629104493000

GAGE.--Water-stage recorder with satellite telemetry and V-notch sharp-crested weir. Elevation of gage is 5,420 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Flows less than 0.02 ft³/s can be in error by more than 25-percent. Natural flow of stream affected by Teller Reservoir contents (station 07099233) and saturation of earthfill dam.

EXTREMES FOR PERIOD OF RECORD (dam seepage only).--Maximum daily discharge, 0.17 ft³/s, Mar. 15, 17, 2002; minimum daily, 0.001 ft³/s (some estimated), on many days during 2003.

EXTREMES FOR CURRENT YEAR (dam seepage only).--Maximum daily discharge, 0.006 ft³/s, Oct. 1-6; minimum daily, 0.001 ft³/s (some estimated), on many days.

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	e0.006	0.002	0.003	0.004	e0.004	0.004	0.001	0.002	0.001	0.001	0.001	e0.001
2	e0.006	0.003	0.004	0.005	e0.004	0.004	0.001	0.002	0.001	0.001	0.001	e0.001
3	e0.006	0.002	0.002	0.004	0.004	0.004	0.001	0.002	0.001	0.001	0.001	e0.001
4	e0.006	0.003	0.003	0.004	e0.004	0.004	0.002	0.002	0.001	0.001	0.001	e0.001
5	0.006	0.003	0.002	0.004	0.004	0.004	0.002	0.002	0.001	0.001	0.001	e0.001
6	0.006	0.003	0.001	0.004	0.004	0.004	0.002	0.002	0.001	0.001	0.001	0.001
7	0.005	0.003	0.003	0.004	0.004	0.004	0.002	0.002	0.001	0.001	0.001	0.002
8	e0.005	0.004	0.002	0.004	0.004	0.004	0.002	0.002	0.001	0.001	0.001	0.001
9	e0.005	0.004	0.003	0.004	0.004	0.004	0.002	0.002	0.001	0.001	0.001	0.001
10	e0.005	0.003	0.004	0.003	0.004	0.004	0.003	0.002	e0.001	e0.001	0.001	0.001
11	e0.005	0.002	0.003	0.001	0.004	0.004	0.002	0.002	e0.001	e0.001	0.001	0.001
12	0.005	0.002	0.003	0.002	0.004	0.004	0.002	0.001	e0.001	e0.001	0.001	0.001
13	0.004	0.003	0.003	0.004	0.004	0.003	0.003	0.001	e0.001	e0.001	0.001	0.001
14	0.004	0.002	0.004	0.004	0.004	0.004	0.003	0.001	e0.001	e0.001	0.001	0.001
15	0.004	0.002	0.004	0.004	0.004	0.003	0.004	0.001	e0.001	e0.001	0.001	0.001
16	0.004	0.002	0.004	e0.003	0.003	e0.002	0.004	0.001	e0.001	0.001	0.001	0.001
17	0.004	0.003	0.004	0.003	0.004	e0.002	0.005	0.001	e0.001	e0.001	0.001	0.001
18	0.004	0.004	0.004	0.002	0.004	0.002	0.005	0.001	e0.001	e0.001	0.001	0.001
19	0.004	0.003	0.004	0.001	0.004	0.004	0.004	0.001	e0.001	e0.001	0.001	0.001
20	e0.004	0.002	0.004	0.004	0.004	0.001	0.004	0.001	e0.001	e0.001	0.001	0.001
21	e0.004	0.002	0.004	0.004	0.004	e0.001	0.004	0.001	e0.001	e0.001	0.001	0.001
22	e0.004	0.003	0.003	0.004	0.004	e0.001	0.004	0.001	e0.001	e0.001	0.001	0.001
23	0.002	0.004	0.001	0.003	0.004	e0.001	0.004	0.001	e0.001	e0.001	0.001	0.001
24	0.002	0.004	0.001	0.002	0.004	e0.001	0.004	0.001	0.001	e0.001	0.001	0.001
25	0.003	0.003	0.001	0.004	0.004	e0.001	0.004	0.002	0.001	0.001	0.001	0.001
26	0.003	0.002	0.001	e0.004	0.004	e0.001	0.004	0.001	0.001	0.001	0.001	0.001
27	0.004	0.002	0.001	e0.004	0.004	0.001	0.004	0.001	0.001	0.001	0.001	0.001
28	0.004	0.003	0.003	e0.004	0.004	0.001	0.004	0.001	e0.001	0.001	e0.001	0.001
29	0.003	0.004	0.004	e0.004	---	e0.001	0.003	0.001	0.001	0.001	0.001	0.001
30	0.002	0.003	0.004	e0.004	---	e0.001	0.002	0.001	0.001	0.001	e0.001	0.001
31	0.002	---	0.004	e0.004	---	e0.001	---	0.001	---	0.001	e0.001	---
TOTAL	0.131	0.085	0.091	0.109	0.111	0.080	0.091	0.043	0.030	0.031	0.031	0.031
MEAN	0.004	0.003	0.003	0.004	0.004	0.003	0.003	0.001	0.001	0.001	0.001	0.001
MAX	0.006	0.004	0.004	0.005	0.004	0.004	0.005	0.002	0.001	0.001	0.001	0.002
MIN	0.002	0.002	0.001	0.001	0.003	0.001	0.001	0.001	0.001	0.001	0.001	0.001
AC-FT	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.09	0.06	0.06	0.06	0.06
CAL YR	2002	TOTAL	13.236	MEAN	0.036	MAX	0.17	MIN	0.001	AC-FT	26	
WTR YR	2003	TOTAL	0.864	MEAN	0.002	MAX	0.006	MIN	0.001	AC-FT	1.7	

e Estimated.

382628104493700 TURKEY CREEK WEST SEEPAGE BELOW TELLER RESERVOIR NEAR STONE CITY, CO

LOCATION.--Lat 38°26'28", long 104°49'37", in SW¹/₄NW¹/₄ sec.31, T.18 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, at base of right downstream end of Teller Dam on Turkey Creek, and 1.9 mi east of Stone City.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 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=382628104493700

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,420 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by Teller Reservoir contents (station 07099233) and saturation of earthfill dam.

EXTREMES FOR PERIOD OF RECORD (dam seepage only).--No flow during period of record.

EXTREMES FOR CURRENT YEAR (dam seepage only).--No flow during current 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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	e0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	0.000	0.000	0.000	---	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	---	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	---	0.000	0.000	---	0.000	---	0.000	---	0.000	0.000	---
TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAL YR	2002	TOTAL 0.000	MEAN 0.000	MAX 0.000	MIN 0.000	AC-FT 0.00						
WTR YR	2003	TOTAL 0.000	MEAN 0.000	MAX 0.000	MIN 0.000	AC-FT 0.00						

e Estimated.

07099235 TURKEY CREEK NEAR STONE CITY, CO

LOCATION.--Lat 38°25'56", long 104°49'58", in SE¹/₄SE¹/₄ sec.36, T.18 S., R.67 W., Pueblo County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, on left bank at downstream end of culverts on military road 14, 1.1 mi downstream from Teller Reservoir Dam, and 2.0 mi southeast of Stone City.

DRAINAGE AREA.--72.4 mi².

PERIOD OF RECORD.--May 1978 to September 1984, June 1987 to current year.For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07099235

REVISED RECORDS.--WDR CO-80-1: 1979(M).

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,350 ft above NGVD of 1929, from topographic map. Prior to June 12, 1987, at site 1.0 mi upstream at different datum. June 12, 1987 to Dec. 6, 1989, at site 0.6 mi upstream at different datum. Dec. 7, 1989 to Dec. 9, 1999, at site 0.9 mi upstream at different datum.

REMARKS.--Records good. Natural flow of stream affected by erosion-control and livestock-watering reservoirs, storage reservoir, diversions for irrigation, ground-water withdrawals, and return flows from irrigated areas. Flow mostly regulated by Teller Reservoir (station 07099233) 1.1 mi upstream. Gage records seepage and releases from reservoir. Measurements of specific conductance and water temperature, when obtained, 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

	1978	1979	2000	2001	2002	2003	1995	1996	1997	1998	1999	2000
MEAN	0.33	0.35	0.76	0.48	0.43	0.41	0.39	1.25	2.14	1.03	0.77	0.55
MAX	1.64	1.57	10.8	5.23	3.69	3.54	2.75	8.37	20.3	9.78	4.43	3.03
(WY)	(1983)	(1983)	(2000)	(2000)	(2000)	(2000)	(2000)	(1995)	(1995)	(1995)	(1995)	(1995)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1978 - 2003

ANNUAL TOTAL	0.00	0.00		
ANNUAL MEAN	0.000	0.000		
HIGHEST ANNUAL MEAN			0.74	1995
LOWEST ANNUAL MEAN			3.93	2002
HIGHEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1
MAXIMUM PEAK FLOW			0.09	Sep 7
MAXIMUM PEAK STAGE			3.45	Sep 7
ANNUAL RUNOFF (AC-FT)	0.00		0.00	
10 PERCENT EXCEEDS	0.00		0.00	1.6
50 PERCENT EXCEEDS	0.00		0.00	0.15
90 PERCENT EXCEEDS	0.00		0.00	0.00

e Estimated.

a Also occurred on many days during 2000-2002.

b From rating curve extended above 62 ft³/s.

c Site and datum then in use.

07099238 TELLER RESERVOIR SPILLWAY NEAR STONE CITY, CO

LOCATION.--Lat 38°26'20", long 104°49'15", in NE¹/₄SW¹/₄ sec.31, T.18 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, on right bank 0.4 mi southeast of Teller Reservoir Dam on Turkey Creek, and 1.2 mi southeast of Stone City.

DRAINAGE AREA.--71.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07099238

GAGE.--Water-stage recorder with satellite telemetry and broad-crested weir. Elevation of gage is 5,480 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. Records represent uncontrolled overflow from Teller Reservoir and local storm runoff. There was no overflow from Teller Reservoir during the year. Published flows represent local storm runoff.

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.76	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.20	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.12	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	1.34	0.15	0.62	1.51	0.47	0.30	0.13
MEAN	0.000	0.000	0.000	0.000	0.000	0.043	0.005	0.020	0.050	0.015	0.010	0.004
MAX	0.00	0.00	0.00	0.00	0.00	0.99	0.15	0.35	0.76	0.47	0.30	0.13
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	2.7	0.3	1.2	3.0	0.9	0.6	0.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	0.000	0.000	0.000	0.000	0.000	0.014	0.002	0.008	0.029	0.016	0.006	0.002
MAX	0.000	0.000	0.000	0.000	0.000	0.043	0.005	0.020	0.050	0.019	0.010	0.004
(WY)	(2002)	(2001)	(2001)	(2001)	(2001)	(2003)	(2003)	(2003)	(2003)	(2002)	(2001)	(2003)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.000
(WY)	(2002)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2002)	(2002)	(2003)	(2002)	(2001)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 2001 - 2003

ANNUAL TOTAL	0.64	4.52	
ANNUAL MEAN	0.002	0.012	0.007
HIGHEST ANNUAL MEAN			0.012 2003
LOWEST ANNUAL MEAN			0.002 2002
HIGHEST DAILY MEAN	0.39 Jul 6	0.99 Mar 18	0.99 Mar 18, 2003
LOWEST DAILY MEAN	0.00 Jan 1	a0.00 Oct 1	a0.00 Oct 20, 2000
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 20, 2000
MAXIMUM PEAK FLOW		b25 Jun 18	b25 Jun 18, 2003
MAXIMUM PEAK STAGE		3.97 Jun 18	3.97 Jun 18, 2003
ANNUAL RUNOFF (AC-FT)	1.3	9.0	5.1
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

a No flow on most days.

b From rating curve based on open-channel flow computations.

07099238 TELLER RESERVOIR SPILLWAY NEAR STONE CITY, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 2001 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=07099238

GAGE.--Tipping-bucket rain gage with satellite telemetry.

REMARKS.--Records during Sept. 5-30 may be less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.38 inches, June 20, 2001.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.00 inch, Apr. 19.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.16	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
2	0.10	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
3	0.05	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.58
4	0.00	---	---	---	---	---	0.00	0.00	0.20	0.00	0.09	0.01
5	0.00	---	---	---	---	---	0.00	0.00	0.32	0.00	0.00	0.00
6	0.00	---	---	---	---	---	0.02	0.00	0.00	0.00	0.00	0.25
7	0.00	---	---	---	---	---	0.14	0.00	0.04	0.00	0.00	0.32
8	0.05	---	---	---	---	---	0.16	0.00	0.00	0.00	0.19	0.01
9	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.01
10	0.00	---	---	---	---	---	0.00	0.00	0.43	0.00	0.00	0.00
11	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.31	0.00	0.00	0.15
14	0.00	---	---	---	---	---	0.00	0.00	0.07	0.00	0.00	0.01
15	0.00	---	---	---	---	---	0.10	0.52	0.00	0.79	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.01	0.01	0.00	0.00	0.00
18	0.00	---	---	---	---	---	0.00	0.00	0.91	0.00	0.03	0.00
19	0.00	---	---	---	---	---	1.00	0.00	0.21	0.14	0.00	0.00
20	0.00	---	---	---	---	---	0.00	0.00	0.15	0.13	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	0.01	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	0.01	---	---	---	---	---	0.00	0.10	0.00	0.00	0.00	0.00
25	0.01	---	---	---	---	---	0.00	0.70	0.00	0.00	0.00	0.00
26	0.23	---	---	---	---	---	0.00	0.04	0.00	0.20	0.50	0.00
27	0.03	---	---	---	---	---	0.00	0.24	0.00	0.00	0.00	0.00
28	0.00	---	---	---	---	---	0.00	0.00	0.34	0.11	0.25	0.00
29	0.01	---	---	---	---	---	0.00	0.00	0.02	0.01	0.01	0.00
30	0.00	---	---	---	---	---	0.00	0.39	0.00	0.00	0.39	0.00
31	0.00	---	---	---	---	---	---	0.02	---	0.00	0.00	---
TOTAL	0.66	---	---	---	---	---	1.42	2.02	3.05	1.38	1.47	1.34
MAX	0.23	---	---	---	---	---	1.00	0.70	0.91	0.79	0.50	0.58

07099350 PUEBLO RESERVOIR NEAR PUEBLO, CO

LOCATION.--Lat 38°16'15", long 104°43'30", in NE¹/₄ sec.36, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at dam on Arkansas River, 7 mi west of Pueblo.

DRAINAGE AREA.--4,669 mi².

RESERVOIR ELEVATIONS AND CONTENTS RECORDS

PERIOD OF RECORD.--January 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,898.70 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation); gage readings at 2400 have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by concrete and earthfill dam. Storage began Jan. 9, 1974; dam completed in August 1975. Capacity, 357,700 acre-ft at elevation 4,898.70 ft, crest of spillway. Dead storage, 3,730 acre-ft, below elevation 4,764.00 ft, invert of river outlet. Reservoir is terminal reservoir of the Fryngpan-Arkansas project and is used to provide flood control, municipal and industrial supplies, and to fulfill irrigation requirements in the Arkansas River Valley. Figures given are total contents.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 295,480 acre-ft, Feb. 12, 1985, elevation, 4,886.94 ft; minimum since appreciable storage was attained, 22,680 acre-ft, Nov. 13, 1974, elevation, 4,790.50 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 114,210 acre-ft, Mar. 19, elevation, 4,840.70 ft; minimum contents, 66,170 acre-ft, Sept. 23, elevation, 4,820.65 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	4,826.27	78,080	-
Oct. 31	4,826.16	77,830	-250
Nov. 30	4,827.93	81,810	+3,980
Dec. 31	4,832.24	92,040	+10,230
CAL YR 2002	-	-	-24,730
Jan. 31	4,835.94	101,430	+9,390
Feb. 28	4,838.89	109,270	+7,840
Mar. 31	4,840.52	113,710	+4,440
Apr. 30	4,837.48	105,490	-8,220
May 31	4,832.15	91,820	-13,670
June 30	4,826.07	77,630	-14,190
July 31	4,823.66	72,420	-5,210
Aug. 31	4,821.32	67,540	-4,880
Sept. 30	4,820.66	66,190	-1,350
WTR YR 2003	-	-	-11,890

PUEBLO RESERVOIR NEAR PUEBLO, CO—Continued

WATER-QUALITY RECORDS

Water-quality samples and field measurements were collected at various depths at a number of sites on transects located along the length of the reservoir. Data are collected in an effort to represent the complete seasonal cycle of lake dynamics.

381754104504000 PUEBLO RESERVOIR SITE 2B

LOCATION.--Lat 38°17'54", long 104°50'40", in SW¹/₄NW¹/₄ sec.24, T.20 S., R.67 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect approximately 1.1 mi downstream from Rush Creek, 1.1 mi upstream from Turkey Creek, 7.8 mi upstream from Pueblo Dam on Arkansas River, and 14.2 mi west of the Pueblo County Courthouse.

PERIOD OF RECORD.--June 1988 to current year (site dry during 1990-92, 2002-03). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=381754104504000

REMARKS.--Site dry during all scheduled sampling events this year.

SITE DRY DURING 2003 WATER YEAR

ARKANSAS RIVER BASIN
PUEBLO RESERVOIR NEAR PUEBLO, CO—Continued

WATER-QUALITY RECORDS

381725104494400 PUEBLO RESERVOIR SITE 3B

LOCATION.--Lat 38°17'25", long 104°49'44", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect approximately 100 ft downstream from Turkey Creek, 6.7 mi upstream from Pueblo Dam on Arkansas River, and 13.4 mi west of the Pueblo County Courthouse.

PERIOD OF RECORD.--June 1988 to current year (site dry during 2003). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=381725104494400

REMARKS.--Site dry during all scheduled sampling events this year.

SITE DRY DURING 2003 WATER YEAR

PUEBLO RESERVOIR NEAR PUEBLO, CO—Continued

WATER-QUALITY RECORDS

381647104475300 PUEBLO RESERVOIR SITE 4B

LOCATION.--Lat 38°16'47", long 104°47'53", in NW¹/₄SE¹/₄ sec.29, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect approximately 1.3 mi upstream from Peck Creek, 2.2 mi downstream from Turkey Creek, 4.5 mi upstream from Pueblo Dam on Arkansas River, and 10.9 mi west of the Pueblo County Courthouse.

PERIOD OF RECORD.--June 1988 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=381647104475300

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

Date	Time	Sam- pling depth, feet (00003)	Trans- parency water unfltrd secchi disc feet (49701)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
APR							
25...	1215	0.10	2.0	8.6	8.2	641	12.2
25...	1216	6.00	--	8.6	8.2	641	11.9
25...	1217	12.0	--	8.6	8.2	641	11.8
25...	1218	18.0	--	7.7	8.0	643	11.3
25...	1220	21.5	--	7.4	8.0	645	11.1
JUN							
03...	1250	0.10	0.50	6.1	8.1	335	19.0
03...	1251	6.00	--	5.9	8.1	319	18.5
03...	1252	12.0	--	5.9	8.1	201	16.2
03...	1253	14.0	--	5.9	8.1	190	16.0
20...	1310	0.10	1.0	8.8	8.8	268	21.8
20...	1312	3.00	--	8.8	8.8	268	21.5
20...	1314	6.00	--	8.2	8.8	268	21.2
20...	1315	9.00	--	6.6	8.0	298	18.4
20...	1317	10.0	--	6.5	7.9	309	17.9
JUL							
30...	1114	0.10	1.5	8.5	8.5	333	24.1
30...	1116	3.00	--	8.5	8.5	333	24.0
30...	1118	6.00	--	6.5	7.9	329	21.1
30...	1121	7.00	--	6.3	7.6	330	20.4
AUG							
27...	1100	0.10	0.50	7.2	8.4	432	23.7
27...	1102	3.00	--	6.0	8.1	453	22.4
27...	1105	5.00	--	5.4	7.9	462	21.3
SEP							
30...	1037	0.10	1.0	8.7	8.6	500	16.9
30...	1038	3.00	--	8.1	8.4	580	13.4
30...	1039	3.50	--	7.9	8.4	585	13.0

PUEBLO RESERVOIR NEAR PUEBLO, CO—Continued

WATER-QUALITY RECORDS

381559104465500 PUEBLO RESERVOIR SITE 5C

LOCATION.--Lat 38°15'59", long 104°46'55", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect approximately 0.1 mi upstream from Peck Creek, 1.2 mi upstream from Rock Creek, 3.2 mi upstream from Pueblo Dam on Arkansas River, and 9.6 mi west of the Pueblo County Courthouse.

PERIOD OF RECORD.--June 1988 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=381559104465500

REMARKS.--Chlorophyll samples were composited from samples collected at the surface, at the transparency depth (secchi disk), and at twice the transparency depth.

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

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
APR						
25...	1105	0.10	7.8	8.2	641	11.5
25...	1108	3.00	7.9	8.2	641	11.5
25...	1110	6.00	8.0	8.2	641	11.4
25...	1111	9.00	8.0	8.2	641	11.4
25...	1112	12.0	8.0	8.2	641	11.3
25...	1113	15.0	7.9	8.1	641	11.1
25...	1114	18.0	7.7	8.1	644	10.8
25...	1116	21.0	7.5	8.0	646	10.6
25...	1118	24.0	7.4	8.0	650	10.4
25...	1119	27.0	7.4	8.0	650	10.2
25...	1120	30.0	7.1	8.0	653	10.0
25...	1121	31.0	7.0	8.0	653	10.0
JUN						
03...	1220	0.10	6.1	8.0	446	19.7
03...	1221	3.00	6.1	8.0	444	19.7
03...	1222	6.00	6.1	8.0	443	19.6
03...	1223	9.00	6.0	8.0	436	19.6
03...	1224	12.0	5.9	8.0	427	19.5
03...	1225	15.0	5.8	8.0	359	18.6
03...	1226	18.0	5.7	8.0	310	17.4
03...	1227	21.0	5.5	8.0	252	16.7
03...	1228	22.5	5.5	8.0	249	16.6
20...	1125	0.10	9.5	8.9	264	21.6
20...	1127	3.00	9.3	8.8	261	20.7
20...	1128	6.00	8.6	8.6	263	19.8
20...	1129	9.00	7.9	8.2	279	19.3
20...	1131	12.0	7.3	8.0	279	19.1
20...	1133	15.0	7.0	7.9	286	18.8
20...	1134	18.0	6.7	7.9	281	18.7
20...	1136	19.5	6.4	7.9	288	18.2
JUL						
30...	1018	0.10	8.4	8.6	331	25.1
30...	1021	3.00	7.9	8.5	331	24.4
30...	1023	6.00	7.3	8.4	332	24.2
30...	1025	9.00	6.9	8.3	333	24.2
30...	1027	12.0	6.4	8.1	333	24.0
30...	1029	15.0	6.3	8.2	339	24.0
30...	1031	16.0	5.5	8.1	338	23.8
AUG						
27...	1016	0.10	6.3	8.4	412	23.7
27...	1017	3.00	5.8	8.3	409	23.1
27...	1018	6.00	5.4	8.2	411	23.0
27...	1020	9.00	5.0	8.1	404	22.9
27...	1021	12.0	4.5	8.0	400	22.7
27...	1023	15.0	3.9	7.9	422	22.7
27...	1026	17.0	3.7	7.8	427	22.6
SEP						
30...	0933	0.10	7.9	8.4	422	17.6
30...	0934	3.00	7.9	8.4	422	17.6
30...	0935	6.00	8.0	8.4	422	17.6
30...	0936	9.00	8.0	8.4	422	17.6
30...	0937	12.0	8.0	8.5	424	17.6
30...	0938	13.5	8.0	8.5	424	17.6

ARKANSAS RIVER BASIN

PUEBLO RESERVOIR NEAR PUEBLO, CO—Continued

381559104465500 PUEBLO RESERVOIR SITE 5C--CONTINUED

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

Date	Lead, water, unfltrd recover- able, ug/L (01051)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover- able, ug/L (01092)
APR					
25...	--	--	--	--	--
25...	--	--	--	--	--
25...	--	--	--	--	--
JUN					
20...	--	--	--	--	--
20...	--	--	--	--	--
20...	--	--	--	--	--
JUL					
30...	--	--	--	--	--
30...	--	--	--	--	--
30...	--	--	--	--	--
AUG					
27...	1.45	1.1	57	E.9	5
27...	1.53	0.7	54	1	6
27...	--	--	--	--	--
SEP					
30...	--	--	--	--	--
30...	--	--	--	--	--
30...	--	--	--	--	--

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

PUEBLO RESERVOIR NEAR PUEBLO, CO—Continued

WATER-QUALITY RECORDS

381548104453300 PUEBLO RESERVOIR SITE 6C

LOCATION.--Lat 38°15'48", long 104°45'33", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect approximately 0.2 mi downstream from Rock Creek, 1.2 mi downstream from Peck Creek, 2.0 mi upstream from Pueblo Dam on Arkansas River, and 8.4 mi west of the Pueblo County Courthouse.

PERIOD OF RECORD.--June 1988 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=381548104453300

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

Date	Time	Sam- pling depth, feet (00003)	Trans- parency water unfltrd secchi disc feet (49701)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
APR							
25...	1030	0.10	6.0	8.0	8.0	651	10.8
25...	1033	6.00	--	7.8	8.0	651	10.7
25...	1034	12.0	--	7.7	8.0	654	10.4
25...	1036	18.0	--	7.7	8.0	654	10.3
25...	1037	24.0	--	7.6	8.0	654	10.2
25...	1039	30.0	--	7.6	8.0	654	10.2
25...	1040	36.0	--	7.6	8.0	654	10.2
25...	1041	42.0	--	7.5	8.0	654	10.2
25...	1042	48.0	--	7.4	8.0	654	9.9
25...	1043	54.0	--	7.3	8.0	654	9.9
25...	1045	57.0	--	7.0	7.9	654	9.9
JUN							
03...	1140	0.10	2.0	6.3	8.0	471	19.5
03...	1141	6.00	--	6.3	8.1	469	19.4
03...	1142	12.0	--	6.2	8.1	466	19.2
03...	1143	18.0	--	6.1	8.1	458	19.1
03...	1144	24.0	--	5.5	8.0	398	18.0
03...	1145	30.0	--	5.1	7.9	381	17.1
03...	1146	36.0	--	5.1	8.0	289	16.4
03...	1147	42.0	--	4.9	7.9	301	16.2
03...	1148	48.0	--	4.8	7.9	292	15.5
20...	1056	0.10	3.5	8.2	8.7	295	20.8
20...	1059	6.00	--	8.0	8.6	290	19.6
20...	1101	12.0	--	7.4	8.4	298	19.4
20...	1103	18.0	--	6.8	8.1	277	19.2
20...	1105	24.0	--	5.8	7.9	294	18.5
20...	1106	30.0	--	5.8	7.9	272	18.1
20...	1107	36.0	--	5.7	7.9	274	17.8
20...	1109	42.0	--	5.8	7.9	278	17.2
20...	1111	46.0	--	5.9	7.9	278	17.0
JUL							
30...	0942	0.10	3.0	6.6	8.2	339	24.2
30...	0943	6.00	--	6.4	8.2	339	24.0
30...	0945	12.0	--	6.1	8.1	339	23.9
30...	0947	18.0	--	5.9	8.1	339	23.8
30...	0948	24.0	--	5.6	8.0	339	23.7
30...	0950	30.0	--	3.9	7.6	340	23.1
30...	0951	36.0	--	3.7	7.6	342	22.9
30...	0954	41.5	--	3.6	7.5	344	22.6
AUG							
27...	0920	0.10	2.5	6.0	8.2	371	23.2
27...	0921	6.00	--	6.0	8.3	371	23.1
27...	0922	12.0	--	5.9	8.3	372	23.1
27...	0924	18.0	--	5.5	8.2	370	23.0
27...	0925	24.0	--	4.8	8.1	366	22.8
27...	0926	30.0	--	4.6	8.0	369	22.8
27...	0927	36.0	--	4.2	8.0	374	22.8
27...	0929	40.5	--	3.5	7.8	374	22.7
SEP							
30...	0912	0.10	2.0	7.3	8.3	418	17.8
30...	0913	6.00	--	7.3	8.3	419	17.8
30...	0914	12.0	--	7.3	8.3	419	17.8
30...	0915	18.0	--	7.0	8.3	418	17.7
30...	0916	24.0	--	6.8	8.2	418	17.6
30...	0917	30.0	--	6.8	8.2	418	17.6
30...	0918	36.0	--	6.7	8.2	418	17.6
30...	0919	38.5	--	6.6	8.2	418	17.6

ARKANSAS RIVER BASIN
PUEBLO RESERVOIR NEAR PUEBLO, CO—Continued

WATER-QUALITY RECORDS

381602104435200 PUEBLO RESERVOIR SITE 7B

LOCATION.--Lat 38°16'02", long 104°43'52", in SE¹/₄ NW¹/₄ sec.36, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect approximately 0.3 mi downstream from Boggs Creek, 0.4 mi upstream from Pueblo Dam on Arkansas River, and 6.8 mi west of the Pueblo County Courthouse.

PERIOD OF RECORD.--June 1988 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=381602104435200

REMARKS.--Chlorophyll samples were composited from samples collected at the surface, at the transparency depth (secchi disk), and at twice the transparency depth.

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

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
APR						
25...	0946	0.10	8.0	7.9	652	10.3
25...	0947	3.00	8.0	7.9	652	10.3
25...	0948	6.00	8.0	7.9	652	10.2
25...	0950	9.00	8.0	7.9	652	10.2
25...	0951	12.0	8.0	7.9	652	10.2
25...	0952	15.0	8.0	7.9	652	10.1
25...	0953	18.0	8.0	7.9	652	10.1
25...	0954	21.0	8.0	7.9	652	10.1
25...	0955	24.0	8.0	7.9	652	10.1
25...	0956	27.0	8.0	7.9	652	10.1
25...	0957	30.0	8.0	7.9	652	10.1
25...	0958	33.0	8.0	7.9	652	10.1
25...	0959	36.0	8.0	7.9	652	10.1
25...	1001	39.0	7.9	7.9	652	10.1
25...	1002	42.0	7.9	7.9	652	10.1
25...	1003	45.0	7.9	7.9	652	10.0
25...	1004	48.0	7.9	7.9	652	10.0
25...	1005	51.0	7.9	7.9	652	10.0
25...	1006	54.0	7.9	7.9	652	10.0
25...	1007	57.0	7.9	7.9	652	10.0
25...	1008	60.0	7.8	7.9	652	9.9
25...	1009	63.0	7.8	7.9	652	9.9
25...	1010	66.0	7.8	7.9	652	9.9
25...	1011	69.0	7.8	7.9	652	9.9
25...	1012	72.0	7.7	7.9	652	9.9
25...	1013	75.0	7.7	7.9	653	9.9
25...	1014	78.0	7.6	7.9	653	9.9
25...	1015	80.0	7.3	7.9	654	9.8

PUEBLO RESERVOIR NEAR PUEBLO, CO—Continued

381602104435200 PUEBLO RESERVOIR SITE 7B--CONTINUED

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

Date	Time	Sam- pling depth, feet (00003)	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)
JUN						
03...	1101	0.10	6.4	7.9	473	19.1
03...	1102	3.00	6.3	7.9	474	19.1
03...	1103	6.00	6.2	8.0	477	19.0
03...	1104	9.00	6.1	8.0	482	18.9
03...	1105	12.0	6.0	8.0	489	18.6
03...	1106	15.0	5.8	7.9	471	18.5
03...	1107	18.0	5.6	7.9	440	18.0
03...	1108	21.0	5.3	7.9	389	17.7
03...	1109	24.0	5.3	7.8	383	17.6
03...	1110	27.0	5.3	7.8	382	17.6
03...	1111	30.0	5.2	7.8	373	17.5
03...	1112	33.0	5.2	7.8	369	17.3
03...	1113	36.0	5.1	7.8	441	16.7
03...	1114	39.0	5.0	7.8	401	16.3
03...	1115	42.0	5.0	7.8	390	16.2
03...	1116	45.0	5.0	7.8	384	16.2
03...	1117	48.0	4.9	7.8	424	15.9
03...	1118	51.0	5.0	7.8	640	15.1
03...	1119	54.0	5.0	7.8	660	14.4
03...	1120	57.0	4.8	7.7	662	14.1
03...	1121	60.0	4.8	7.7	668	13.6
03...	1122	63.0	4.6	7.7	668	13.5
03...	1123	66.0	4.6	7.7	671	13.3
03...	1124	69.0	4.4	7.7	672	13.1
03...	1125	72.0	4.0	7.7	673	12.9
20...	0946	0.10	7.4	8.5	340	19.8
20...	0947	3.00	7.5	8.5	340	19.4
20...	0948	6.00	7.5	8.4	340	19.3
20...	0949	9.00	7.4	8.4	341	19.3
20...	0950	12.0	7.3	8.4	341	19.3
20...	0951	15.0	7.3	8.4	342	19.3
20...	0952	18.0	7.3	8.4	344	19.2
20...	0953	21.0	7.0	8.3	346	19.1
20...	0954	24.0	6.3	8.0	352	18.9
20...	0955	27.0	6.0	8.0	352	18.8
20...	0956	30.0	5.6	7.8	353	18.6
20...	0957	33.0	5.1	7.7	345	18.2
20...	0958	36.0	4.7	7.7	331	17.8
20...	0959	39.0	4.6	7.7	321	17.7
20...	1001	42.0	4.4	7.7	323	17.4
20...	1002	45.0	4.2	7.7	330	17.2
20...	1003	48.0	4.0	7.7	340	16.9
20...	1004	51.0	3.5	7.7	352	16.4
20...	1005	54.0	3.4	7.7	358	16.3
20...	1006	57.0	3.2	7.6	373	16.0
20...	1007	60.0	2.9	7.6	390	15.7
20...	1009	63.0	2.7	7.6	400	15.6
20...	1011	66.0	2.2	7.5	421	15.2
20...	1012	69.0	1.5	7.5	440	14.8
20...	1014	70.0	1.0	7.4	455	14.6
JUL						
30...	0848	0.10	5.4	8.0	336	23.6
30...	0849	3.00	5.4	7.9	337	23.6
30...	0850	6.00	5.4	7.9	337	23.6
30...	0851	9.00	5.3	7.9	337	23.6
30...	0852	12.0	5.2	7.9	337	23.5
30...	0853	15.0	5.0	7.9	337	23.5
30...	0854	18.0	4.9	7.9	337	23.5
30...	0855	21.0	4.9	7.9	337	23.5
30...	0856	24.0	4.9	7.9	337	23.4
30...	0857	27.0	4.8	7.9	337	23.4
30...	0858	30.0	4.8	7.8	337	23.3
30...	0859	33.0	4.8	7.8	337	23.3
30...	0901	36.0	4.8	7.8	337	23.2
30...	0902	39.0	3.8	7.7	337	22.8
30...	0904	42.0	3.2	7.6	337	22.7
30...	0906	45.0	2.3	7.5	337	22.5
30...	0908	48.0	1.4	7.4	337	22.1
30...	0909	51.0	0.7	7.4	337	21.4
30...	0911	54.0	0.6	7.4	337	21.2
30...	0914	57.0	0.2	7.4	337	20.4

ARKANSAS RIVER BASIN

PUEBLO RESERVOIR NEAR PUEBLO, CO—Continued

381602104435200 PUEBLO RESERVOIR SITE 7B--CONTINUED

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

Date	Time	Sam- pling depth, feet (00003)	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)
JUL						
30...	0917	60.0	0.1	7.4	337	20.0
30...	0920	63.0	0.0	7.4	337	19.6
30...	0922	66.0	0.0	7.4	337	19.2
AUG						
27...	0831	0.10	6.4	8.3	362	23.1
27...	0832	3.00	6.4	8.3	362	23.1
27...	0833	6.00	6.4	8.4	362	23.1
27...	0834	9.00	6.4	8.4	362	23.1
27...	0835	12.0	6.4	8.4	362	23.1
27...	0836	15.0	6.4	8.4	362	23.1
27...	0837	18.0	6.4	8.4	362	23.1
27...	0838	21.0	6.4	8.4	362	23.1
27...	0839	24.0	6.3	8.4	362	23.1
27...	0840	27.0	6.3	8.4	362	23.0
27...	0841	30.0	6.2	8.4	362	23.0
27...	0842	33.0	6.1	8.4	362	22.9
27...	0843	36.0	5.6	8.2	362	22.8
27...	0844	39.0	5.3	8.2	362	22.8
27...	0846	42.0	5.3	8.2	362	22.7
27...	0847	45.0	5.1	8.1	362	22.7
27...	0848	48.0	4.6	8.0	362	22.7
27...	0849	51.0	4.1	7.9	362	22.6
27...	0850	54.0	3.3	7.8	364	22.6
27...	0851	57.0	2.8	7.8	363	22.5
27...	0852	60.0	2.3	7.7	363	22.4
27...	0853	63.0	1.0	7.6	364	22.1
27...	0854	64.5	1.0	7.6	365	22.0
SEP						
30...	0837	0.10	6.3	8.0	410	17.4
30...	0838	3.00	6.4	8.1	410	17.4
30...	0839	6.00	6.4	8.1	411	17.4
30...	0840	9.00	6.4	8.2	411	17.4
30...	0841	12.0	6.4	8.2	411	17.4
30...	0842	15.0	6.4	8.2	411	17.4
30...	0843	18.0	6.4	8.2	411	17.4
30...	0844	21.0	6.4	8.2	411	17.4
30...	0846	24.0	6.4	8.2	411	17.4
30...	0847	27.0	6.4	8.2	411	17.4
30...	0848	30.0	6.4	8.2	411	17.4
30...	0849	33.0	6.4	8.2	411	17.4
30...	0850	36.0	6.3	8.2	410	17.4
30...	0851	39.0	6.2	8.2	410	17.4
30...	0852	42.0	6.2	8.2	410	17.4
30...	0853	45.0	6.1	8.2	410	17.4
30...	0854	48.0	6.0	8.2	410	17.4
30...	0855	51.0	5.9	8.1	410	17.4
30...	0856	54.0	5.9	8.1	410	17.4
30...	0857	57.0	5.9	8.1	410	17.4
30...	0858	60.0	5.9	8.1	410	17.4
30...	0859	63.0	5.3	8.0	412	17.3

ARKANSAS RIVER BASIN

PUEBLO RESERVOIR NEAR PUEBLO, CO—Continued

381602104435200 PUEBLO RESERVOIR SITE 7B--CONTINUED

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

Date	Lead, water, unfltrd recover- able, ug/L (01051)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover- able, ug/L (01092)
APR					
25...	--	--	--	--	--
25...	--	--	--	--	--
25...	--	--	--	--	--
JUN					
20...	--	--	--	--	--
20...	--	--	--	--	--
20...	--	--	--	--	--
JUL					
30...	--	--	--	--	--
30...	--	--	--	--	--
30...	--	--	--	--	--
AUG					
27...	0.24	0.3	11	E.8	E2
27...	0.35	0.6	18	E.7	2
27...	--	--	--	--	--
SEP					
30...	--	--	--	--	--
30...	--	--	--	--	--
30...	--	--	--	--	--

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

E -- Estimated laboratory analysis value.

07099400 ARKANSAS RIVER ABOVE PUEBLO, CO

LOCATION.--Lat 38°16'18", long 104°43'03", in NE¼NE¼ sec.36, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on left bank 200 ft downstream from northeast corner of Arkansas River bridge, 0.4 mi downstream from Pueblo Dam, and 7 mi west of Pueblo.

DRAINAGE AREA.--4,670 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year. Statistical summary computed for 1975 to current year subsequent to completion of Pueblo Reservoir. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07099400

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,740 ft above NGVD of 1929, from topographic map. Prior to Mar. 23, 1967, at site 730 ft upstream at datum 2.23 ft higher. Mar. 24, 1967 to May 23 1974 at present site at datum 1.00 ft higher. May 24, 1974 to Feb. 24, 1975, at site 2,000 ft downstream, at different datum. Feb. 25, 1975 to Sept. 30, 2001, at or within 50 ft of present location at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Flow completely regulated by Pueblo Reservoir (station 07099350) 0.4 mi upstream since Jan. 9, 1974.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	e0.55	82	0.46	1.3	20	27	e91	181	4,020	816	280	223
2	e0.55	82	0.45	1.3	21	27	211	144	4,530	759	400	165
3	e25	82	0.57	1.2	21	27	239	142	4,690	607	376	91
4	103	93	0.57	1.3	22	28	256	142	4,160	581	367	84
5	103	102	0.57	1.3	22	27	290	156	3,400	690	368	105
6	104	102	0.61	1.4	23	27	309	165	2,100	693	383	117
7	103	103	0.64	1.4	22	27	310	165	1,570	692	387	133
8	95	103	0.59	1.5	23	27	261	69	1,260	689	197	167
9	53	103	0.63	1.7	23	27	237	37	1,020	689	141	214
10	32	103	0.66	1.7	23	27	237	60	953	685	141	255
11	26	103	0.75	1.6	26	27	233	55	1,360	567	138	285
12	8.7	103	0.82	1.7	27	27	224	55	1,590	502	138	328
13	1.3	103	0.71	1.7	27	28	224	178	1,630	499	136	342
14	1.3	93	0.68	1.8	27	27	213	252	1,710	523	145	332
15	4.6	1.5	0.67	1.6	27	27	196	269	1,710	556	149	331
16	9.0	0.84	0.73	8.3	27	27	196	357	1,700	516	135	297
17	1.0	0.62	0.65	20	26	27	196	559	1,650	488	135	220
18	1.0	0.60	0.76	20	27	58	178	589	1,590	428	136	137
19	1.1	0.47	0.79	20	27	108	232	639	1,600	393	136	113
20	1.1	0.53	0.77	20	27	160	232	758	1,450	303	136	146
21	1.1	0.52	0.77	20	27	180	210	952	1,520	262	135	151
22	1.1	0.45	0.81	20	27	180	211	1,030	1,620	264	135	126
23	8.5	0.50	0.96	20	28	180	229	1,080	1,390	264	e135	113
24	15	0.52	1.0	20	28	147	230	1,260	1,210	243	e135	88
25	15	0.56	1.1	20	27	126	210	1,580	1,110	217	e160	66
26	16	0.46	1.0	20	27	125	139	1,990	973	186	e185	48
27	16	0.50	0.92	20	27	126	140	2,030	893	176	184	42
28	33	0.54	1.0	20	27	104	141	2,010	892	192	203	40
29	e60	0.50	1.1	20	---	89	142	2,220	893	241	237	40
30	e82	0.50	1.2	20	---	69	175	2,690	859	263	309	40
31	82	---	1.3	20	---	e56	---	3,290	---	247	278	---
TOTAL	1,003.90	1,366.61	24.24	330.8	706	2,169	6,392	25,104	55,053	14,231	6,520	4,839
MEAN	32.4	45.6	0.78	10.7	25.2	70.0	213	810	1,835	459	210	161
MAX	104	103	1.3	20	28	180	310	3,290	4,690	816	400	342
MIN	0.55	0.45	0.45	1.2	20	27	91	37	859	176	135	40
AC-FT	1,990	2,710	48	656	1,400	4,300	12,680	49,790	109,200	28,230	12,930	9,600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

	MEAN	338	247	153	167	201	308	574	1,151	2,292	1,562	986	432
MAX	1,103	505	553	558	837	718	1,389	2,564	4,219	4,110	2,716	1,040	
(WY)	(1985)	(1985)	(1987)	(1985)	(1985)	(1985)	(1985)	(1984)	(1980)	(1995)	(1984)	(1982)	
MIN	32.4	45.6	0.78	10.7	25.2	70.0	125	374	386	281	16.5	4.10	
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(1978)	(1978)	(2002)	(2002)	(2002)	(2002)	

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1975 - 2003

ANNUAL TOTAL	51,811.06	117,739.55	
ANNUAL MEAN	142	323	a703
HIGHEST ANNUAL MEAN			1,227
LOWEST ANNUAL MEAN			174
HIGHEST DAILY MEAN	870	4,690	1984
LOWEST DAILY MEAN	0.45	0.45	2002
ANNUAL SEVEN-DAY MINIMUM	0.49	0.49	174
MAXIMUM PEAK FLOW		4,760	1984
MAXIMUM PEAK STAGE		7.20	2002
ANNUAL RUNOFF (AC-FT)	102,800	233,500	1,227
10 PERCENT EXCEEDS	356	952	1,780
50 PERCENT EXCEEDS	107	103	368
90 PERCENT EXCEEDS	0.58	0.80	86

e Estimated.

a Average discharge for 8 years (water years 1966-73), 643 ft³/s; 465,900 acre-ft/yr, prior to completion of Pueblo Dam.

b Also the maximum daily discharge for period of record.

c Also occurred Dec 2, 2002. Also minimum daily discharge for period of record.

d Maximum discharge for period of record, 10,100 ft³/s, Aug 1, 1966, from rating curve extended above 1,600 ft³/s, on basis of slope-area measurement of peak flow.

f Datum then in use; maximum gage height, 7.57 ft, Jun 14, 1985, datum then in use; maximum gage height for period of record, 13.12 ft, Aug 1, 1966, site and datum then in use.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1965 to September 1970, December 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07099400

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1985 to current year.

WATER TEMPERATURE: December 1985 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Daily specific-conductance records are good except for Oct. 1, 12, 15-16, 23, Jan. 16, Apr. 27, 29, and May 8, which are fair. Daily water-temperature records are good except for Oct. 1, 12-23, and Nov. 16 to Jan. 16, which are fair. Daily data that are not published are either missing or of unacceptable quality. Specific conductance data may not be representative of the river at the site during periods of transient hydrologic conditions caused by abrupt flow changes from Pueblo Reservoir.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,670 microsiemens/cm, Sept. 30, 2002; minimum, 223 microsiemens/cm, July 13, 1986.

WATER TEMPERATURE: Maximum, 26.9°C, Aug. 31, Sept. 5, 2002; minimum, 0.8°C, Dec. 26, 2003.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 808 microsiemens/cm, Nov. 16, but was probably higher during periods of unreliable record, Oct. 1, 12-30, and Nov. 17 to Jan. 16; minimum, 315 microsiemens/cm, June 22.

WATER TEMPERATURE: Maximum, 23.4°C, Aug. 17; minimum, 0.8°C, Dec. 26.

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

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd std units (00400)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	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)	Phosphorus, water, unfltrd, mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)
APR 23...	1315	225	10.3	8.4	643	10.0	0.048	0.223	0.007	<0.007	0.005	0.015	2.1
JUN 18...	1300	1,590	9.0	8.0	355	17.5	E.011	0.362	0.017	E.006	0.011	0.065	2.2
JUL 31...	1215	237	8.5	8.1	342	22.0	0.065	0.182	0.005	0.008	0.014	0.034	2.3
AUG 26...	0915	191	7.8	8.3	366	22.5	0.072	0.089	E.002	E.004	0.009	0.031	2.3
SEP 29...	1000	40	9.7	8.4	419	17.5	E.011	0.107	0.008	E.004	0.006	0.021	2.2

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

E -- Estimated laboratory analysis value.

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd std units (00400)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfiltered end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
DEC 17...	1030	0.72	9.3	8.1	822	4.5	95.7	28.0	3.54	44.0	E177	11.7	0.81
MAR 10...	1210	27	12.0	8.5	653	6.0	70.3	22.8	3.08	36.0	138	10.9	0.63
MAY 28...	0745	2,020	8.9	8.3	660	14.5	65.1	20.8	3.17	34.1	137	13.4	0.6
AUG 26...	0915	191	7.8	8.3	366	22.5	43.1	10.4	2.17	15.8	95	5.91	0.5

07099400 ARKANSAS RIVER ABOVE PUEBLO, 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
	FEBRUARY			MARCH			APRIL			MAY		
1	685	673	680	684	665	677	661	644	655	659	649	654
2	696	675	684	683	673	678	662	642	647	658	652	655
3	688	670	679	710	668	677	648	644	646	657	653	655
4	689	670	677	679	669	675	647	644	645	660	652	656
5	685	672	678	677	666	674	646	643	645	660	653	657
6	683	672	678	683	667	675	646	643	645	659	654	656
7	682	670	675	683	665	673	648	644	646	660	654	657
8	678	667	674	680	667	674	660	644	648	748	439	691
9	678	668	674	681	666	675	649	645	647	729	662	700
10	701	672	678	678	666	674	651	646	649	681	667	675
11	674	665	671	681	664	674	654	647	650	687	674	679
12	679	665	671	687	667	676	653	647	650	687	675	681
13	675	666	671	690	665	676	652	648	650	686	654	666
14	680	669	675	682	666	674	654	648	651	660	656	658
15	679	666	673	681	668	675	654	646	650	661	657	659
16	678	670	674	679	670	674	652	642	647	662	656	659
17	696	670	677	684	669	676	653	647	650	660	656	658
18	677	667	672	682	645	660	654	646	651	660	656	659
19	677	668	673	652	640	645	652	642	648	661	656	659
20	676	665	672	646	638	642	652	646	649	662	659	661
21	676	666	672	646	639	642	652	646	649	663	658	660
22	681	666	673	652	641	646	652	647	649	663	659	661
23	683	668	676	661	646	653	656	646	650	665	660	662
24	680	664	672	667	653	661	651	645	648	665	661	663
25	676	665	672	663	647	656	657	645	649	666	661	664
26	676	665	672	664	648	655	655	650	653	667	665	666
27	680	665	674	659	644	648	655	648	652	668	662	666
28	681	668	677	652	644	649	---	---	---	672	661	666
29	---	---	---	651	646	649	657	651	655	665	661	664
30	---	---	---	662	646	656	657	648	652	670	658	665
31	---	---	---	662	654	658	---	---	---	667	599	655
MONTH	701	664	675	710	638	664	---	---	---	748	439	664
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	636	563	601	328	322	325	360	356	358	396	389	392
2	633	407	513	333	320	325	362	358	359	417	394	403
3	488	412	448	332	319	326	364	359	362	436	402	418
4	468	381	430	331	322	326	369	357	361	431	410	420
5	471	417	444	330	323	327	361	357	359	421	413	418
6	447	391	424	331	326	328	361	357	360	419	408	414
7	444	343	413	331	325	328	363	359	361	419	412	415
8	441	398	425	331	327	329	381	362	370	419	398	408
9	456	396	413	330	325	327	370	364	368	404	399	402
10	467	386	416	330	327	329	370	365	368	408	403	405
11	425	381	400	336	328	331	369	364	367	404	400	402
12	404	364	387	335	330	333	369	364	367	406	401	404
13	405	372	388	335	331	333	369	365	367	410	406	408
14	390	380	385	334	331	333	370	363	367	411	409	410
15	386	366	376	335	331	333	371	364	367	414	410	411
16	377	362	370	336	332	334	371	366	369	416	410	414
17	377	358	368	338	333	336	373	367	370	419	414	417
18	372	354	360	340	336	338	374	368	371	427	415	422
19	359	330	350	342	337	340	376	370	373	427	419	423
20	350	330	342	345	339	342	377	370	374	422	414	419
21	347	329	334	346	340	343	377	372	375	421	416	419
22	333	315	326	348	342	345	380	375	377	427	419	422
23	336	322	328	349	344	347	381	376	378	427	423	425
24	337	321	327	353	345	349	381	376	379	433	423	428
25	345	316	327	356	349	352	380	376	378	433	426	430
26	331	321	325	358	351	355	381	376	379	452	430	446
27	329	322	326	359	353	356	382	378	380	455	444	450
28	333	318	326	360	354	357	383	378	381	461	447	453
29	332	316	324	360	349	354	386	380	382	461	444	453
30	330	323	326	356	352	354	386	379	383	462	446	453
31	---	---	---	359	354	356	392	385	388	---	---	---
MONTH	636	315	384	360	319	338	392	356	371	462	389	420

07099400 ARKANSAS RIVER ABOVE PUEBLO, 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
1	17.9	13.4	16.0	11.1	10.9	11.0	9.0	2.8	6.0	6.5	3.5	4.8
2	17.3	16.3	16.8	11.3	10.6	10.9	9.3	4.0	6.5	6.6	2.6	4.7
3	18.1	16.7	17.2	11.0	9.8	10.3	6.3	2.9	4.6	8.2	3.0	5.5
4	17.9	16.7	17.1	10.4	9.6	9.8	5.6	3.0	4.6	6.9	4.5	5.9
5	17.7	16.4	16.8	10.8	9.5	9.9	6.6	4.8	5.5	6.1	3.7	5.1
6	17.5	16.3	16.7	10.7	9.6	10	7.4	2.7	5.1	9.3	5.5	7.0
7	17.4	16.2	16.6	10.6	9.5	9.8	7.8	3.2	5.4	8.7	3.8	6.4
8	17.3	16.1	16.4	10.4	9.6	9.8	7.7	4.1	5.6	9.1	4.5	6.5
9	18.2	15.8	16.6	10.5	9.4	9.8	7.0	2.3	4.6	7.3	3.5	5.5
10	18.2	15.4	16.3	10.0	9.0	9.3	7.2	2.5	4.8	6.1	2.4	4.3
11	18.6	14.9	16.3	9.9	8.8	9.2	7.8	2.9	5.4	4.1	3.0	3.5
12	17.9	13.4	15.5	9.6	8.6	9.0	7.7	3.4	5.7	7.9	3.2	5.2
13	18.3	10.5	14.1	9.6	8.9	9.1	8.2	3.2	5.5	8.8	3.0	5.8
14	17.4	10.7	13.9	9.3	8.6	9.0	8.3	3.1	5.7	7.2	3.8	5.5
15	17.0	9.6	13.1	10.2	6.5	8.2	6.6	4.4	5.6	7.8	2.8	5.3
16	17.1	---	---	10.3	3.3	6.4	7.6	2.3	5.4	6.0	2.4	3.7
17	17.1	9.6	13.3	11.0	5.7	7.9	8.2	4.1	5.8	4.9	2.1	3.0
18	17.7	10.2	13.5	11.2	5.9	8.1	6.4	3.7	4.9	4.6	1.7	2.7
19	16.7	10.5	13.2	11.0	4.5	7.2	7.1	3.6	5.0	5.2	1.8	3.1
20	17.4	10.1	13.2	11.0	5.1	7.7	6.6	2.1	4.2	5.6	2.4	3.5
21	---	10.7	12.6	11.9	4.8	8.1	6.3	2.9	4.2	4.8	2.3	3.1
22	14.7	10.3	12.2	11.3	5.1	8.2	5.9	2.1	4.1	2.6	1.9	2.2
23	12.0	8.1	10.6	11.7	4.9	8.2	4.2	2.5	3.4	4.7	1.9	2.6
24	11.6	11.6	11.6	6.8	4.3	5.5	4.4	1.8	2.8	4.5	2.0	2.9
25	---	---	---	6.0	3.4	4.4	4.3	0.9	2.4	5.0	2.1	3.1
26	---	---	---	5.5	1.9	3.6	4.2	0.8	2.3	5.4	1.8	3.2
27	---	---	---	6.1	1.6	3.8	4.4	1.1	2.6	5.6	2.6	3.7
28	---	---	---	7.6	2.7	5.0	5.2	1.9	3.5	5.8	2.5	3.5
29	---	---	---	10.0	4.5	6.8	7.4	3.5	4.9	5.6	2.5	3.5
30	---	---	---	8.7	4.1	6.1	7.6	3.2	5.0	4.4	2.3	3.2
31	11.5	11.0	11.3	---	---	---	6.2	2.3	4.3	5.4	2.8	3.7
MONTH	---	---	---	11.9	1.6	8.1	9.3	0.8	4.7	9.3	1.7	4.2
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.6	2.9	3.8	6.0	2.6	3.5	8.6	6.2	7.0	11.1	10.1	10.4
2	5.0	2.8	3.6	6.0	2.6	3.6	8.6	7.0	7.6	11.4	10.1	10.5
3	5.6	2.5	3.5	5.9	2.2	3.7	8.4	7.3	7.7	12.3	10.2	10.9
4	5.4	2.2	3.3	3.4	2.2	2.9	7.8	7.1	7.4	11.9	10.5	11.2
5	5.2	2.3	3.3	5.8	2.2	3.3	7.7	7.0	7.2	12.0	10.8	11.3
6	3.8	1.8	2.5	6.2	2.4	3.8	7.7	7.0	7.2	11.9	10.8	11.2
7	4.6	1.3	2.3	6.8	2.7	4.1	7.7	7.0	7.2	12.1	10.9	11.5
8	4.6	1.0	2.1	7.0	3.1	4.5	8.6	7.0	7.6	14.8	11.0	12.6
9	3.3	1.1	1.9	7.2	3.1	4.6	8.7	6.9	7.6	15.4	10.5	12.0
10	4.5	1.1	2.2	7.3	3.4	4.8	9.1	7.1	7.9	13.3	11.1	12.0
11	4.3	1.4	2.4	7.6	3.5	5.2	8.9	7.1	7.7	13.6	11.1	12.1
12	5.3	1.8	3.1	8.1	4.2	5.5	8.1	7.2	7.5	14.1	11.3	12.4
13	4.3	2.6	3.2	8.4	4.2	5.8	8.2	7.2	7.6	13.1	11.4	12.3
14	4.9	2.7	3.4	8.4	4.4	5.9	8.1	7.2	7.5	13.1	12.1	12.5
15	3.5	2.5	2.9	8.7	4.7	6.1	9.2	7.3	7.8	13.0	12.0	12.5
16	3.7	2.4	2.8	7.2	4.5	5.6	11.1	8.5	9.5	13.2	12.5	12.7
17	5.5	2.4	3.5	5.6	4.8	5.1	9.5	8.5	8.8	13.2	12.5	12.7
18	3.7	2.7	3.1	5.6	4.7	5.1	10.5	8.3	9.3	13.3	12.5	12.8
19	4.9	2.3	3.1	5.4	5.0	5.3	9.5	8.9	9.2	13.0	12.4	12.7
20	4.5	2.0	2.9	6.4	5.2	5.7	10.1	9.1	9.4	13.7	12.8	13.1
21	5.6	2.1	3.2	5.8	5.3	5.6	10.1	9.1	9.4	13.3	12.8	13.0
22	5.6	2.2	3.3	6.3	5.3	5.6	10.2	9.1	9.6	14.0	12.9	13.4
23	4.9	1.8	2.9	6.3	5.2	5.6	10.1	9.0	9.6	14.0	12.9	13.5
24	4.5	1.5	2.3	6.2	5.3	5.6	10.7	9.6	10.0	14.4	12.7	13.7
25	4.7	1.7	2.7	6.6	5.3	5.7	10.8	9.8	10.1	14.2	13.0	13.7
26	4.0	2.2	2.9	6.4	5.1	5.6	11.0	9.7	10.2	14.4	13.5	14.0
27	5.6	2.3	3.4	7.7	5.6	6.5	---	9.8	---	14.4	13.9	14.2
28	4.5	2.2	3.1	7.3	6.0	6.5	---	---	---	14.8	14.0	14.4
29	---	---	---	7.2	5.8	6.2	11.3	9.9	10.7	15.2	13.8	14.6
30	---	---	---	8.0	5.7	6.4	11.1	9.9	10.3	15.4	14.2	14.9
31	---	---	---	8.2	5.8	6.7	---	---	---	15.8	14.5	15.2
MONTH	5.6	1.0	3.0	8.7	2.2	5.2	---	---	---	15.8	10.1	12.7

ARKANSAS RIVER BASIN

07099400 ARKANSAS RIVER ABOVE PUEBLO, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.1	15.4	16.2	18.8	17.9	18.3	22.1	20.8	21.4	22.7	21.8	22.1
2	16.5	15.5	16.1	19.0	17.8	18.4	22.1	21.3	21.7	22.7	21.5	22.0
3	16.6	15.9	16.2	19.3	17.7	18.4	22.3	21.4	21.8	22.2	21.2	21.5
4	16.9	15.6	16.4	19.3	17.9	18.5	22.3	21.5	22.0	22.5	20.9	21.5
5	17.2	16.0	16.7	18.9	18.0	18.6	22.5	21.7	22.0	22.6	21.0	21.5
6	16.7	15.2	16.2	19.1	18.2	18.5	22.6	21.7	22.1	22.3	21.2	21.5
7	16.5	15.2	16.1	19.2	18.2	18.7	22.5	21.8	22.1	21.9	21.2	21.4
8	16.3	15.5	16.0	19.4	18.4	18.8	22.9	21.3	22.0	22.3	21.1	21.5
9	16.3	15.5	15.9	19.4	18.3	18.9	22.8	21.3	21.9	21.7	21.1	21.3
10	16.3	15.5	15.9	19.5	18.7	19.1	22.8	21.3	21.9	21.8	20.9	21.3
11	16.9	15.3	16.2	19.8	18.5	19.0	22.8	21.6	22.0	21.6	20.7	21.0
12	17.1	15.5	16.6	19.7	18.7	19.1	22.7	21.5	22.0	21.3	20.4	20.8
13	17.0	16.4	16.7	19.7	18.8	19.2	23.0	21.6	22.1	20.4	19.7	20.0
14	17.1	16.5	16.8	19.8	19.0	19.4	23.1	21.5	22.1	20.3	19.5	19.8
15	17.2	16.7	16.9	20.0	19.2	19.6	22.9	21.6	22.1	19.9	19.0	19.5
16	18.1	16.6	17.1	20.1	19.2	19.7	23.1	21.6	22.2	19.7	18.9	19.2
17	17.9	16.7	17.2	20.2	19.4	19.8	23.4	21.8	22.3	19.3	18.0	18.9
18	17.5	16.9	17.2	20.1	19.5	19.8	22.8	21.8	22.2	19.4	18.0	18.7
19	17.7	16.7	17.2	20.8	19.4	20.0	23.1	21.7	22.3	19.5	17.9	18.5
20	17.6	16.8	17.3	20.3	19.7	20.0	23.0	22.0	22.4	19.0	17.8	18.3
21	17.5	16.9	17.2	20.8	19.5	20.0	23.0	21.9	22.3	18.9	17.6	18.1
22	17.8	17.0	17.4	20.5	19.7	20.1	23.1	21.8	22.3	18.7	17.2	17.9
23	17.8	16.9	17.5	20.9	19.9	20.3	23.1	21.9	22.4	18.9	17.4	17.9
24	17.9	16.9	17.4	21.0	19.6	20.3	23.3	22.1	22.6	19.0	17.3	17.9
25	18.2	16.6	17.5	21.1	19.9	20.4	23.2	22.2	22.5	19.6	16.9	17.9
26	18.3	17.2	17.7	21.1	19.9	20.5	23.2	22.3	22.5	20.0	16.7	17.9
27	18.6	17.4	17.9	21.0	20.0	20.5	23.2	22.1	22.5	19.9	16.6	17.8
28	18.5	17.3	17.9	21.1	20.3	20.6	22.8	22.3	22.5	19.6	16.1	17.4
29	18.5	17.3	18.0	22.1	20.4	20.9	23.1	22.1	22.5	19.7	16.2	17.5
30	18.9	17.8	18.2	21.7	20.6	21.2	22.9	22.2	22.4	19.2	16.4	17.3
31	---	---	---	22.0	20.8	21.2	22.5	22.0	22.2	---	---	---
MONTH	18.9	15.2	16.9	22.1	17.7	19.6	23.4	20.8	22.2	22.7	16.1	19.6

382624104472400 POND 46.212 NEAR TELLER RESERVOIR AT FORT CARSON, CO

LOCATION (REVISED).--Lat 38°26'21", long 104°47'11", in NE¹/₄SW¹/₄ sec.33, T.18 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, near center of dam on unnamed tributary of Wildhorse Creek, 2.2 mi east of Teller Reservoir dam, and 3.2 mi southeast of Stone City.

DRAINAGE AREA.--0.35 mi² (from Agricultural Research Service).

RESERVOIR ELEVATIONS AND CONTENTS RECORDS

PERIOD OF RECORD.--April 1999 to September 2001, October 2001 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=382624104472400

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gages. Elevation of gage is 5,580 ft above NGVD of 1929, from topographic map.

REMARKS.--Reservoir is formed by an earthfill dam. All figures represent total contents from area-capacity table effective Apr. 28, 1999, and based on a 1997 survey by the Agricultural Research Service. Total capacity, 7.26 acre-ft at elevation 15.28 ft. Elevation of high crest of spillway, about 15.28 ft. Elevation of no contents, about 1.81 ft. Reservoir is used for flood retention and erosion control.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 0.41 acre-ft, June 13, 2003, elevation, 5.20 ft; no contents on most days.

EXTREMES FOR CURRENT WATER YEAR.--Maximum contents, 0.41 acre-ft, June 13, elevation, 5.20 ft; no contents on most days.

Capacity table
(Elevation, in feet, and contents, in acre-feet, effective April 28, 1999)

Elevation	Capacity	Elevation	Capacity	Elevation	Capacity	Elevation	Capacity
1.81	0.000	5.04	0.36	8.81	1.94	12.81	4.79
2.00	0.002	5.75	0.57	9.81	2.53	13.81	5.71
2.94	0.02	7.00	1.05	10.81	3.21	14.81	6.20
3.99	0.13	7.81	1.41	11.81	3.96	15.28	7.26

RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.32	0.00	0.00	0.00
14	0.00	---	---	---	---	---	0.00	0.00	0.21	0.00	0.00	0.00
15	0.00	---	---	---	---	---	0.00	0.00	0.15	0.00	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.00	0.11	0.00	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	0.08	0.00	0.00	0.00
18	0.00	---	---	---	---	---	0.00	0.00	0.07	0.00	0.00	0.00
19	0.00	---	---	---	---	---	0.00	0.00	0.06	0.00	0.00	0.00
20	0.00	---	---	---	---	---	0.00	0.00	0.05	0.00	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.00	0.04	0.00	0.00	0.00
22	0.00	---	---	---	---	---	0.00	0.00	e0.03	0.00	0.00	0.00
23	0.00	---	---	---	---	---	0.00	0.00	e0.02	0.00	0.00	0.00
24	0.00	---	---	---	---	---	0.00	0.00	e0.01	0.00	0.00	0.00
25	0.00	---	---	---	---	---	0.00	0.00	e0.01	0.00	0.00	0.00
26	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	---	---	---	---	---	0.00	---	0.00	0.00	---
MAX	0.00	---	---	---	---	---	0.00	0.00	0.32	0.00	0.00	0.00
MIN	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00

e Estimated.

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 1999 to September 2000 (seasonal records only), October 2000 to September 2001, October 2001 to current year (seasonal records only). Air temperature data available, April 1999 to current year, in files of the district office. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382624104472400

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 1.94 inches, Apr. 30, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 0.71 inch, Apr. 19.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.06	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
2	0.12	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
3	0.12	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.33
4	0.00	---	---	---	---	---	0.00	0.00	0.05	0.00	0.00	0.00
5	0.00	---	---	---	---	---	0.00	0.00	0.17	0.00	0.00	0.00
6	0.00	---	---	---	---	---	0.02	0.00	0.00	0.00	0.00	0.08
7	0.00	---	---	---	---	---	0.02	0.00	0.02	0.00	0.00	0.06
8	0.00	---	---	---	---	---	0.02	0.00	0.00	0.00	0.01	0.01
9	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00
10	0.00	---	---	---	---	---	0.00	0.00	0.13	0.00	0.00	0.00
11	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.49	0.00	0.00	0.10
14	0.00	---	---	---	---	---	0.00	0.00	0.05	0.00	0.00	0.01
15	0.00	---	---	---	---	---	0.10	0.31	0.00	0.15	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	---	---	---	---	---	0.00	0.00	0.15	0.00	0.01	0.00
19	0.00	---	---	---	---	---	0.71	0.00	0.14	0.11	0.00	0.00
20	0.00	---	---	---	---	---	0.00	0.00	0.09	0.03	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.00	0.00	0.01	0.00	0.00
22	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	0.06	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	0.04	---	---	---	---	---	0.00	0.02	0.00	0.00	0.00	0.00
25	0.01	---	---	---	---	---	0.00	0.07	0.00	0.00	0.05	0.00
26	0.00	---	---	---	---	---	0.00	0.01	0.00	0.00	0.05	0.00
27	0.00	---	---	---	---	---	0.00	0.17	0.00	0.01	0.00	0.00
28	0.00	---	---	---	---	---	0.00	0.00	0.19	0.00	0.16	0.00
29	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
30	0.00	---	---	---	---	---	0.00	0.16	0.00	0.00	0.41	0.00
31	0.00	---	---	---	---	---	---	0.01	---	0.00	0.00	---
TOTAL	0.41	---	---	---	---	---	0.87	0.75	1.50	0.31	0.70	0.59
MAX	0.12	---	---	---	---	---	0.71	0.31	0.49	0.15	0.41	0.33

0709969 ARKANSAS RIVER AT ST. CHARLES MESA DIVERSION AT PUEBLO, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°15'13", long 104°36'20", in SW¼NW¼ sec.6, T.21 S., R.64 W., Pueblo County, Hydrologic Unit 11020002, on right bank 10 ft upstream from intake of Saint Charles Mesa Water Association at Moffat Street at Pueblo, 150 ft downstream from Santa Fe Avenue bridge, and 1.1 mi upstream from Fountain Creek.

DRAINAGE AREA.--4,778 mi².

PERIOD OF RECORD.--October 1988 to current year. Prior to October 1989, published as Arkansas River at Moffat Street at Pueblo (0709970). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=0709969

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Records good except for Oct. 1-2, 11-29, Nov. 15 to Mar. 18, May 8-13, and Sept. 11-30, which are poor. Daily data that are not published are either missing or of unacceptable quality. Specific conductance data is not representative of the stream cross section at the site but is more representative of flow entering the diversion. Specific conductance data representative of the cross section at the site have been published as Arkansas River at Moffat Street at Pueblo (0709970) since the 1991 water year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,990 microsiemens/cm, Dec. 27, 2002, Jan. 1, 2003; minimum, 225 microsiemens/cm, Aug. 25, 1995.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,990 microsiemens/cm, Dec. 27, Jan. 1; minimum, 287 microsiemens/cm, June 20.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2,060	1,880	1,920	878	865	875	2,340	2,300	2,320	2,990	2,970	2,980
2	2,500	579	1,340	884	867	877	2,480	2,340	2,430	2,980	2,940	2,960
3	1,380	960	1,160	886	861	871	2,510	2,440	2,480	2,950	2,930	2,940
4	975	869	911	881	840	866	2,510	2,480	2,490	2,940	2,930	2,930
5	869	856	865	840	819	829	2,490	2,470	2,480	2,930	2,910	2,930
6	875	846	860	849	820	828	2,540	2,490	2,510	2,920	2,900	2,910
7	869	845	852	845	824	831	2,560	2,540	2,540	2,910	2,860	2,900
8	861	839	849	830	820	825	2,590	2,560	2,570	2,860	2,850	2,850
9	886	842	867	835	819	827	2,610	2,590	2,600	2,850	2,790	2,820
10	980	854	903	830	813	821	2,620	2,600	2,610	2,870	2,830	2,860
11	1,250	980	1,160	819	803	811	2,680	2,570	2,640	2,890	2,870	2,880
12	1,440	1,250	1,340	817	802	807	2,700	2,680	2,690	2,880	2,870	2,880
13	1,540	1,440	1,500	818	804	809	2,770	2,700	2,720	2,870	2,830	2,850
14	1,740	1,540	1,660	818	797	808	2,790	2,770	2,790	2,830	2,800	2,810
15	1,850	1,740	1,800	883	813	856	2,830	2,790	2,800	2,960	2,790	2,860
16	2,020	1,850	1,950	880	875	877	2,840	2,830	2,830	2,960	2,890	2,940
17	2,060	1,840	1,960	956	880	903	2,890	2,830	2,860	2,890	2,870	2,880
18	1,930	1,840	1,880	1,140	956	1,040	2,890	2,890	2,890	2,930	2,870	2,900
19	2,020	1,930	1,990	1,470	1,120	1,300	2,890	2,880	2,890	2,950	2,850	2,910
20	2,030	1,900	1,990	1,490	1,390	1,450	2,890	2,880	2,890	2,860	2,830	2,850
21	1,960	1,900	1,930	1,550	1,490	1,520	2,900	2,880	2,890	2,860	2,820	2,850
22	1,980	1,960	1,970	1,740	1,550	1,620	2,920	2,900	2,910	2,830	2,820	2,820
23	2,030	1,970	2,010	1,820	1,670	1,750	2,930	2,910	2,920	2,860	2,820	2,850
24	2,060	2,030	2,050	2,000	1,820	1,890	2,940	2,920	2,930	2,870	2,860	2,870
25	2,080	1,760	1,940	2,100	2,000	2,080	2,950	2,930	2,940	2,870	2,850	2,860
26	1,890	1,760	1,780	2,130	2,050	2,090	2,970	2,950	2,960	2,860	2,830	2,840
27	1,920	1,830	1,910	2,170	2,130	2,140	2,990	2,970	2,980	2,860	2,790	2,800
28	1,860	1,820	1,830	2,190	2,170	2,180	2,980	2,970	2,970	2,810	2,690	2,780
29	2,030	1,020	1,230	2,240	2,190	2,210	2,970	2,950	2,960	2,860	2,800	2,840
30	1,030	877	935	2,300	2,230	2,260	2,950	2,920	2,930	2,850	2,800	2,830
31	878	865	875	---	---	---	2,990	2,940	2,970	2,860	2,840	2,860
MONTH	2,500	579	1,490	2,300	797	1,260	2,990	2,300	2,750	2,990	2,690	2,870

07099970 ARKANSAS RIVER AT MOFFAT STREET AT PUEBLO, CO

LOCATION.--Lat 38°15'13", long 104°36'20", in SW¹/₄NW¹/₄ sec.6, T.21 S., R.64 W., Pueblo County, Hydrologic Unit 11020002, on right bank 10 ft upstream from Saint Charles Mesa Water District intake at Moffat Street at Pueblo, 150 ft downstream from Santa Fe Avenue bridge, and 1.1 mi upstream from Fountain Creek.

DRAINAGE AREA.--4,778 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07099970

REVISED RECORDS: WDR CO-90-1: 1989(M).

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 4,653 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for Nov. 16 to Mar. 17 and July 21, which are fair. Records do not include diversion for municipal supply of Saint Charles Mesa Water District. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Flow almost completely regulated by Pueblo Reservoir (station 07099350) 8 mi upstream since Jan. 9, 1974.

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	2.2	58	1.9	1.7	1.5	1.5	15	128	4,050	713	205	202
2	9.7	57	1.9	1.8	1.5	1.7	160	80	4,620	675	355	139
3	25	56	1.9	1.8	1.5	1.5	195	78	4,790	559	338	63
4	69	63	2.0	1.7	1.5	1.5	250	78	4,300	536	327	33
5	70	75	1.9	1.7	1.5	1.5	281	90	3,430	604	320	54
6	68	75	1.9	1.7	1.9	1.5	302	106	2,140	611	321	67
7	70	78	1.9	1.7	1.5	1.5	311	106	1,470	608	331	81
8	68	83	1.9	1.7	1.5	1.4	276	60	1,170	592	168	112
9	36	82	1.9	1.7	1.5	1.4	236	2.3	904	581	61	166
10	3.4	81	1.9	1.7	1.5	1.4	223	2.9	856	573	61	220
11	2.7	82	1.9	1.7	1.5	1.4	223	2.4	1,200	508	62	260
12	2.3	81	1.9	1.7	1.6	1.4	197	2.3	1,480	441	70	278
13	2.3	80	1.9	1.7	1.5	1.4	196	86	1,600	442	60	303
14	2.3	76	1.9	1.7	1.7	1.4	190	213	1,620	455	65	288
15	2.3	17	1.9	1.7	1.5	1.5	164	264	1,620	502	72	289
16	2.6	1.9	1.9	1.7	1.5	1.5	165	254	1,620	458	71	273
17	2.8	1.9	1.9	1.7	1.5	5.3	178	446	1,610	453	70	204
18	2.5	1.9	1.9	1.7	1.5	7.6	150	478	1,500	400	120	111
19	2.5	1.9	1.9	1.7	5.0	46	280	510	1,500	369	78	66
20	2.5	1.9	1.9	1.5	1.5	89	187	613	1,400	300	89	96
21	2.4	1.9	1.9	1.5	1.5	127	165	759	1,360	e255	89	114
22	2.6	1.9	1.8	1.5	1.5	131	155	854	1,480	231	86	82
23	2.4	1.9	1.7	1.5	1.5	132	179	896	1,280	231	95	76
24	2.3	1.9	1.7	1.5	1.5	104	174	1,090	1,080	210	94	55
25	2.3	1.9	1.7	1.5	1.5	69	170	1,420	991	162	107	42
26	2.4	1.9	1.8	1.5	1.5	67	77	1,870	861	133	116	20
27	2.8	1.9	1.7	1.5	1.5	74	75	1,940	785	113	116	17
28	2.3	1.9	1.7	1.5	1.9	71	77	1,950	786	128	126	17
29	25	1.9	1.7	1.5	---	43	74	2,150	784	197	196	17
30	54	1.9	1.7	1.5	---	33	98	2,640	756	239	288	16
31	59	---	1.7	1.5	---	13	---	3,280	---	218	275	---
TOTAL	603.6	1,072.5	57.2	50.5	46.6	1,035.4	5,423	22,448.9	53,043	12,497	4,832	3,761
MEAN	19.5	35.8	1.85	1.63	1.66	33.4	181	724	1,768	403	156	125
MAX	70	83	2.0	1.8	5.0	132	311	3,280	4,790	713	355	303
MIN	2.2	1.9	1.7	1.5	1.5	1.4	15	2.3	756	113	60	16
AC-FT	1,200	2,130	113	100	92	2,050	10,760	44,530	105,200	24,790	9,580	7,460

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

	229	201	104	97.0	128	289	531	1,072	2,071	1,366	843	321
MAX	431	491	330	355	312	623	1,031	1,716	4,111	4,290	1,616	699
(WY)	(1996)	(1998)	(1998)	(2000)	(1996)	(1997)	(1998)	(1996)	(1997)	(1995)	(1995)	(1995)
MIN	19.5	35.7	1.85	1.63	1.66	33.4	107	320	310	213	8.23	3.70
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1989 - 2003

ANNUAL TOTAL	38,409.2	104,870.7	
ANNUAL MEAN	105	287	606
HIGHEST ANNUAL MEAN			1,107 1995
LOWEST ANNUAL MEAN			129 2002
HIGHEST DAILY MEAN	772 Jun 9	4,790 Jun 3	6,030 Jun 23, 1997
LOWEST DAILY MEAN	1.7 Dec 23	1.4 Mar 8	a1.4 Mar 8, 2003
ANNUAL SEVEN-DAY MINIMUM	1.7 Dec 23	1.4 Mar 8	1.4 Mar 8, 2003
MAXIMUM PEAK FLOW		4,880 Jun 2	b10,400 Jun 3, 1994
MAXIMUM PEAK STAGE		12.04 Jun 2	14.18 Jun 3, 1994
ANNUAL RUNOFF (AC-FT)	76,180	208,000	439,100
10 PERCENT EXCEEDS	290	813	1,580
50 PERCENT EXCEEDS	64	68	296
90 PERCENT EXCEEDS	1.9	1.5	42

e Estimated.

a Also occurred Mar. 9-14, 2003.

b From rating curve extended above 5,190 ft³/s on basis of slope-conveyance and area-velocity study.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1988 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07099970

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year.

WATER TEMPERATURE: October 1988 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Daily specific-conductance records are fair except for Oct. 1, 12-28, Nov. 15 to Mar. 16, May 11-12, and Sept. 11-30, which are poor. Daily water-temperature records are good except for Oct. 1-2 and May 9-13, which are poor. Daily water-temperature data that are not published are either missing or of unacceptable quality. Daily specific-conductance data that are not published are either during periods of estimated discharge, are missing for the day, or are of unacceptable quality. During low-flow periods in October and November through March, velocities in the gage pool at the monitoring location became sufficiently slow for the water column to become thermally stratified. Recorded water-temperature values during these periods became completely unrepresentative of the river and were not published.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 2,980 microsiemens/cm, Dec. 27, 2002, Jan. 1, 2003; minimum daily mean, 252 microsiemens/cm, June 29, 1993.

WATER TEMPERATURE: Maximum, 27.9°C, July 31, 2002; minimum, 0.0°C, on many days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 2,980 microsiemens/cm, Dec. 27, Jan. 1; minimum daily mean, 351 microsiemens/cm, July 2.

WATER TEMPERATURE: Maximum, 27.5°C, Aug. 11; minimum recorded, 3.1°C, Mar. 19, but was probably lower during periods of unreliable record, Oct. 11-29 and Nov. 15 to Mar. 17.

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN,
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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	
DEC	17...	1300	1.9	14.4	8.4	2,720	10.5	355	102	4.27	198	E180	67.1	1.19
MAR	10...	1015	1.5	12.9	8.3	2,680	13.0	398	119	4.39	236	170	68.9	1.15
MAY	28...	0915	1,960	8.8	8.4	673	16.0	65.4	21.0	3.22	34.7	138	13.6	0.6
AUG	26...	1430	117	8.5	8.7	481	26.0	57.0	15.2	2.67	24.9	101	8.77	0.5

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sulfate water, fltrd, mg/L (00945)	
DEC	17...	1,370
MAR	10...	1,330
MAY	28...	188
AUG	26...	127

E -- Estimated laboratory analysis value.

07099970 ARKANSAS RIVER AT MOFFAT STREET AT PUEBLO, 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
1	15.8	14.8	15.3	6.8	5.5	6.2	---	---	---	---	---	---
2	15.1	12.6	13.4	9.2	6.5	7.7	---	---	---	---	---	---
3	15.2	11.4	13.2	11.1	7.2	8.7	---	---	---	---	---	---
4	17.6	11.6	14.2	9.5	6.9	8.1	---	---	---	---	---	---
5	19.1	12.9	15.6	10.4	6.4	8.3	---	---	---	---	---	---
6	17.9	13.3	15.5	10.8	6.3	8.5	---	---	---	---	---	---
7	18.8	13.0	15.7	10.4	6.6	8.7	---	---	---	---	---	---
8	19.1	13.5	16.2	10.7	7.6	9.2	---	---	---	---	---	---
9	20.2	15.0	17.4	12.0	8.3	10.0	---	---	---	---	---	---
10	18.9	16.9	17.8	9.9	7.0	8.5	---	---	---	---	---	---
11	---	---	---	9.5	6.1	7.7	---	---	---	---	---	---
12	---	---	---	8.9	5.4	7.2	---	---	---	---	---	---
13	---	---	---	9.5	6.7	8.1	---	---	---	---	---	---
14	---	---	---	10.0	8.1	8.8	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	7.7	5.3	6.4	---	---	---	---	---	---	---	---	---
31	6.7	5.7	6.2	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	18.3	8.8	13.2	15.1	10.0	12.8
2	---	---	---	---	---	---	12.1	7.2	10.3	16.5	10.6	13.3
3	---	---	---	---	---	---	12.6	6.5	9.5	17.6	11.0	14.0
4	---	---	---	---	---	---	11.8	6.3	8.9	15.5	10.9	13.1
5	---	---	---	---	---	---	10.5	6.2	8.2	17.4	10.1	13.6
6	---	---	---	---	---	---	9.9	6.2	7.9	16.2	10.8	13.8
7	---	---	---	---	---	---	9.4	6.2	7.6	18.2	11.1	14.5
8	---	---	---	---	---	---	13.0	5.8	9.1	16.8	11.2	14.5
9	---	---	---	---	---	---	13.8	5.6	9.7	16.9	14.3	15.5
10	---	---	---	---	---	---	14.5	6.4	10.5	17.1	14.7	15.6
11	---	---	---	---	---	---	14.3	7.1	10.9	17.0	14.2	15.5
12	---	---	---	---	---	---	14.2	7.1	10.8	17.7	14.3	15.9
13	---	---	---	---	---	---	15.3	7.1	11.2	18.9	14.5	16.1
14	---	---	---	---	---	---	13.1	7.4	10.7	19.3	11.6	15.3
15	---	---	---	---	---	---	12.0	8.1	10.1	18.3	12.0	14.6
16	---	---	---	---	---	---	15.4	6.9	11.1	20.0	12.3	15.7
17	---	---	---	---	---	---	15.8	8.3	12.1	17.6	12.1	14.6
18	---	---	---	9.0	5.9	7.1	15.0	8.1	11.8	16.4	12.3	14.1
19	---	---	---	5.9	3.1	4.2	13.1	8.4	9.9	14.9	12.0	13.3
20	---	---	---	11.0	4.4	7.6	15.4	8.5	11.6	15.9	11.8	13.3
21	---	---	---	9.0	6.0	6.9	15.9	9.1	12.5	17.0	12.1	14.2
22	---	---	---	11.0	4.3	7.7	15.9	9.3	12.6	18.1	12.5	14.7
23	---	---	---	11.4	5.1	8.6	12.4	8.6	10.4	18.1	12.8	14.8
24	---	---	---	10.2	5.3	8.1	15.1	7.8	11.0	17.8	12.6	14.6
25	---	---	---	12.9	7.3	9.7	16.4	8.6	12.6	16.3	13.2	14.4
26	---	---	---	11.4	6.7	9.3	17.9	9.6	13.4	16.3	13.6	14.6
27	---	---	---	9.2	5.7	7.5	17.2	10.3	13.9	17.2	13.8	15.1
28	---	---	---	9.2	3.6	6.3	18.0	11.6	14.5	17.2	14.4	15.2
29	---	---	---	10.6	4.9	7.4	19.0	11.3	14.8	17.7	14.1	15.5
30	---	---	---	13.1	4.9	8.8	16.2	11.4	14.1	17.3	14.2	15.6
31	---	---	---	17.9	6.8	11.7	---	---	---	17.1	14.8	15.7
MONTH	---	---	---	---	---	---	19.0	5.6	11.2	20.0	10.0	14.6

07099970 ARKANSAS RIVER AT MOFFAT STREET AT PUEBLO, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.7	15.5	16.7	23.0	17.6	19.7	25.5	19.2	22.3	25.5	19.6	22.3
2	17.6	15.7	16.6	23.2	17.4	19.8	26.5	20.0	22.9	25.5	19.3	22.5
3	17.7	16.1	16.7	23.8	17.4	20.1	26.3	20.3	23.0	23.1	19.7	21.5
4	18.3	15.7	16.7	24.1	17.4	20.3	27.3	20.3	23.3	26.4	17.7	21.2
5	17.4	16.1	16.8	23.8	17.6	20.2	26.4	20.6	23.3	26.8	20.1	22.7
6	18.7	15.4	17.0	22.5	17.7	19.7	26.5	20.2	23.1	23.7	20.0	21.4
7	17.4	14.8	16.0	23.4	17.5	19.8	26.8	20.6	23.2	22.0	19.2	20.6
8	19.4	15.5	17.0	24.3	17.9	20.4	26.6	20.7	23.1	24.5	18.8	21.6
9	19.2	15.1	16.6	23.6	17.4	20.0	27.4	20.8	23.6	22.4	18.7	20.6
10	19.5	15.4	16.7	24.1	17.8	20.5	27.4	20.2	23.6	22.6	18.3	20.5
11	19.4	15.1	17.0	24.4	18.0	20.7	27.5	21.3	24.1	23.1	17.5	20.0
12	19.3	15.3	17.1	24.0	17.9	20.6	27.3	20.6	23.7	23.5	17.1	20.2
13	19.0	16.2	16.9	24.5	18.5	21.1	27.0	20.5	23.4	20.3	16.4	17.7
14	19.6	16.2	17.3	24.0	18.0	20.8	26.7	19.9	23.0	21.7	15.8	18.5
15	19.8	16.3	17.6	24.7	18.5	20.9	26.2	19.9	22.9	22.4	16.2	19.1
16	19.3	16.4	17.5	25.0	18.9	21.4	26.3	20.2	23.1	22.5	16.3	19.4
17	19.9	16.7	18.0	25.3	18.8	21.6	25.3	19.5	22.3	20.3	16.7	18.2
18	19.8	16.7	17.8	25.5	18.5	21.7	24.7	20.6	22.4	19.3	13.8	16.4
19	19.4	16.8	17.7	25.7	18.9	21.8	27.1	19.4	22.9	20.3	14.0	16.9
20	20.2	16.0	17.5	25.2	19.2	21.8	26.9	20.7	23.8	20.1	15.3	17.6
21	20.1	16.3	17.9	26.4	---	---	26.6	20.8	23.8	20.9	15.7	18.3
22	20.3	16.6	18.1	25.5	19.0	22.3	26.4	20.5	23.4	20.1	14.7	17.5
23	21.0	16.7	18.4	25.0	19.2	22.1	26.3	20.3	23.1	21.2	15.5	18.3
24	20.9	16.7	18.3	26.6	18.8	22.5	26.8	20.3	23.5	20.5	15.8	18.0
25	21.3	16.2	18.3	26.3	19.5	22.9	26.8	21.0	23.6	21.3	14.9	17.7
26	21.8	16.7	18.7	25.9	19.5	22.9	26.7	20.5	23.4	20.4	14.7	17.2
27	22.3	16.6	19.0	23.7	20.4	22.2	26.7	20.1	23.4	19.4	15.3	17.1
28	22.3	16.9	18.8	24.4	20.0	22.2	24.3	21.1	22.0	19.0	14.6	16.6
29	21.0	17.0	18.7	25.4	19.2	22.1	25.1	20.0	22.1	19.1	14.7	16.6
30	22.9	17.3	19.6	26.0	19.4	22.6	23.4	18.9	21.3	17.9	15.3	16.5
31	---	---	---	24.6	19.1	22.0	22.9	20.0	21.2	---	---	---
MONTH	22.9	14.8	17.6	26.6	---	---	27.5	18.9	23.0	26.8	13.8	19.1

07099990 FOUNTAIN CREEK AT GREEN MOUNTAIN FALLS, CO

LOCATION.--Lat 38°56'20", long 105°00'55", in NW¼NE¼ sec.8, T.13 S., R.68 W., El Paso County, Hydrologic Unit 11020003, on left bank at upstream side of bridge on Green Mountain Falls Road at Green Mountain Falls, 0.2 mi south of U.S. Highway 24, 0.4 mile upstream from North Catamount Creek, and 1.3 miles downstream from Crystola Creek.

DRAINAGE AREA.--16.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2001 to current year. Site was part of a hydrologic study, water-quality data available, May 1986 to September 1989, published as "Fountain Creek above Green Mountain Falls" (station 385620105005401). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07099990

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 7,740 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation, ground-water withdrawals, and return flows from irrigated areas. 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	0.65	0.54	0.56	0.66	e0.67	0.78	1.6	1.4	1.4	0.98	0.66
2	0.68	0.69	0.55	0.60	0.69	e0.66	0.77	1.6	1.2	1.0	1.1	0.62
3	0.65	0.71	0.56	0.56	e0.68	0.65	0.76	1.6	1.0	1.1	0.94	2.5
4	0.64	0.68	0.55	0.56	e0.66	e0.64	0.72	1.5	1.0	0.89	1.00	0.63
5	0.67	0.72	0.57	0.56	e0.65	e0.66	0.71	1.4	1.3	0.78	1.0	0.52
6	0.75	0.73	0.57	0.56	e0.65	0.70	0.71	1.4	1.1	0.69	1.0	0.53
7	0.77	0.75	0.57	0.56	e0.63	0.66	0.67	1.4	1.0	0.71	0.96	2.3
8	0.80	0.77	0.54	0.61	e0.65	0.69	0.70	1.3	0.97	0.57	1.0	0.60
9	0.80	0.78	0.55	e0.62	e0.67	0.67	0.80	1.3	0.88	0.50	1.2	0.42
10	0.76	0.77	0.61	e0.62	e0.68	0.66	1.2	1.3	0.86	0.68	0.74	0.47
11	0.65	0.71	0.57	0.62	e0.68	0.73	1.6	1.3	0.78	0.45	0.86	0.43
12	0.63	0.66	0.58	e0.62	0.65	0.79	2.0	1.2	0.80	0.46	0.65	0.38
13	0.64	0.68	0.55	0.61	0.66	0.90	2.8	1.2	0.78	0.51	0.48	0.35
14	0.63	0.72	0.54	0.61	0.71	0.92	2.8	1.2	0.84	0.50	0.42	0.34
15	0.63	0.66	0.54	0.59	0.71	0.92	2.6	1.2	0.78	0.54	0.45	0.36
16	0.64	0.64	0.54	e0.59	e0.69	0.89	2.5	1.3	0.75	0.50	0.48	0.40
17	0.64	0.63	0.56	e0.59	e0.70	0.92	2.5	1.3	0.90	0.52	0.47	0.45
18	0.63	0.63	0.55	e0.59	0.72	1.3	2.4	1.2	1.1	0.55	0.93	0.41
19	0.64	0.60	e0.54	0.59	e0.70	1.2	2.3	1.2	0.92	1.0	0.40	0.34
20	0.67	0.59	e0.53	0.58	e0.68	0.79	2.3	1.2	1.00	0.29	0.43	0.35
21	0.68	0.60	0.55	0.57	e0.69	0.75	2.7	1.2	0.81	0.28	0.40	0.30
22	0.70	0.61	e0.52	0.56	e0.70	0.78	2.8	1.2	0.89	0.29	0.34	0.37
23	0.72	0.61	e0.52	0.58	e0.68	0.88	2.6	1.1	0.87	0.39	0.39	0.34
24	0.72	0.60	e0.51	0.58	e0.65	0.92	2.5	1.1	0.82	0.34	1.1	0.36
25	0.74	0.57	e0.52	0.58	e0.64	0.95	2.3	1.2	0.89	0.32	0.30	0.40
26	0.75	0.57	e0.55	0.60	0.65	0.94	2.0	1.2	3.0	0.33	0.35	0.46
27	0.84	0.63	e0.57	0.62	0.67	0.86	1.8	1.1	1.5	0.33	0.45	0.52
28	0.82	0.56	0.58	0.64	e0.67	0.70	1.8	1.1	1.1	0.40	0.55	0.50
29	0.78	0.56	0.58	0.64	---	0.90	1.8	1.2	1.2	0.63	0.66	0.48
30	0.66	0.55	0.56	0.64	---	0.85	1.8	1.2	1.9	1.0	0.65	0.49
31	0.64	---	0.57	0.65	---	0.76	---	1.9	---	1.0	0.95	---
TOTAL	21.58	19.63	17.14	18.46	18.87	25.31	53.72	40.2	32.34	18.95	21.63	17.28
MEAN	0.70	0.65	0.55	0.60	0.67	0.82	1.79	1.30	1.08	0.61	0.70	0.58
MAX	0.84	0.78	0.61	0.65	0.72	1.3	2.8	1.9	3.0	1.4	1.2	2.5
MIN	0.61	0.55	0.51	0.56	0.63	0.64	0.67	1.1	0.75	0.28	0.30	0.30
AC-FT	43	39	34	37	37	50	107	80	64	38	43	34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
MEAN	0.80	0.84	0.75	0.79	0.81	1.03	1.96	1.79	1.11	0.89	0.83	0.65
MAX	0.90	1.03	0.95	0.98	0.95	1.24	2.58	3.08	1.66	1.60	1.32	0.88
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)
MIN	0.70	0.65	0.55	0.60	0.67	0.82	1.50	1.01	0.59	0.44	0.48	0.50
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	291.65		305.11			
ANNUAL MEAN	0.80		0.84		0.86	
HIGHEST ANNUAL MEAN					0.88 2002	
LOWEST ANNUAL MEAN					0.84 2003	
HIGHEST DAILY MEAN	2.3	Apr 1	3.0	Jun 26	8.1	Jul 13, 2001
LOWEST DAILY MEAN	0.38	Jun 30	0.28	Jul 21	0.28	Jul 21, 2003
ANNUAL SEVEN-DAY MINIMUM	0.42	Jul 27	0.32	Jul 20	0.32	Jul 20, 2003
MAXIMUM PEAK FLOW			a57	Sep 3	b183	Jul 13, 2001
MAXIMUM PEAK STAGE			5.09	Sep 3	6.43	Jul 13, 2001
ANNUAL RUNOFF (AC-FT)	578		605		622	
10 PERCENT EXCEEDS	1.2		1.3		1.3	
50 PERCENT EXCEEDS	0.68		0.67		0.78	
90 PERCENT EXCEEDS	0.44		0.46		0.45	

e Estimated.

a From rating curve extended above 3.9 ft³/s on basis of slope-conveyance measurement of peak flow.

b From slope-conveyance measurement of peak flow.

07099990 FOUNTAIN CREEK AT GREEN MOUNTAIN FALLS, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 2001 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=07099990

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.22 inches, Aug. 1, 2001.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 0.85 inch, Sept. 7.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.34	---	---	---	---	---	0.00	0.00	0.03	0.00	0.00	0.00
2	0.12	---	---	---	---	---	0.00	0.01	0.00	0.00	0.29	0.13
3	0.01	---	---	---	---	---	0.00	0.00	0.01	0.00	0.06	0.48
4	0.01	---	---	---	---	---	0.00	0.00	0.06	0.00	0.11	0.00
5	0.01	---	---	---	---	---	0.06	0.00	0.53	0.00	0.12	0.02
6	0.00	---	---	---	---	---	0.16	0.00	0.06	0.00	0.00	0.09
7	0.00	---	---	---	---	---	0.00	0.00	0.14	0.01	0.00	0.85
8	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	---	---	---	---	---	0.00	0.04	0.02	0.00	0.07	0.00
10	0.00	---	---	---	---	---	0.00	0.03	0.02	0.00	0.02	0.00
11	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.37	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.44	0.14	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.11	0.00	0.00	0.07
14	0.00	---	---	---	---	---	0.00	0.00	0.26	0.00	0.00	0.04
15	0.00	---	---	---	---	---	0.09	0.31	0.00	0.21	0.00	0.00
16	0.00	---	---	---	---	---	0.01	0.00	0.52	0.02	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	0.17	0.00	0.01	0.00
18	0.00	---	---	---	---	---	0.02	0.07	0.02	0.00	0.14	0.00
19	0.00	---	---	---	---	---	0.22	0.02	0.42	0.37	0.00	0.00
20	0.00	---	---	---	---	---	0.16	0.06	0.01	0.01	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	---	---	---	---	---	0.02	0.00	0.00	0.12	0.03	0.00
23	0.02	---	---	---	---	---	0.02	0.00	0.00	0.41	0.19	0.00
24	0.01	---	---	---	---	---	0.60	0.06	0.00	0.00	0.44	0.00
25	0.00	---	---	---	---	---	0.00	0.02	0.25	0.01	0.01	0.00
26	0.14	---	---	---	---	---	0.00	0.00	0.15	0.01	0.04	0.00
27	0.32	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00
28	0.03	---	---	---	---	---	0.00	0.06	0.16	0.01	0.04	0.00
29	0.00	---	---	---	---	---	0.00	0.08	0.66	0.29	0.25	0.00
30	0.00	---	---	---	---	---	0.00	0.13	0.15	0.00	0.32	0.00
31	0.00	---	---	---	---	---	---	0.43	---	0.00	0.10	---
TOTAL	1.01	---	---	---	---	---	1.36	1.32	4.20	1.61	2.62	1.68
MAX	0.34	---	---	---	---	---	0.60	0.43	0.66	0.41	0.44	0.85

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO

LOCATION.--Lat 38°51'17", long 104°52'39", in SE¹/₄SW¹/₄ sec.3, T.14 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank 200 ft upstream from diversion to city of Colorado Springs, 0.5 mi east of bridge on U.S. Highway 24, 1.0 mi downstream from Sutherland Creek, and 3.3 mi northwest of courthouse in Colorado Spring.

DRAINAGE AREA.--103 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1958 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103700

REVISED RECORDS.--WDR CO-99-1: 1997(M).

GAGE.--Water-stage recorder with satellite telemetry, crest-stage gage, and V-notch weir. Elevation of gage is 6,110 ft above NGVD of 1929, from topographic map. Feb. 4 to Apr. 15, 1992, gage temporarily located 80 ft upstream, at same datum.

REMARKS.--No estimated daily discharges. Records fair. Natural flow of stream affected by storage reservoirs, power developments, transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, and return flows 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	4.2	5.4	4.6	4.1	4.4	5.0	8.0	10	14	12	5.3	9.8
2	5.3	5.5	4.7	4.0	4.5	5.7	9.1	10	12	10	14	8.9
3	4.9	5.4	4.6	4.2	4.6	5.8	9.1	10	11	9.2	8.8	15
4	4.2	5.4	4.7	3.8	3.5	5.1	8.1	10	13	8.4	10	12
5	3.9	5.1	4.5	4.1	4.1	4.9	9.0	9.8	18	8.7	7.1	10
6	3.8	5.0	3.9	4.3	3.9	5.0	9.7	9.3	14	8.3	6.6	10
7	3.8	4.7	3.6	4.3	3.3	5.3	8.0	9.9	13	8.1	5.3	14
8	3.8	4.7	4.0	4.4	3.6	5.3	8.0	9.7	11	7.5	5.3	11
9	3.8	5.0	4.1	4.3	4.2	5.1	8.2	9.4	13	6.7	6.7	9.9
10	3.6	5.0	3.4	2.8	4.9	5.2	9.0	9.3	10	6.3	8.7	9.7
11	3.6	4.9	3.3	4.5	4.9	5.3	10	8.8	10	6.1	9.3	8.1
12	3.6	4.6	3.5	4.8	4.9	5.4	10	8.7	12	7.0	11	8.5
13	3.9	5.5	3.5	4.4	5.0	5.5	11	8.9	13	7.7	8.4	8.1
14	3.9	5.4	4.4	4.3	5.4	5.6	12	8.0	11	6.6	7.4	8.6
15	4.2	5.5	5.2	4.3	5.0	5.9	12	9.1	10	8.7	6.9	8.3
16	3.8	5.3	4.6	3.9	4.8	6.1	11	10	11	10	6.2	7.4
17	4.1	5.5	4.5	3.6	4.8	6.9	11	9.5	13	8.1	6.0	7.1
18	4.2	5.3	4.3	3.5	4.7	8.1	11	10	13	7.0	7.2	6.2
19	3.8	5.0	3.2	4.6	5.1	6.1	11	11	17	6.9	7.6	7.4
20	3.8	4.9	2.7	4.7	4.3	7.0	10	11	21	8.7	6.6	7.2
21	4.2	4.5	3.8	4.3	4.7	7.1	10	11	15	6.8	5.0	6.9
22	4.0	4.3	3.4	4.4	4.8	6.3	12	10	13	5.8	5.0	6.2
23	4.4	4.4	3.5	4.3	4.3	6.7	14	9.8	13	8.2	4.8	6.3
24	4.7	4.5	3.3	4.4	3.1	9.1	13	11	13	7.8	5.8	6.3
25	4.5	4.3	3.3	4.3	4.5	12	11	12	12	6.3	8.3	7.5
26	5.7	2.8	3.2	4.3	5.2	11	11	13	23	6.3	6.9	7.0
27	8.4	3.1	3.9	4.4	5.3	12	11	12	12	7.2	11	6.7
28	5.9	4.0	4.6	4.5	5.2	11	12	11	11	7.1	8.0	6.6
29	5.3	5.4	4.7	4.4	---	10	12	11	15	9.0	8.9	6.3
30	4.7	4.8	4.3	4.3	---	11	11	11	14	8.1	12	5.8
31	5.2	---	4.1	4.3	---	9.2	---	14	---	5.8	14	---
TOTAL	137.2	145.2	123.4	130.8	127.0	219.7	312.2	318.2	401	240.4	244.1	252.8
MEAN	4.43	4.84	3.98	4.22	4.54	7.09	10.4	10.3	13.4	7.75	7.87	8.43
MAX	8.4	5.5	5.2	4.8	5.4	12	14	14	23	12	14	15
MIN	3.6	2.8	2.7	2.8	3.1	4.9	8.0	8.0	10	5.8	4.8	5.8
AC-FT	272	288	245	259	252	436	619	631	795	477	484	501

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

MEAN	12.7	10.8	8.84	8.13	7.71	9.08	14.7	32.9	31.2	21.3	20.4	14.4
MAX	44.0	34.6	18.8	18.5	13.6	16.9	65.1	172	198	108	90.5	43.2
(WY)	(1985)	(1985)	(1985)	(1985)	(1986)	(1998)	(1999)	(1980)	(1997)	(1995)	(1999)	(1999)
MIN	4.43	4.84	3.98	4.22	4.44	4.91	5.90	6.37	4.08	3.31	3.48	4.34
(WY)	(2003)	(2003)	(2003)	(2003)	(1972)	(1965)	(1963)	(1989)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1958 - 2003
ANNUAL TOTAL	1,939.2	2,652.0	
ANNUAL MEAN	5.31	7.27	16.0
HIGHEST ANNUAL MEAN			46.3 1999
LOWEST ANNUAL MEAN			5.72 2002
HIGHEST DAILY MEAN	16 Sep 10	23 Jun 26	813 Apr 30, 1999
LOWEST DAILY MEAN	1.9 Jul 3	2.7 Dec 20	1.9 Jul 3, 2002
ANNUAL SEVEN-DAY MINIMUM	2.3 Jun 28	3.3 Dec 19	2.3 Jun 28, 2002
MAXIMUM PEAK FLOW		211 Aug 2	a2,630 Aug 4, 1964
MAXIMUM PEAK STAGE		4.32 Aug 2	b5.27 Aug 4, 1964
ANNUAL RUNOFF (AC-FT)	3,850	5,260	11,620
10 PERCENT EXCEEDS	8.2	12	29
50 PERCENT EXCEEDS	5.0	6.3	9.8
90 PERCENT EXCEEDS	2.9	3.9	5.4

a From slope-area measurement of peak flow.

b Maximum gage height, 7.81 ft, Apr 29, 1999, from floodmark.

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1974 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103700

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT: August 1995 to September 1997 (seasonal peaks only), April 1998 to October 2002 (seasonal records only) (discontinued).

INSTRUMENTATION.--Pumping sediment sampler with satellite telemetry.

REMARKS.--Water-quality data collected July 24 were obtained to determine base-flow constituent concentrations.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 8,090 mg/L, June 6, 1997; minimum daily mean, 1 mg/L, Oct. 21, 23-24, 2002.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 41,800 tons, June 6, 1997; minimum daily, 0.0 ton (estimated), Oct. 25, 2002.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean during October, 86 mg/L, Oct. 27; minimum daily mean, 1 mg/L, Oct. 21, 23-24.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily during October, 2.4 tons, Oct. 27; minimum daily, 0.0 ton (estimated), Oct. 25.

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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 07...	0930	4.8	11.0	8.3	498	3.0	53.0	11.3	2.60	21.0	<0.015	0.814	<0.02
DEC 03...	1015	4.6	11.1	8.3	496	2.5	54.0	11.4	2.50	21.0	<0.015	0.949	<0.02
FEB 14...	1015	5.0	10.9	8.4	480	4.5	47	10	2.5	22.4	<0.015	0.933	<0.02
APR 28...	1600	11	9.0	8.4	338	12.5	37	6.4	2.76	17.0	<0.015	0.400	<0.02

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

Date	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Arsenic water, fltrd, ug/L (01000)	Arsenic water, unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)
NOV 07...	<0.040	<2.0	--	44	38	<0.60	<0.80	65	69	<0.10	30	E1.6	1.7
DEC 03...	<0.040	<2.0	--	52	46	<0.60	<0.80	60	60	<0.10	<0.10	2.7	1.8
FEB 14...	E.036	--	--	E19	E17	E.16	<2	52.7	59.6	<0.037	<0.035	<0.8	<0.8
APR 28...	E.033	--	140	--	E260	--	<2	38	39	--	--	--	--

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Cyanide water, unfltrd mg/L (00720)	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)	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)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
NOV 07...	0.84	1.4	<0.01	38.0	102	<0.20	0.24	25	27	<0.018	<0.018	2.1	3.0
DEC 03...	E1.5	2.0	<0.01	12.0	124	E.20	E.27	18	21	<0.018	<0.018	1.6	1.5
FEB 14...	0.70	1.59	<0.009	17	188	<0.08	0.59	12.5	29.1	<0.018	<0.018	1.93	3.28
APR 28...	0.73	2.00	--	--	--	--	1.75	23.7	54.2	--	--	--	1.38

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO—Continued

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

Date	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)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration, mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 07...	1.2	E1.5	0.07	<0.04	<6.0	<9.0	1.3	0.02
DEC 03...	E.97	1.2	<0.04	<0.04	6.0	<9.0	1.2	0.01
FEB 14...	<0.50	<0.48	<0.20	<0.16	2.9	6.7	15	0.20
APR 28...	<0.50	E.30	--	--	1.2	9.2	30	0.89

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

E -- Estimated laboratory analysis value.

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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)	Specific conductance, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
JUL 24...	1330	8.1	7.3	8.1	332	17.5	33.2	6.43	2.59	13	<0.015	0.517	<0.02
AUG 11...	2100	39	7.1	7.8	201	19.5	21.9	3.67	0.99	9.48	0.448	1.25	E.01
SEP 03...	1850	32	8.4	8.0	205	13.5	20.4	3.43	2.36	9.73	E.011	0.655	E.01

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd, mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC, 0.7u MF col/100 mL (31625)	Arsenic, water, unfltrd, ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)
JUL 24...	E.020	530	780	<2	35	47	0.688	1.30	1.06	9.39	35.9	1.16	E.31
AUG 11...	1.38	33,000	54,000	2	34	50	2.20	37.2	98.8	29.8	1,390	18.9	0.66
SEP 03...	1.50	5,300	5,100	5	21	32	0.85	35.5	110	2.65	3,000	12.8	<0.5

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Selenium, water, unfltrd, ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	2,6-Diethyl-aniline, water, fltrd, 0.7u GF, ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	9H-Fluorene, water, unfltrd, ug/L (34381)	Ace-naphthene, water, unfltrd, ug/L (34205)	Ace-naphthylene, water, unfltrd, ug/L (34200)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Anthra-cene, water, unfltrd, ug/L (34220)	Atra-zine, water, fltrd, ug/L (39632)
JUL 24...	E.27	1.1	6.2	<0.006	<0.006	<2	<2	<2	<0.006	<0.004	<0.0046	<2	<0.007
AUG 11...	2.22	3.8	322	<0.006	<0.008	E.0423	<2	<2	<0.006	<0.004	<0.0046	E.1050	0.0141
SEP 03...	3.25	<1	381	<0.006	<0.006	E.0181	E.0208	<2	<0.006	<0.004	<0.0046	E.0353	<0.007

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benzo-[a]-anthra-cene, water, unfltrd ug/L (34526)	Benzo-[a]-pyrene, water, unfltrd ug/L (34247)	Benzo-[b]-fluor-anthene, water, unfltrd ug/L (34230)	Benzo-[g,h,i]-per-ylene, water, unfltrd ug/L (34521)	Benzo-[k]-fluor-anthene, water, unfltrd ug/L (34242)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	Chrys-ene, water, unfltrd ug/L (34320)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)
JUL 24...	<0.05	<0.010	<2	<1	<2	<3	<2	<0.002	<0.041	<0.020	<0.005	<3	<0.006
AUG 11...	<0.05	<0.010	E.4490	E.7070	E1	E.4700	E.3970	<0.002	E.277	<0.020	<0.005	E.6400	<0.006
SEP 03...	<0.05	<0.010	E.2060	E.3190	E.4240	E.2250	E.2040	<0.002	E.091	<0.020	<0.005	E.2250	<0.006

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf-inyl fipron-il, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Di-benzo-[a,h]-anthra-cene, wat unf ug/L (34556)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Desulf-inyl-fipron-il amide, wat flt ug/L (62169)	Fipron-nil sulfide water, fltrd, ug/L (62167)	Fipron-nil sulfone water, fltrd, ug/L (62168)
JUL 24...	<0.018	<0.0030	<0.004	<0.005	<3	<0.0048	<0.021	<0.0020	<0.009	<0.005	<0.009	<0.005	<0.005
AUG 11...	<0.018	<0.0030	<0.004	0.278	E.1320	<0.0048	<0.021	<0.0020	<0.009	<0.005	<0.009	<0.005	<0.005
SEP 03...	<0.018	<0.0030	<0.004	E.0045	<3	<0.0048	<0.021	<0.0020	<0.009	<0.005	<0.009	<0.005	<0.005

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fipron-nil, water, fltrd, ug/L (62166)	Fluor-anthene water unfltrd ug/L (34376)	Fonofos water, fltrd, ug/L (04095)	Indeno-[1,2,-3-cd]-pyrene, water, unfltrd ug/L (34403)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Nitro-benzene water unfltrd ug/L (34447)
JUL 24...	<0.007	E.0433	<0.0027	<3	<0.0040	<0.035	<0.027	<0.006	<0.013	<0.006	<0.0016	<0.007	<2
AUG 11...	<0.007	E1	<0.0027	E.5670	<0.0040	<0.035	0.0419	<0.006	<0.013	<0.006	<0.0016	<0.007	<2
SEP 03...	<0.007	E.3970	<0.0027	E.2600	<0.0040	<0.035	<0.027	<0.006	<0.013	<0.006	<0.0016	<0.007	<2

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phenan-threne, water, unfltrd ug/L (34461)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Pyrene, water, unfltrd ug/L (34469)	Sima-zine, water, fltrd, ug/L (04035)
JUL 24...	<0.0025	<0.010	<0.004	<0.022	<2	<0.011	<0.015	<0.0041	<0.010	<0.011	<0.023	E.0337	<0.005
AUG 11...	<0.0025	<0.010	<0.004	<0.022	E.4210	<0.011	<0.015	<0.045	<0.010	<0.011	<0.023	E1	<0.005
SEP 03...	<0.0025	<0.010	<0.004	<0.022	E.1540	<0.011	E.0052	<0.0041	<0.010	<0.011	<0.023	E.3730	<0.005

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Naphth- alene, water, unfltrd ug/L (34696)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
JUL 24...	<0.016	<0.034	<0.017	<0.0048	<0.0023	<0.009	<2	12	0.26
AUG 11...	<0.016	<0.034	<0.017	<0.0048	<0.0023	<0.009	<2	2,040	215
SEP 03...	<0.016	<0.034	<0.017	<0.0048	<0.0023	<0.009	E.0342	1,880	162

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

WATER-QUALITY DATA DURING MICROBIOLOGICAL SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)
NOV 07...	0930	4.8	498	3.0	--	44	38
DEC 03...	1015	4.6	496	2.5	--	52	46
FEB 14...	1015	5.0	480	4.5	--	E19	E17
APR 09...	1600	8.1	447	12.5	E12	--	E19
28...	1600	11	338	12.5	140	--	E260
MAY 12...	1330	8.9	385	11.5	280	--	E410
28...	1400	11	402	16.5	E300	--	220
JUN 11...	0947	11	300	11.5	660	--	E860
25...	1340	12	204	14.5	150	--	230
JUL 08...	1327	7.3	314	17.0	910	--	1,200
24...	1330	8.1	332	17.5	530	--	780
AUG 06...	0915	8.1	343	15.0	960	--	1,200
11...	2100	39	201	19.5	33,000	--	54,000
21...	1230	5.6	385	17.5	350	--	640
SEP 03...	1850	32	205	13.5	5,300	--	5,100
18...	1120	6.2	376	9.0	310	--	370

E -- Estimated laboratory analysis value.

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO—Continued

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT						
16...	1015	3.9	553	6.5	3	0.03
16...	1040	4.0	553	6.5	--	--
NOV						
07...	0930	4.8	498	3.0	1	0.02
DEC						
03...	1015	4.6	496	2.5	1	0.01
FEB						
14...	1015	5.0	480	4.5	15	0.20
MAR						
06...	1150	5.3	577	1.0	--	--
APR						
28...	1600	11	338	12.5	30	0.89
MAY						
07...	1319	9.9	369	10.5	--	--
JUL						
24...	1330	8.1	332	17.5	12	0.26
AUG						
11...	2100	39	201	19.5	2,040	215
SEP						
03...	1850	32	205	13.5	1,880	162

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
OCTOBER			
1	4.2	---	e0.71
2	5.3	14	0.22
3	4.9	8	0.10
4	4.2	6	0.07
5	3.9	---	e0.07
6	3.8	7	0.07
7	3.8	8	0.08
8	3.8	7	0.07
9	3.8	6	0.06
10	3.6	---	e0.05
11	3.6	4	0.04
12	3.6	5	0.05
13	3.9	4	0.04
14	3.9	3	0.03
15	4.2	---	e0.02
16	3.8	2	0.02
17	4.1	3	0.03
18	4.2	2	0.03
19	3.8	2	0.02
20	3.8	---	e0.02
21	4.2	1	0.01
22	4.0	2	0.02
23	4.4	1	0.01
24	4.7	1	0.01
25	4.5	---	e0.00
26	5.7	27	1.1
27	8.4	86	2.4
28	5.9	16	0.26
29	5.3	---	e0.03
30	4.7	---	e0.03
31	5.2	---	e0.03
TOTAL	137.2	---	5.70

e Estimated.

07103703 CAMP CREEK AT GARDEN OF THE GODS, CO

LOCATION.--Lat 38°52'37", long 104°52'20", in SE¼NE¼ sec.34, T.13 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank, 80 ft downstream from county road bridge at east entrance to Garden of the Gods Park at Colorado Springs, and 1.9 mi upstream from mouth.

DRAINAGE AREA.--9.45 mi².

PERIOD OF RECORD.--April 1992 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103703

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Concrete control since September 1993. Elevation of gage is 6,310 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Natural flow of stream may be affected by Palmer Reservoir, 7.9 mi upstream. Measurements of specific conductance and water temperature, when obtained, 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.05	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.06	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
26	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
27	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.01	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.07	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.05	---	0.00	0.01	---
TOTAL	0.05	0.00	0.00	0.00	0.01	0.07	0.08	0.20	0.20	0.01	0.13	0.01
MEAN	0.002	0.000	0.000	0.000	0.000	0.002	0.003	0.006	0.007	0.000	0.004	0.000
MAX	0.03	0.00	0.00	0.00	0.01	0.03	0.03	0.07	0.05	0.01	0.07	0.01
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.1	0.00	0.00	0.00	0.02	0.1	0.2	0.4	0.4	0.02	0.3	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	0.012	0.001	0.000	0.001	0.000	0.067	2.03	9.05	5.10	0.66	0.57	0.10
MAX	0.12	0.003	0.001	0.015	0.000	0.38	15.7	45.5	27.7	6.78	5.66	0.76
(WY)	(1995)	(1999)	(1993)	(1995)	(1998)	(1996)	(1999)	(1999)	(1997)	(1995)	(1999)	(1994)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000
(WY)	(1993)	(1993)	(1994)	(1993)	(1993)	(1994)	(1994)	(2000)	(2000)	(1993)	(1993)	(1993)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1992 - 2003

ANNUAL TOTAL	0.32	0.76				
ANNUAL MEAN	0.001	0.002	1.57			
HIGHEST ANNUAL MEAN			6.48 1999			
LOWEST ANNUAL MEAN			0.001 2002			
HIGHEST DAILY MEAN	0.06	May 24	0.07	May 1	240	Apr 29, 1999
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	a0.00	Aug 15, 1992
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Aug 15, 1992
MAXIMUM PEAK FLOW			2.7	May 24	b430	Apr 29, 1999
MAXIMUM PEAK STAGE			2.72	May 24	c5.40	Apr 29, 1999
ANNUAL RUNOFF (AC-FT)	0.6	1.5	1,140			
10 PERCENT EXCEEDS	0.00	0.00	0.84			
50 PERCENT EXCEEDS	0.00	0.00	0.00			
90 PERCENT EXCEEDS	0.00	0.00	0.00			

a No flow on many days during many years.

b From rating curve extended above 327 ft³/s.

c From floodmarks.

07103707 FOUNTAIN CREEK AT 8th STREET AT COLORADO SPRINGS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°49'46", long 104°50'21", in NW¼SE¼ sec.13, T.14 S., R.67 W., El Paso County, Hydrologic Unit 11020003, 270 ft downstream from 8th Street at Colorado Springs, and 0.4 mi upstream from Monument Creek.

DRAINAGE AREA.--119 mi².

PERIOD OF RECORD.--February 1981 to January 1982. March 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=07103707

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 07...	1105	0.99	9.4	7.9	1,960	6.0	153	92.6	4.30	750	0.340	0.952	<0.02
DEC 05...	1010	0.72	10.8	8.0	1,530	3.5	135	66.1	3.40	530	0.088	1.24	E.01
FEB 13...	1130	0.66	9.8	8.1	1,340	6.0	99	49	3.2	422	0.097	1.16	<0.02
APR 28...	1310	3.0	7.7	8.2	839	17.0	75	25	2.98	205	0.033	0.723	<0.02
JUL 24...	1545	0.31	5.7	7.7	2,200	27.0	163	89.3	4.25	878	0.102	1.07	<0.02

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

Date	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd, ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd, ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)
NOV 07...	0.047	<2.0	--	1,600	1,600	2.6	4.6	217	213	3.0	4.4	1.7	<1.0
DEC 05...	0.118	<2.0	--	E110	E120	2.8	6.0	187	175	3.6	4.5	2.7	3.3
FEB 13...	0.246	--	--	E2400	E1900	1.70	6	149	156	3.77	4.78	<0.8	2.7
APR 28...	0.532	--	E140	--	E130	--	18	102	112	--	--	--	--
JUL 24...	<0.040	--	840	--	1,600	--	3	261	289	--	--	--	--

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Cyanide water, unfltrd mg/L (00720)	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)	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)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
NOV 07...	4.9	10	0.18	10.0	974	0.29	7.0	5,350	5,420	<0.018	<0.018	15	16
DEC 05...	--	13	<0.01	<10.0	2,940	E.25	9.0	2,680	2,600	<0.018	E.011	8.0	9.2
FEB 13...	3.15	13.2	0.013	<10	5,810	<0.08	10.9	1,910	2,850	<0.018	0.022	8.01	13.6
APR 28...	2.04	26.4	--	--	--	--	50.3	337	622	--	--	--	11.8
JUL 24...	4.88	5.47	--	--	--	--	0.75	1,750	1,610	--	--	--	8.19

ARKANSAS RIVER BASIN

07103707 FOUNTAIN CREEK AT 8th STREET AT COLORADO SPRINGS, CO—Continued

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

Date	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)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
NOV 07...	9.4	9.7	0.05	0.08	1,750	1,870	33	0.09
DEC 05...	11	10	<0.04	0.06	927	973	104	0.20
FEB 13...	8.02	7.51	<0.20	E.09	831	1,170	205	0.37
APR 28...	7.39	6.82	--	--	26.9	394	397	3.2
JUL 24...	11.9	11.0	--	--	220	266	4	0.00

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

E -- Estimated laboratory analysis value.

07103740 NORTH MONUMENT CREEK AT SPRING STREET AT PALMER LAKE, CO

LOCATION.--Lat 39°06'56", long 104°54'43", in SW¹/₄SE¹/₄ sec.5, T.11 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank at downstream side of bridge on Spring Street at Palmer Lake, 0.1 mi upstream from mouth, and 2.3 mi upstream from Monument Lake.

DRAINAGE AREA.--16.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 2002 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=07103740

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,120 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by storage reservoirs and diversions for municipal supply of Monument and Palmer Lake.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 38 ft³/s, Apr. 28, 2003, gage height, 4.57 ft, from rating curve extended above 21 ft³/s; no flow on many days.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 38 ft³/s, Apr. 28, gage height, 4.57 ft, from rating curve extended above 21 ft³/s; no flow on many days.

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	---	---	---	---	---	0.08	1.4	17	2.5	0.79	0.00	0.00
2	---	---	---	---	---	0.08	2.4	15	2.2	0.60	0.00	0.00
3	---	---	---	---	---	0.08	3.2	13	1.9	0.48	0.00	0.00
4	---	---	---	---	---	0.07	3.2	12	1.6	0.39	0.00	0.00
5	---	---	---	---	---	0.07	3.1	10	2.4	0.34	0.00	0.00
6	---	---	---	---	---	0.07	3.9	9.3	2.8	0.31	0.00	0.00
7	---	---	---	---	---	0.06	4.8	8.6	3.1	0.27	0.00	0.00
8	---	---	---	---	---	0.06	4.5	7.8	2.8	0.23	0.00	0.00
9	---	---	---	---	---	0.06	4.4	7.0	2.0	0.20	0.00	0.00
10	---	---	---	---	---	0.07	5.2	6.4	1.9	0.17	0.00	0.00
11	---	---	---	---	---	0.07	6.0	5.7	2.0	0.13	0.00	0.00
12	---	---	---	---	---	0.08	6.8	5.4	1.6	0.11	0.00	0.00
13	---	---	---	---	---	0.09	8.6	5.2	1.5	0.09	0.00	0.00
14	---	---	---	---	---	0.09	11	4.9	1.7	0.07	0.00	0.00
15	---	---	---	---	---	0.09	11	4.7	1.3	0.07	0.00	0.00
16	---	---	---	---	---	0.10	11	5.0	1.1	0.06	0.00	0.00
17	---	---	---	---	---	0.11	11	4.6	1.4	0.05	0.00	0.00
18	---	---	---	---	---	0.13	10	4.2	3.0	0.04	0.00	0.00
19	---	---	---	---	---	0.14	9.3	3.9	3.5	0.03	0.00	0.00
20	---	---	---	---	---	0.17	8.6	3.8	3.1	0.02	0.00	0.00
21	---	---	---	---	---	0.19	8.8	3.5	2.5	0.02	0.00	0.00
22	---	---	---	---	---	0.21	10	3.2	1.9	0.01	0.00	0.00
23	---	---	---	---	---	0.26	11	3.0	1.6	0.01	0.00	0.00
24	---	---	---	---	---	0.38	12	2.8	1.3	0.01	0.00	0.00
25	---	---	---	---	---	0.65	16	3.2	1.2	0.01	0.00	0.00
26	---	---	---	---	---	1.1	23	3.1	1.2	0.01	0.00	0.00
27	---	---	---	---	---	1.3	25	3.1	1.1	0.00	0.00	0.00
28	---	---	---	---	---	1.3	26	2.6	1.0	0.01	0.00	0.00
29	---	---	---	---	---	1.1	23	2.5	1.1	0.01	0.00	0.00
30	---	---	---	---	---	1.0	20	2.3	0.94	0.01	0.00	0.00
31	---	---	---	---	---	1.0	---	2.2	---	0.01	0.00	---
TOTAL	---	---	---	---	---	10.26	304.2	185.0	57.24	4.56	0.00	0.00
MEAN	---	---	---	---	---	0.33	10.1	5.97	1.91	0.15	0.000	0.000
MAX	---	---	---	---	---	1.3	26	17	3.5	0.79	0.00	0.00
MIN	---	---	---	---	---	0.06	1.4	2.2	0.94	0.00	0.00	0.00
AC-FT	---	---	---	---	---	20	603	367	114	9.0	0.00	0.00

07103740 NORTH MONUMENT CREEK AT SPRING STREET AT PALMER LAKE, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--June 2002 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=07103740

GAGE.--Tipping-bucket rain gage with satellite telemetry.

REMARKS.--Daily data that are not published during period of operation are either missing or of unacceptable quality.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.51 inches, Apr. 24, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.51 inches, Apr. 24.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	0.00	0.01	0.04	0.01	0.10	0.00
2	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00	0.01
3	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.10	0.31
4	---	---	---	---	---	---	0.05	0.23	0.34	0.00	0.00	0.01
5	---	---	---	---	---	---	0.02	0.00	0.40	0.00	0.07	0.00
6	---	---	---	---	---	---	0.14	0.00	0.27	0.00	0.00	0.00
7	---	---	---	---	---	---	0.00	0.01	0.31	0.00	0.00	0.25
8	---	---	---	---	---	---	0.01	0.00	0.01	0.00	0.00	0.00
9	---	---	---	---	---	---	0.00	0.04	0.01	0.00	0.00	0.02
10	---	---	---	---	---	---	0.00	0.19	0.33	0.00	0.00	0.01
11	---	---	---	---	---	---	0.00	0.01	0.01	0.00	0.04	0.00
12	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.10
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.50	0.39	0.00	0.42	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.06	0.00	0.00
17	---	---	---	---	---	0.09	0.00	0.00	1.05	0.00	0.06	0.05
18	---	---	---	---	---	0.01	0.04	0.02	1.42	0.00	0.28	0.07
19	---	---	---	---	---	0.02	0.62	0.13	0.14	0.17	0.00	0.00
20	---	---	---	---	---	0.59	0.27	0.04	0.01	0.00	0.00	0.00
21	---	---	---	---	---	0.34	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	0.08	0.05	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	0.00	0.10	0.00	0.00	0.28	0.15	0.00
24	---	---	---	---	---	0.01	1.51	0.08	0.04	0.00	0.77	0.00
25	---	---	---	---	---	0.11	0.03	0.01	0.43	0.00	0.00	0.00
26	---	---	---	---	---	0.02	0.00	0.00	0.09	0.13	0.00	0.00
27	---	---	---	---	---	0.01	0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	0.02	0.00	0.04	0.55	0.20	0.04	0.00
29	---	---	---	---	---	0.00	0.00	0.02	0.01	0.00	0.08	0.00
30	---	---	---	---	---	0.02	0.00	0.28	0.00	0.00	0.75	0.00
31	---	---	---	---	---	0.00	---	0.06	---	0.02	0.03	---
TOTAL	---	---	---	---	---	---	3.34	1.57	5.48	1.29	2.47	0.83
MAX	---	---	---	---	---	---	1.51	0.39	1.42	0.42	0.77	0.31

07103780 MONUMENT CREEK ABOVE NORTH GATE BOULEVARD AT U.S. AIR FORCE ACADEMY, CO

LOCATION.--Lat 39°01'52", long 104°50'52", in SW¹/₄SW¹/₄ sec.1, T.12 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on U.S. Air Force Academy, on right bank 50 ft upstream from Denver and Rio Grande Western Railroad bridge, 0.8 mi upstream from North Gate Boulevard, and 1.5 mi downstream from Beaver Creek.

DRAINAGE AREA.--81.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103780

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,640 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants.

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	2.5	3.7	2.8	e2.8	3.4	e3.0	13	33	9.6	5.6	2.5	3.1
2	3.1	3.9	2.9	e3.3	e3.2	3.1	12	34	8.6	4.4	2.2	3.4
3	3.5	3.9	2.7	3.1	e3.1	3.2	10	32	7.4	4.4	2.4	4.4
4	3.1	3.8	2.7	3.5	e3.0	3.0	10	30	5.9	4.0	2.5	4.3
5	3.1	3.5	e2.8	2.9	e2.8	e2.8	7.9	26	10	3.6	2.3	3.2
6	3.1	3.2	e3.0	2.9	e2.6	e2.9	8.2	21	9.8	3.5	1.8	3.5
7	3.1	3.2	e2.8	2.8	e2.5	3.0	9.5	21	9.8	3.4	1.0	5.8
8	2.2	3.2	e2.7	2.9	e2.4	2.7	13	21	8.8	3.1	1.4	4.8
9	1.9	3.3	e2.8	e2.7	e2.6	2.7	13	17	6.2	2.8	1.2	3.6
10	2.1	3.5	e2.8	e2.6	e2.8	2.8	10	19	5.5	2.9	1.2	2.8
11	2.2	3.7	e2.8	e2.6	e3.0	2.6	6.2	17	7.1	3.1	1.3	2.5
12	2.4	3.3	e2.8	e2.8	e3.1	2.5	6.7	17	7.5	e2.4	1.8	2.4
13	2.7	3.3	e3.0	2.9	3.2	2.6	11	16	7.9	e2.2	1.6	2.9
14	2.4	3.7	e2.6	2.7	3.5	2.5	18	15	4.8	e2.1	1.7	2.9
15	2.3	3.5	e2.6	e2.8	3.2	2.7	22	17	4.4	e2.1	1.9	3.0
16	2.6	3.2	e2.6	e2.6	3.0	2.8	25	16	5.0	e2.0	1.6	2.7
17	3.2	3.1	e2.6	e2.5	2.9	3.0	22	14	14	e2.0	1.7	2.5
18	3.1	3.0	e2.6	e2.5	2.9	3.5	18	14	25	e2.0	2.7	2.6
19	3.2	2.6	e2.5	e2.8	2.8	e2.5	20	15	20	e2.1	2.4	4.1
20	3.2	2.5	e2.4	2.9	2.7	5.2	20	14	25	e2.3	1.5	2.4
21	3.0	2.6	e2.5	e2.8	3.1	5.5	18	12	13	2.4	1.1	2.3
22	3.2	2.5	e2.6	e2.7	2.8	5.2	13	11	8.6	2.8	1.3	2.5
23	3.3	2.7	e2.5	e2.7	e2.8	6.3	20	11	8.5	2.7	1.1	2.4
24	3.5	2.8	e2.5	3.1	e2.6	6.9	35	9.0	7.8	2.7	0.96	1.8
25	3.1	2.8	e2.5	e2.7	e2.7	6.4	31	8.6	7.5	2.8	1.2	1.7
26	3.6	e2.7	e2.5	e2.8	2.8	9.3	19	8.3	11	2.5	1.3	1.7
27	4.5	e2.6	e2.7	2.9	2.9	11	7.9	8.0	8.1	2.9	1.7	1.7
28	3.8	e2.7	e3.0	2.8	e2.8	7.4	32	6.5	8.0	2.6	1.7	2.0
29	3.5	e2.7	e3.0	3.2	---	5.2	46	6.6	13	2.6	1.9	2.3
30	3.2	2.7	e2.9	3.3	---	4.6	33	16	7.3	2.2	3.4	2.8
31	3.6	---	e3.0	3.7	---	5.8	---	12	---	2.2	13	---
TOTAL	93.3	93.9	84.2	89.3	81.2	132.7	530.4	518.0	295.1	88.4	65.36	88.1
MEAN	3.01	3.13	2.72	2.88	2.90	4.28	17.7	16.7	9.84	2.85	2.11	2.94
MAX	4.5	3.9	3.0	3.7	3.5	11	46	34	25	5.6	13	5.8
MIN	1.9	2.5	2.4	2.5	2.4	2.5	6.2	6.5	4.4	2.0	0.96	1.7
AC-FT	185	186	167	177	161	263	1,050	1,030	585	175	130	175

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

	5.20	6.10	5.24	4.94	5.24	8.45	26.3	47.3	22.6	8.77	8.14	5.10
MEAN	5.20	6.10	5.24	4.94	5.24	8.45	26.3	47.3	22.6	8.77	8.14	5.10
MAX	11.4	13.0	9.91	10.1	10.8	21.1	75.5	210	77.8	30.6	36.7	15.7
(WY)	(2000)	(1998)	(2000)	(2000)	(2000)	(1998)	(1999)	(1999)	(1999)	(1995)	(1999)	(1997)
MIN	0.95	1.63	1.54	1.08	1.81	2.38	5.67	5.23	2.74	1.04	0.90	1.16
(WY)	(1990)	(1990)	(1990)	(1990)	(1990)	(1991)	(2002)	(2002)	(2002)	(1989)	(1989)	(1989)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1985 - 2003

ANNUAL TOTAL	1,237.0	2,159.96	
ANNUAL MEAN	3.39	5.92	
HIGHEST ANNUAL MEAN			12.4
LOWEST ANNUAL MEAN			39.6
HIGHEST DAILY MEAN	10	Apr 21	3.58
LOWEST DAILY MEAN	1.2	Aug 17	2002
ANNUAL SEVEN-DAY MINIMUM	1.4	Aug 6	1,250
MAXIMUM PEAK FLOW			0.58
MAXIMUM PEAK STAGE			0.69
ANNUAL RUNOFF (AC-FT)	2,450	4,280	0.96
10 PERCENT EXCEEDS	5.2	14	1.2
50 PERCENT EXCEEDS	3.1	3.0	1.2
90 PERCENT EXCEEDS	1.8	2.2	1.2

e Estimated.
a From rating curve extended above 54 ft³/s on basis of slope-area measurement of peak flow.
b From slope-area measurement of peak flow.
c From floodmarks.

07103780 MONUMENT CREEK ABOVE NORTH GATE BOULEVARD AT U.S. AIR FORCE ACADEMY, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1984 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103780

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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 07...	1320	3.4	14.7	9.1	498	8.0	37	8.2	1.05	41.2	0.204	1.03	1.5
DEC 03...	0830	2.3	11.1	7.7	493	2.5	34	8.0	1.12	42.4	0.568	1.30	2.1
FEB 14...	1215	3.9	11.6	8.5	483	7.5	29	7.7	1.1	39.8	0.149	5.11	2.2
JUL 31...	1030	2.6	10.1	8.5	512	19.5	34.3	12.1	1.39	35.1	E.008	1.26	1.6
AUG 21...	1115	1.5	8.2	8.1	487	21.0	30.2	7.20	1.42	33.8	0.042	0.108	1.7

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

Date	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)
NOV 07...	1.66	<2.0	--	11	13	<1.9	<2	225	222	0.058	<0.22	E.5	<0.8
DEC 03...	2.26	2.0	--	E10	15	<1.9	<2	282	276	0.081	<0.22	<0.8	<0.8
FEB 14...	2.46	--	--	10	E9	E.86	<2	238	229	E.096	E.028	<0.8	<0.8
JUL 31...	2.11	--	130	--	120	E1.4	E2	252	248	0.075	<0.22	<0.8	<0.8
AUG 21...	2.23	--	92	--	78	1.78	3	228	248	E.024	E.029	<0.8	E.5

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Cyanide water unfltrd mg/L (00720)	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)	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)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
NOV 07...	2.55	2	<0.009	85	292	0.21	E.5	22.5	39.9	<0.018	<0.018	2.83	E2
DEC 03...	3.49	4	<0.009	59	346	0.37	E.6	42.6	60.9	<0.018	<0.018	3.63	3
FEB 14...	5.75	6.00	<0.009	43	193	0.53	0.62	20.4	31.0	<0.018	<0.018	4.43	5.32
JUL 31...	2.30	3	<0.009	54.1	775	0.18	E.8	54.6	96.5	<0.018	<0.018	3.55	4
AUG 21...	1.43	2.42	<0.009	45.8	1,040	0.12	0.77	61.6	133	<0.018	<0.018	4.15	4.49

07103780 MONUMENT CREEK ABOVE NORTH GATE BOULEVARD AT U.S. AIR FORCE ACADEMY, CO—Continued

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

Date	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)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 07...	<2.6	<2.6	<0.20	<0.26	14.9	<25	6	0.06
DEC 03...	<2.6	<2.6	<0.20	<0.26	20.5	E24.3	6	0.04
FEB 14...	<2.50	E.29	<1.00	<0.16	29.4	28.9	5	0.05
JUL 31...	<3	<3	<0.20	<0.26	12.3	15.4	12	0.08
AUG 21...	E.39	0.69	<0.20	<0.16	6.4	10.5	--	--

< -- 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 unflab, uS/cm 25 degC (90095)	Specif. conductance, wat unfl 25 degC (00095)	Temperature, water, deg C (00010)
NOV 05...	1530	3.3	--	495	7.0
DEC 03...	0820	2.3	--	478	2.0
DEC 17...	1035	2.9	--	479	3.0
JAN 02...	1545	4.6	--	515	3.5
FEB 04...	1550	4.4	--	548	5.0
MAR 06...	0815	2.0	--	499	0.0
MAR 31...	1000	6.2	--	489	8.0
APR 29...	1340	54	--	182	15.0
MAY 14...	1335	16	--	253	17.5
JUN 09...	1445	6.3	--	418	19.5
JUN 09...	1446	6.3	--	414	19.5
JUL 21...	1300	2.4	378	--	--
AUG 07...	1715	0.92	483	--	--
SEP 05...	1345	3.5	492	--	--

07103780 MONUMENT CREEK ABOVE NORTH GATE BOULEVARD AT U.S. AIR FORCE ACADEMY, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 2000 to September 2003 (discontinued) (seasonal records only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103780

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.56 inches, May 8, 2000 and Aug. 30, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.56 inches, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.19	---	---	---	---	---	0.00	0.00	0.01	0.01	0.00	0.00
2	0.11	---	---	---	---	---	0.00	0.00	0.00	0.00	0.02	0.01
3	0.08	---	---	---	---	---	0.00	0.00	0.00	0.00	0.48	0.38
4	0.00	---	---	---	---	---	0.00	0.06	0.12	0.00	0.02	0.00
5	0.00	---	---	---	---	---	0.01	0.00	0.49	0.00	0.08	0.01
6	0.00	---	---	---	---	---	0.29	0.00	0.06	0.00	0.00	0.00
7	0.01	---	---	---	---	---	0.00	0.00	0.20	0.00	0.10	0.56
8	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
9	0.00	---	---	---	---	---	0.00	0.18	0.01	0.00	0.39	0.03
10	0.00	---	---	---	---	---	0.00	0.16	0.12	0.00	0.06	0.00
11	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.28	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.05	0.00	0.00	0.01
13	0.00	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.04
14	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	---	---	---	---	---	0.26	0.44	0.00	0.00	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.00	0.32	0.03	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	1.04	0.00	0.01	0.00
18	0.00	---	---	---	---	---	0.10	0.02	0.21	0.00	0.44	0.00
19	0.00	---	---	---	---	---	0.24	0.00	0.48	0.61	0.00	0.00
20	0.00	---	---	---	---	---	0.10	0.01	0.01	0.00	0.00	0.00
21	0.00	---	---	---	---	---	0.01	0.00	0.00	0.00	0.00	0.00
22	0.00	---	---	---	---	---	0.28	0.00	0.00	0.00	0.00	0.00
23	0.00	---	---	---	---	---	0.47	0.00	0.00	0.02	0.00	0.00
24	0.05	---	---	---	---	---	0.47	0.00	0.00	0.00	0.15	0.00
25	0.01	---	---	---	---	---	0.01	0.01	0.31	0.03	0.00	0.00
26	0.41	---	---	---	---	---	0.00	0.00	0.35	0.23	0.00	0.00
27	0.15	---	---	---	---	---	0.00	0.00	0.00	0.00	0.50	0.00
28	0.02	---	---	---	---	---	0.00	0.05	0.09	0.22	0.04	0.00
29	0.00	---	---	---	---	---	0.00	0.01	0.00	0.01	0.20	0.00
30	0.00	---	---	---	---	---	0.00	0.82	0.00	0.00	1.56	0.00
31	0.00	---	---	---	---	---	---	0.07	---	0.01	0.14	---
TOTAL	1.03	---	---	---	---	---	2.24	1.83	3.90	1.17	4.47	1.04
MAX	0.41	---	---	---	---	---	0.47	0.82	1.04	0.61	1.56	0.56

07103785 DEADMANS CREEK ABOVE DEADMANS LAKE AT U.S. AIR FORCE ACADEMY, CO

LOCATION.--Lat 39°01'27", long 104°54'03", in NE¹/₄NW¹/₄ sec.9, T.12 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on U.S. Air Force Academy, on left bank 100 ft upstream from Deadmans Lake, 1.2 mi northwest of the Air Force Academy Chapel, 3.7 mi west of Interstate-25, and 5.0 mi southwest of Monument.

DRAINAGE AREA.--1.55 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 2000 to September 2003 (discontinued). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103785

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,220 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. 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	0.00	0.00	0.02	0.01	0.02	0.04	0.14	0.40	0.06	0.05	0.00	0.00
2	0.00	0.00	0.02	0.01	0.02	0.04	0.19	0.36	0.06	0.05	0.00	0.00
3	0.00	0.00	0.02	0.01	0.02	0.04	0.21	0.33	0.06	0.04	0.00	0.00
4	0.00	0.00	0.02	0.01	0.02	0.04	0.19	0.30	0.05	0.03	0.00	0.00
5	0.00	0.00	0.02	0.01	0.02	0.05	0.18	0.26	0.07	0.03	0.00	0.00
6	0.00	0.00	0.02	0.01	e0.02	0.05	0.18	0.25	0.08	0.03	0.00	0.00
7	0.00	0.00	0.02	0.01	e0.02	0.04	0.15	0.23	0.08	0.02	0.00	0.00
8	0.00	0.00	0.02	0.01	e0.02	0.04	0.14	0.21	0.06	0.02	0.00	0.00
9	0.00	0.00	0.02	0.01	e0.02	0.04	0.17	0.22	0.06	0.02	0.00	0.00
10	0.00	0.00	0.02	0.01	e0.02	0.04	0.21	0.22	0.07	0.02	0.00	0.00
11	0.00	0.00	0.02	0.01	e0.03	0.05	0.24	0.20	0.06	0.02	0.00	0.00
12	0.00	0.00	0.02	0.01	0.03	0.04	0.26	0.19	0.06	0.01	0.00	0.00
13	0.00	0.00	0.02	0.01	0.03	0.05	0.29	0.17	0.06	0.01	0.00	0.00
14	0.00	0.01	0.02	0.01	0.02	0.05	0.32	0.16	0.06	0.01	0.00	0.00
15	0.00	0.01	0.02	0.01	0.02	0.05	0.32	0.20	0.06	0.01	0.00	0.00
16	0.00	0.02	0.02	0.02	0.03	0.05	0.31	0.21	0.06	0.01	0.00	0.00
17	0.00	0.02	0.02	0.02	0.03	0.05	0.30	0.16	0.06	0.01	0.00	0.00
18	0.00	0.02	0.02	e0.01	0.03	0.06	0.27	0.14	0.06	0.00	0.00	0.00
19	0.00	0.02	0.02	0.01	0.02	0.04	0.25	0.14	0.06	0.00	0.00	0.00
20	0.00	0.02	0.02	0.01	0.03	0.05	0.23	0.14	0.06	0.00	0.00	0.00
21	0.00	0.02	0.02	0.01	0.03	0.05	0.26	0.12	0.06	0.00	0.00	0.00
22	0.00	0.02	0.02	0.01	0.03	0.06	0.31	0.10	0.06	0.00	0.00	0.00
23	0.00	0.02	e0.01	0.01	e0.03	0.08	0.36	0.10	0.06	0.00	0.00	0.00
24	0.00	0.02	e0.01	0.01	e0.03	0.08	0.36	0.09	0.06	0.00	0.00	0.00
25	0.00	0.02	e0.01	0.02	e0.03	0.09	0.46	0.09	0.06	0.00	0.00	0.00
26	0.00	0.02	e0.01	0.02	0.03	0.12	0.64	0.09	0.05	0.00	0.00	0.00
27	0.00	0.02	e0.01	0.02	0.03	0.12	0.61	0.08	0.05	0.00	0.00	0.00
28	0.00	0.02	0.01	0.02	0.04	0.09	0.55	0.07	0.05	0.00	0.00	0.00
29	0.00	0.02	0.01	0.02	---	0.09	0.51	0.07	0.06	0.00	0.00	0.00
30	0.00	0.02	0.01	0.02	---	0.09	0.46	0.07	0.06	0.00	0.00	0.00
31	0.00	---	0.01	0.02	---	0.11	---	0.07	---	0.00	0.00	---
TOTAL	0.00	0.32	0.53	0.40	0.72	1.89	9.07	5.44	1.82	0.39	0.00	0.00
MEAN	0.000	0.011	0.017	0.013	0.026	0.061	0.30	0.18	0.061	0.013	0.000	0.000
MAX	0.00	0.02	0.02	0.02	0.04	0.12	0.64	0.40	0.08	0.05	0.00	0.00
MIN	0.00	0.00	0.01	0.01	0.02	0.04	0.14	0.07	0.05	0.00	0.00	0.00
AC-FT	0.00	0.6	1.1	0.8	1.4	3.7	18	11	3.6	0.8	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003
MEAN	0.051	0.068	0.061	0.063	0.059	0.099	0.46	0.35	0.097	0.028	0.017	0.025
MAX	0.10	0.12	0.11	0.12	0.10	0.16	1.02	0.58	0.16	0.050	0.040	0.072
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)
MIN	0.000	0.011	0.017	0.013	0.026	0.061	0.13	0.089	0.024	0.000	0.000	0.000
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 2000 - 2003

ANNUAL TOTAL	13.73	20.58	
ANNUAL MEAN	0.038	0.056	0.088
HIGHEST ANNUAL MEAN			0.16 2001
LOWEST ANNUAL MEAN			0.051 2002
HIGHEST DAILY MEAN	0.17 Apr 7	0.64 Apr 26	1.3 Apr 14, 2000
LOWEST DAILY MEAN	0.00 Jun 27	0.00 Oct 1	a0.00 Aug 2, 2000
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 27	0.00 Oct 1	0.00 Aug 8, 2000
MAXIMUM PEAK FLOW		b0.81 Apr 26	b1.5 Apr 9, 2000
MAXIMUM PEAK STAGE		3.89 Apr 26	4.05 Apr 9, 2000
ANNUAL RUNOFF (AC-FT)	27	41	64
10 PERCENT EXCEEDS	0.10	0.19	0.21
50 PERCENT EXCEEDS	0.02	0.02	0.05
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated.

a No flow on many days during most years.

b From rating curve extended above 0.90 ft³/s.

07103785 DEADMANS CREEK ABOVE DEADMANS LAKE AT U. S. AIR FORCE ACADEMY, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 2000 to September 2003 (discontinued) (seasonal records only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103785

GAGE.--Tipping-bucket rain gage with satellite telemetry.

REMARKS.--Daily data that are not published during period of operation are either missing or of unacceptable quality.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.66 inches, May 8, 2000.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 0.92 inch, July 19.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.38	---	---	---	---	---	0.00	0.02	0.00	0.01	0.01	0.00
2	0.16	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.03
3	0.02	---	---	---	---	---	0.00	0.01	0.00	0.00	0.79	0.33
4	0.00	---	---	---	---	---	0.00	0.03	---	0.00	0.09	0.00
5	0.00	---	---	---	---	---	0.04	0.00	---	0.00	0.32	0.00
6	0.00	---	---	---	---	---	0.24	0.00	---	0.00	0.00	0.01
7	0.00	---	---	---	---	---	0.00	0.00	---	0.00	0.03	0.44
8	0.00	---	---	---	---	---	0.00	0.00	---	0.00	0.01	0.00
9	0.00	---	---	---	---	---	0.01	0.14	0.03	0.00	0.35	0.02
10	0.00	---	---	---	---	---	0.00	0.16	0.14	0.00	0.00	0.00
11	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.33	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.07	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.07
14	0.01	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	---	---	---	---	---	0.42	0.61	0.00	0.02	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.00	0.01	0.02	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	0.12	0.00	0.01	0.00
18	0.00	---	---	---	---	---	0.06	0.02	0.06	0.01	0.85	0.02
19	0.00	---	---	---	---	---	0.43	0.04	0.24	0.92	0.01	0.00
20	0.00	---	---	---	---	---	0.16	0.03	0.01	0.01	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.01	0.00	0.00	0.07	0.00
22	0.00	---	---	---	---	---	0.43	0.00	0.00	0.00	0.00	0.00
23	0.00	---	---	---	---	---	0.22	0.00	0.00	0.05	0.00	0.00
24	0.08	---	---	---	---	---	0.81	0.00	0.00	0.00	0.15	0.00
25	0.01	---	---	---	---	---	0.01	0.02	0.34	0.00	0.00	0.00
26	0.30	---	---	---	---	---	0.00	0.00	0.45	0.55	0.00	0.00
27	0.18	---	---	---	---	---	0.00	0.00	0.00	0.00	0.52	0.00
28	0.00	---	---	---	---	---	0.00	0.02	0.03	0.04	0.03	0.00
29	0.00	---	---	---	---	---	0.00	0.01	0.05	0.00	0.22	0.00
30	0.00	---	---	---	---	---	0.00	0.02	0.00	0.00	0.86	0.00
31	0.00	---	---	---	---	---	---	0.33	---	0.02	0.13	---
TOTAL	1.14	---	---	---	---	---	2.83	1.47	---	1.65	4.78	0.92
MAX	0.38	---	---	---	---	---	0.81	0.61	---	0.92	0.86	0.44

07103790 MONUMENT CREEK BELOW SEWAGE TREATMENT PLANT AT U.S. AIR FORCE ACADEMY, CO

LOCATION.--Lat 38°58'53", long 104°49'50", in NW¹/₄NW¹/₄ sec.30, T.12 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on U.S. Air Force Academy, on right bank 100 ft upstream from Sante Fe Recreation Trail footbridge, 1.0 mi west of Interstate 25, 1.2 mi southeast of Falcon Stadium, and 1.5 mi northwest of the south entrance to the U.S. Air Force Academy.

DRAINAGE AREA.--122 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2000 to September 2003 (seasonal records only) (discontinued). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103790

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,420 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and those above 30 ft³/s, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. 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 RECORD (seasonal only).--Maximum discharge, 218 ft³/s, Aug. 31, 2003, gage height, 4.95 ft, from rating curve extended above 44 ft³/s; minimum daily, 1.5 ft³/s, Aug. 17, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 218 ft³/s, Aug. 31, gage height, 4.95 ft, from rating curve extended above 44 ft³/s; minimum daily, 1.7 ft³/s, Aug. 24.

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	3.3	5.3	---	---	---	---	12	35	12	6.9	2.6	9.5
2	4.1	5.4	---	---	---	---	13	36	11	4.9	2.4	6.8
3	4.8	5.5	---	---	---	---	12	35	9.7	4.6	2.4	7.0
4	4.3	5.4	---	---	---	---	12	34	7.7	4.1	2.8	7.7
5	4.2	4.9	---	---	---	---	10	32	12	3.7	2.4	5.8
6	4.1	4.8	---	---	---	---	10	24	12	3.7	2.2	5.5
7	4.3	4.8	---	---	---	---	10	23	12	3.8	1.8	6.9
8	3.4	4.7	---	---	---	---	13	22	12	3.5	2.1	8.2
9	2.8	4.6	---	---	---	---	14	19	9.1	3.1	2.2	6.1
10	2.8	4.8	---	---	---	---	12	21	8.1	3.2	2.5	5.3
11	2.9	4.8	---	---	---	---	8.7	19	8.9	3.5	3.2	4.2
12	2.9	4.8	---	---	---	---	8.4	18	9.6	3.0	3.8	4.1
13	e3.7	4.6	---	---	---	---	11	17	10	2.8	2.8	4.1
14	e3.5	4.7	---	---	---	---	16	16	6.5	2.6	2.5	4.7
15	e3.4	4.7	---	---	---	---	22	18	5.1	2.5	2.5	4.2
16	e3.5	4.6	---	---	---	---	27	19	5.8	2.5	2.2	4.1
17	3.8	4.5	---	---	---	---	25	15	12	2.4	2.2	3.6
18	3.9	4.2	---	---	---	---	21	15	27	2.4	2.8	3.6
19	3.9	3.8	---	---	---	---	21	16	29	2.5	3.5	4.8
20	4.1	3.5	---	---	---	---	23	17	31	3.0	2.3	3.3
21	4.1	3.5	---	---	---	---	21	15	17	2.8	1.9	3.0
22	4.2	3.6	---	---	---	---	17	13	10	2.9	1.9	3.1
23	4.5	3.7	---	---	---	---	19	13	9.7	3.0	1.8	3.5
24	4.7	3.9	---	---	---	---	38	12	8.9	2.9	1.7	2.6
25	4.7	4.0	---	---	---	---	38	11	8.5	2.9	1.9	2.5
26	4.6	e3.8	---	---	---	---	25	11	13	2.9	1.8	2.4
27	6.3	e3.6	---	---	---	---	12	11	10	3.0	2.9	2.4
28	5.9	e3.7	---	---	---	---	29	8.9	8.8	2.8	2.8	2.6
29	5.4	e3.8	---	---	---	---	54	8.0	14	2.8	4.8	2.8
30	5.0	e4.0	---	---	---	---	37	12	9.2	2.9	24	3.6
31	5.0	---	---	---	---	---	---	18	---	2.6	69	---
TOTAL	128.1	132.0	---	---	---	---	591.1	583.9	359.6	100.2	165.7	138.0
MEAN	4.13	4.40	---	---	---	---	19.7	18.8	12.0	3.23	5.35	4.60
MAX	6.3	5.5	---	---	---	---	54	36	31	6.9	69	9.5
MIN	2.8	3.5	---	---	---	---	8.4	8.0	5.1	2.4	1.7	2.4
AC-FT	254	262	---	---	---	---	1,170	1,160	713	199	329	274

e Estimated.

07103790 MONUMENT CREEK BELOW SEWAGE TREATMENT PLANT AT U.S. AIR FORCE ACADEMY, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 2000 to September 2003 (discontinued) (seasonal records only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103790

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.91 inches, Aug. 30, 2003,

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.91 inches, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.17	---	---	---	---	---	0.00	0.00	0.26	0.00	0.03	0.00
2	0.05	---	---	---	---	---	0.00	0.00	0.00	0.00	0.04	0.05
3	0.06	---	---	---	---	---	0.00	0.01	0.00	0.00	0.13	0.47
4	0.00	---	---	---	---	---	0.00	0.03	0.29	0.00	0.04	0.00
5	0.00	---	---	---	---	---	0.03	0.00	0.44	0.00	0.06	0.01
6	0.00	---	---	---	---	---	0.19	0.01	0.08	0.00	0.00	0.11
7	0.00	---	---	---	---	---	0.00	0.00	0.18	0.00	0.14	0.47
8	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.03	0.01
9	0.00	---	---	---	---	---	0.00	0.22	0.06	0.00	0.08	0.07
10	0.00	---	---	---	---	---	0.00	0.09	0.16	0.00	0.11	0.01
11	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.08	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.08	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.03
14	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.01
15	0.00	---	---	---	---	---	0.13	0.15	0.00	0.00	0.00	0.00
16	0.00	---	---	---	---	---	0.01	0.00	0.16	0.02	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	0.63	0.00	0.00	0.00
18	0.00	---	---	---	---	---	0.02	0.12	0.02	0.06	0.19	0.00
19	0.00	---	---	---	---	---	0.17	0.01	0.54	0.49	0.01	0.00
20	0.00	---	---	---	---	---	0.03	0.00	0.00	0.00	0.00	0.00
21	0.00	---	---	---	---	---	0.01	0.00	0.00	0.00	0.00	0.00
22	0.00	---	---	---	---	---	0.37	0.00	0.00	0.00	0.00	0.00
23	0.00	---	---	---	---	---	0.51	0.03	0.00	0.02	0.00	0.00
24	0.03	---	---	---	---	---	0.55	0.00	0.00	0.00	0.37	0.00
25	0.03	---	---	---	---	---	0.01	0.02	0.44	0.14	0.00	0.00
26	0.46	---	---	---	---	---	0.00	0.00	0.51	0.39	0.00	0.00
27	0.13	---	---	---	---	---	0.00	0.00	0.00	0.03	0.35	0.00
28	0.01	---	---	---	---	---	0.00	0.00	0.03	0.12	0.03	0.00
29	0.00	---	---	---	---	---	0.00	0.00	0.02	0.01	1.67	0.00
30	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	1.91	0.00
31	0.00	---	---	---	---	---	---	0.04	---	0.06	0.06	---
TOTAL	0.94	---	---	---	---	---	2.03	0.73	3.92	1.34	5.33	1.24
MAX	0.46	---	---	---	---	---	0.55	0.22	0.63	0.49	1.91	0.47

07103797 WEST MONUMENT CREEK BELOW RAMPART RESERVOIR, CO

LOCATION.--Lat 38°58'30", long 104°57'18", in NE¹/₄SE¹/₄ sec.26, T.12 S., R.68 W., El Paso County, Hydrologic Unit 11020003, on Pike National Forest, on right bank 0.1 mi below Wildcat Gulch, and 0.5 mi below Rampart Reservoir.

DRAINAGE AREA.--7.29 mi².

PERIOD OF RECORD.--November 1993 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103797

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,710 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 storage reservoir and transmountain diversions. Flow mostly regulated by Rampart Reservoir 0.5 mi upstream. 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	3.4	3.5	3.4	3.5	3.8	3.6	3.8	3.3	3.5	3.4	3.8	4.6
2	3.5	3.5	3.4	3.5	3.8	3.6	4.0	3.2	3.4	3.4	3.7	4.6
3	3.4	3.6	3.4	3.5	3.8	3.6	4.0	3.3	3.4	3.4	3.8	4.5
4	3.5	3.6	3.3	3.6	3.8	3.6	3.9	3.3	3.4	3.3	3.8	4.3
5	3.6	3.5	3.3	3.6	3.8	3.6	3.6	3.2	3.9	3.3	3.8	4.3
6	3.5	3.6	3.3	3.6	3.8	3.6	3.6	3.4	4.0	3.3	3.8	4.3
7	3.5	3.6	3.4	3.6	3.8	3.6	3.6	3.5	3.9	3.3	3.8	4.4
8	3.5	3.6	3.5	3.3	3.8	3.6	3.6	3.5	3.6	3.3	3.9	4.3
9	3.6	3.7	3.5	3.2	3.9	3.6	3.7	3.4	3.5	3.3	4.0	4.1
10	3.6	3.6	3.6	3.3	4.0	3.6	3.8	3.5	3.5	3.4	3.9	4.1
11	3.6	3.5	3.5	3.3	4.0	3.7	3.9	3.4	3.4	3.4	4.0	4.1
12	3.6	3.4	3.6	3.3	4.0	3.6	3.7	3.4	3.5	3.4	4.0	4.1
13	3.4	3.4	3.7	3.3	4.0	3.5	3.6	3.4	3.6	3.5	4.0	4.1
14	3.5	3.4	3.6	3.3	4.0	3.5	3.5	3.4	3.5	3.5	3.9	4.1
15	3.6	3.4	3.7	3.3	4.0	3.5	3.5	3.5	3.5	3.5	3.9	4.0
16	3.6	3.4	4.0	3.3	4.0	3.5	3.5	3.8	3.5	3.5	3.9	4.0
17	3.6	3.4	4.1	3.3	4.0	3.7	3.5	3.8	3.5	3.7	4.0	4.0
18	3.8	3.4	3.8	3.3	4.1	3.6	3.4	3.7	3.5	3.7	4.1	4.1
19	3.9	3.4	3.6	3.3	4.1	3.6	3.4	3.7	3.7	3.7	4.1	4.0
20	e3.8	3.4	3.6	3.3	4.1	3.6	3.4	3.6	3.7	3.7	4.1	4.0
21	3.8	3.4	3.6	3.3	4.1	3.6	3.5	3.4	3.5	e3.7	4.1	4.0
22	3.8	3.4	3.6	3.3	4.2	3.6	3.5	3.4	3.5	e3.7	4.1	4.0
23	3.8	3.4	3.5	3.4	4.2	3.7	3.6	3.4	3.4	3.7	4.2	4.0
24	3.8	3.4	3.4	3.4	4.0	3.7	3.7	3.4	3.4	3.7	4.3	4.1
25	3.8	3.4	3.4	3.6	3.9	3.7	4.0	3.4	3.5	3.7	4.4	4.1
26	3.8	3.4	3.4	3.7	3.7	3.6	3.8	3.4	3.7	3.8	4.5	4.1
27	3.8	3.4	3.5	3.7	3.5	3.6	3.5	3.3	3.4	3.7	4.5	4.1
28	3.8	3.4	3.5	3.7	3.6	3.5	3.5	3.4	3.4	3.8	4.5	4.1
29	3.8	3.4	3.5	3.7	---	3.5	3.5	3.4	3.5	3.8	4.5	4.1
30	3.7	3.4	3.5	3.8	---	3.5	3.4	3.4	3.5	3.7	4.6	4.1
31	3.5	---	3.5	3.8	---	3.7	---	3.5	---	3.7	4.7	---
TOTAL	112.9	103.9	109.7	107.1	109.8	111.5	109.0	106.7	106.3	110.0	126.7	124.7
MEAN	3.64	3.46	3.54	3.45	3.92	3.60	3.63	3.44	3.54	3.55	4.09	4.16
MAX	3.9	3.7	4.1	3.8	4.2	3.7	4.0	3.8	4.0	3.8	4.7	4.6
MIN	3.4	3.4	3.3	3.2	3.5	3.5	3.4	3.2	3.4	3.3	3.7	4.0
AC-FT	224	206	218	212	218	221	216	212	211	218	251	247

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

MEAN	4.47	4.97	5.60	5.42	5.60	5.39	5.74	6.82	7.03	7.75	6.84	5.56
MAX	10.1	10.6	9.68	9.36	8.75	10.7	10.5	17.5	15.1	20.6	15.7	12.2
(WY)	(1995)	(1995)	(1994)	(1996)	(1996)	(1994)	(1996)	(1996)	(1996)	(1994)	(1994)	(1994)
MIN	3.35	2.86	2.90	3.15	3.22	3.16	3.58	3.40	3.14	3.08	3.36	2.90
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1994 - 2003	
ANNUAL TOTAL	1,219.9		1,338.3		5,44	
ANNUAL MEAN	3.34		3.67		10.0 1996	
HIGHEST ANNUAL MEAN					3.21 2002	
LOWEST ANNUAL MEAN					29 Jul 10, 1994	
HIGHEST DAILY MEAN	4.8	Mar 10	4.7	Aug 31	1.4 Jan 14, 1997	
LOWEST DAILY MEAN	2.8	Jan 10	3.2	Jan 9	2.7 Nov 9, 2001	
ANNUAL SEVEN-DAY MINIMUM	2.9	Mar 12	3.3	Jan 8	a46 Jun 6, 1997	
MAXIMUM PEAK FLOW			6.7	May 16	5.54 Jun 6, 1997	
MAXIMUM PEAK STAGE			4.54	May 16		
ANNUAL RUNOFF (AC-FT)	2,420		2,650		3,940	
10 PERCENT EXCEEDS	3.6		4.1		9.2	
50 PERCENT EXCEEDS	3.4		3.6		4.2	
90 PERCENT EXCEEDS	3.0		3.4		3.3	

e Estimated.

a From rating curve extended above 30 ft³/s.

07103800 WEST MONUMENT CREEK AT U.S. AIR FORCE ACADEMY, CO

LOCATION.--Lat 38°58'14", long 104°54'08", in SW¹/₄SW¹/₄ sec.28, T.12 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on Pike National Forest, on left bank 500 ft upstream from diversion to city of Colorado Springs water-treatment plant, 2.7 mi south of U.S. Air Force Academy Chapel, and 4.4 mi upstream from mouth.

DRAINAGE AREA.--14.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1970 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103800

REVISED RECORDS.--WDR CO-99-1: 1997.

GAGE.--Water-stage recorder with satellite telemetry and V-notch sharp-crested weir. Elevation of gage is 7,180 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 storage reservoirs, transmountain diversions, and diversions for municipal use. Flow mostly regulated by Rampart Reservoir 4.5 mi upstream, Nichols Reservoir 3.5 mi upstream, and Northfield Reservoir 2.7 mi upstream. 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	0.27	0.27	0.35	0.27	0.27	0.35	0.74	1.2	2.7	3.1	2.9	3.3
2	0.30	0.27	0.35	0.25	0.28	0.35	0.85	1.2	2.8	3.1	2.9	3.2
3	0.29	0.25	0.35	0.21	0.28	0.35	0.87	1.3	2.9	3.1	3.1	3.4
4	0.27	0.26	0.35	0.21	e0.30	0.35	0.81	1.3	3.0	3.1	3.0	3.8
5	0.27	0.27	0.35	0.21	e0.28	0.35	0.74	1.2	3.1	3.2	3.0	4.1
6	0.27	0.27	0.35	0.21	e0.27	0.35	0.73	1.2	3.1	3.2	2.9	4.3
7	0.27	0.27	0.35	0.20	e0.26	0.36	0.68	1.2	3.1	3.2	3.0	4.1
8	0.27	0.27	0.35	0.21	e0.26	0.37	0.62	1.1	3.0	3.1	3.0	3.8
9	0.27	0.27	0.35	0.20	e0.27	0.37	0.64	1.1	3.0	3.1	2.9	3.6
10	0.27	0.27	e0.35	e0.20	e0.28	0.37	0.68	1.1	3.0	3.1	2.9	3.4
11	0.27	0.27	e0.34	e0.20	e0.29	0.37	0.74	1.0	3.0	3.0	2.9	3.4
12	0.27	1.3	e0.33	0.21	e0.30	0.39	0.80	0.97	3.0	3.0	2.8	3.3
13	0.28	0.26	e0.32	0.21	0.32	0.40	0.87	0.92	3.0	2.9	2.8	3.2
14	0.33	0.18	0.31	0.21	0.32	0.41	0.89	0.90	3.1	2.9	3.0	3.2
15	0.32	0.38	0.31	0.21	0.28	0.43	0.89	0.94	3.4	2.9	3.1	3.2
16	0.32	0.40	0.31	e0.20	0.27	0.41	0.81	0.95	3.5	2.9	3.1	3.2
17	0.34	0.40	0.31	e0.20	0.27	0.41	0.80	0.84	3.1	2.8	3.4	3.2
18	0.32	0.38	0.31	e0.20	0.27	0.45	0.78	0.84	2.9	2.9	3.4	3.3
19	0.31	0.40	e0.30	e0.21	0.30	0.45	0.76	0.80	3.0	2.9	3.3	3.3
20	0.31	0.39	e0.30	e0.22	0.31	0.47	0.70	0.78	3.1	2.9	3.4	3.3
21	0.32	0.40	e0.30	0.23	0.31	0.50	0.72	0.74	3.0	2.8	3.5	3.3
22	0.36	0.40	e0.30	0.21	0.31	0.51	0.78	0.71	3.0	2.8	3.6	3.3
23	0.33	0.40	e0.29	e0.20	e0.30	0.61	0.98	0.68	3.0	2.9	3.6	3.3
24	0.31	e0.37	e0.29	e0.21	e0.28	0.67	1.1	0.67	2.9	2.8	3.6	3.3
25	0.31	e0.35	e0.29	0.21	e0.30	0.67	1.4	0.67	3.1	2.9	3.6	3.2
26	0.32	e0.35	e0.28	0.21	e0.32	0.72	1.6	0.64	3.2	3.0	3.5	3.2
27	0.35	e0.35	e0.28	0.24	0.35	0.79	1.5	0.58	3.2	2.9	3.5	3.2
28	0.32	e0.35	e0.28	0.24	0.35	0.68	1.5	0.58	3.2	2.9	3.4	3.2
29	0.31	0.35	e0.27	0.24	---	e0.64	1.4	0.57	3.2	2.9	3.4	3.2
30	0.29	0.35	0.27	0.24	---	e0.61	1.3	1.8	3.2	2.9	3.4	3.1
31	0.27	---	0.27	0.27	---	0.61	---	2.8	---	2.9	3.4	---
TOTAL	9.31	10.70	9.76	6.74	8.20	14.77	27.68	31.28	91.8	92.1	99.3	101.9
MEAN	0.30	0.36	0.31	0.22	0.29	0.48	0.92	1.01	3.06	2.97	3.20	3.40
MAX	0.36	1.3	0.35	0.27	0.35	0.79	1.6	2.8	3.5	3.2	3.6	4.3
MIN	0.27	0.18	0.27	0.20	0.26	0.35	0.62	0.57	2.7	2.8	2.8	3.1
AC-FT	18	21	19	13	16	29	55	62	182	183	197	202

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	1.83	1.31	0.94	0.74	0.49	0.55	2.07	6.77	4.40	2.31	2.67	1.74																							
MAX	11.7	7.74	8.62	8.78	4.21	2.46	12.4	41.2	30.6	23.3	23.8	20.3																							
(WY)	(1972)	(1971)	(1971)	(1971)	(1999)	(1971)	(1971)	(1999)	(1997)	(1970)	(1970)	(1970)																							
MIN	0.000	0.000	0.000	0.000	0.000	0.001	0.11	0.20	0.031	0.017	0.000	0.000																							
(WY)	(1993)	(1993)	(1994)	(1993)	(1976)	(1991)	(1989)	(1976)	(1976)	(1993)	(1993)	(1993)																							

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	121.06		503.54			
ANNUAL MEAN	0.33		1.38		1.93	
HIGHEST ANNUAL MEAN					13.4 1971	
LOWEST ANNUAL MEAN					0.10 1993	
HIGHEST DAILY MEAN	1.3	Nov 12	4.3	Sep 6	e116 Apr 30, 1999	
LOWEST DAILY MEAN	0.18	Nov 14	0.18	Nov 14	a0.00 Jan 29, 1976	
ANNUAL SEVEN-DAY MINIMUM	0.23	Aug 13	0.20	Jan 5	0.00 Jan 29, 1976	
MAXIMUM PEAK FLOW			5.1 Aug 3		b132 Apr 30, 1999	
MAXIMUM PEAK STAGE			c1.49 Aug 3		d3.41 Apr 30, 1999	
ANNUAL RUNOFF (AC-FT)	240		999		1,400	
10 PERCENT EXCEEDS	0.40		3.2		4.2	
50 PERCENT EXCEEDS	0.33		0.67		0.53	
90 PERCENT EXCEEDS	0.26		0.27		0.07	

e Estimated.
a No flow many days during 1976, 1991-92.
b From rating curve extended above 105 ft³/s.
c Maximum gage height, 1.92 ft, Dec. 27, backwater from ice.
d From floodmarks, maximum gage height, 3.88 ft, Dec. 22, 1983, backwater from ice.

07103800 WEST MONUMENT CREEK AT U.S. AIR FORCE ACADEMY, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 2000 to September 2003 (discontinued) (seasonal records only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103800

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.34 inches, May 5, 2001.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 0.93 inch, July 26.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.22	---	---	---	---	---	0.00	0.00	0.05	0.00	0.02	0.01
2	0.14	---	---	---	---	---	0.00	0.00	0.00	0.00	0.29	0.15
3	0.01	---	---	---	---	---	0.00	0.01	0.00	0.00	0.78	0.27
4	0.00	---	---	---	---	---	0.00	0.01	0.19	0.00	0.22	0.00
5	0.00	---	---	---	---	---	0.06	0.00	0.50	0.00	0.08	0.00
6	0.00	---	---	---	---	---	0.31	0.00	0.26	0.00	0.00	0.01
7	0.00	---	---	---	---	---	0.00	0.00	0.25	0.00	0.00	0.45
8	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	---	---	---	---	---	0.00	0.28	0.09	0.00	0.06	0.04
10	0.00	---	---	---	---	---	0.00	0.08	0.06	0.00	0.00	0.00
11	0.00	---	---	---	---	---	0.00	0.01	0.00	0.00	0.13	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.21	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.09	0.01	0.00	0.04
14	0.00	---	---	---	---	---	0.00	0.00	0.07	0.00	0.00	0.00
15	0.00	---	---	---	---	---	0.41	0.34	0.00	0.11	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.00	0.34	0.01	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.01	0.14	0.00	0.00	0.01
18	0.00	---	---	---	---	---	0.09	0.11	0.01	0.01	0.30	0.06
19	0.00	---	---	---	---	---	0.37	0.05	0.54	0.39	0.00	0.00
20	0.00	---	---	---	---	---	0.09	0.03	0.01	0.00	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	---	---	---	---	---	0.50	0.00	0.00	0.04	0.00	0.00
23	0.00	---	---	---	---	---	0.17	0.00	0.00	0.20	0.00	0.00
24	0.04	---	---	---	---	---	0.78	0.01	0.00	0.00	0.37	0.00
25	0.11	---	---	---	---	---	0.01	0.03	0.42	0.19	0.01	0.00
26	0.39	---	---	---	---	---	0.00	0.00	0.29	0.93	0.00	0.00
27	0.29	---	---	---	---	---	0.00	0.00	0.00	0.00	0.57	0.00
28	0.00	---	---	---	---	---	0.00	0.03	0.13	0.03	0.06	0.00
29	0.00	---	---	---	---	---	0.00	0.04	0.11	0.02	0.23	0.00
30	0.00	---	---	---	---	---	0.00	0.01	0.01	0.00	0.90	0.00
31	0.00	---	---	---	---	---	---	0.16	---	0.01	0.26	---
TOTAL	1.20	---	---	---	---	---	2.79	1.21	3.77	1.95	4.28	1.04
MAX	0.39	---	---	---	---	---	0.78	0.34	0.54	0.93	0.90	0.45

07103930 WEST MONUMENT CREEK AT MOUTH AT U.S. AIR FORCE ACADEMY, CO

LOCATION.--Lat 38°57'32", long 104°50'08", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.12 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank 75 ft downstream from Union Pacific railroad bridge at U. S. Air Force Academy, 0.2 mi north of Ice Lake, and 2.0 mi west of Interstate 25.

DRAINAGE AREA.--23.5 mi².

PERIOD OF RECORD.--March 2000 to September 2003 (discontinued). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103930

GAGE.--Water-stage recorder and satellite telemetry. Elevation of gage is 6,380 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except for Aug. 30-31, which are poor. Natural flow of stream affected by storage reservoirs, transmountain diversions, and diversions for municipal use. Flow partly regulated by Rampart Reservoir 9.3 mi upstream, Nichols Reservoir 8.3 mi upstream, and Northfield Reservoir 7.5 mi upstream. 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	0.00	0.51	0.65	0.09	0.09	0.14	0.25	2.2	0.35	0.36	0.02	0.63
2	0.00	0.45	0.64	0.08	0.10	0.15	0.26	2.0	0.29	0.24	0.00	0.48
3	0.38	0.41	0.65	0.09	0.11	0.18	0.25	1.9	0.36	0.16	0.00	0.63
4	0.68	0.68	0.66	0.07	0.09	0.15	0.27	1.8	0.44	0.12	0.00	2.1
5	0.81	0.95	0.70	0.06	0.10	0.15	0.29	1.6	0.51	0.10	0.00	2.4
6	0.86	0.68	0.67	0.05	0.10	0.16	0.31	1.5	0.44	0.07	0.00	3.0
7	0.94	0.63	0.69	0.05	0.12	0.19	0.30	1.3	0.45	0.72	0.00	4.1
8	1.0	0.79	0.70	0.05	0.10	0.21	0.31	1.2	0.40	0.82	0.39	3.9
9	1.1	1.1	0.67	0.04	0.11	0.17	0.30	1.1	0.37	0.78	0.26	3.8
10	1.1	1.4	0.68	0.03	0.16	0.20	0.29	1.2	0.35	0.61	0.07	3.5
11	1.2	0.81	0.70	0.04	0.16	0.22	0.28	1.0	1.5	0.62	0.05	3.5
12	1.3	0.63	0.58	0.05	0.15	0.21	0.27	0.93	2.8	0.59	0.23	3.3
13	1.3	1.9	0.49	0.04	0.14	0.22	0.29	0.86	3.6	0.63	0.30	3.2
14	1.2	0.86	0.37	0.04	0.13	0.23	0.29	0.80	4.2	1.2	0.09	3.1
15	1.4	0.94	0.33	0.05	0.08	0.22	0.29	0.77	5.1	1.2	0.82	3.0
16	1.4	0.79	0.33	0.04	0.08	0.21	0.29	0.73	5.4	1.9	0.30	3.0
17	1.4	0.75	0.35	0.04	0.08	0.21	0.29	0.76	6.4	0.92	0.15	2.9
18	1.4	0.71	0.33	0.03	0.08	0.26	0.29	0.74	4.6	0.61	0.10	3.0
19	1.4	0.71	0.28	0.10	0.11	0.19	0.31	0.70	2.0	0.53	0.13	3.0
20	1.4	0.65	0.26	0.17	0.10	0.25	0.31	0.68	1.7	0.43	0.06	2.9
21	1.4	0.61	0.25	0.15	0.09	0.29	0.31	0.61	1.1	0.29	0.04	2.9
22	1.5	0.54	0.20	0.14	0.09	0.29	0.37	0.54	0.89	0.14	0.02	2.9
23	1.8	0.45	0.19	0.15	0.08	0.31	0.51	0.48	0.74	0.10	0.06	3.0
24	1.9	0.41	0.19	0.15	0.07	0.32	0.76	0.46	0.65	0.07	0.04	3.1
25	2.0	0.37	0.13	0.13	0.09	0.31	0.78	0.45	0.64	0.04	0.02	3.1
26	2.0	0.30	0.08	0.13	0.12	0.30	0.88	0.41	1.1	0.04	0.01	2.7
27	2.3	0.35	0.13	0.13	0.12	0.30	1.1	0.37	0.65	0.62	0.01	2.9
28	1.1	0.44	0.16	0.08	0.13	0.27	1.2	0.38	0.57	0.11	0.13	2.9
29	0.79	0.58	0.14	0.07	---	0.26	1.7	0.36	0.55	0.09	0.79	2.9
30	0.68	0.61	0.09	0.09	---	0.26	2.2	0.32	0.45	0.06	4.9	2.9
31	0.59	---	0.10	0.09	---	0.26	---	0.32	---	0.04	3.6	---
TOTAL	36.33	21.01	12.39	2.52	2.98	7.09	15.55	28.47	48.60	14.21	12.59	84.74
MEAN	1.17	0.70	0.40	0.081	0.11	0.23	0.52	0.92	1.62	0.46	0.41	2.82
MAX	2.3	1.9	0.70	0.17	0.16	0.32	2.2	2.2	6.4	1.9	4.9	4.1
MIN	0.00	0.30	0.08	0.03	0.07	0.14	0.25	0.32	0.29	0.04	0.00	0.48
AC-FT	72	42	25	5.0	5.9	14	31	56	96	28	25	168

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

MEAN	1.85	3.26	0.55	0.76	0.72	0.50	2.54	1.81	1.00	0.70	0.47	1.02
MAX	3.82	8.35	0.93	1.51	1.10	0.94	7.38	2.99	1.62	1.63	1.14	2.82
(WY)	(2001)	(2001)	(2001)	(2001)	(2002)	(2001)	(2000)	(2000)	(2003)	(2001)	(2001)	(2003)
MIN	0.55	0.70	0.31	0.081	0.11	0.23	0.52	0.35	0.20	0.028	0.000	0.000
(WY)	(2002)	(2003)	(2002)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	171.92		286.48			
ANNUAL MEAN	0.47		0.78		1.10	
HIGHEST ANNUAL MEAN					2.09 2001	
LOWEST ANNUAL MEAN					0.41 2002	
HIGHEST DAILY MEAN	2.3	Oct 27	6.4	Jun 17	16	Apr 14, 2000
LOWEST DAILY MEAN	0.00	Jun 30	0.00	Oct 1	a0.00	Jul 8, 2001
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 22	0.00	Aug 1	0.00	Jul 22, 2002
MAXIMUM PEAK FLOW			b193	Aug 30	b193	Aug 30, 2003
MAXIMUM PEAK STAGE			5.31	Aug 30	5.31	Aug 30, 2003
ANNUAL RUNOFF (AC-FT)	341		568		794	
10 PERCENT EXCEEDS	1.3		2.2		2.3	
50 PERCENT EXCEEDS	0.35		0.37		0.58	
90 PERCENT EXCEEDS	0.00		0.07		0.04	

a Also occurred July 9-11, 2001, and on many days during 2002 and 2003.

b From rating curve extended above 10 ft³/s.

07103940 MONUMENT CREEK AT SOUTH BOUNDARY AT U.S. AIR FORCE ACADEMY, CO

LOCATION.--Lat 38°57'15", long 104°50'00", in NE¹/₄NE¹/₄ sec.1, T.13 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on the U. S. Air Force Academy, on left bank at the south boundary, 400 feet downstream from the Sante Fe Recreation Trail footbridge, 0.2 mi south of Ice Lake, and 1.5 mi west of Interstate 25.

DRAINAGE AREA.--150 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 2000 to September 2003 (discontinued). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103940

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,350 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and those above 30 ft³/s, which are poor. Natural flow of stream affected by storage reservoirs, transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage treatment plants. 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	3.6	6.0	e5.5	e5.0	5.7	e5.8	13	39	12	7.8	3.4	13
2	4.5	6.1	5.5	e5.2	5.7	6.0	14	42	11	6.4	3.2	8.2
3	5.2	6.2	5.1	e5.7	6.0	6.0	13	39	9.9	5.7	3.1	8.0
4	5.2	6.3	5.1	5.6	e5.8	5.6	12	37	8.4	5.5	3.6	11
5	5.2	6.3	5.0	5.8	e5.6	e5.2	11	34	12	4.9	3.2	9.0
6	5.2	5.8	e5.0	5.6	e5.3	5.3	11	28	13	4.9	2.9	8.9
7	5.3	5.7	e4.8	e5.7	e4.9	5.4	11	27	13	5.1	2.3	10
8	4.9	5.8	e4.5	e6.0	e5.0	5.1	14	26	13	4.6	2.7	12
9	4.2	6.0	e4.8	e5.3	e5.2	4.9	14	22	9.4	4.0	2.8	9.7
10	4.2	6.5	e5.1	e5.0	e5.5	5.1	13	24	8.6	3.8	2.8	8.8
11	4.3	6.3	e4.8	e5.1	e5.7	5.1	9.6	21	9.9	3.9	3.6	6.7
12	4.2	6.0	e4.5	e5.4	e6.0	4.9	8.6	21	11	3.8	4.0	6.0
13	4.9	6.7	e4.6	e5.7	6.2	4.7	10	20	13	3.6	3.5	5.6
14	4.7	6.3	e4.7	e5.6	6.3	4.9	16	18	10	3.9	3.1	6.4
15	4.6	6.5	e4.7	e5.7	6.0	5.2	22	19	9.3	3.7	3.6	6.1
16	4.8	6.1	e4.5	e5.2	5.8	5.2	28	21	9.9	4.3	3.1	6.1
17	5.6	6.0	e4.5	e5.0	5.6	5.5	27	15	15	3.6	3.0	5.6
18	5.2	5.7	e4.4	e4.9	5.5	7.2	22	16	31	3.3	3.5	6.1
19	5.3	5.8	e4.2	e5.5	5.7	5.6	23	18	35	3.6	4.3	8.0
20	5.5	5.5	e4.0	e5.4	5.5	8.4	24	18	35	4.1	3.2	6.6
21	5.3	5.4	e4.2	e4.9	5.6	10	23	16	19	3.4	2.6	6.0
22	5.2	5.5	e4.2	e4.7	5.5	9.6	18	14	11	3.7	2.6	6.5
23	5.6	5.4	e4.0	e5.0	e5.0	11	22	14	11	3.8	2.4	7.5
24	5.8	5.5	e3.8	e5.1	e4.6	12	40	13	9.4	3.8	2.4	6.9
25	5.7	5.5	e3.8	e5.4	e4.7	11	45	12	9.1	3.8	2.7	6.8
26	5.8	e5.2	e4.0	e5.5	e4.9	13	30	11	15	3.9	2.5	6.4
27	8.4	e5.0	e4.6	5.3	5.4	15	12	11	11	4.1	3.3	6.2
28	7.3	e4.8	e4.9	5.1	5.3	12	28	9.0	9.0	4.0	3.5	6.0
29	6.9	5.2	e5.0	5.5	---	9.9	60	8.3	15	3.9	6.4	6.0
30	5.8	5.5	e4.5	5.6	---	8.8	41	9.8	10	3.6	20	6.3
31	5.7	---	e4.8	5.9	---	8.7	---	20	---	3.4	86	---
TOTAL	164.1	174.6	143.1	166.4	154.0	232.1	635.2	643.1	408.9	131.9	199.3	226.4
MEAN	5.29	5.82	4.62	5.37	5.50	7.49	21.2	20.7	13.6	4.25	6.43	7.55
MAX	8.4	6.7	5.5	6.0	6.3	15	60	42	35	7.8	86	13
MIN	3.6	4.8	3.8	4.7	4.6	4.7	8.6	8.3	8.4	3.3	2.3	5.6
AC-FT	325	346	284	330	305	460	1,260	1,280	811	262	395	449

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003
MEAN	7.71	8.53	7.38	8.40	8.51	10.1	26.1	26.1	11.1	7.14	6.69	6.43
MAX	9.85	11.6	10.6	11.7	12.0	14.8	51.7	39.7	13.6	11.4	9.55	8.37
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2000)	(2001)	(2003)	(2001)	(2000)	(2000)
MIN	5.29	5.82	4.62	5.37	5.50	7.49	8.69	7.65	4.82	3.98	2.76	3.52
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 2000 - 2003

ANNUAL TOTAL	2,162.1	3,279.1	
ANNUAL MEAN	5.92	8.98	9.95
HIGHEST ANNUAL MEAN			14.3 2001
LOWEST ANNUAL MEAN			6.55 2002
HIGHEST DAILY MEAN	14 Jan 9	86 Aug 31	86 Aug 31, 2003
LOWEST DAILY MEAN	1.9 Aug 17	2.3 Aug 7	1.9 Aug 17, 2002
ANNUAL SEVEN-DAY MINIMUM	2.2 Aug 11	2.6 Aug 20	2.2 Aug 11, 2002
MAXIMUM PEAK FLOW		a218 Aug 31	a218 Aug 31, 2003
MAXIMUM PEAK STAGE		4.85 Aug 31	4.85 Aug 31, 2003
ANNUAL RUNOFF (AC-FT)	4,290	6,500	7,210
10 PERCENT EXCEEDS	8.7	18	17
50 PERCENT EXCEEDS	5.8	5.7	7.6
90 PERCENT EXCEEDS	3.1	3.8	3.7

e Estimated.

a From rating curve extended above 58 ft³/s.

07103940 MONUMENT CREEK AT SOUTH BOUNDARY AT U.S. AIR FORCE ACADEMY, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 2000 to September 2003 (discontinued) (seasonal records only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103940

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.83 inches, May 8, 2000.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.47 inches, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.18	---	---	---	---	---	0.00	0.00	0.55	0.00	0.03	0.00
2	0.04	---	---	---	---	---	0.00	0.00	0.00	0.00	0.12	0.12
3	0.05	---	---	---	---	---	0.00	0.00	0.00	0.00	0.13	0.45
4	0.00	---	---	---	---	---	0.00	0.00	0.17	0.00	0.18	0.00
5	0.00	---	---	---	---	---	0.04	0.00	0.46	0.00	0.02	0.01
6	0.00	---	---	---	---	---	0.16	0.00	0.10	0.00	0.00	0.04
7	0.00	---	---	---	---	---	0.00	0.00	0.15	0.00	0.00	0.29
8	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00
9	0.00	---	---	---	---	---	0.00	0.21	0.10	0.00	0.09	0.02
10	0.00	---	---	---	---	---	0.00	0.05	0.05	0.00	0.04	0.00
11	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.11	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.05	0.03	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.04
14	0.00	---	---	---	---	---	0.00	0.00	0.04	0.00	0.00	0.00
15	0.00	---	---	---	---	---	0.07	0.19	0.00	0.00	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.00	0.03	0.00	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.01	1.18	0.00	0.00	0.00
18	0.00	---	---	---	---	---	0.01	0.11	0.00	0.00	0.11	0.00
19	0.00	---	---	---	---	---	0.11	0.00	0.61	0.31	0.01	0.00
20	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00	0.00
22	0.00	---	---	---	---	---	0.67	0.08	0.00	0.00	0.00	0.00
23	0.00	---	---	---	---	---	0.47	0.07	0.00	0.00	0.00	0.00
24	0.02	---	---	---	---	---	0.37	0.00	0.00	0.00	0.16	0.00
25	0.05	---	---	---	---	---	0.00	0.02	0.44	0.02	0.00	0.00
26	0.49	---	---	---	---	---	0.00	0.00	0.59	0.20	0.00	0.00
27	0.18	---	---	---	---	---	0.00	0.00	0.00	0.06	0.17	0.00
28	0.00	---	---	---	---	---	0.00	0.00	0.08	0.08	0.01	0.00
29	0.01	---	---	---	---	---	0.00	0.00	0.02	0.00	0.63	0.00
30	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	1.47	0.00
31	0.00	---	---	---	---	---	---	0.03	---	0.03	0.08	---
TOTAL	1.02	---	---	---	---	---	1.90	0.78	4.65	0.73	3.37	0.97
MAX	0.49	---	---	---	---	---	0.67	0.21	1.18	0.31	1.47	0.45

385854104470100 KETTLE CREEK ABOVE OLD RANCH ROAD NEAR COLORADO SPRINGS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°58'58", long 104°47'03", in NE¹/₄NW¹/₄ sec.28, T.12 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank 250 ft upstream from bridge on Old Ranch Road, 1.5 mi east of Interstate 25, 4.0 mi upstream from the mouth, 5.1 mi northeast of Pulpit Rock, and 10.7 mi northeast of courthouse in Colorado Springs. Elevation of gage is 6,670 ft above NGVD of 1929, from topographic map.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--August to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=385854104470100

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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)	Specific conductance, uS/cm wat unfiltered 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, filtered, mg/L as N (00608)	Nitrite + nitrate water filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L (00665)	E coli, modified, water, col/100 mL (90902)	Fecal coliform, M-FC col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
AUG 27...	1945	3.9	7.1	7.1	308	18.0	<0.015	0.62	<0.02	5.36	E100000	E86000	21,000

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Suspended sediment load, tons/d (80155)
AUG 27...	221

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

07103960 KETTLE CREEK ABOVE U.S. AIR FORCE ACADEMY, CO

LOCATION.--Lat 38°58'34", long 104°47'55", in NW¹/₄SE¹/₄ sec.29, T.12 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank 70 ft downstream from State Highway 83, 0.5 mi upstream from flood-retention dam, 0.6 mi east of Interstate 25, 2.7 mi upstream from mouth, and 5.4 mi southeast of U.S. Air Force Academy Chapel.

DRAINAGE AREA.--16.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2000 to September 2003 (seasonal records only). October 2003 converted to crest-stage partial-record station. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103960

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,620 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, those above 5.0 ft³/s, and those below 0.30 ft³/s, which are poor. Natural flow of stream affected by erosion-control and livestock-watering reservoirs and ground-water withdrawals.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 202 ft³/s, July 5, 2002, from rating curve extended above 5.0 ft³/s, gage height, 5.52 ft, from floodmarks; no flow on many days during 2002 and 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 123 ft³/s, Aug. 30, gage height, 5.28 ft, from rating curve extended above 5.0 ft³/s on the basis of step-backwater analysis of flow; no flow on many days.

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	0.08	e0.09	---	---	---	---	1.1	0.47	1.5	0.13	0.08	3.1
2	0.12	0.12	---	---	---	---	0.93	0.53	0.86	0.11	0.04	3.0
3	0.09	0.10	---	---	---	---	0.95	0.45	0.37	0.11	0.06	e2.0
4	0.11	0.13	---	---	---	---	1.0	0.52	1.1	0.03	0.08	e1.0
5	0.12	0.12	---	---	---	---	1.00	0.73	1.8	0.02	0.10	1.4
6	0.10	0.12	---	---	---	---	0.52	0.65	1.5	0.02	0.06	1.6
7	0.09	0.10	---	---	---	---	0.40	0.55	1.2	0.02	0.01	1.7
8	0.09	0.07	---	---	---	---	0.45	0.51	0.84	0.01	0.00	1.4
9	0.12	0.06	---	---	---	---	0.47	0.62	0.81	0.00	0.57	0.98
10	0.12	0.03	---	---	---	---	0.45	e0.50	0.59	0.00	0.46	0.68
11	0.09	0.02	---	---	---	---	0.46	e0.45	0.64	0.00	0.25	0.44
12	0.13	0.02	---	---	---	---	0.44	0.42	0.65	0.00	0.16	0.51
13	0.12	0.08	---	---	---	---	0.42	0.55	0.48	0.00	0.57	0.34
14	0.08	0.13	---	---	---	---	0.42	0.35	0.27	0.00	0.03	0.23
15	0.08	0.10	---	---	---	---	0.49	0.43	0.21	0.00	0.01	0.21
16	0.10	0.05	---	---	---	---	0.33	0.46	0.36	0.00	0.00	0.20
17	0.12	0.06	---	---	---	---	0.48	0.45	0.31	0.00	0.00	0.18
18	0.12	0.03	---	---	---	---	0.43	0.44	0.13	0.00	0.20	0.16
19	0.12	0.02	---	---	---	---	0.53	0.66	1.3	0.14	0.01	0.18
20	0.13	0.03	---	---	---	---	0.36	0.72	0.63	0.05	0.01	0.20
21	0.14	0.06	---	---	---	---	0.45	0.40	0.24	0.01	0.01	0.18
22	0.14	0.06	---	---	---	---	1.4	0.33	0.19	0.00	0.04	0.33
23	0.16	0.14	---	---	---	---	1.1	0.25	0.20	0.00	0.00	0.39
24	0.13	0.14	---	---	---	---	2.9	0.21	0.17	0.00	0.05	0.30
25	0.12	0.09	---	---	---	---	1.5	0.19	0.35	0.00	0.13	0.24
26	0.24	0.04	---	---	---	---	0.68	0.17	1.6	0.02	0.08	0.20
27	0.19	e0.03	---	---	---	---	0.55	0.15	0.54	0.11	0.56	0.15
28	0.09	e0.03	---	---	---	---	0.48	0.18	0.34	0.11	0.18	0.20
29	0.09	0.09	---	---	---	---	0.52	0.24	0.26	0.07	7.2	0.25
30	0.10	0.09	---	---	---	---	0.50	0.16	0.14	0.04	8.8	0.14
31	0.08	---	---	---	---	---	---	0.09	---	0.03	6.0	---
TOTAL	3.61	2.25	---	---	---	---	21.71	12.83	19.58	1.03	25.75	21.89
MEAN	0.12	0.075	---	---	---	---	0.72	0.41	0.65	0.033	0.83	0.73
MAX	0.24	0.14	---	---	---	---	2.9	0.73	1.8	0.14	8.8	3.1
MIN	0.08	0.02	---	---	---	---	0.33	0.09	0.13	0.00	0.00	0.14
AC-FT	7.2	4.5	---	---	---	---	43	25	39	2.0	51	43

e Estimated.

07103960 KETTLE CREEK ABOVE U.S. AIR FORCE ACADEMY, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103960

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)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, filtered, mg/L as N (00608)	Nitrite + nitrate water filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L (00665)	E coli, modified, m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUN 24...	1645	0.07	6.0	7.7	607	23.5	0.025	0.08	<0.02	0.04	E60	E70	25

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

Date	Suspended sediment load, tons/d (80155)
JUN 24...	0.00

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

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, filtered, mg/L as N (00608)	Nitrite + nitrate water filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L (00665)	E coli, modified, m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
AUG 27...	2020	3.1	7.1	7.7	355	18.0	0.032	0.40	<0.02	3.94	E130000	E140000	13,800

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Suspended sediment load, tons/d (80155)
AUG 27...	116

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

ARKANSAS RIVER BASIN

07103960 KETTLE CREEK ABOVE U.S. AIR FORCE ACADEMY, CO—Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unflab, uS/cm 25 degC (90095)	Specific conductance, wat unflab, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV					
05...	0750	0.06	--	646	0.5
DEC					
02...	1645	0.35	--	514	0.5
MAR					
24...	1120	1.4	--	505	6.0
APR					
09...	1435	0.58	--	533	19.5
MAY					
12...	1115	0.48	--	540	16.5
28...	1225	0.25	--	573	25.5
JUN					
05...	0845	3.4	285	--	10.5
JUL					
31...	1145	0.04	633	--	--
AUG					
11...	1130	0.27	519	--	--
SEP					
04...	1350	0.99	484	--	--

07103960 KETTLE CREEK ABOVE U.S. AIR FORCE ACADEMY, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 2000 to September 2003 (discontinued) (seasonal records only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103960

GAGE.--Tipping-bucket rain gage with satellite telemetry.

REMARKS.--Daily data that are not published during period of operation are either missing or of unacceptable quality.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 2.03 inches, Aug. 30, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 2.03 inches, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.24	---	---	---	---	---	0.00	0.00	0.49	0.00	0.01	0.00
2	0.03	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.04
3	0.02	---	---	---	---	---	0.00	0.00	0.00	0.00	0.15	---
4	0.04	---	---	---	---	---	0.00	0.08	0.65	0.00	0.06	0.00
5	0.00	---	---	---	---	---	0.02	0.00	0.47	0.00	0.10	0.00
6	0.00	---	---	---	---	---	0.28	0.02	0.06	0.00	0.00	0.10
7	0.00	---	---	---	---	---	0.00	0.00	0.22	0.00	0.02	0.39
8	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	---	---	---	---	---	0.00	0.17	0.09	0.00	0.61	0.02
10	0.00	---	---	---	---	---	0.00	0.09	0.14	0.00	0.09	0.00
11	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.13	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.08	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.03
14	0.00	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
15	0.00	---	---	---	---	---	0.18	0.12	0.00	0.00	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.00	0.16	0.03	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	0.47	0.00	0.00	0.00
18	0.00	---	---	---	---	---	0.02	0.06	0.02	0.03	0.28	0.00
19	0.00	---	---	---	---	---	0.21	0.00	0.75	0.48	0.00	0.00
20	0.00	---	---	---	---	---	0.05	0.00	0.00	0.00	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	---	---	---	---	---	0.72	0.00	0.00	0.00	0.00	0.00
23	0.00	---	---	---	---	---	0.60	0.09	0.00	0.03	0.00	0.01
24	0.03	---	---	---	---	---	0.55	0.00	0.00	0.01	0.13	0.00
25	0.01	---	---	---	---	---	0.00	0.02	0.52	0.03	0.01	0.00
26	0.47	---	---	---	---	---	0.00	0.00	0.54	0.24	0.00	0.00
27	0.13	---	---	---	---	---	0.00	0.00	0.00	0.09	0.45	0.00
28	0.00	---	---	---	---	---	0.00	0.00	0.04	0.32	0.02	0.00
29	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	1.13	0.00
30	0.00	---	---	---	---	---	0.00	0.04	0.00	0.00	2.03	0.00
31	0.00	---	---	---	---	---	---	0.02	---	0.02	0.05	---
TOTAL	0.97	---	---	---	---	---	2.63	0.71	4.74	1.28	5.27	---
MAX	0.47	---	---	---	---	---	0.72	0.17	0.75	0.48	2.03	---

385750104475001 PINE CREEK ABOVE HIGHWAY 83 AT COLORADO SPRINGS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°57'50", long 104°47'50", in SE¹/₄NE¹/₄ sec.32, T.12 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank 0.2 mi upstream from State Highway 83 at Colorado Springs, 0.3 mi east of Interstate 25, 3.4 mi southeast of Falcon Stadium at U.S. Air Force Academy, and 3.6 mi northeast of Pulpit Rock. Elevation of gage is 6,540 ft above NGVD of 1929, from topographic map.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--June to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=385750104475001

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUN 24...	1330	0.87	7.7	8.4	539	18.0	0.110	1.23	0.07	0.10	2,300	3,300	8

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

Date	Suspended sediment load, tons/d (80155)
JUN 24...	0.02

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUN 17...	1810	19	7.0	7.7	179	15.0	0.245	0.79	0.10	0.77	7,400	10,000	1,950

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Suspended sediment load, tons/d (80155)
JUN 17...	99

07103970 MONUMENT CREEK ABOVE WOODMEN ROAD AT COLORADO SPRINGS, CO

LOCATION.--Lat 38°56'02", long 104°49'00", in SW¼NE¼ sec.7, T.13 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank 0.1 mi upstream from Woodmen Road at Colorado Springs, 0.2 mi west of Interstate 25, and 0.5 mi upstream from Cottonwood Creek.

DRAINAGE AREA.--181 mi².

WATER-DISCHARGE RECORDS

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=07103970

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 6,270 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants.

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	7.6	9.0	e7.0	6.9	8.2	12	16	44	42	11	5.6	22
2	10	11	7.2	e7.0	8.3	13	18	45	17	9.4	5.4	16
3	7.2	9.4	7.0	e7.4	e8.5	11	16	42	13	8.9	7.8	38
4	6.9	8.2	6.9	6.8	e7.8	8.8	15	41	25	9.1	17	18
5	6.9	7.6	6.8	6.7	e7.5	8.8	18	39	34	8.5	7.4	13
6	7.0	7.3	e7.3	6.3	e7.0	8.1	20	33	19	8.4	5.6	16
7	7.3	7.6	e7.5	6.8	e6.5	8.6	14	33	22	8.2	4.4	23
8	7.2	7.8	e7.2	7.2	e6.8	8.2	16	32	17	7.3	4.7	19
9	6.5	7.8	e7.4	6.8	e7.0	8.0	17	30	15	6.3	26	14
10	6.6	8.4	e7.6	e6.5	e7.8	8.0	16	35	13	5.6	5.2	12
11	6.9	9.0	e7.2	e6.8	e8.3	8.1	13	28	14	5.5	7.9	9.7
12	7.1	8.6	e6.8	e7.0	e8.8	8.1	11	26	17	5.5	7.3	9.9
13	8.8	9.8	e7.3	e7.5	8.9	7.9	13	24	19	5.1	6.1	10
14	8.8	9.5	e7.5	7.4	8.5	8.2	17	23	16	5.2	4.8	11
15	8.6	9.7	e7.7	e7.5	7.6	8.7	25	25	14	5.2	5.4	10
16	8.7	8.9	e7.5	e6.8	7.3	8.9	31	29	15	7.8	4.7	9.7
17	9.6	8.5	7.4	e6.7	6.9	12	29	23	64	5.8	4.3	8.5
18	8.6	8.1	e7.2	e6.5	6.7	20	26	24	39	5.0	7.7	9.3
19	8.4	8.0	e6.7	e8.0	11	13	27	24	70	13	6.8	11
20	8.7	7.6	e6.4	e7.8	7.5	28	27	24	52	9.2	4.6	9.7
21	8.5	7.6	e7.0	e7.2	7.1	24	27	21	27	5.3	3.8	9.1
22	8.7	7.6	e6.8	e6.8	7.1	19	53	18	16	5.4	3.8	10
23	9.2	7.2	e7.0	e7.3	6.7	21	58	21	14	5.6	3.7	11
24	9.6	6.9	e6.2	e7.4	5.8	29	71	16	13	5.6	8.3	10
25	10	7.2	e6.0	e7.6	e6.5	21	51	15	15	6.0	4.2	11
26	15	e6.7	e6.2	e7.8	e7.5	16	39	15	52	6.4	3.5	14
27	18	e6.5	e7.0	7.8	8.0	17	19	14	17	15	18	10
28	10	e6.3	e7.8	7.2	9.7	14	32	12	13	16	7.2	9.8
29	9.8	e7.0	7.6	7.6	---	13	58	11	20	8.1	32	10
30	8.4	6.8	6.5	7.8	---	12	47	11	14	5.8	79	11
31	8.5	---	e6.7	8.2	---	12	---	26	---	5.3	157	---
TOTAL	273.1	241.6	218.4	223.1	215.3	415.4	840	804	738	234.5	469.2	395.7
MEAN	8.81	8.05	7.05	7.20	7.69	13.4	28.0	25.9	24.6	7.56	15.1	13.2
MAX	18	11	7.8	8.2	11	29	71	45	70	16	157	38
MIN	6.5	6.3	6.0	6.3	5.8	7.9	11	11	13	5.0	3.5	8.5
AC-FT	542	479	433	443	427	824	1,670	1,590	1,460	465	931	785

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

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
MEAN	18.0	17.8	15.4	15.6	15.7	19.8	53.4	98.2	55.4	25.1	32.3	16.1
MAX	30.3	30.1	22.1	23.2	22.1	35.5	124	383	152	66.0	100	29.3
(WY)	(2000)	(1998)	(2001)	(2000)	(2000)	(1998)	(1999)	(1999)	(1999)	(1999)	(1999)	(1999)
MIN	8.81	8.05	7.05	7.20	7.69	12.3	12.5	13.0	8.09	7.56	5.22	7.11
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(1997)	(2002)	(2002)	(2002)	(2003)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1997 - 2003

ANNUAL TOTAL	3,723.1	5,068.3		
ANNUAL MEAN	10.2	13.9		32.0
HIGHEST ANNUAL MEAN				80.2
LOWEST ANNUAL MEAN				11.2
HIGHEST DAILY MEAN	63	157	Aug 31	2,000
LOWEST DAILY MEAN	4.1	3.5	Aug 26	3.5
ANNUAL SEVEN-DAY MINIMUM	4.4	4.6	Aug 20	4.4
MAXIMUM PEAK FLOW		963	Aug 30	a3,580
MAXIMUM PEAK STAGE		6.74	Aug 30	b10.98
ANNUAL RUNOFF (AC-FT)	7,380	10,050		23,170
10 PERCENT EXCEEDS	15	27		58
50 PERCENT EXCEEDS	9.0	8.6		17
90 PERCENT EXCEEDS	5.0	6.3		8.1

e Estimated.

a From rating curve extended above 636 ft³/s.

b From floodmark.

07103970 MONUMENT CREEK ABOVE WOODMEN ROAD AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 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=07103970

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT: May to September 1997 (seasonal peaks only), April 1998 to current year (seasonal records only).

INSTRUMENTATION.--Pumping sediment sampler with satellite telemetry.

REMARKS.--Water-quality data collected July 25 were obtained to determine base-flow constituent concentrations.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 3,580 mg/L, Aug. 19, 1998; minimum daily mean, 2 mg/L, June 9, 2000.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 49,100 tons (estimated), Apr. 30, 1999; minimum daily, 0.08 ton, June 9, 2000, Sept. 30, 2002, Aug. 21, 2003.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 3,350 mg/L, Aug. 31; minimum daily mean, 7 mg/L, Sept. 29.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 2,430 tons, Aug. 31; minimum daily, 0.08 ton, Aug. 21.

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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 06...	1455	6.9	10.3	8.4	470	6.0	47.6	8.72	1.00	57.0	<0.015	1.01	0.27
DEC 03...	0900	6.9	11.4	7.9	468	1.5	48.3	8.40	1.00	58.0	<0.015	1.38	0.41
FEB 13...	1345	9.1	11.3	8.3	495	2.5	42	8.4	1.0	56.8	0.023	2.82	0.57
APR 28...	1125	29	9.0	8.1	372	11.5	41	6.2	1.23	52.7	0.055	0.618	0.37
JUL 22...	1050	6.3	6.9	8.2	438	22.0	47.9	7.44	1.19	48.0	0.020	0.764	0.27

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

Date	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Arsenic water, fltrd, ug/L (01000)	Arsenic water, unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)
NOV 06...	0.346	<2.0	--	E9	E17	1.4	1.3	121	129	<0.10	0.11	<1.0	1.3
DEC 03...	0.443	<2.0	--	34	32	1.1	1.3	115	111	<0.10	<0.10	1.7	1.5
FEB 13...	0.636	--	--	E12	12	1.09	<2	117	111	0.043	<0.035	<0.8	<0.8
APR 28...	0.551	--	E19	--	E19	--	E2	56	62	--	--	--	--
JUL 22...	0.402	--	180	--	310	--	E2	73	84	--	--	--	--

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Cyanide water unfltrd mg/L (00720)	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)	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)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
NOV 06...	1.8	2.8	<0.01	19.0	293	0.24	0.53	42	49	<0.018	<0.018	3.4	4.2
DEC 03...	2.3	2.7	<0.01	29.0	230	E.26	0.33	47	47	<0.018	<0.018	3.0	2.9
FEB 13...	2.20	2.99	<0.009	22	411	0.21	1.08	31.7	51.4	<0.018	<0.018	3.55	4.67
APR 28...	1.06	3.46	--	--	--	--	3.12	72.2	137	--	--	--	2.63
JUL 22...	1.12	3.16	--	--	--	--	5.74	38.6	78.6	--	--	--	3.33

07103970 MONUMENT CREEK ABOVE WOODMEN ROAD AT COLORADO SPRINGS, CO—Continued

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

Date	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)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 06...	2.4	E2.2	0.09	<0.04	E7.0	E9.0	3	0.06
DEC 03...	2.0	1.7	<0.04	<0.04	E9.0	<9.0	4	0.07
FEB 13...	1.12	1.33	<0.20	<0.16	11.1	15.1	36	0.88
APR 28...	0.96	1.11	--	--	5.1	16.1	92	7.2
JUL 22...	1.20	1.21	--	--	3.4	22.3	64	1.1

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

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
JUN 05...	1230	68	8.4	7.3	182	11.0	19.7	2.97	0.39	19.0	0.183	0.589	0.15
JUL 25...	1130	6.3	7.9	8.5	452	25.0	--	--	--	--	--	--	--
SEP 03...	1745	61	7.7	8.0	227	16.5	24.8	3.38	0.39	29.2	0.080	0.680	0.09

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, col/100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Arsenic, water unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)
JUN 05...	0.524	E1800	E3400	E2	26	35	1.75	12.4	25.3	18.5	210	5.82	E.37
JUL 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 03...	0.641	11,000	8,800	3	31	35	1.83	16.6	30.8	16.1	322	8.38	0.74

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Selenium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	2,6-Diethyl-aniline, water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	9H-Fluorene, water, unfltrd ug/L (34381)	Ace-naphth-ene, water, unfltrd ug/L (34205)	Ace-naphth-ylene, water, unfltrd ug/L (34200)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Anthra-cene, water, unfltrd ug/L (34220)	Atra-zine, water, fltrd, ug/L (39632)
JUN 05...	1.67	3.6	69.5	<0.006	<0.0060	E.2	E.09	E.2	<0.006	<0.004	<0.0046	E.2	0.0140
JUL 25...	--	--	--	<0.006	<0.006	E.0206	E.0187	<2	<0.006	<0.004	<0.0046	<2	<0.007
SEP 03...	1.92	1.7	93.8	<0.006	<0.006	<2	<2	<2	<0.006	<0.004	<0.0046	<2	<0.007

07103970 MONUMENT CREEK ABOVE WOODMEN ROAD AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benzo-[a]-anthra-cene, water, unfltrd ug/L (34526)	Benzo-[a]-pyrene, water, unfltrd ug/L (34247)	Benzo-[b]-fluor-anthene, water, unfltrd ug/L (34230)	Benzo-[g,h,i]-per-ylene, water, unfltrd ug/L (34521)	Benzo-[k]-fluor-anthene, water, unfltrd ug/L (34242)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	Chrys-ene, water, unfltrd ug/L (34320)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)
JUN 05...	<0.0500	<0.0100	E.3	E.4	E.5	E.3	E.3	<0.002	E.430	E.0083	<0.0100	E.3	<0.0060
JUL 25...	<0.05	<0.010	<2	<1	<2	<3	<2	<0.002	E.009	<0.020	<0.005	<3	<0.006
SEP 03...	<0.05	<0.010	<2	E.0321	<2	<3	<2	<0.002	E.099	<0.020	<0.005	E.0237	<0.006

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf-nyl fipron-yl, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Di-benzo-[a,h]-anthra-cene, wat unf ug/L (34556)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Desulf-nyl-fipron-yl amide, wat flt ug/L (62169)	Fipron-yl sulfide water, fltrd, ug/L (62167)	Fipron-yl sulfone water, fltrd, ug/L (62168)
JUN 05...	<0.0180	<0.0030	<0.0040	0.120	E.2	<0.0048	<0.0210	<0.0020	<0.0090	<0.0050	<0.0090	<0.0050	<0.0050
JUL 25...	<0.018	<0.0030	<0.004	<0.005	<3	<0.0048	<0.021	<0.0020	<0.009	<0.005	<0.009	<0.005	<0.005
SEP 03...	<0.018	<0.0030	<0.004	0.0324	<3	<0.0048	<0.021	<0.0020	<0.009	<0.005	<0.009	<0.005	<0.005

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fipron-yl, water, fltrd, ug/L (62166)	Fluor-anthene water unfltrd ug/L (34376)	Fonofos water, fltrd, ug/L (04095)	Indeno-[1,2,3-cd]-pyrene, water, unfltrd ug/L (34403)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Nitro-benzene water unfltrd ug/L (34447)
JUN 05...	<0.0070	E.8	<0.0027	E.3	<0.0040	<0.0350	<0.0300	<0.0060	<0.0130	<0.0060	<0.0016	<0.0070	<2
JUL 25...	<0.007	E.0369	<0.0027	<3	<0.0040	<0.035	<0.027	<0.006	<0.013	<0.006	<0.0016	<0.007	<2
SEP 03...	<0.007	E.1020	<0.0027	<3	<0.0040	<0.035	<0.027	<0.006	<0.013	<0.006	<0.0016	<0.007	<2

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phenan-threne, water, unfltrd ug/L (34461)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Pyrene, water, unfltrd ug/L (34469)	Sima-zine, water, fltrd, ug/L (04035)
JUN 05...	<0.0025	<0.010	<0.004	<0.022	E.3	<0.0110	E.0108	<0.0041	<0.0100	<0.0110	<0.0230	E.7	<0.005
JUL 25...	<0.0025	<0.010	<0.004	<0.022	E.0577	<0.011	0.0164	<0.0041	<0.010	<0.011	<0.023	E.0207	<0.005
SEP 03...	<0.0025	<0.010	<0.004	<0.022	E.0410	<0.011	E.0103	<0.0041	<0.010	<0.011	<0.023	E.0784	<0.005

07103970 MONUMENT CREEK ABOVE WOODMEN ROAD AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Naphth- alene, water, unfltrd ug/L (34696)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
JUN 05...	<0.0160	<0.0340	<0.0170	<0.0048	<0.0023	<0.0090	<2	2,160	397
JUL 25...	<0.016	<0.034	<0.017	<0.0048	<0.0023	<0.009	E.0564	--	--
SEP 03...	<0.016	<0.034	<0.017	<0.0048	<0.0023	<0.009	<2	1,440	237

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

WATER-QUALITY DATA DURING MICROBIOLOGICAL SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)
APR 09...	1515	17	467	14.5	E2	E1
MAY 12...	1300	25	316	15.5	E3	E4
MAY 28...	1515	11	404	26.0	E6	E7
JUN 11...	0910	15	394	15.0	E170	E170
JUN 25...	1010	12	376	16.5	88	71
JUL 08...	1245	8.3	408	24.5	78	83
AUG 06...	0820	6.3	479	18.0	140	>120
AUG 21...	1300	3.7	478	23.5	59	67
SEP 18...	1150	10	389	13.0	41	54

> -- Actual value is known to be greater than the value shown.
E -- Estimated laboratory analysis value.

07103970 MONUMENT CREEK ABOVE WOODMEN ROAD AT COLORADO SPRINGS, CO—Continued

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf lab, uS/cm 25 degC (90095)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT							
07...	1545	7.6	--	455	14.5	27	0.55
18...	1300	9.1	--	451	10.0	23	0.57
NOV							
04...	1300	9.1	--	473	4.5	6	0.15
06...	1455	6.9	--	470	6.0	3	0.06
13...	0805	9.9	--	470	2.0	--	--
DEC							
03...	0900	6.9	--	468	1.5	4	0.07
03...	1150	7.6	--	470	2.0	--	--
JAN							
02...	1100	6.3	--	578	0.0	40	0.68
FEB							
13...	1345	9.1	--	495	2.5	36	0.88
MAR							
24...	0915	18	--	486	5.0	--	--
APR							
01...	1800	17	--	506	14.0	34	1.6
14...	1545	18	--	412	15.0	19	0.92
24...	1215	82	279	--	9.5	1,350	299
28...	1125	29	--	372	11.5	92	7.2
30...	1300	46	--	258	12.5	66	8.2
MAY							
12...	1245	24	--	319	15.5	155	10
JUN							
02...	1445	15	380	--	23.0	89	3.6
04...	1830	52	227	--	12.0	1,420	199
05...	1230	68	--	182	11.0	2,160	397
12...	1215	16	384	--	18.0	31	1.3
19...	0830	39	323	--	13.5	535	56
26...	1200	28	--	360	19.0	227	17
JUL							
21...	1130	6.3	--	437	24.5	12	0.20
22...	1050	6.3	--	438	22.0	64	1.1
25...	1130	6.3	--	452	25.0	--	--
31...	1015	5.7	--	474	20.0	53	0.82
AUG							
07...	1345	4.0	--	464	27.0	--	--
21...	0815	4.2	--	495	16.0	4	0.05
27...	1945	70	--	232	20.5	1,580	299
28...	1100	6.9	--	449	19.0	24	0.45
SEP							
03...	1745	61	--	227	16.5	1,440	237
11...	1330	11	400	--	--	--	--

07103970 MONUMENT CREEK ABOVE WOODMEN ROAD AT COLORADO SPRINGS, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
OCTOBER			NOVEMBER			DECEMBER			
1	7.6	139	15	9.0	---	---	e7.0	---	---
2	10	334	16	11	---	---	7.2	---	---
3	7.2	34	0.65	9.4	---	---	7.0	---	---
4	6.9	20	0.37	8.2	---	---	6.9	---	---
5	6.9	20	0.37	7.6	---	---	6.8	---	---
6	7.0	---	e0.39	7.3	---	---	e7.3	---	---
7	7.3	26	0.51	7.6	---	---	e7.5	---	---
8	7.2	33	0.64	7.8	---	---	e7.2	---	---
9	6.5	---	e0.49	7.8	---	---	e7.4	---	---
10	6.6	22	0.39	8.4	---	---	e7.6	---	---
11	6.9	16	0.30	9.0	---	---	e7.2	---	---
12	7.1	14	0.27	8.6	---	---	e6.8	---	---
13	8.8	---	e0.39	9.8	---	---	e7.3	---	---
14	8.8	---	e0.46	9.5	---	---	e7.5	---	---
15	8.6	22	0.51	9.7	---	---	e7.7	---	---
16	8.7	16	0.37	8.9	---	---	e7.5	---	---
17	9.6	---	e0.43	8.5	---	---	7.4	---	---
18	8.6	23	0.53	8.1	---	---	e7.2	---	---
19	8.4	---	e0.50	8.0	---	---	e6.7	---	---
20	8.7	21	0.48	7.6	---	---	e6.4	---	---
21	8.5	16	0.36	7.6	---	---	e7.0	---	---
22	8.7	15	0.35	7.6	---	---	e6.8	---	---
23	9.2	19	0.48	7.2	---	---	e7.0	---	---
24	9.6	---	e0.55	6.9	---	---	e6.2	---	---
25	10	24	0.65	7.2	---	---	e6.0	---	---
26	15	314	41	e6.7	---	---	e6.2	---	---
27	18	413	33	e6.5	---	---	e7.0	---	---
28	10	32	0.91	e6.3	---	---	e7.8	---	---
29	9.8	38	1.1	e7.0	---	---	7.6	---	---
30	8.4	---	e0.40	6.8	---	---	6.5	---	---
31	8.5	---	e0.35	---	---	---	e6.7	---	---
TOTAL	273.1	---	118.20	241.6	---	---	218.4	---	---
JANUARY			FEBRUARY			MARCH			
1	6.9	---	---	8.2	---	---	12	---	---
2	e7.0	---	---	8.3	---	---	13	---	---
3	e7.4	---	---	e8.5	---	---	11	---	---
4	6.8	---	---	e7.8	---	---	8.8	---	---
5	6.7	---	---	e7.5	---	---	8.8	---	---
6	6.3	---	---	e7.0	---	---	8.1	---	---
7	6.8	---	---	e6.5	---	---	8.6	---	---
8	7.2	---	---	e6.8	---	---	8.2	---	---
9	6.8	---	---	e7.0	---	---	8.0	---	---
10	e6.5	---	---	e7.8	---	---	8.0	---	---
11	e6.8	---	---	e8.3	---	---	8.1	---	---
12	e7.0	---	---	e8.8	---	---	8.1	---	---
13	e7.5	---	---	8.9	---	---	7.9	---	---
14	7.4	---	---	8.5	---	---	8.2	---	---
15	e7.5	---	---	7.6	---	---	8.7	---	---
16	e6.8	---	---	7.3	---	---	8.9	---	---
17	e6.7	---	---	6.9	---	---	12	---	---
18	e6.5	---	---	6.7	---	---	20	---	---
19	e8.0	---	---	11	---	---	13	---	---
20	e7.8	---	---	7.5	---	---	28	---	---
21	e7.2	---	---	7.1	---	---	24	---	---
22	e6.8	---	---	7.1	---	---	19	---	---
23	e7.3	---	---	6.7	---	---	21	---	---
24	e7.4	---	---	5.8	---	---	29	---	---
25	e7.6	---	---	e6.5	---	---	21	---	---
26	e7.8	---	---	e7.5	---	---	16	---	---
27	7.8	---	---	8.0	---	---	17	---	---
28	7.2	---	---	9.7	---	---	14	---	---
29	7.6	---	---	---	---	---	13	---	---
30	7.8	---	---	---	---	---	12	---	---
31	8.2	---	---	---	---	---	12	---	---
TOTAL	223.1	---	---	215.3	---	---	415.4	---	---

07103970 MONUMENT CREEK ABOVE WOODMEN ROAD AT COLORADO SPRINGS, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	16	29	1.3	44	55	6.6	42	1,030	365
2	18	30	1.4	45	51	6.2	17	173	8.3
3	16	20	0.83	42	---	e6.0	13	84	2.9
4	15	---	e0.78	41	95	11	25	404	59
5	18	---	e1.6	39	187	20	34	506	70
6	20	---	e2.1	33	138	12	19	145	7.8
7	14	29	1.1	33	102	9.0	22	---	e16
8	16	---	e1.3	32	---	e8.5	17	85	3.9
9	17	---	e1.3	30	119	10	15	60	2.5
10	16	31	1.3	35	179	19	13	42	1.5
11	13	---	e1.1	28	93	6.9	14	49	1.8
12	11	30	0.93	26	129	8.9	17	43	2.0
13	13	25	0.87	24	---	e6.1	19	46	2.4
14	17	22	1.0	23	77	4.8	16	28	1.2
15	25	49	3.4	25	75	5.4	14	25	0.94
16	31	---	e5.2	29	138	12	15	33	1.4
17	29	46	3.6	23	76	4.8	64	1,160	695
18	26	36	2.5	24	---	e6.1	39	483	69
19	27	---	e2.8	24	103	6.8	70	921	282
20	27	40	3.0	24	66	4.2	52	594	97
21	27	---	e2.7	21	65	3.7	27	222	17
22	53	1,100	386	18	48	2.4	16	---	e3.6
23	58	1,210	247	21	---	e9.7	14	124	4.6
24	71	1,240	250	16	---	e3.4	13	257	8.7
25	51	694	102	15	---	e3.1	15	176	9.5
26	39	198	21	15	---	e2.9	52	595	165
27	19	122	6.5	14	---	e2.8	17	---	e4.3
28	32	150	15	12	66	2.1	13	78	2.8
29	58	---	e51	11	39	1.2	20	179	11
30	47	105	14	11	50	1.6	14	121	4.8
31	---	---	---	26	309	26	---	---	---
TOTAL	840	---	1,132.61	804	---	233.2	738	---	1,920.94
		JULY		AUGUST			SEPTEMBER		
1	11	65	2.0	5.6	---	e0.27	22	222	15
2	9.4	---	e1.2	5.4	13	0.19	16	---	e3.4
3	8.9	47	1.1	7.8	67	3.1	38	767	180
4	9.1	20	0.49	17	257	29	18	193	11
5	8.5	13	0.30	7.4	40	0.82	13	---	e2.8
6	8.4	19	0.44	5.6	---	e0.47	16	97	4.7
7	8.2	---	e0.61	4.4	14	0.17	23	181	14
8	7.3	29	0.58	4.7	10	0.12	19	93	5.1
9	6.3	21	0.36	26	705	395	14	36	1.4
10	5.6	---	e0.30	5.2	99	1.4	12	---	e1.0
11	5.5	---	e0.29	7.9	---	e1.5	9.7	32	0.84
12	5.5	---	e0.28	7.3	48	0.98	9.9	21	0.58
13	5.1	---	e0.25	6.1	32	0.54	10	16	0.43
14	5.2	---	e0.25	4.8	18	0.23	11	22	0.62
15	5.2	---	e0.25	5.4	23	0.34	10	---	e0.72
16	7.8	50	1.8	4.7	---	e0.29	9.7	22	0.60
17	5.8	---	e0.94	4.3	18	0.21	8.5	13	0.30
18	5.0	---	e1.2	7.7	33	1.3	9.3	25	0.69
19	13	502	86	6.8	25	0.48	11	29	0.93
20	9.2	69	2.6	4.6	12	0.15	9.7	---	e0.79
21	5.3	15	0.22	3.8	8	0.08	9.1	20	0.50
22	5.4	45	0.67	3.8	16	0.16	10	14	0.38
23	5.6	20	0.30	3.7	20	0.20	11	9	0.27
24	5.6	13	0.20	8.3	109	10	10	9	0.25
25	6.0	63	1.3	4.2	34	0.43	11	---	e1.1
26	6.4	---	e1.7	3.5	---	e0.14	14	179	6.8
27	15	136	12	18	486	90	10	33	0.94
28	16	241	46	7.2	64	1.7	9.8	10	0.25
29	8.1	43	1.1	32	1,500	350	10	7	0.20
30	5.8	30	0.46	79	1,330	743	11	---	e0.21
31	5.3	40	0.58	157	3,350	2,430	---	---	---
TOTAL	234.5	---	165.77	469.2	---	4,062.27	395.7	---	255.80

e Estimated.

07103977 COTTONWOOD CREEK AT COWPOKE ROAD AT COLORADO SPRINGS, CO

LOCATION.--Lat 38°57'04", long 104°42'47", in SE¹/₄NW¹/₄ sec.6, T.13 S., R.65 W., El Paso County, Hydrologic Unit 11020003, on left bank on downstream side of bridge on Cowpoke Road at Colorado Springs, 1.0 mi upstream from Woodmen Road, and 5.3 mi east of Interstate 25.

DRAINAGE AREA.--5.93 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1998 to October 2002 (seasonal records only) (discontinued). October 2002 to September 2003 (annual maximum only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103977

GAGE.--Water-stage recorder with satellite telemetry and artificial control. Elevation of gage is 6,875 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Natural flow of stream affected by erosion-control and livestock-watering reservoirs and ground-water withdrawals. Station operated as both a crest-stage partial-record station and continuous-record station in October and as only a crest-stage partial-record station beginning in November.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 230 ft³/s, June 23, 1999, from rating curve extended above 42 ft³/s on basis of velocity-area study, gage height, 6.25 ft, from floodmarks; minimum daily, 0.01 ft³/s (estimated), July 12, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Minimum daily discharge during October, 0.04 ft³/s (estimated), Oct. 21; maximum discharge for the 2003 water year is published in the "Maximum Discharge at Crest-Stage Partial-Record 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	e0.07	---	---	---	---	---	---	---	---	---	---	---
2	e0.07	---	---	---	---	---	---	---	---	---	---	---
3	e0.07	---	---	---	---	---	---	---	---	---	---	---
4	e0.07	---	---	---	---	---	---	---	---	---	---	---
5	e0.07	---	---	---	---	---	---	---	---	---	---	---
6	e0.07	---	---	---	---	---	---	---	---	---	---	---
7	e0.07	---	---	---	---	---	---	---	---	---	---	---
8	e0.07	---	---	---	---	---	---	---	---	---	---	---
9	e0.07	---	---	---	---	---	---	---	---	---	---	---
10	e0.07	---	---	---	---	---	---	---	---	---	---	---
11	e0.07	---	---	---	---	---	---	---	---	---	---	---
12	e0.07	---	---	---	---	---	---	---	---	---	---	---
13	e0.07	---	---	---	---	---	---	---	---	---	---	---
14	e0.07	---	---	---	---	---	---	---	---	---	---	---
15	e0.06	---	---	---	---	---	---	---	---	---	---	---
16	e0.06	---	---	---	---	---	---	---	---	---	---	---
17	e0.06	---	---	---	---	---	---	---	---	---	---	---
18	e0.06	---	---	---	---	---	---	---	---	---	---	---
19	e0.06	---	---	---	---	---	---	---	---	---	---	---
20	e0.05	---	---	---	---	---	---	---	---	---	---	---
21	e0.04	---	---	---	---	---	---	---	---	---	---	---
22	e0.05	---	---	---	---	---	---	---	---	---	---	---
23	e0.06	---	---	---	---	---	---	---	---	---	---	---
24	e0.06	---	---	---	---	---	---	---	---	---	---	---
25	e0.06	---	---	---	---	---	---	---	---	---	---	---
26	e0.07	---	---	---	---	---	---	---	---	---	---	---
27	e0.08	---	---	---	---	---	---	---	---	---	---	---
28	e0.06	---	---	---	---	---	---	---	---	---	---	---
29	e0.05	---	---	---	---	---	---	---	---	---	---	---
30	e0.05	---	---	---	---	---	---	---	---	---	---	---
31	e0.05	---	---	---	---	---	---	---	---	---	---	---
TOTAL	1.96	---	---	---	---	---	---	---	---	---	---	---
MEAN	0.063	---	---	---	---	---	---	---	---	---	---	---
MAX	0.08	---	---	---	---	---	---	---	---	---	---	---
MIN	0.04	---	---	---	---	---	---	---	---	---	---	---
AC-FT	3.9	---	---	---	---	---	---	---	---	---	---	---

e Estimated.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 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=07103977

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT: April 1998 to October 2002 (seasonal records only) (discontinued).

INSTRUMENTATION.--Pumping sediment sampler with satellite telemetry.

REMARKS.--Daily suspended-sediment records are poor.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 6,760 mg/L, May 25, 1999; minimum daily mean, 7 mg/L, June 13, 2000.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 2,510 tons (estimated), Apr. 30, 1999; minimum daily, 0.0 ton (most estimated), on many days in 2000 and 2002.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily during October, 0.09 ton (estimated), Oct. 2-3; minimum daily, 0.03 ton (estimated), Oct. 20-22.

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)
NOV 06...	1300	0.05	8.8	7.9	412	10.0	0.052	E.04	<0.02	0.47	--	E2100	E1600
JUN 24...	1035	0.05	6.5	7.6	503	22.5	0.043	E.04	<0.02	0.08	4,200	--	3,900

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

Date	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 06...	2,000	0.27
JUN 24...	178	0.02

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

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUL 28...	1935	2.5	7.3	e5.5	273	17.0	0.635	1.04	<0.02	4.30	18,000	20,000	17,600

07103977 COTTONWOOD CREEK AT COWPOKE ROAD AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Suspended sediment load, tons/d (80155)
JUL 28...	121

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

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT						
02...	1045	0.07	453	9.0	501	0.09
09...	0800	0.07	435	7.5	253	0.05
22...	1145	0.05	453	9.5	214	0.03
NOV						
05...	0745	0.05	534	0.0	580	0.08
06...	1300	0.05	412	10.0	2,000	0.27
JUN						
24...	1035	0.05	503	22.5	178	0.02
JUL						
28...	1935	2.5	273	17.0	17,600	121

07103977 COTTONWOOD CREEK AT COWPOKE ROAD AT COLORADO SPRINGS, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/ day)
OCTOBER			
1	e0.07	---	e0.07
2	e0.07	---	e0.09
3	e0.07	---	e0.09
4	e0.07	---	e0.08
5	e0.07	---	e0.07
6	e0.07	---	e0.07
7	e0.07	---	e0.06
8	e0.07	---	e0.05
9	e0.07	---	e0.05
10	e0.07	---	e0.05
11	e0.07	---	e0.05
12	e0.07	---	e0.05
13	e0.07	---	e0.05
14	e0.07	---	e0.04
15	e0.06	---	e0.04
16	e0.06	---	e0.04
17	e0.06	---	e0.04
18	e0.06	---	e0.04
19	e0.06	---	e0.04
20	e0.05	---	e0.03
21	e0.04	---	e0.03
22	e0.05	---	e0.03
23	e0.06	---	e0.04
24	e0.06	---	e0.04
25	e0.06	---	e0.05
26	e0.07	---	e0.06
27	e0.08	---	e0.07
28	e0.06	---	e0.07
29	e0.05	---	e0.06
30	e0.05	---	e0.06
31	e0.05	---	e0.06
TOTAL	1.96	---	1.67

e Estimated.

07103980 COTTONWOOD CREEK AT WOODMEN ROAD NEAR COLORADO SPRINGS, CO

LOCATION.--Lat 38°56'22", long 104°44'26", in NE¼NE¼ sec.11, T.13 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank, 250 ft downstream from Woodmen Road, 4.0 mi east of Interstate 25, 5.0 mi upstream from mouth, and 8.2 mi northeast of courthouse in Colorado Springs.

DRAINAGE AREA.--10.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1992 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103980

REVISED RECORDS.--WDR CO-93-1: Drainage area. WDR CO-96-1: 1995 (M)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,680 ft above NGVD of 1929, from topographic map. Prior to Apr. 13, 1999, at site 150 ft upstream at datum 10 ft higher.

REMARKS.--Records fair except for estimated daily discharges and those above 10 ft³/s, which are poor. Natural flow of stream affected by erosion-control and livestock-watering reservoirs and ground-water withdrawals.

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	1.3	0.38	0.62	0.35	0.34	2.0	0.73	0.70	3.1	0.90	0.45	1.7
2	1.2	1.0	0.53	e0.30	0.36	0.87	0.73	0.90	0.59	0.94	0.26	1.2
3	0.63	0.70	0.57	e0.30	0.66	0.93	0.63	0.74	0.65	0.79	1.5	4.4
4	0.56	0.56	0.40	0.46	e0.56	0.52	0.53	1.3	6.7	0.70	2.3	0.65
5	0.58	0.46	0.34	0.36	e0.52	1.6	1.8	0.69	3.9	0.63	0.35	1.2
6	0.56	0.38	0.33	0.33	e0.48	0.78	1.1	0.78	0.88	0.55	0.33	6.6
7	0.45	0.42	0.34	0.39	e0.46	0.57	0.65	0.72	2.0	0.55	0.26	3.8
8	0.54	0.37	0.29	0.47	e0.40	0.40	0.64	0.59	0.92	0.54	0.27	1.7
9	0.50	0.42	0.25	0.41	e0.50	0.34	0.49	0.58	1.2	0.50	0.53	1.3
10	0.51	0.34	0.30	e0.35	e0.46	0.43	0.38	1.1	0.85	0.44	0.47	0.84
11	0.49	0.32	0.33	e0.30	e0.50	0.58	0.42	0.68	0.71	0.44	0.53	0.88
12	0.50	0.32	0.31	0.58	e0.60	0.55	0.42	0.57	1.2	0.52	0.50	1.0
13	0.51	0.63	0.34	0.61	0.66	0.49	0.52	0.67	1.2	0.48	0.44	0.84
14	0.53	0.59	0.24	0.48	0.60	0.46	0.40	0.62	1.0	0.45	0.36	0.87
15	0.44	0.50	0.20	0.45	0.52	0.55	1.2	1.00	1.0	0.51	0.39	1.0
16	0.35	0.49	0.23	e0.38	0.57	0.50	0.97	0.83	1.2	0.60	0.42	0.83
17	0.37	0.33	0.21	e0.40	0.66	1.4	0.82	0.76	e17	0.61	0.41	0.79
18	0.39	0.25	0.22	e0.30	0.92	1.8	0.61	0.68	e1.2	0.53	1.9	0.91
19	0.38	0.31	e0.20	e0.25	2.6	7.0	1.2	0.60	11	4.4	0.50	0.84
20	0.37	0.33	e0.20	e0.25	1.1	4.2	0.68	0.60	0.90	0.33	0.48	0.68
21	0.31	0.39	0.30	e0.27	0.72	2.4	0.58	0.50	0.54	0.26	0.42	0.63
22	0.35	0.44	e0.25	e0.29	0.44	2.3	2.5	0.50	1.1	0.36	0.52	0.80
23	0.45	0.52	0.30	e0.30	0.68	2.3	3.7	1.2	0.94	0.67	0.48	0.80
24	0.45	0.51	0.27	0.37	0.80	4.4	4.6	0.54	1.00	0.96	0.70	0.70
25	0.47	0.44	e0.30	0.33	1.1	2.2	0.49	0.71	1.5	1.6	0.60	0.60
26	2.4	e0.45	e0.30	0.37	e0.90	1.3	0.49	0.62	4.0	2.3	0.63	0.63
27	1.1	e0.60	0.25	0.38	0.69	0.78	0.44	0.57	0.44	2.5	3.2	0.53
28	0.51	0.59	0.29	0.30	1.1	0.88	0.46	0.65	0.57	11	0.49	0.57
29	0.36	0.57	0.30	0.29	---	1.2	0.51	1.1	0.69	0.59	0.56	0.61
30	0.44	0.52	0.26	0.36	---	0.75	0.62	0.70	0.80	0.53	19	0.65
31	0.54	---	0.28	0.43	---	0.79	---	0.88	---	0.44	14	---
TOTAL	18.54	14.13	9.55	11.41	19.90	45.27	29.31	23.08	68.78	36.62	53.25	38.55
MEAN	0.60	0.47	0.31	0.37	0.71	1.46	0.98	0.74	2.29	1.18	1.72	1.28
MAX	2.4	1.0	0.62	0.61	2.6	7.0	4.6	1.3	17	11	19	6.6
MIN	0.31	0.25	0.20	0.25	0.34	0.34	0.38	0.50	0.44	0.26	0.26	0.53
AC-FT	37	28	19	23	39	90	58	46	136	73	106	76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	1.20	1.06	0.76	0.66	0.80	1.25	1.83	3.09	2.96	2.22	2.38	1.33
MAX	2.59	3.20	1.71	1.36	1.26	3.34	6.42	13.6	8.85	5.07	6.36	2.82
(WY)	(1995)	(1998)	(2000)	(1998)	(1998)	(1998)	(1999)	(1999)	(1995)	(1999)	(1999)	(1995)
MIN	0.35	0.47	0.31	0.33	0.42	0.49	0.50	0.64	0.49	0.24	0.40	0.47
(WY)	(1993)	(1993)	(2003)	(1994)	(1994)	(1995)	(1996)	(1993)	(1994)	(1994)	(2002)	(1992)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1992 - 2003

ANNUAL TOTAL	262.68		368.39				
ANNUAL MEAN	0.72		1.01		1.67		
HIGHEST ANNUAL MEAN					3.63 1999		
LOWEST ANNUAL MEAN					0.65 1993		
HIGHEST DAILY MEAN	12	Jul 5	19	Aug 30	e100 Apr 30, 1999		
LOWEST DAILY MEAN	0.20	Dec 15	0.20	Dec 15	a0.15 Jan 23, 1995		
ANNUAL SEVEN-DAY MINIMUM	0.21	Dec 14	0.21	Dec 14	0.17 Jan 21, 1995		
MAXIMUM PEAK FLOW			b511 Jun 17		c1,090 Jul 19, 1993		
MAXIMUM PEAK STAGE			d7.07 Jun 17		f5.57 Jul 19, 1993		
ANNUAL RUNOFF (AC-FT)	521		731		1,210		
10 PERCENT EXCEEDS	1.0		1.6		3.0		
50 PERCENT EXCEEDS	0.56		0.56		0.83		
90 PERCENT EXCEEDS	0.33		0.30		0.36		

e Estimated.

a Also occurred Jan 23, Feb 3 (estimated), 1996.

b From rating curve extended above 19 ft³/s on basis of velocity-area study.

c From rating curve extended above 1.1 ft³/s on basis of slope-area measurement of peak flow at gage height 4.45 ft, site and datum then in use.

d From floodmarks.

f From floodmarks, site and datum then in use. Maximum gage height, 7.84 ft, May 25, 1999.

07103980 COTTONWOOD CREEK AT WOODMEN ROAD NEAR COLORADO SPRINGS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1998 to current year (seasonal peaks only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103980

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unflab, uS/cm 25 degC (90095)	Specific conductance, wat unflab, uS/cm 25 degC (00095)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
APR							
08...	1045	0.86	--	760	--	--	--
MAY							
14...	0735	0.65	--	726	--	--	--
JUN							
18...	1520	1.4	649	--	--	2,740	10
JUL							
28...	2045	23	--	262	95	8,450	516
AUG							
19...	1300	0.41	716	--	--	--	--
SEP							
10...	1030	0.90	721	--	--	--	--
10...	1040	1.6	765	--	--	--	--

07103980 COTTONWOOD CREEK AT WOODMEN ROAD NEAR COLORADO SPRINGS, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 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=07103980

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.75 inches, June 17, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation for period April to September, 1.75 inches, June 17.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	0.00	0.42	0.00	0.01	0.00
2	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.16
3	---	---	---	---	---	---	---	0.00	0.00	0.00	0.30	0.32
4	---	---	---	---	---	---	---	0.09	0.28	0.00	0.12	0.00
5	---	---	---	---	---	---	---	0.00	0.42	0.00	0.01	0.00
6	---	---	---	---	---	---	---	0.00	0.04	0.00	0.00	0.65
7	---	---	---	---	---	---	---	0.00	0.19	0.00	0.00	0.25
8	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	e0.00	0.05	0.12	0.00	0.07	0.00
10	---	---	---	---	---	---	0.00	0.10	0.01	0.00	0.13	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.03	0.00
12	---	---	---	---	---	---	0.00	0.00	0.14	0.01	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.02
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.11	0.15	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.04	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	1.75	0.00	0.02	0.00
18	---	---	---	---	---	---	0.00	0.00	0.01	0.01	0.16	0.00
19	---	---	---	---	---	---	0.11	0.00	1.12	0.55	0.00	0.00
20	---	---	---	---	---	---	0.02	0.01	0.00	0.00	0.00	0.04
21	---	---	---	---	---	---	0.01	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.50	0.00	0.00	0.00	0.00	0.04
23	---	---	---	---	---	---	0.31	0.19	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.36	0.00	0.00	0.00	0.09	0.00
25	---	---	---	---	---	---	0.00	0.03	0.16	0.06	0.00	0.00
26	---	---	---	---	---	---	0.00	0.02	0.34	0.22	0.01	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.15	0.50	0.00
28	---	---	---	---	---	---	0.00	0.00	0.07	0.67	0.03	0.00
29	---	---	---	---	---	---	0.00	0.12	0.00	0.00	0.09	0.00
30	---	---	---	---	---	---	0.00	0.00	0.00	0.00	1.69	0.00
31	---	---	---	---	---	---	---	0.01	---	0.00	0.41	---
TOTAL	---	---	---	---	---	---	---	0.77	5.08	1.71	3.67	1.48
MAX	---	---	---	---	---	---	---	0.19	1.75	0.67	1.69	0.65

e Estimated.

07103985 COTTONWOOD CREEK TRIBUTARY ABOVE RANGEWOOD DRIVE AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 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=07103985

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT: April 1998 to October 2002 (seasonal records only) (discontinued).

INSTRUMENTATION.--Pumping sediment sampler with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 8,990 mg/L, Apr. 30, 1999; minimum daily mean, 1 mg/L, June 11, Sept. 24-25, 2002.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 1,250 tons, June 7, 2001; minimum daily, 0.0 ton, on many days (some estimated) in 1999, 2000, 2002, and 2003.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean during October, 40 mg/L, Oct. 27; minimum daily mean, 1 mg/L, Oct. 10, 12, 17.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily during October, 0.68 ton, Oct. 26; minimum daily, 0.0 ton, on many days (some estimated).

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)
NOV 06...	1200	e0.60	9.1	8.4	1,120	11.0	0.022	6.28	0.02	0.04	--	E20	E10
JUN 24...	1145	1.1	6.9	8.3	1,080	20.0	0.108	5.45	0.02	0.07	E230	--	E270

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

Date	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 06...	2	E.00
JUN 24...	83	0.24

e -- Estimated.
E -- Estimated laboratory analysis value.

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUN 12...	1655	31	7.1	8.0	150	16.5	0.556	0.93	0.12	0.67	2,800	4,100	765

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Suspended sediment load, tons/d (80155)
JUN 12...	64

07103985 COTTONWOOD CREEK TRIBUTARY ABOVE RANGEWOOD DRIVE AT COLORADO SPRINGS, CO—Continued

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT						
22...	1100	0.62	1,070	11.5	0.0	0.00
NOV						
05...	0845	0.61	1,110	4.5	8	0.01
06...	1200	e0.60	1,120	11.0	2	e0.00
JUN						
12...	1655	31	150	16.5	765	64
24...	1145	1.1	1,080	20.0	83	0.24

e -- Estimated.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
OCTOBER			
1	0.85	---	e0.18
2	0.87	18	0.09
3	0.67	---	e0.03
4	0.54	2	0.00
5	0.58	---	e0.00
6	0.55	---	e0.00
7	0.56	---	e0.00
8	0.59	---	e0.00
9	0.61	---	e0.00
10	0.60	1	0.00
11	0.57	---	e0.00
12	0.55	1	0.00
13	0.56	---	e0.00
14	0.56	---	e0.00
15	0.56	---	e0.00
16	0.61	---	e0.00
17	0.61	1	0.00
18	0.61	---	e0.00
19	0.61	---	e0.00
20	0.61	---	e0.00
21	0.60	---	e0.00
22	0.77	11	0.06
23	0.72	---	e0.04
24	0.63	---	e0.00
25	0.64	---	e0.00
26	2.1	26	0.68
27	1.0	40	0.24
28	0.61	---	e0.02
29	0.61	---	e0.02
30	0.61	---	e0.01
31	0.67	---	e0.01
TOTAL	21.23	---	1.38

e Estimated.

07103990 COTTONWOOD CREEK AT MOUTH AT PIKEVIEW, CO

LOCATION.--Lat 38°55'41", long 104°48'35", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.8, T.13 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank 20 ft upstream from Vincent Drive bridge, 0.3 mi south of Woodmen Road, 0.3 mi upstream from mouth, and 1.2 mi northeast of Pikeview.

DRAINAGE AREA.--18.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07103990

GAGE.--Water-stage recorder with satellite telemetry, crest-stage gage, and concrete control. Elevation of gage is 6,265 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by erosion-control and livestock-watering reservoirs and ground-water withdrawals.

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	6.8	3.7	5.2	e3.5	e3.0	e4.0	4.9	3.2	16	3.0	3.1	7.8
2	9.9	10	4.9	e3.0	e3.5	e5.0	4.6	3.3	2.7	2.8	4.1	13
3	4.6	4.6	5.9	e3.0	e3.5	e3.0	3.8	2.9	2.6	2.7	8.5	18
4	4.4	3.3	5.3	e4.0	e3.0	3.5	4.1	4.1	15	2.5	9.9	4.1
5	3.9	3.4	5.2	e4.0	e3.0	e3.0	11	2.2	21	2.7	3.0	3.7
6	4.0	e3.0	e5.0	e5.0	4.0	e3.0	8.4	2.8	3.0	3.4	3.5	12
7	3.9	e3.0	e4.5	e5.0	3.4	e2.5	3.0	2.6	8.3	2.4	3.9	12
8	4.1	e3.0	e4.0	e5.5	e3.0	e5.5	3.5	2.6	4.2	3.2	3.2	e6.0
9	4.4	e3.0	e4.0	e6.1	e3.0	2.4	3.1	3.1	6.3	2.2	7.3	e5.0
10	3.8	e4.0	e3.5	4.9	e3.0	3.6	3.2	7.1	3.7	2.8	e4.0	4.0
11	e3.8	e4.0	e3.0	e4.0	e3.0	3.9	3.3	2.8	4.3	2.6	3.7	4.3
12	3.6	e4.0	e3.0	4.5	e4.0	4.1	2.9	2.4	8.6	3.7	e4.0	4.8
13	4.1	e3.0	e3.5	e5.0	e5.0	4.3	3.3	2.4	6.9	3.0	e3.0	7.7
14	3.8	e3.0	e4.0	e5.0	4.7	5.3	3.0	e2.0	5.3	2.9	e3.0	7.3
15	3.1	e3.0	4.5	e5.0	5.7	4.5	4.3	4.9	5.7	3.0	e2.5	7.1
16	4.4	e3.0	3.5	e5.0	4.5	4.4	3.6	3.4	5.9	5.8	e2.5	5.2
17	4.9	e3.0	4.7	e4.0	4.7	9.7	3.0	2.5	53	2.4	e2.5	4.0
18	3.3	e3.0	4.9	e4.0	5.3	15	e3.5	2.4	7.9	2.2	4.6	4.2
19	3.2	e3.0	e5.0	e4.0	13	8.9	4.6	2.5	33	13	e4.0	4.6
20	2.8	e3.0	e4.5	3.7	6.5	32	4.2	2.3	10	3.9	e3.0	3.4
21	2.6	e4.0	e4.0	3.9	4.1	14	3.4	2.0	6.5	2.7	e3.0	3.1
22	3.6	e4.0	e4.0	3.7	4.6	12	15	3.5	6.0	4.0	e3.0	3.8
23	3.7	e4.0	e4.0	e6.0	5.3	11	21	8.0	5.7	4.4	e3.0	3.4
24	5.3	e4.0	e4.0	5.0	e4.5	22	29	2.3	5.3	3.3	5.0	3.4
25	4.2	e5.0	e4.0	6.1	e4.0	12	3.5	3.5	6.9	4.2	4.9	4.3
26	15	e5.0	e4.0	5.6	e4.0	7.1	3.1	4.6	15	5.2	5.8	3.4
27	12	e5.0	e4.5	4.3	e4.0	6.2	3.2	2.8	2.5	13	16	3.7
28	3.0	e5.0	e4.5	5.5	e4.0	5.2	3.9	2.5	3.0	30	4.4	3.8
29	e3.0	4.7	e4.5	e4.0	---	5.3	3.4	6.7	3.2	4.2	30	4.6
30	4.7	4.1	e4.5	e3.5	---	5.4	2.5	3.4	3.3	3.3	36	3.7
31	3.8	---	e4.0	e3.0	---	5.8	---	3.8	---	2.8	53	---
TOTAL	147.7	117.8	134.1	138.8	123.3	233.6	173.3	104.6	280.8	147.3	247.4	175.4
MEAN	4.76	3.93	4.33	4.48	4.40	7.54	5.78	3.37	9.36	4.75	7.98	5.85
MAX	15	10	5.9	6.1	13	32	29	8.0	53	30	53	18
MIN	2.6	3.0	3.0	3.0	3.0	2.4	2.5	2.0	2.5	2.2	2.5	3.1
AC-FT	293	234	266	275	245	463	344	207	557	292	491	348

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

	MEAN	5.75	5.14	4.49	4.36	4.56	5.58	6.84	9.25	9.64	9.65	9.32	6.43
MAX	9.59	9.18	7.90	7.60	7.56	11.1	33.3	40.7	26.4	26.2	27.7	13.9	
(WY)	(1995)	(1998)	(1998)	(2000)	(2000)	(1992)	(1999)	(1999)	(1999)	(1995)	(2001)	(1999)	(1999)
MIN	1.93	2.90	1.92	2.30	2.28	2.57	3.31	2.71	3.05	2.34	3.93	2.67	
(WY)	(1987)	(1987)	(1992)	(1987)	(1990)	(1999)	(1989)	(1986)	(1990)	(1992)	(2002)	(1986)	

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1986 - 2003

ANNUAL TOTAL	1,853.8	2,024.1	
ANNUAL MEAN	5.08	5.55	6.91
HIGHEST ANNUAL MEAN			15.7 1999
LOWEST ANNUAL MEAN			4.01 1989
HIGHEST DAILY MEAN	140 Jul 5	53 Jun 17	e500 Apr 30, 1999
LOWEST DAILY MEAN	2.3 Jun 19	2.0 May 14	a0.01 Jul 10, 1989
ANNUAL SEVEN-DAY MINIMUM	2.6 Jun 17	2.7 May 16	0.12 Jul 5, 1989
MAXIMUM PEAK FLOW		b1,440 Jun 17	c,d2,710 Jul 9, 2001
MAXIMUM PEAK STAGE		7.87 Jun 17	d,f9.53 Jul 9, 2001
ANNUAL RUNOFF (AC-FT)	3,680	4,010	5,000
10 PERCENT EXCEEDS	5.4	9.2	10
50 PERCENT EXCEEDS	4.0	4.0	4.7
90 PERCENT EXCEEDS	3.0	2.8	2.5

e Estimated.

a Also occurred Jul 11, 1989.

b From rating curve extended above 213 ft³/s, on basis of critical-depth measurement of peak flow at gage height 9.02 ft.

c From rating curve extended above 900 ft³/s, on basis of critical-depth measurement of peak flow at gage height 9.02 ft.

d Also occurred Jul 13, 2001.

f From floodmarks.

07103990 COTTONWOOD CREEK AT MOUTH AT PIKEVIEW, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 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=07103990

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT: April 1998 to current year (seasonal records only).

INSTRUMENTATION.--Pumping sediment sampler with satellite telemetry.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 7,870 mg/L, May 25, 1999; minimum daily mean, 96 mg/L, Oct. 2, 2001.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 13,500 tons (estimated), April 30, 1999; minimum daily, 0.59 ton (estimated), Oct. 11, 2002.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 3,390 mg/L, July 28; minimum daily mean, 134 mg/L, Oct. 7.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 1,900 tons, June 17; minimum daily, 0.59 ton (estimated), Oct. 11.

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 unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, filtered, mg/L as N (00608)	Nitrite + nitrate water filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L (00665)	E coli, modified, water, col/100 mL (90902)	E coli, m-TEC, MF, water, col/100 mL (31633)	Fecal coliform, M-FC col/100 mL (31625)
NOV 06...	1030	e3.6	10.4	8.4	737	5.0	E.009	5.11	E.01	0.12	--	E44	50
JUN 24...	0915	6.6	7.3	8.3	786	18.0	E.022	4.14	0.03	0.23	E620	--	E640

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

Date	Suspended sediment concentration, mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 06...	376	E3.7
JUN 24...	490	8.7

E -- Estimated laboratory analysis value.
e -- Estimated.

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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 unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, filtered, mg/L as N (00608)	Nitrite + nitrate water filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L (00665)	E coli, modified, water, col/100 mL (90902)	Fecal coliform, M-FC col/100 mL (31625)	Suspended sediment concentration, mg/L (80154)
JUN 12...	1815	47	7.9	8.1	354	16.0	0.210	1.81	0.06	1.98	7,400	E15000	4,090

ARKANSAS RIVER BASIN

07103990 COTTONWOOD CREEK AT MOUTH AT PIKEVIEW, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Suspended sediment load, tons/d (80155)
JUN 12...	519

E -- Estimated laboratory analysis value.

WATER-QUALITY DATA DURING MICROBIOLOGICAL SAMPLING,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
JUN 25...	1110	4.0	717	21.0	E140	230

E -- Estimated laboratory analysis value.

07103990 COTTONWOOD CREEK AT MOUTH AT PIKEVIEW, CO—Continued

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT							
10...	0800	4.2	--	730	6.5	175	2.0
24...	1000	7.3	--	724	3.0	141	2.8
NOV							
05...	1145	3.6	--	759	6.5	387	3.8
06...	1030	e3.6	--	737	5.0	376	e3.7
MAR							
31...	1400	3.9	--	729	20.5	427	4.5
APR							
08...	1230	3.5	--	702	16.0	--	--
08...	1245	4.2	--	702	16.0	466	5.3
21...	1200	2.7	--	691	15.5	720	5.2
24...	1530	33	--	294	16.0	1,870	167
MAY							
12...	1015	3.7	--	714	15.5	222	2.2
12...	1145	4.2	--	712	20.5	232	2.6
30...	0930	3.7	--	667	20.0	369	3.7
JUN							
02...	1300	2.7	--	659	25.5	294	2.1
12...	1245	3.7	--	716	19.5	170	1.7
12...	1815	47	--	354	16.0	4,090	519
18...	1815	7.2	--	604	--	619	12
24...	0915	6.6	--	786	18.0	490	8.7
25...	1130	4.2	--	757	22.0	571	6.5
30...	1215	4.2	--	719	--	268	3.0
JUL							
01...	1245	2.7	--	638	--	316	2.3
08...	1030	3.7	696	--	23.0	526	5.3
18...	1400	3.2	--	703	--	255	2.2
AUG							
01...	1315	3.7	728	--	--	235	2.3
11...	1230	2.7	700	--	--	191	1.4
25...	1130	4.8	690	--	--	289	3.7
29...	1430	203	198	--	--	4,270	2,340
29...	1500	124	278	--	--	3,350	1,120
SEP							
02...	1600	5.3	759	--	--	259	3.7
09...	1130	4.8	734	--	--	235	3.0
17...	1415	4.2	732	--	--	313	3.5

e -- Estimated.

07103990 COTTONWOOD CREEK AT MOUTH AT PIKEVIEW, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
OCTOBER									
1	6.8	---	e10.0	3.7	---	---	5.2	---	---
2	9.9	---	e18.0	10	---	---	4.9	---	---
3	4.6	---	e2.4	4.6	---	---	5.9	---	---
4	4.4	173	2.1	3.3	---	---	5.3	---	---
5	3.9	---	e1.7	3.4	---	---	5.2	---	---
6	4.0	---	e1.5	e3.0	---	---	e5.0	---	---
7	3.9	134	1.4	e3.0	---	---	e4.5	---	---
8	4.1	---	e1.6	e3.0	---	---	e4.0	---	---
9	4.4	---	e1.9	e3.0	---	---	e4.0	---	---
10	3.8	157	1.6	e4.0	---	---	e3.5	---	---
11	e3.8	---	e0.59	e4.0	---	---	e3.0	---	---
12	3.6	163	1.6	e4.0	---	---	e3.0	---	---
13	4.1	197	2.2	e3.0	---	---	e3.5	---	---
14	3.8	---	e2.0	e3.0	---	---	e4.0	---	---
15	3.1	---	e1.6	e3.0	---	---	4.5	---	---
16	4.4	---	e2.2	e3.0	---	---	3.5	---	---
17	4.9	---	e2.4	e3.0	---	---	4.7	---	---
18	3.3	---	e1.6	e3.0	---	---	4.9	---	---
19	3.2	---	e1.4	e3.0	---	---	e5.0	---	---
20	2.8	---	e1.2	e3.0	---	---	e4.5	---	---
21	2.6	---	e1.1	e4.0	---	---	e4.0	---	---
22	3.6	---	e1.5	e4.0	---	---	e4.0	---	---
23	3.7	---	e1.4	e4.0	---	---	e4.0	---	---
24	5.3	141	2.0	e4.0	---	---	e4.0	---	---
25	4.2	---	e1.6	e5.0	---	---	e4.0	---	---
26	15	---	e40.0	e5.0	---	---	e4.0	---	---
27	12	---	e30.0	e5.0	---	---	e4.5	---	---
28	3.0	270	2.2	e5.0	---	---	e4.5	---	---
29	e3.0	---	e1.3	4.7	---	---	e4.5	---	---
30	4.7	---	e2.9	4.1	---	---	e4.5	---	---
31	3.8	---	e2.3	---	---	---	e4.0	---	---
TOTAL	147.7	---	145.29	117.8	---	---	134.1	---	---
JANUARY									
1	e3.5	---	---	e3.0	---	---	e4.0	---	---
2	e3.0	---	---	e3.5	---	---	e5.0	---	---
3	e3.0	---	---	e3.5	---	---	e3.0	---	---
4	e4.0	---	---	e3.0	---	---	3.5	---	---
5	e4.0	---	---	e3.0	---	---	e3.0	---	---
6	e5.0	---	---	4.0	---	---	e3.0	---	---
7	e5.0	---	---	3.4	---	---	e2.5	---	---
8	e5.5	---	---	e3.0	---	---	e5.5	---	---
9	6.1	---	---	e3.0	---	---	2.4	---	---
10	4.9	---	---	e3.0	---	---	3.6	---	---
11	e4.0	---	---	e3.0	---	---	3.9	---	---
12	4.5	---	---	e4.0	---	---	4.1	---	---
13	e5.0	---	---	e5.0	---	---	4.3	---	---
14	e5.0	---	---	4.7	---	---	5.3	---	---
15	e5.0	---	---	5.7	---	---	4.5	---	---
16	e5.0	---	---	4.5	---	---	4.4	---	---
17	e4.0	---	---	4.7	---	---	9.7	---	---
18	e4.0	---	---	5.3	---	---	15	---	---
19	e4.0	---	---	13	---	---	8.9	---	---
20	3.7	---	---	6.5	---	---	32	---	---
21	3.9	---	---	4.1	---	---	14	---	---
22	3.7	---	---	4.6	---	---	12	---	---
23	e6.0	---	---	5.3	---	---	11	---	---
24	5.0	---	---	e4.5	---	---	22	---	---
25	6.1	---	---	e4.0	---	---	12	---	---
26	5.6	---	---	e4.0	---	---	7.1	---	---
27	4.3	---	---	e4.0	---	---	6.2	---	---
28	5.5	---	---	e4.0	---	---	5.2	---	---
29	e4.0	---	---	---	---	---	5.3	---	---
30	e3.5	---	---	---	---	---	5.4	---	---
31	e3.0	---	---	---	---	---	5.8	---	---
TOTAL	138.8	---	---	123.3	---	---	233.6	---	---
FEBRUARY									
MARCH									

07103990 COTTONWOOD CREEK AT MOUTH AT PIKEVIEW, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	4.9	---	e5.5	3.2	---	e2.3	16	1,470	235
2	4.6	---	e5.2	3.3	---	e2.4	2.7	334	2.5
3	3.8	---	e4.4	2.9	---	e2.0	2.6	---	e2.1
4	4.1	---	e4.7	4.1	---	e6.6	15	1,070	198
5	11	---	e29	2.2	---	e1.6	21	---	e125
6	8.4	---	e20	2.8	---	e1.9	3.0	---	e2.6
7	3.0	---	e4.0	2.6	---	e1.8	8.3	---	e20
8	3.5	454	4.3	2.6	---	e1.8	4.2	---	e3.1
9	3.1	---	e3.5	3.1	---	e3.3	6.3	---	e13
10	3.2	434	3.8	7.1	677	24	3.7	---	e2.6
11	3.3	491	4.4	2.8	---	e1.8	4.3	---	e2.4
12	2.9	374	2.9	2.4	227	1.5	8.6	731	53
13	3.3	284	2.6	2.4	211	1.3	6.9	---	e13
14	3.0	---	e2.1	e2.0	---	e0.99	5.3	---	e6.0
15	4.3	376	6.9	4.9	540	25	5.7	---	e6.0
16	3.6	---	e7.9	3.4	---	e6.2	5.9	370	5.9
17	3.0	---	e5.5	2.5	---	e2.7	53	2,850	1,900
18	e3.5	---	e2.4	2.4	325	2.1	7.9	878	20
19	4.6	---	e7.9	2.5	---	e1.9	33	---	e564
20	4.2	647	7.3	2.3	---	e1.8	10	---	e34
21	3.4	710	6.6	2.0	---	e1.4	6.5	---	e10
22	15	1,380	124	3.5	---	e2.5	6.0	---	e8.5
23	21	1,900	164	8.0	---	e26	5.7	---	e7.7
24	29	1,840	168	2.3	---	e2.1	5.3	---	e7.2
25	3.5	---	e5.9	3.5	---	e2.9	6.9	565	11
26	3.1	---	e3.0	4.6	---	e6.1	15	---	e81
27	3.2	---	e2.6	2.8	---	e2.8	2.5	---	e2.2
28	3.9	---	e3.1	2.5	---	e2.1	3.0	---	e3.2
29	3.4	---	e2.7	6.7	---	e26	3.2	---	e3.1
30	2.5	---	e1.9	3.4	380	3.4	3.3	281	2.5
31	---	---	---	3.8	336	3.5	---	---	---
TOTAL	173.3	---	616.1	104.6	---	171.79	280.8	---	3,344.6
		JULY			AUGUST			SEPTEMBER	
1	3.0	305	2.5	3.1	240	2.0	7.8	---	e6.8
2	2.8	286	2.2	4.1	252	2.8	13	635	40
3	2.7	291	2.1	8.5	385	15	18	---	e65
4	2.5	---	e2.6	9.9	426	22	4.1	---	e3.6
5	2.7	540	4.0	3.0	---	e1.6	3.7	---	e2.5
6	3.4	638	5.8	3.5	151	1.4	12	---	e74
7	2.4	---	e3.8	3.9	---	e1.5	12	---	e35
8	3.2	533	4.6	3.2	---	e1.3	e6.0	---	e4.7
9	2.2	---	e3.3	7.3	486	31	e5.0	---	e3.4
10	2.8	539	4.1	e4.0	---	e1.2	4.0	243	2.7
11	2.6	426	3.0	3.7	287	4.6	4.3	267	3.1
12	3.7	---	e4.6	e4.0	---	e1.1	4.8	---	e4.5
13	3.0	353	2.9	e3.0	---	e0.69	7.7	379	7.9
14	2.9	---	e3.1	e3.0	---	e0.90	7.3	361	7.2
15	3.0	420	3.4	e2.5	---	e1.0	7.1	---	e6.6
16	5.8	604	19	e2.5	---	e1.0	5.2	---	e4.6
17	2.4	476	3.1	e2.5	---	e0.76	4.0	323	3.4
18	2.2	294	1.8	4.6	---	e13	4.2	340	3.9
19	13	672	69	e4.0	---	e1.1	4.6	311	3.8
20	3.9	---	e5.4	e3.0	---	e1.4	3.4	285	2.6
21	2.7	---	e2.2	e3.0	---	e1.2	3.1	---	e2.5
22	4.0	---	e3.3	e3.0	---	e1.2	3.8	---	e3.2
23	4.4	---	e3.7	e3.0	---	e1.2	3.4	312	2.9
24	3.3	---	e2.7	5.0	380	15	3.4	---	e2.6
25	4.2	---	e3.6	4.9	325	4.6	4.3	244	2.8
26	5.2	341	7.5	5.8	220	3.4	3.4	201	1.9
27	13	---	e92	16	1,250	169	3.7	---	e2.1
28	30	3,390	942	4.4	---	e5.5	3.8	301	3.1
29	4.2	---	e6.0	30	1,100	446	4.6	---	e5.7
30	3.3	---	e2.5	36	---	e295	3.7	596	5.8
31	2.8	---	e2.0	53	---	e797	---	---	---
TOTAL	147.3	---	1,217.8	247.4	---	1,844.45	175.4	---	317.9

e Estimated.

07104000 MONUMENT CREEK AT PIKEVIEW, CO

LOCATION.--Lat 38°55'04", long 104°49'05", in NW¹/₄SE¹/₄ sec.18, T.13 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank 0.1 mi west of Interstate 25 at Pikeview, 0.9 mi downstream from Cottonwood Creek, and 1.3 mi downstream from Woodmen Road.

DRAINAGE AREA.--204 mi².

PERIOD OF RECORD.--October 1938 to September 1949, January 1976 to current year. Daily record for suspended sediment available, May 1996 to September 1997 (seasonal peaks only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07104000

REVISED RECORDS.--WDR CO-90-1: 1989 (M).

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 6,203.26 ft above NGVD of 1929. Oct. 1938 to Sept. 1949, nonrecording gage at present site at datum 2.10 ft higher. Jan. 1976 to June 6, 1994, at present site at datum 2.00 ft higher. Since Aug. 14, 2002, supplementary water-stage recorder on left bank 15 ft downstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. 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 OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1935, reached a stage of about 14 ft, former datum, discharge unknown.

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	15	14	e10	11	e16	17	45	71	14	8.7	e30
2	20	21	15	e10	12	18	18	47	23	12	8.3	e25
3	11	16	15	e11	12	14	17	44	21	12	13	50
4	11	15	14	e11	e11	12	16	44	55	12	28	22
5	11	13	13	e11	e10	12	23	41	66	11	12	20
6	11	12	e12	11	e10	11	31	35	24	11	7.1	30
7	11	12	e11	e12	e9.0	12	19	32	30	11	6.0	36
8	11	13	e11	13	e9.0	15	20	27	24	11	6.4	26
9	11	12	e11	e13	e9.0	11	20	25	23	9.3	37	e20
10	11	13	e11	e11	e10	11	22	42	20	8.8	12	e17
11	11	13	e11	e11	e11	11	19	29	17	9.3	13	e16
12	11	13	e11	e12	e13	11	17	27	18	10	12	e15
13	11	13	e12	e12	14	10	17	26	23	9.0	8.7	e17
14	11	12	e12	12	15	10	19	23	20	8.9	7.0	e18
15	11	12	e13	13	15	11	23	26	19	8.7	7.3	e17
16	12	13	14	e11	14	11	32	34	19	13	6.7	e15
17	12	13	15	e10	13	13	31	25	161	12	5.8	e14
18	e12	13	14	e10	13	31	30	25	52	8.5	11	13
19	e12	13	e13	e12	22	20	29	27	108	25	11	16
20	e12	13	e12	14	14	54	29	26	66	16	6.5	16
21	e12	12	e11	12	13	41	30	23	36	9.5	6.1	14
22	13	13	e11	14	11	25	70	19	24	8.9	6.4	14
23	14	13	e11	14	11	24	90	32	20	9.1	5.9	13
24	13	13	e11	14	e9.0	49	108	24	17	8.7	11	12
25	14	e13	e11	13	e10	47	67	23	19	10	13	12
26	24	e12	e11	12	e12	27	52	22	79	10	9.0	16
27	44	e12	e11	11	e12	22	26	19	28	36	34	13
28	19	e12	e12	11	13	16	33	16	21	61	13	12
29	17	e13	e12	10	---	15	62	18	27	17	85	14
30	15	14	e11	10	---	15	51	17	20	11	141	14
31	15	---	e11	11	---	15	---	33	---	9.1	237	---
TOTAL	436	397	377	362	338.0	610	1,038	896	1,151	422.8	788.9	567
MEAN	14.1	13.2	12.2	11.7	12.1	19.7	34.6	28.9	38.4	13.6	25.4	18.9
MAX	44	21	15	14	22	54	108	47	161	61	237	50
MIN	11	12	11	10	9.0	10	16	16	17	8.5	5.8	12
AC-FT	865	787	748	718	670	1,210	2,060	1,780	2,280	839	1,560	1,120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

	1939	1940	1946	1947	1948	1949	1976	1977	1978	1979	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	19.5	18.6	15.6	14.5	15.5	22.1	50.2	93.0	48.1	28.1	31.2	17.0																	
MAX	82.8	55.3	32.2	31.9	35.2	52.4	259	399	190	97.6	149	46.7																	
(WY)	(1985)	(1985)	(2000)	(2000)	(2000)	(1998)	(1942)	(1999)	(1999)	(1999)	(1999)	(1985)																	
MIN	1.90	4.27	3.95	4.40	4.06	6.67	10.2	12.7	5.20	2.01	1.11	1.74																	
(WY)	(1940)	(1979)	(1979)	(1979)	(1940)	(1944)	(1978)	(1946)	(1976)	(1939)	(1940)	(1939)																	

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1939 - 2003

ANNUAL TOTAL	5,956.8	7,383.7	
ANNUAL MEAN	16.3	20.2	
HIGHEST ANNUAL MEAN			31.7
LOWEST ANNUAL MEAN			100
HIGHEST DAILY MEAN	251	Jul 5	8.21
LOWEST DAILY MEAN	8.2	Aug 19	1978
ANNUAL SEVEN-DAY MINIMUM	8.6	Aug 13	2,950
MAXIMUM PEAK FLOW			Aug 31
MAXIMUM PEAK STAGE			5.8
ANNUAL RUNOFF (AC-FT)	11,820	14,650	7.5
10 PERCENT EXCEEDS	22	34	Aug 17
50 PERCENT EXCEEDS	14	13	Aug 17
90 PERCENT EXCEEDS	9.7	10	Aug 31
			4,890
			11.10
			22,970
			64
			18
			5.4

e Estimated.

385501104483701 MONUMENT CREEK TRIBUTARY 1 NEAR PULPIT ROCK AT COLORADO SPRINGS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°55'01", long 104°48'37", in NW¼SW¼ sec.17, T.13 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank 0.3 mi east of Interstate 25 at Colorado Springs, 0.3 mi north of Pulpit Rock, 0.5 mi upstream from mouth, and 5.8 mi southeast of Falcon Stadium at U.S. Air Force Academy. Elevation of gage is 6,260 ft above NGVD of 1929, from topographic map.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--June to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=385501104483701

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, col/100 mL (90902)	Fecal coliform, M-FC col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUN 25...	1050	0.03	7.5	8.2	685	23.5	E.011	<0.06	<0.02	E.02	130	170	4

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

Date	Suspended sediment load, tons/d (80155)
JUN 25...	0.00

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

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, col/100 mL (90902)	Fecal coliform, M-FC col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUN 05...	1310	8.4	7.3	133	11.5	0.182	0.48	0.07	0.33	E3000	E3100	237

E -- Estimated laboratory analysis value.

07104050 NORTH ROCKRIMMON CREEK ABOVE DELMONICO DRIVE AT COLORADO SPRINGS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°54'56", long 104°49'35", in SW¹/₄NE¹/₄ sec.18, T.13 S., R.66 W., El Paso County, Hydrologic Unit 11020003, 300 ft upstream from Delmonico Drive at Colorado Springs, 0.2 mi west of Interstate 25, 0.3 mi upstream from mouth, and 2.0 mi downstream from Woodmen Road. Elevation of site is 6,220 feet above NGVD of 1929, from topographic map.

DRAINAGE AREA.--1.82 mi².

PERIOD OF RECORD.-- June to September 2003. Miscellaneous field and suspended-sediment discharge data may be available, August 1998 to current year (seasonal peaks only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07104050

REMARKS.--Annual maximum discharge data are published in the "Maximum Discharge at Crest-Stage Partial-Record Stations" section of this report.

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)	Specific conductance, uS/cm wat unfltrd 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUN 25...	1220	0.04	8.1	8.2	2,090	22.0	E.109	13.3	E.01	E.03	110	E150	2

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

Date	Suspended sediment load, tons/d (80155)
JUN 25...	0.00

E -- Estimated laboratory analysis value.

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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)	Specific conductance, uS/cm wat unfltrd 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
AUG 30...	1025	3.0	7.8	7.9	431	15.5	0.174	2.48	0.09	0.17	1,600	4,500	271

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Suspended sediment load, tons/d (80155)
AUG 30...	2.2

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm wat unfltrd 25 degC (00095)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
JUN 06...	1430	3.8	427	--	2,360	24
JUN 06...	1431	3.8	427	--	2,330	24
JUN 25...	1220	0.04	2,090	22.0	2	0.00
AUG 30...	1025	3.0	431	15.5	271	2.2

385204104510101 MONUMENT CREEK TRIBUTARY 2 BELOW FILLMORE STREET AT COLORADO SPRINGS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°52'04", long 104°51'01", in SE¹/₄SE¹/₄ sec.35, T.13 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on right bank 0.5 mi southeast of Coronado High School at Colorado Springs, 0.6 mi downstream from Fillmore Street, 0.8 mi downstream from Mesa Water Treatment Plant pond, and 1.8 mi upstream from mouth. Elevation of gage is 6,340 ft above NGVD of 1929, from topographic map.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--June to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=385204104510101

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUN 25...	1415	0.30	7.4	8.4	576	17.5	<0.015	1.18	<0.02	<0.04	E32	E32	2

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

Date	Suspended sediment load, tons/d (80155)
JUN 25...	0.00

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

385124104501301 MONUMENT CREEK TRIBUTARY 2 AT SONDERMANN PARK AT COLORADO SPRINGS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°51'24", long 104°50'13", in SW¹/₄SE¹/₄ sec.1, T.13 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank at Sonderrmann Park at Colorado Springs, 200 ft downstream from small right-bank tributary, 0.2 mi east of Interstate 25, 0.4 mi upstream from mouth, and 1.6 mi southeast of Coronado High School. Elevation of gage is 6,060 ft above NGVD of 1929, from topographic map.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--June to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=385124104501301

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUN 25...	1545	0.46	7.0	8.2	654	17.0	0.022	0.90	<0.02	E.03	420	530	38

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

Date	Suspended sediment load, tons/d (80155)
JUN 25...	0.05

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

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
AUG 30...	1120	1.0	8.1	8.2	538	14.0	0.018	0.95	<0.02	0.05	E1600	4,200	49

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Suspended sediment load, tons/d (80155)
AUG 30...	0.14

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

07104905 MONUMENT CREEK AT BIJOU STREET AT COLORADO SPRINGS, CO

LOCATION.--Lat 38°50'14", long 104°49'44", in NW¹/₄NW¹/₄ sec.18, T.14 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank 250 ft downstream from bridge on Bijou Street at Colorado Springs, 250 ft east of Interstate 25, and 0.7 mi upstream from mouth.

DRAINAGE AREA.--235 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07104905

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,980 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and those above 300 ft³/s, which are poor. Natural flow of stream affected by storage reservoirs, transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,850 ft³/s, Aug. 31, 2003, gage height, 8.19 ft, from rating curve extended above 309 ft³/s; minimum daily, 4.0 ft³/s, July 21, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 2,850 ft³/s, Aug. 31, gage height, 8.19 ft, from rating curve extended above 309 ft³/s; minimum daily, 4.0 ft³/s, July 21.

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	---	---	---	---	---	---	e20	56	69	16	16	36
2	---	---	---	---	---	---	e20	56	24	12	19	44
3	---	---	---	---	---	---	19	54	32	13	25	76
4	---	---	---	---	---	---	18	53	87	16	31	20
5	---	---	---	---	---	---	37	52	99	12	12	21
6	---	---	---	---	---	---	59	44	33	14	9.8	31
7	---	---	---	---	---	---	20	42	45	15	9.1	35
8	---	---	---	---	---	---	23	39	28	12	10	20
9	---	---	---	---	---	---	25	40	26	8.7	35	20
10	---	---	---	---	---	---	22	56	23	8.5	8.8	20
11	---	---	---	---	---	---	20	29	19	9.4	10	20
12	---	---	---	---	---	---	19	33	28	15	17	22
13	---	---	---	---	---	---	20	32	27	15	7.5	22
14	---	---	---	---	---	---	20	30	22	10	7.0	22
15	---	---	---	---	---	---	34	40	16	14	6.5	e20
16	---	---	---	---	---	---	49	45	16	14	6.2	e17
17	---	---	---	---	---	---	36	28	266	11	6.0	e16
18	---	---	---	---	---	---	28	30	76	9.7	9.3	e15
19	---	---	---	---	---	---	39	30	135	20	8.7	e17
20	---	---	---	---	---	---	37	33	52	17	7.1	e17
21	---	---	---	---	---	---	38	31	26	4.0	6.4	e17
22	---	---	---	---	---	---	111	29	25	4.1	5.8	18
23	---	---	---	---	---	---	168	45	29	5.1	6.0	16
24	---	---	---	---	---	---	170	33	28	7.0	7.5	16
25	---	---	---	---	---	---	67	36	41	5.7	17	16
26	---	---	---	---	---	---	55	26	86	5.8	11	21
27	---	---	---	---	---	---	37	22	33	32	52	18
28	---	---	---	---	---	---	47	20	30	43	28	14
29	---	---	---	---	---	---	73	21	40	13	120	14
30	---	---	---	---	---	---	60	20	28	9.4	89	16
31	---	---	---	---	---	---	---	55	---	14	565	---
TOTAL	---	---	---	---	---	---	1,391	1,160	1,489	405.4	1,168.7	677
MEAN	---	---	---	---	---	---	46.4	37.4	49.6	13.1	37.7	22.6
MAX	---	---	---	---	---	---	170	56	266	43	565	76
MIN	---	---	---	---	---	---	18	20	16	4.0	5.8	14
AC-FT	---	---	---	---	---	---	2,760	2,300	2,950	804	2,320	1,340

e Estimated.

07104905 MONUMENT CREEK AT BIJOU STREET AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1979 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07104905

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT: April to September 2003 (seasonal records only).

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 5,070 mg/L, June 17, 2003; minimum daily mean, 6 mg/L, July 22, 2003.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 14,100 tons, June 17, 2003; minimum daily, 0.06 ton, July 22, 2003.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 5,070 mg/L, June 17; minimum daily mean, 6 mg/L, July 22.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 14,100 tons, June 17; minimum daily, 0.06 ton, July 22.

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 05...	1310	18	9.9	8.4	789	9.0	83.1	15.5	1.00	140	E.009	2.65	0.11
DEC 05...	1210	13	11.2	8.4	785	3.5	90.3	17.7	1.00	160	E.008	2.96	0.13
FEB 12...	1230	20	11.7	8.5	914	0.0	90	18	1.0	173	E.011	3.39	0.20
APR 30...	1140	61	8.5	8.1	427	15.0	41	7.3	1.37	75.5	0.017	1.20	0.24
JUL 22...	1250	4.5	6.5	8.3	832	28.5	92.1	18.3	1.17	208	E.013	1.72	0.10

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

Date	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd, ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recoverable, ug/L (01022)	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)
NOV 05...	0.229	<2.0	--	140	140	1.5	1.9	93	92	<0.10	0.27	2.0	2.3
DEC 05...	0.284	<2.0	--	140	E120	1.6	2.2	92	85	E.13	0.33	<1.0	2.1
FEB 12...	0.367	--	--	E84	60	1.33	E1	106	93.1	0.045	0.077	<0.8	E.6
APR 30...	0.605	--	40	--	44	--	3	53	52	--	--	--	--
JUL 22...	0.111	--	280	--	380	--	<2	81	97	--	--	--	--

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Cyanide water unfltrd, mg/L (00720)	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)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	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)
NOV 05...	E1.6	5.8	<0.01	<10.0	2,030	E.21	2.9	2.0	54	<0.018	<0.018	5.3	6.3
DEC 05...	3.3	11	<0.01	<10.0	3,270	<0.20	4.5	<2.0	81	<0.018	E.009	3.2	4.5
FEB 12...	2.55	6.27	<0.009	<10	2,940	0.12	3.94	2.71	82.9	<0.018	E.011	4.46	6.98
APR 30...	1.41	9.79	--	--	--	--	8.36	1.56	195	--	--	--	4.38
JUL 22...	2.40	4.13	--	--	--	--	0.19	5.87	7.8	--	--	--	4.66

07104905 MONUMENT CREEK AT BIJOU STREET AT COLORADO SPRINGS, CO—Continued

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

Date	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)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 05...	8.0	7.8	0.04	<0.04	<6.0	16	113	5.5
DEC 05...	2.0	10	0.15	<0.04	<6.0	E20	253	8.9
FEB 12...	8.45	7.39	<0.20	<0.16	5.8	22.3	267	14
APR 30...	3.11	2.93	--	--	3.1	40.5	511	84
JUL 22...	8.71	8.84	--	--	2.2	3.2	5	0.06

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

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
APR 23...	1600	293	--	7.7	228	7.5	21	3.6	0.40	32.3	0.133	0.686	0.11
AUG 27...	2210	149	6.7	7.9	244	20.5	26.9	4.00	0.28	39.2	0.155	1.52	0.04

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC, 0.7u MF col/100 mL (31625)	Arsenic water unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)
APR 23...	2.17	1,200	1,400	9	30	35	2.01	44.7	64.9	2.99	1,380	30.0	1.52
AUG 27...	2.39	24,000	24,000	6	21	27	1.94	50.7	57.2	1.21	1,100	24.7	2.38

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Selenium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	9H-Fluorene, water, unfltrd ug/L (34381)	Ace-naphthene, water, unfltrd ug/L (34205)	Ace-naphthylene, water, unfltrd ug/L (34200)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Anthra-cene, water, unfltrd ug/L (34220)	Atra-zine, water, fltrd, ug/L (39632)
APR 23...	4.18	3.4	280	<0.006	<0.0060	E.3	E.2	E.2	<0.015	<0.004	<0.0046	E.4	0.0099
AUG 27...	3.70	3.2	241	<0.006	E.005	E.0608	E.0564	<2	<0.006	<0.004	<0.0046	E.1480	E.006

07104905 MONUMENT CREEK AT BIJOU STREET AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benzo-[a]-anthra-cene, water, unfltrd ug/L (34526)	Benzo-[a]-pyrene, water, unfltrd ug/L (34247)	Benzo-[b]-fluor-anthene, water, unfltrd ug/L (34230)	Benzo-[g,h,i]-per-ylene, water, unfltrd ug/L (34521)	Benzo-[k]-fluor-anthene, water, unfltrd ug/L (34242)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	Chrys-ene, water, unfltrd ug/L (34320)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)
APR 23...	<0.0500	E.0080	E1	E2	E3	E1	E1.0	<0.002	E.540	<0.0200	<0.0050	E2	<0.0060
AUG 27...	<0.05	<0.010	E.4940	E.7530	E1	E.4580	E.4490	<0.002	E.504	<0.020	<0.030	E.8110	<0.006

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water, fltrd 0.7u GF ug/L (82682)	Desulf-inyl fipron-il, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Di-benzo-[a,h]-anthra-cene, wat unf ug/L (34556)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Desulf-inyl-fipron-il amide, wat flt ug/L (62169)	Fipron-il sulfide water, fltrd, ug/L (62167)	Fipron-il sulfone water, fltrd, ug/L (62168)
APR 23...	<0.0180	<0.0030	<0.0040	0.0315	E.4	<0.0048	<0.0210	<0.0020	<0.0090	<0.0050	<0.0090	<0.0050	<0.0050
AUG 27...	<0.018	<0.0030	<0.004	E.044	<3	<0.0048	<0.021	<0.0020	<0.009	<0.005	E.004	<0.005	<0.005

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fipron-il, water, fltrd, ug/L (62166)	Fluor-anthene water, unfltrd ug/L (34376)	Fonofos water, fltrd, ug/L (04095)	Indeno-[1,2,-3-cd]-pyrene, water, unfltrd ug/L (34403)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malath-ion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Nitro-benzene water unfltrd ug/L (34447)
APR 23...	<0.0070	4	<0.0027	E1	<0.0040	<0.0350	<0.0400	<0.0060	<0.0130	<0.0060	<0.0016	<0.0070	<2
AUG 27...	<0.007	E1	<0.0027	E.5410	<0.0040	<0.035	E.046	<0.006	<0.013	<0.006	<0.0016	<0.007	<2

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phenan-threne, water, unfltrd ug/L (34461)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Pyrene, water, unfltrd ug/L (34469)	Sima-zine, water, fltrd, ug/L (04035)
APR 23...	<0.0025	<0.010	<0.004	E.021	2	<0.0110	0.0170	<0.0041	<0.0100	<0.0110	<0.0230	3	<0.005
AUG 27...	<0.0025	<0.010	<0.004	<0.022	E.5780	<0.011	E.08	<0.040	<0.010	<0.011	<0.023	E1	<0.005

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)	Naphth-alene, water, unfltrd ug/L (34696)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)
APR 23...	<0.0300	<0.0340	<0.0170	<0.0048	<0.0023	<0.0090	E.2	--	--
AUG 27...	<0.016	<0.034	<0.017	<0.0048	<0.0023	<0.009	E.0673	4,230	1,700

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

07104905 MONUMENT CREEK AT BIJOU STREET AT COLORADO SPRINGS, CO—Continued

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV						
05...	1310	18	789	9.0	113	5.5
DEC						
05...	1210	13	785	3.5	253	8.9
FEB						
12...	1230	20	914	0.0	267	14
APR						
03...	1315	18	753	19.0	108	5.2
09...	1345	28	696	18.5	171	13
17...	1440	35	540	--	--	--
23...	1300	56	471	10.5	548	83
24...	1530	149	280	13.5	1,390	559
30...	1140	61	427	15.0	511	84
MAY						
05...	1405	54	433	--	--	--
15...	1200	31	526	18.0	100	8.4
JUN						
02...	1620	26	583	--	--	--
05...	1500	213	--	--	2,030	1,170
11...	1015	26	665	20.0	125	8.8
26...	1715	37	456	22.0	169	17
JUL						
22...	1250	4.5	832	28.5	5	0.06
30...	1355	11	669	28.0	81	2.4
AUG						
25...	1235	13	690	--	--	--
27...	2210	149	244	20.5	4,230	1,700
27...	2215	149	244	20.5	4,230	1,700
SEP						
22...	1100	20	680	15.0	110	5.9

07104905 MONUMENT CREEK AT BIJOU STREET AT COLORADO SPRINGS, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
APRIL									
1	e20	---	e3.5	56	512	78	69	1,510	873
2	e20	---	e3.5	56	513	78	24	---	e18
3	19	107	3.4	54	572	83	32	428	53
4	18	103	4.9	53	492	70	87	2,190	1,060
5	37	---	e68	52	---	e41	99	1,670	584
6	59	688	190	44	185	22	33	593	55
7	20	148	9.6	42	246	29	45	638	96
8	23	---	e11	39	285	30	28	162	12
9	25	163	11	40	258	32	26	---	e24
10	22	---	e7.4	56	---	e201	23	320	22
11	20	127	6.9	29	437	34	19	155	8.2
12	19	144	7.5	33	208	18	28	277	44
13	20	113	6.0	32	164	14	27	342	30
14	20	108	5.9	30	147	12	22	---	e15
15	34	---	e29	40	232	33	16	108	4.5
16	49	440	69	45	350	57	16	150	6.3
17	36	248	24	28	163	12	266	5,070	14,100
18	28	199	15	30	129	11	76	---	e296
19	39	242	28	30	152	13	135	1,790	2,020
20	37	---	e22	33	---	e35	52	1,670	443
21	38	292	32	31	443	37	26	811	58
22	111	2,720	2,330	29	291	22	25	381	26
23	168	2,520	1,970	45	434	94	29	245	19
24	170	1,700	894	33	394	131	28	---	e18
25	67	1,200	226	36	508	314	41	480	74
26	55	612	91	26	133	9.8	86	1,050	535
27	37	476	48	22	78	4.7	33	177	16
28	47	545	71	20	70	3.9	30	269	22
29	73	788	156	21	207	20	40	---	e39
30	60	567	92	20	---	e19	28	---	e22
31	---	---	---	55	1,310	431	---	---	---
TOTAL	1,391	---	6,435.6	1,160	---	1,989.4	1,489	---	20,593.0
JULY									
1	16	---	e11	16	248	10	36	---	e17
2	12	246	8.1	19	305	40	44	452	139
3	13	165	5.5	25	---	e28	76	---	e131
4	16	---	e5.2	31	585	102	20	---	e15
5	12	109	3.6	12	167	5.4	21	232	14
6	14	227	9.1	9.8	75	2.0	31	229	46
7	15	348	14	9.1	34	0.84	35	---	e31
8	12	282	9.1	10	---	e1.9	20	104	5.7
9	8.7	---	e6.1	35	1,490	465	20	100	5.4
10	8.5	---	e5.9	8.8	206	5.6	20	119	6.5
11	9.4	---	e6.5	10	---	e3.8	20	96	5.2
12	15	---	e10	17	165	11	22	---	e4.7
13	15	---	e4.7	7.5	---	e0.96	22	82	4.9
14	10	---	e3.1	7.0	31	0.59	22	93	5.6
15	14	---	e8.8	6.5	24	0.43	e20	---	e7.1
16	14	---	e3.6	6.2	26	0.44	e17	---	e11
17	11	---	e1.8	6.0	---	e0.43	e16	---	e9.3
18	9.7	---	e1.6	9.3	---	e3.5	e15	---	e6.3
19	20	---	e5.2	8.7	179	4.7	e17	---	e7.7
20	17	529	101	7.1	87	1.7	e17	---	e6.8
21	4.0	---	e0.11	6.4	44	0.77	e17	---	e7.1
22	4.1	6	0.06	5.8	---	e0.63	18	105	5.2
23	5.1	---	e0.08	6.0	---	e0.71	16	74	3.2
24	7.0	---	e0.12	7.5	49	1.1	16	87	3.8
25	5.7	---	e0.11	17	153	9.5	16	106	4.6
26	5.8	---	e0.14	11	75	2.1	21	133	7.6
27	32	624	115	52	829	346	18	---	e5.6
28	43	1,240	440	28	267	32	14	93	3.4
29	13	216	12	120	1,420	1,900	14	103	4.0
30	9.4	82	2.1	89	1,240	727	16	129	5.5
31	14	138	5.3	565	2,000	8,240	---	---	---
TOTAL	405.4	---	845.72	1,168.7	---	11,948.10	677	---	529.2

e Estimated.

07104905 MONUMENT CREEK AT BIJOU STREET AT COLORADO SPRINGS, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 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=07104905

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.77 inches, Aug. 30, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation for period April to September, 1.77 inches, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	0.01	0.16	0.00	0.00	0.00
2	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.20
3	---	---	---	---	---	---	0.00	0.01	0.11	0.00	0.05	0.20
4	---	---	---	---	---	---	0.00	0.00	0.44	0.00	0.13	0.01
5	---	---	---	---	---	---	0.19	0.01	0.47	0.00	0.01	0.03
6	---	---	---	---	---	---	0.26	0.00	0.11	0.00	0.00	0.05
7	---	---	---	---	---	---	0.00	0.00	0.20	0.00	0.00	0.08
8	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	0.00	0.14	0.34	0.00	0.04	0.00
10	---	---	---	---	---	---	0.00	0.22	0.02	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.23	0.00
12	---	---	---	---	---	---	0.00	0.00	0.05	0.01	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.12
14	---	---	---	---	---	---	0.00	0.00	0.44	0.01	0.00	0.01
15	---	---	---	---	---	---	0.03	0.15	0.00	0.16	0.00	0.00
16	---	---	---	---	---	---	0.00	0.01	0.00	0.07	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.09	0.00	0.03	0.00
18	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.05	0.00
19	---	---	---	---	---	---	0.04	0.03	0.96	0.17	0.00	0.00
20	---	---	---	---	---	---	0.01	0.00	0.01	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.62	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.15	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.16	1.00	0.00	0.00	0.01	0.00
25	---	---	---	---	---	---	0.00	0.11	0.63	0.00	0.01	0.00
26	---	---	---	---	---	---	0.00	0.03	0.14	0.34	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.08	0.51	0.00
28	---	---	---	---	---	---	0.00	0.00	0.25	0.53	0.22	0.00
29	---	---	---	---	---	---	0.00	0.02	0.10	0.01	0.00	0.00
30	---	---	---	---	---	---	0.00	0.01	0.00	0.01	1.77	0.00
31	---	---	---	---	---	---	---	0.22	---	0.00	0.16	---
TOTAL	---	---	---	---	---	---	---	1.97	4.53	1.39	3.22	0.70
MAX	---	---	---	---	---	---	---	1.00	0.96	0.53	1.77	0.20

07105000 BEAR CREEK NEAR COLORADO SPRINGS, CO

LOCATION.--Lat 38°49'21", long 104°53'17", in NE¹/₄NE¹/₄ sec.21, T.14 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank 30 ft east of 26th Street, 0.6 mi southwest of Bear Creek Nature Center, 3.4 mi upstream from mouth, and 3.5 mi west of courthouse in Colorado Springs.

DRAINAGE AREA.--6.89 mi².

PERIOD OF RECORD.--May 1992 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105000

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,520 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for July 10 through September 11 and estimated daily discharges, which are poor. 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	0.55	0.62	0.57	0.44	0.63	0.72	1.5	2.0	1.0	0.75	0.50	1.1
2	0.62	0.64	0.57	0.46	0.63	0.74	1.5	1.9	1.1	0.72	0.58	0.91
3	0.59	0.60	0.57	0.48	0.58	0.74	1.6	1.9	1.2	0.65	0.59	0.92
4	0.58	0.61	0.58	0.49	0.56	0.75	1.6	1.9	1.4	0.65	0.63	0.89
5	0.57	0.66	0.58	0.49	0.65	0.74	1.6	1.8	1.8	0.67	0.65	0.80
6	0.59	0.70	0.58	0.50	0.65	0.74	1.6	1.6	1.8	0.68	0.64	0.79
7	0.59	0.70	0.58	0.53	e0.65	0.78	1.5	1.6	1.7	0.60	0.62	0.76
8	0.59	0.70	0.58	0.54	0.64	0.79	1.4	1.5	1.8	0.55	0.64	0.72
9	0.62	0.70	0.58	0.54	e0.59	0.81	1.5	1.5	1.8	0.55	0.64	0.64
10	0.64	0.70	0.58	0.57	e0.61	0.82	1.6	1.5	1.7	0.57	0.58	0.61
11	0.64	0.69	0.57	0.58	0.64	0.85	1.8	1.4	1.7	0.67	0.62	0.58
12	0.65	0.64	0.54	0.58	0.66	0.88	1.8	1.4	1.7	0.72	0.73	0.57
13	0.67	0.69	0.55	0.59	0.68	0.92	1.9	1.4	1.7	0.69	0.66	0.57
14	0.63	0.64	0.54	0.59	0.73	0.94	2.0	1.3	1.7	0.58	0.67	0.58
15	0.59	0.63	0.54	0.59	0.70	0.98	2.1	1.4	1.7	0.61	0.65	0.55
16	0.58	0.60	0.53	0.59	0.70	0.98	2.1	1.4	1.7	0.69	0.63	0.52
17	0.59	0.61	0.51	0.60	0.70	0.98	2.2	1.3	1.7	0.60	0.65	0.50
18	0.58	0.60	0.51	0.57	0.70	0.92	2.1	1.2	1.7	0.58	0.67	0.52
19	0.58	0.60	0.52	0.62	0.70	0.81	2.1	1.3	1.8	0.58	0.64	0.53
20	0.60	0.60	0.54	0.58	0.68	1.00	2.0	1.3	2.0	0.59	0.61	0.50
21	0.59	0.61	0.58	0.58	0.69	1.1	1.9	1.1	1.6	0.55	0.60	0.51
22	0.59	0.62	0.55	0.58	0.70	1.0	1.9	1.1	1.4	0.50	0.62	0.55
23	0.64	0.60	0.53	0.59	0.71	1.1	1.9	1.1	1.2	0.52	0.64	0.52
24	0.60	0.59	0.53	0.58	e0.70	1.6	1.9	1.2	1.1	0.48	0.69	0.51
25	0.59	0.58	0.53	0.58	0.77	1.8	1.9	1.2	1.1	0.48	0.67	0.54
26	0.61	0.47	0.50	0.59	0.74	1.8	2.1	1.1	1.3	0.50	0.67	0.52
27	0.72	0.50	0.50	0.61	0.68	1.8	2.2	1.0	1.1	0.52	0.73	0.52
28	0.70	0.63	0.52	0.61	0.70	1.5	2.2	0.95	0.92	0.46	0.81	0.53
29	0.68	0.58	0.47	0.62	---	1.4	2.2	0.95	0.99	0.55	0.81	0.53
30	0.61	0.55	0.41	0.63	---	1.4	2.1	0.96	0.90	0.71	1.1	0.54
31	0.62	---	0.46	0.63	---	1.4	---	1.0	---	0.50	1.3	---
TOTAL	19.00	18.66	16.70	17.53	18.77	32.79	55.8	42.26	44.31	18.47	21.24	18.83
MEAN	0.61	0.62	0.54	0.57	0.67	1.06	1.86	1.36	1.48	0.60	0.69	0.63
MAX	0.72	0.70	0.58	0.63	0.77	1.8	2.2	2.0	2.0	0.75	1.3	1.1
MIN	0.55	0.47	0.41	0.44	0.56	0.72	1.4	0.95	0.90	0.46	0.50	0.50
AC-FT	38	37	33	35	37	65	111	84	88	37	42	37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	1.78	1.54	1.35	1.23	1.21	1.40	2.55	7.01	4.88	2.61	2.71	1.89
MAX	3.16	2.41	2.12	1.87	1.80	2.15	6.13	22.0	17.0	7.55	6.77	4.39
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(1999)	(1997)	(1995)	(1999)	(1997)
MIN	0.37	0.14	0.17	0.30	0.36	0.52	0.31	0.80	0.47	0.30	0.43	0.30
(WY)	(1993)	(1993)	(1993)	(1993)	(1993)	(1993)	(1993)	(2002)	(1993)	(1993)	(2002)	(1992)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1992 - 2003

ANNUAL TOTAL	242.59	324.36	
ANNUAL MEAN	0.66	0.89	2.59
HIGHEST ANNUAL MEAN			5.30 1999
LOWEST ANNUAL MEAN			0.41 1993
HIGHEST DAILY MEAN	1.6 Apr 14	2.2 Apr 17	89 Apr 30, 1999
LOWEST DAILY MEAN	0.24 Jul 1	0.41 Dec 30	0.02 Sep 18, 1992
ANNUAL SEVEN-DAY MINIMUM	0.31 Jun 25	0.46 Dec 29	0.05 Nov 7, 1992
MAXIMUM PEAK FLOW		3.4 Jun 19	a185 Apr 30, 1999
MAXIMUM PEAK STAGE		1.19 Jun 19	b2.80 Apr 30, 1999
ANNUAL RUNOFF (AC-FT)	481	643	1,870
10 PERCENT EXCEEDS	0.96	1.7	5.0
50 PERCENT EXCEEDS	0.63	0.65	1.6
90 PERCENT EXCEEDS	0.39	0.53	0.50

e Estimated.

a From rating curve extended above 122 ft³/s.

b From floodmarks.

07105000 BEAR CREEK NEAR COLORADO SPRINGS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105000

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)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, filtered, mg/L as N (00608)	Nitrite + nitrate water, filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L (00665)	E coli, modified, m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC, 0.7u MF col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUN 25...	1655	1.1	9.0	7.4	92	11.5	<0.015	E.03	<0.02	<0.04	E2	E1	3

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

Date	Suspended sediment load, tons/d (80155)
JUN 25...	0.01

< -- 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)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 09...	1550	0.65	112	10.0	APR 28...	1550	2.0	86	9.0
NOV 19...	1600	0.66	99	3.0	MAY 23...	1505	1.1	95	10.5
DEC 17...	1405	0.51	96	2.5	JUL 15...	1540	0.59	114	15.0
FEB 12...	1610	0.68	118	1.0	AUG 07...	1110	0.64	108	14.5
FEB 13...	1110	0.65	93	2.0	SEP 11...	1815	0.58	110	11.0
MAR 26...	1400	1.8	107	5.0					

384909104504401 BEAR CREEK ABOVE 8th STREET AT COLORADO SPRINGS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°49'09", long 104°50'44", in SW¹/₄NW¹/₄ sec.24, T.14 S., R.67 W., El Paso County, Hydrologic Unit 11020003, in Bear Creek Regional Park, on left bank 150 ft upstream from small right-bank tributary, 500 ft west of 8th Street at Colorado Springs, 0.3 mi southeast of Penrose Stadium, 0.6 mi west of Interstate 25, and 0.7 mi upstream from mouth.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--June to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=384909104504401

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
JUN 25...	1810	1.0	7.8	7.9	415	15.5	<0.015	0.41	<0.02	E.03	140	170	4

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Suspended sediment load, tons/d (80155)
JUN 25...	0.01

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

07105490 CHEYENNE CREEK AT EVANS AVENUE AT COLORADO SPRINGS, CO

LOCATION.--Lat 38°47'26", Long 104°51'49", in SW¼NW¼ sec.35, T.14 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on right bank 23 ft upstream from Evans Avenue at Colorado Springs, 30 ft downstream from the confluence of North and South Cheyenne Creeks, and 3.1 mi upstream from the mouth.

DRAINAGE AREA.--21.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1992 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105490

REVISED RECORDS.--WDR CO-93-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 6,280 ft above NGVD of 1929, from topographic map. Prior to June 13, 2000, at datum 1.00 ft higher.

REMARKS.--Records good except for July 8-9 and estimated daily discharges, which are poor. Natural flow of stream affected by several small reservoirs and diversions. 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	0.48	0.49	0.51	0.42	0.41	0.43	2.1	5.0	5.1	4.9	1.0	1.5
2	0.46	0.51	0.52	0.44	0.41	0.45	3.2	7.0	3.7	4.4	1.0	0.82
3	0.47	0.50	0.54	0.45	0.42	0.44	4.1	7.1	3.7	4.3	1.1	1.2
4	0.45	0.52	0.54	0.45	0.41	0.45	2.5	7.2	2.1	6.5	1.1	1.4
5	0.44	0.54	0.54	0.45	0.41	0.45	1.7	6.7	4.9	10	1.1	1.1
6	0.45	0.54	0.55	0.45	0.40	0.46	1.6	6.8	6.1	10	1.2	1.1
7	0.47	0.51	0.54	0.45	e0.40	0.47	1.4	7.5	6.0	9.7	1.2	1.5
8	0.49	0.51	0.54	0.45	0.40	0.47	1.3	8.2	7.8	8.0	1.2	1.5
9	0.48	0.48	0.54	0.44	0.41	0.47	1.4	8.0	8.8	0.69	1.1	1.2
10	0.45	0.49	0.51	0.44	0.41	0.47	1.3	8.4	9.0	1.5	1.1	1.0
11	0.45	0.49	0.49	0.42	0.41	0.48	1.3	8.0	8.7	1.7	1.8	0.93
12	0.48	0.50	0.50	0.43	0.40	0.50	1.6	7.8	6.6	1.7	1.3	0.79
13	0.49	0.52	0.49	0.42	0.41	0.49	2.9	7.7	2.5	1.9	0.88	0.78
14	0.49	0.49	0.47	0.41	0.41	0.49	3.3	7.8	2.8	1.7	0.86	0.81
15	0.50	0.50	0.46	0.41	0.41	0.49	3.1	8.1	2.7	4.1	0.88	0.77
16	0.50	0.54	0.46	0.41	0.41	0.43	4.1	8.6	2.8	1.0	0.90	0.80
17	0.51	0.54	0.46	0.42	0.45	0.36	6.7	8.9	4.2	0.53	0.87	0.82
18	0.51	0.50	0.45	0.41	0.45	0.38	6.9	7.4	3.0	0.74	0.91	0.82
19	0.51	0.50	0.45	0.42	0.45	0.40	6.9	6.7	e5.0	0.76	0.82	0.82
20	0.52	0.51	0.45	0.42	0.46	0.42	6.3	6.9	e9.0	0.81	0.76	0.83
21	0.53	0.53	0.45	0.41	0.45	0.42	5.9	6.5	5.9	0.76	0.69	0.78
22	0.55	0.54	0.45	0.41	0.45	0.44	4.7	6.4	2.3	0.88	0.68	0.81
23	0.58	0.54	0.45	0.41	0.45	0.45	2.9	6.1	5.5	0.81	0.74	0.78
24	0.56	0.54	0.45	0.41	e0.44	0.56	1.7	5.5	11	0.92	0.67	0.77
25	0.52	0.54	0.45	0.41	e0.42	1.3	1.4	5.8	13	1.2	0.65	0.74
26	0.46	0.53	0.45	0.42	0.41	3.1	1.4	6.0	10	1.3	0.67	0.70
27	0.54	0.51	0.44	0.42	0.41	5.2	1.3	5.2	7.5	2.0	0.68	0.70
28	0.51	0.50	0.45	0.43	0.41	4.4	2.1	4.4	5.1	1.2	0.73	0.82
29	0.47	0.50	0.45	0.41	---	3.7	1.9	1.8	5.1	1.2	0.70	0.95
30	0.47	0.49	0.45	0.41	---	3.4	1.7	2.8	6.4	1.5	0.76	0.60
31	0.46	---	0.44	0.41	---	2.8	---	2.8	---	0.97	1.1	---
TOTAL	15.25	15.40	14.94	13.16	11.78	34.77	88.7	203.1	176.3	87.67	29.15	28.14
MEAN	0.49	0.51	0.48	0.42	0.42	1.12	2.96	6.55	5.88	2.83	0.94	0.94
MAX	0.58	0.54	0.55	0.45	0.46	5.2	6.9	8.9	13	10	1.8	1.5
MIN	0.44	0.48	0.44	0.41	0.40	0.36	1.3	1.8	2.1	0.53	0.65	0.60
AC-FT	30	31	30	26	23	69	176	403	350	174	58	56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	(1992)	(1993)	(1994)	(1995)	(1996)	(1997)	(1998)	(1999)	(2000)	(2001)	(2002)	(2003)
MEAN	3.61	3.15	2.45	2.32	2.17	2.59	8.80	31.2	23.8	7.66	10.9	4.39
MAX	7.31	5.56	5.15	4.54	5.20	7.34	25.5	86.4	93.1	30.5	39.7	11.2
(WY)	(1997)	(1998)	(1998)	(1996)	(1998)	(1998)	(1999)	(1994)	(1995)	(1995)	(1999)	(1997)
MIN	0.49	0.51	0.46	0.42	0.42	0.53	0.81	0.47	0.37	0.59	0.40	0.51
(WY)	(2003)	(2003)	(1993)	(2003)	(2003)	(1993)	(2002)	(2002)	(2002)	(2001)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1992 - 2003
ANNUAL TOTAL	239.15	718.36	
ANNUAL MEAN	0.66	1.97	8.89
HIGHEST ANNUAL MEAN			21.8 1995
LOWEST ANNUAL MEAN			0.72 2002
HIGHEST DAILY MEAN	15 Jul 2	13 Jun 25	453 Apr 30, 1999
LOWEST DAILY MEAN	0.28 Jul 20	0.36 Mar 17	0.10 Apr 8, 1993
ANNUAL SEVEN-DAY MINIMUM	0.31 Jun 7	0.40 Feb 6	0.23 Mar 6, 1993
MAXIMUM PEAK FLOW		57 Jul 15	a595 Jun 10, 1997
MAXIMUM PEAK STAGE		2.14 Jul 15	b3.51 Jun 10, 1997
ANNUAL RUNOFF (AC-FT)	474	1,420	6,440
10 PERCENT EXCEEDS	1.0	6.5	18
50 PERCENT EXCEEDS	0.50	0.69	3.1
90 PERCENT EXCEEDS	0.37	0.42	0.51

e Estimated.
a From rating curve extended above 437 ft³/s.
b Datum then in use.

07105490 CHEYENNE CREEK AT EVANS AVENUE AT COLORADO SPRINGS, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 2002 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=07105490

GAGE.--Tipping-bucket rain gage with satellite telemetry.

REMARKS.--Records for June 19 are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.02 inches, July 2, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 0.76 inch, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.29	---	---	---	---	---	0.00	0.00	0.27	0.02	0.01	0.00
2	0.05	---	---	---	---	---	0.00	0.01	0.00	0.00	0.03	0.03
3	0.03	---	---	---	---	---	0.00	0.00	0.01	0.00	0.06	0.16
4	0.12	---	---	---	---	---	0.00	0.00	0.52	0.00	0.04	0.00
5	0.00	---	---	---	---	---	0.09	0.00	0.49	0.00	0.03	0.03
6	0.32	---	---	---	---	---	0.32	0.00	0.10	0.00	0.02	0.08
7	0.00	---	---	---	---	---	0.01	0.00	0.09	0.00	0.00	0.06
8	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.06	0.00
9	0.00	---	---	---	---	---	0.00	0.09	0.06	0.00	0.02	0.01
10	0.00	---	---	---	---	---	0.00	0.21	0.11	0.00	0.00	0.00
11	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.47	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.08	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.09
14	0.00	---	---	---	---	---	0.00	0.00	0.23	0.00	0.00	0.00
15	0.00	---	---	---	---	---	0.03	0.19	0.00	0.61	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.01	0.17	0.09	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	0.10	0.00	0.01	0.00
18	0.00	---	---	---	---	---	0.00	0.01	0.01	0.00	0.02	0.00
19	0.00	---	---	---	---	---	0.05	0.10	0.58	0.19	0.01	0.00
20	0.00	---	---	---	---	---	0.01	0.01	0.05	0.00	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	---	---	---	---	---	0.37	0.00	0.00	0.01	0.00	0.00
23	0.00	---	---	---	---	---	0.09	0.06	0.00	0.01	0.37	0.00
24	0.00	---	---	---	---	---	0.18	0.01	0.00	0.00	0.00	0.00
25	0.31	---	---	---	---	---	0.00	0.08	0.44	0.00	0.01	0.00
26	0.44	---	---	---	---	---	0.00	0.01	0.02	0.55	0.08	0.00
27	0.37	---	---	---	---	---	0.00	0.00	0.00	0.11	0.06	0.00
28	0.00	---	---	---	---	---	0.00	0.00	0.43	0.07	0.32	0.00
29	0.03	---	---	---	---	---	0.00	0.00	0.10	0.03	0.01	0.00
30	0.00	---	---	---	---	---	0.00	0.04	0.00	0.00	0.76	0.00
31	0.00	---	---	---	---	---	---	0.15	---	0.00	0.10	---
TOTAL	1.96	---	---	---	---	---	1.15	0.98	3.88	1.69	2.49	0.46
MAX	0.44	---	---	---	---	---	0.37	0.21	0.58	0.61	0.76	0.16

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO

LOCATION.--Lat 38°48'59", long 104°49'20", in NE¹/₄SW¹/₄ sec.19, T.14 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank 10 ft downstream from Cheyenne Creek, 31 ft upstream from Nevada Avenue bridge at Colorado Springs, and 1.3 mi downstream from Monument Creek.

DRAINAGE AREA.--392 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to September 1924, January 1976 to current year. Monthly discharge only for some periods, published in WSP 1311. Statistical summary computed for 1976 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105500

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,900 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for Oct. 1-4 and estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power developments, transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants.

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	27	22	16	18	16	39	29	52	112	19	14	55
2	81	36	17	15	14	e39	30	54	37	17	20	56
3	23	26	16	19	15	e25	26	52	32	15	22	115
4	17	21	15	18	e14	e14	22	51	118	14	38	47
5	14	19	14	17	19	e13	33	49	162	13	13	30
6	11	19	14	17	14	e16	61	44	51	14	11	38
7	11	18	16	16	14	19	27	44	51	13	11	62
8	13	16	19	17	14	22	28	42	33	12	12	42
9	13	15	15	16	14	15	29	43	44	11	48	25
10	13	17	16	e12	19	14	28	67	42	9.4	16	28
11	12	18	19	16	21	14	26	37	33	9.7	15	26
12	11	19	19	18	24	14	25	39	38	12	20	26
13	12	19	17	16	24	15	25	38	50	13	11	28
14	13	19	18	15	28	15	26	37	52	10	10	31
15	12	18	18	14	18	13	33	46	30	19	9.9	22
16	11	18	19	e12	16	11	42	56	31	17	10	18
17	13	18	18	16	17	16	37	36	236	13	10	17
18	16	17	17	e14	19	93	33	33	74	10	13	16
19	14	16	15	17	56	46	36	33	269	19	15	18
20	15	16	e11	16	25	78	36	35	158	35	13	18
21	14	17	17	13	18	46	36	34	53	9.2	13	18
22	16	17	17	12	16	32	128	31	32	9.3	12	19
23	24	16	17	e13	14	32	156	42	26	11	13	19
24	19	16	18	14	e10	93	144	32	25	10	13	18
25	16	17	14	14	e12	69	56	89	43	8.7	20	16
26	38	16	14	15	18	26	45	50	184	9.6	15	19
27	138	17	19	14	20	29	34	30	32	38	90	18
28	31	18	21	13	30	28	36	22	29	62	31	16
29	23	18	20	13	---	26	66	26	43	25	122	18
30	21	17	18	15	---	26	55	24	31	14	163	19
31	21	---	17	15	---	28	---	87	---	13	622	---
TOTAL	713	556	521	470	539	966	1,388	1,355	2,151	504.9	1,445.9	898
MEAN	23.0	18.5	16.8	15.2	19.2	31.2	46.3	43.7	71.7	16.3	46.6	29.9
MAX	138	36	21	19	56	93	156	89	269	62	622	115
MIN	11	15	11	12	10	11	22	22	25	8.7	9.9	16
AC-FT	1,410	1,100	1,030	932	1,070	1,920	2,750	2,690	4,270	1,000	2,870	1,780

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

MEAN	46.0	40.4	32.7	30.2	28.5	39.6	89.2	192	126	77.1	86.4	46.8
MAX	212	143	81.3	68.1	57.8	92.6	486	944	555	268	341	116
(WY)	(1985)	(1985)	(1985)	(2000)	(2000)	(1998)	(1999)	(1999)	(1997)	(1995)	(1999)	(1999)
MIN	10.6	11.4	11.8	5.12	6.27	11.4	14.8	23.5	16.3	12.9	9.54	7.98
(WY)	(1978)	(1979)	(1979)	(1979)	(1979)	(1976)	(1978)	(1976)	(1976)	(1976)	(2002)	(1978)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1976 - 2003
ANNUAL TOTAL	9,157.0	11,507.8	
ANNUAL MEAN	25.1	31.5	71.4
HIGHEST ANNUAL MEAN			228 1999
LOWEST ANNUAL MEAN			23.2 1978
HIGHEST DAILY MEAN	761 Jul 5	622 Aug 31	7,510 Apr 30, 1999
LOWEST DAILY MEAN	5.1 Sep 7	8.7 Jul 25	2.0 Aug 19, 1978
ANNUAL SEVEN-DAY MINIMUM	7.1 Jul 27	11 Jul 8	3.3 Jan 3, 1979
MAXIMUM PEAK FLOW		3,540 Aug 31	a10,100 Sep 2, 1994
MAXIMUM PEAK STAGE		6.19 Aug 31	b12.12 Sep 2, 1994
ANNUAL RUNOFF (AC-FT)	18,160	22,830	51,710
10 PERCENT EXCEEDS	27	53	147
50 PERCENT EXCEEDS	19	19	36
90 PERCENT EXCEEDS	9.7	13	15

e Estimated.

a From slope-area measurement of peak flow.

b From floodmark.

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1975 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105500

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT: August 1995 to September 1997 (seasonal peaks only), April 1998 to current year (seasonal records only).

INSTRUMENTATION.--Pumping sediment sampler with satellite telemetry.

REMARKS.--Water-quality data collected July 25 were obtained to determine base-flow constituent concentrations.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 8,640 mg/L, Apr. 29, 1999; minimum daily mean, 11 mg/L, July 11, 2003.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 275,000 tons (estimated), Apr. 30, 1999; minimum daily, 0.29 ton, July 11, 2003.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 3,730 mg/L, Aug. 31; minimum daily mean, 11 mg/L, July 11.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 15,700 tons, Aug. 31; minimum daily, 0.29 ton, July 11.

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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 05...	1115	19	10.2	8.2	936	6.0	88	23.1	1.40	210	0.021	2.60	0.08
DEC 03...	1000	17	11.7	8.0	883	1.5	95.4	22.0	1.30	190	E.014	3.15	0.12
FEB 12...	1445	26	11.1	8.4	932	3.0	88	21	1.2	192	E.009	3.24	0.17
APR 30...	1330	56	7.8	8.2	482	17.0	--	--	1.58	94.4	E.011	1.29	0.22
JUN 24...	1810	23	6.6	7.9	566	22.5	57.4	12.9	1.52	95.1	--	--	--
JUL 22...	1415	9.6	6.1	8.0	1,010	28.5	101	25.8	1.53	275	E.011	1.76	0.08

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

Date	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, modif. m-TEC, col/100 mL (90902)	E coli, MF, col/100 mL (31633)	Fecal coliform, M-FC, col/100 mL (31625)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recoverable, ug/L (01022)	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)
NOV 05...	0.180	<2.0	--	350	260	1.6	2.8	108	117	0.27	0.69	2.6	2.7
DEC 03...	0.191	<2.0	--	160	E120	1.7	2.2	112	104	<0.10	0.40	2.6	2.6
FEB 12...	0.465	--	--	140	52	1.29	3.3	106	102	0.201	0.415	<0.8	1.4
APR 30...	0.541	--	65	--	92	--	--	--	--	--	--	--	--
JUN 24...	--	--	E940	--	E1100	--	<2.0	79	71	--	--	--	--
JUL 22...	0.093	--	E160	--	500	--	E1.0	122	134	--	--	--	--

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO—Continued

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Cyanide water unfltrd mg/L (00720)	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)	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)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
NOV 05...	1.9	6.7	<0.01	<10.0	2,510	0.20	11	348	583	<0.018	<0.018	6.3	7.6
DEC 03...	2.6	5.7	<0.01	<10.0	1,600	E.22	3.0	84.0	137	<0.018	<0.018	4.3	4.8
FEB 12...	2.44	10.1	<0.009	<10.0	5,350	0.09	8.20	90.9	316	<0.018	0.020	4.54	9.58
APR 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 24...	1.67	3.14	--	--	--	--	1.89	8.27	40.9	--	--	--	3.06
JUL 22...	2.50	3.02	--	--	--	--	0.30	26.5	26.5	--	--	--	4.16

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

Date	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)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)
NOV 05...	8.2	8.9	<0.04	0.06	101	164	96	4.9
DEC 03...	9.9	9.3	<0.04	<0.04	31	51	116	5.3
FEB 12...	7.92	6.92	<0.20	<0.16	39.0	124	513	36
APR 30...	--	--	--	--	--	--	--	--
JUN 24...	4.23	4.04	--	--	3.5	13.3	45	2.8
JUL 22...	7.75	7.04	--	--	6.3	7.6	--	--

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

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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 un f uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Fluor-ide, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)
APR 23...	1830	457	9.9	7.4	286	6.5	29	5.0	0.49	45.8	0.117	1.04	0.09
JUL 25...	0945	9.3	7.2	7.9	1,000	23.0	--	--	--	--	--	--	--
JUL 28...	1420	91	6.3	8.0	337	21.5	33.0	6.60	0.53	65.7	0.296	1.31	0.02

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos-phorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, col/ 100 mL (90902)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Arsenic water unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)
APR 23...	2.43	1,300	1,800	9.5	31	35	1.78	51.5	82.2	4.06	1,220	32.1	2.53
JUL 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 28...	0.663	E24000	>12000	3.0	40	46	2.44	24.7	37.1	21.6	346	8.73	2.26

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Selenium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	9H-Fluorene, water, unfltrd ug/L (34381)	Ace-naphth-ene, water, unfltrd ug/L (34205)	Ace-naphth-ylene, water, unfltrd ug/L (34200)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Anthra-cene, water, unfltrd ug/L (34220)	Atra-zine, water, fltrd, ug/L (39632)
APR 23...	5.04	3.2	297	<0.006	<0.0060	E.2	E.08	E.2	<0.010	<0.004	<0.0046	E.2	0.0098
JUL 25...	--	--	--	<0.006	<0.006	<2	<2	<2	<0.006	<0.004	<0.0046	E.0131	<0.007
28...	2.48	7.3	212	<0.006	<0.006	E.1110	E.0752	<2	<0.006	<0.004	<0.0046	E.3800	0.0138

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benzo-[a]-anthra-cene, water, unfltrd ug/L (34526)	Benzo-[a]-pyrene, water, unfltrd ug/L (34247)	Benzo-[b]-fluor-anthene, water, unfltrd ug/L (34230)	Benzo-[g,h,i]-per-ylene, water, unfltrd ug/L (34521)	Benzo-[k]-fluor-anthene, water, unfltrd ug/L (34242)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyri-fos water, fltrd, ug/L (38933)	Chrys-ene, water, unfltrd ug/L (34320)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)
APR 23...	<0.0500	<0.0100	E.4	E.6	E.8	E.4	E.4	<0.002	E.448	<0.0200	<0.0050	E.6	<0.0060
JUL 25...	<0.05	<0.010	<2	E.0297	<2	<3	<2	<0.002	<0.041	<0.020	<0.005	E.0177	<0.006
28...	<0.05	<0.010	E2	E3	5	E2	E2	<0.002	E.354	<0.020	<0.005	4	<0.006

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water, fltrd 0.7u GF ug/L (82682)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Di-benzo-[a,h]-anthra-cene, wat unf ug/L (34556)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Desulf-inyl fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)
APR 23...	<0.0180	<0.0030	<0.0040	0.0450	E.2	<0.0048	<0.0210	<0.0020	<0.0090	<0.0050	<0.0090	<0.0050	<0.0050
JUL 25...	<0.018	<0.0030	<0.004	<0.005	<3	<0.0048	<0.021	<0.0020	<0.009	<0.005	<0.009	<0.005	<0.005
28...	<0.018	<0.0030	<0.004	<0.005	E.5850	<0.0048	<0.021	<0.0020	<0.009	<0.005	<0.009	<0.005	<0.005

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fipro-nil, water, fltrd, ug/L (62166)	Fluor-anthene, water, unfltrd ug/L (34376)	Fonofos, water, fltrd, ug/L (04095)	Indeno-[1,2,3-cd]-pyrene, water, unfltrd ug/L (34403)	Lindane, water, fltrd, ug/L (39341)	Linuron, water, fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Nitro-benzene, water, unfltrd ug/L (34447)
APR 23...	<0.0070	E1	<0.0027	E.4	<0.0040	<0.0350	<0.0300	<0.0060	<0.0130	<0.0060	<0.0016	<0.0070	<2
JUL 25...	<0.007	E.0638	<0.0027	<3	<0.0040	<0.035	<0.027	<0.006	<0.013	<0.006	<0.0016	<0.007	<2
28...	<0.007	6	<0.0027	E2	<0.0040	<0.035	<0.027	<0.006	<0.013	<0.006	<0.0016	<0.007	<2

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phenan-threne, water, unfltrd ug/L (34461)	Phorate, water, fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Pyrene, water, unfltrd ug/L (34469)	Simaz-ine, water, fltrd, ug/L (04035)
APR 23...	<0.0025	<0.010	<0.004	E.021	E.6	<0.0110	E.0133	<0.0041	<0.0100	<0.0110	<0.0230	E1	<0.005
JUL 25...	<0.0025	<0.010	<0.004	<0.022	E.0301	<0.011	0.0244	<0.0041	<0.010	<0.011	<0.023	E.0563	<0.005
28...	<0.0025	<0.010	<0.004	<0.022	E2	<0.011	0.0258	<0.075	<0.010	<0.011	<0.023	5	<0.005

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Naphth- alene, water, unfltrd ug/L (34696)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
APR 23...	<0.0160	<0.0340	<0.0170	<0.0048	<0.0023	<0.0090	E.09	6,060	7,480
JUL 25...	<0.016	<0.034	<0.017	<0.0048	<0.0023	<0.009	<2	--	--
28...	<0.016	<0.034	<0.017	<0.0048	<0.0023	<0.009	E.1140	623	153

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

WATER-QUALITY DATA DURING MICROBIOLOGICAL SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)
APR 09...	1615	30	788	19.5	E20	E21
MAY 12...	1345	39	580	20.5	51	50
28...	1300	24	732	26.5	120	140
JUN 11...	1015	33	679	18.0	200	290
JUL 08...	1350	13	833	28.5	340	540
AUG 06...	0955	11	807	20.5	420	550
21...	1210	13	834	25.5	240	350
SEP 03...	1930	206	297	16.5	3,300	6,400
18...	1050	17	771	12.0	340	340

E -- Estimated laboratory analysis value.

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO—Continued

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT						
03...	1555	22	789	--	--	--
04...	1325	17	892	--	--	--
04...	1330	18	892	17.0	44	2.1
22...	1355	16	808	--	--	--
28...	1455	26	730	--	--	--
28...	1510	29	730	13.0	55	4.3
NOV						
13...	1425	20	878	--	--	--
DEC						
10...	1510	15	924	3.5	--	--
27...	1340	23	934	--	--	--
JAN						
14...	1455	18	866	4.0	--	--
FEB						
13...	1235	25	873	--	--	--
MAR						
06...	1025	13	1,150	--	--	--
31...	1615	31	753	16.5	142	12
31...	1620	31	753	--	--	--
APR						
08...	1425	28	776	16.5	--	--
08...	1430	29	776	16.5	160	13
23...	1645	266	332	7.0	3,940	2,830
29...	1610	64	442	--	--	--
MAY						
14...	1635	37	502	--	--	--
14...	1800	35	502	15.5	92	8.7
JUN						
11...	1535	39	627	--	--	--
11...	1545	38	627	25.0	61	6.3
26...	1200	94	317	20.0	608	154
26...	1225	86	317	--	--	--
JUL						
10...	1515	8.9	971	29.0	10	0.24
AUG						
07...	1245	13	856	27.0	45	1.6
07...	1255	12	856	27.0	--	--
26...	1615	16	724	22.0	54	2.3
26...	1620	17	724	--	--	--
29...	1740	330	195	--	--	--
29...	1745	256	195	16.5	3,720	2,570
SEP						
16...	1415	19	794	--	--	--

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
OCTOBER			NOVEMBER			DECEMBER			
1	27	104	21	22	---	---	16	---	---
2	81	516	199	36	---	---	17	---	---
3	23	83	5.2	26	---	---	16	---	---
4	17	59	2.8	21	---	---	15	---	---
5	14	---	e1.9	19	---	---	14	---	---
6	11	55	1.6	19	---	---	14	---	---
7	11	---	e1.5	18	---	---	16	---	---
8	13	47	1.6	16	---	---	19	---	---
9	13	53	1.9	15	---	---	15	---	---
10	13	---	e2.0	17	---	---	16	---	---
11	12	---	e2.0	18	---	---	19	---	---
12	11	---	e2.0	19	---	---	19	---	---
13	12	---	e2.3	19	---	---	17	---	---
14	13	68	2.4	19	---	---	18	---	---
15	12	51	1.7	18	---	---	18	---	---
16	11	40	1.2	18	---	---	19	---	---
17	13	---	e2.0	18	---	---	18	---	---
18	16	144	5.8	17	---	---	17	---	---
19	14	107	4.1	16	---	---	15	---	---
20	15	---	e3.9	16	---	---	e11	---	---
21	14	88	3.4	17	---	---	17	---	---
22	16	---	e3.9	17	---	---	17	---	---
23	24	258	13	16	---	---	17	---	---
24	19	111	5.0	16	---	---	18	---	---
25	16	101	4.0	17	---	---	14	---	---
26	38	222	81	16	---	---	14	---	---
27	138	766	477	17	---	---	19	---	---
28	31	124	11	18	---	---	21	---	---
29	23	---	e7.7	18	---	---	20	---	---
30	21	200	11	17	---	---	18	---	---
31	21	208	12	---	---	---	17	---	---
TOTAL	713	---	894.9	556	---	---	521	---	---
JANUARY			FEBRUARY			MARCH			
1	18	---	---	16	---	---	39	---	---
2	15	---	---	14	---	---	e39	---	---
3	19	---	---	15	---	---	e25	---	---
4	18	---	---	e14	---	---	e14	---	---
5	17	---	---	19	---	---	e13	---	---
6	17	---	---	14	---	---	e16	---	---
7	16	---	---	14	---	---	19	---	---
8	17	---	---	14	---	---	22	---	---
9	16	---	---	14	---	---	15	---	---
10	e12	---	---	19	---	---	14	---	---
11	16	---	---	21	---	---	14	---	---
12	18	---	---	24	---	---	14	---	---
13	16	---	---	24	---	---	15	---	---
14	15	---	---	28	---	---	15	---	---
15	14	---	---	18	---	---	13	---	---
16	e12	---	---	16	---	---	11	---	---
17	16	---	---	17	---	---	16	---	---
18	e14	---	---	19	---	---	93	---	---
19	17	---	---	56	---	---	46	---	---
20	16	---	---	25	---	---	78	---	---
21	13	---	---	18	---	---	46	---	---
22	12	---	---	16	---	---	32	---	---
23	e13	---	---	14	---	---	32	---	---
24	14	---	---	e10	---	---	93	---	---
25	14	---	---	e12	---	---	69	---	---
26	15	---	---	18	---	---	26	---	---
27	14	---	---	20	---	---	29	---	---
28	13	---	---	30	---	---	28	---	---
29	13	---	---	---	---	---	26	---	---
30	15	---	---	---	---	---	26	---	---
31	15	---	---	---	---	---	28	---	---
TOTAL	470	---	---	539	---	---	966	---	---

ARKANSAS RIVER BASIN

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	29	---	e12	52	453	64	112	---	e527
2	30	---	e13	54	414	61	37	---	e33
3	26	---	e12	52	---	e52	32	236	25
4	22	---	e11	51	327	45	118	881	671
5	33	231	25	49	311	41	162	711	494
6	61	---	e103	44	303	36	51	---	e47
7	27	123	8.8	44	163	19	51	387	60
8	28	169	13	42	178	20	33	178	16
9	29	240	19	43	189	22	44	346	65
10	28	233	18	67	743	173	42	240	31
11	26	168	12	37	134	13	33	80	7.1
12	25	125	8.4	39	172	18	38	---	e26
13	25	---	e7.8	38	120	12	50	398	60
14	26	148	10	37	95	9.5	52	360	105
15	33	204	19	46	---	e27	30	97	8.3
16	42	540	61	56	380	67	31	---	e5.0
17	37	407	40	36	209	20	236	1,970	4,470
18	33	---	e27	33	124	11	74	1,100	247
19	36	240	24	33	121	11	269	1,700	4,170
20	36	---	e20	35	---	e31	158	1,470	1,020
21	36	178	17	34	321	29	53	605	88
22	128	1,740	1,850	31	190	16	32	308	28
23	156	2,710	1,540	42	---	e69	26	180	13
24	144	2,540	1,210	32	215	19	25	93	6.2
25	56	841	134	89	932	601	43	266	59
26	45	340	41	50	186	27	184	1,130	1,050
27	34	165	16	30	140	13	32	119	11
28	36	---	e20	22	137	8.1	29	257	28
29	66	639	113	26	---	e24	43	449	69
30	55	481	72	24	---	e9.8	31	278	25
31	---	---	---	87	---	e352	---	---	---
TOTAL	1,388	---	5,477.0	1,355	---	1,920.4	2,151	---	13,464.6
		JULY		AUGUST			SEPTEMBER		
1	19	135	7.1	14	105	3.9	55	---	e113
2	17	---	e5.4	20	351	76	56	---	e81
3	15	---	e4.4	22	610	77	115	---	e294
4	14	---	e3.4	38	727	139	47	---	e24
5	13	---	e2.8	13	---	e2.7	30	---	e6.3
6	14	---	e2.4	11	---	e1.7	38	---	e24
7	13	---	e1.9	11	40	1.2	62	---	e56
8	12	---	e1.3	12	---	e3.1	42	---	e15
9	11	---	e0.73	48	915	376	25	---	e7.0
10	9.4	13	0.32	16	238	11	28	134	10
11	9.7	11	0.29	15	---	e6.6	26	---	e11
12	12	14	0.47	20	172	12	26	---	e13
13	13	---	e0.69	11	---	e1.1	28	185	14
14	10	---	e0.74	10	25	0.67	31	---	e13
15	19	67	6.9	9.9	26	0.71	22	---	e7.9
16	17	---	e9.3	10	19	0.52	18	105	5.1
17	13	---	e5.0	10	14	0.39	17	---	e5.2
18	10	---	e2.5	13	---	e1.5	16	130	5.8
19	19	---	e30	15	65	2.6	18	100	4.7
20	35	323	85	13	52	1.8	18	79	3.9
21	9.2	---	e4.0	13	---	e1.3	18	88	4.3
22	9.3	---	e4.0	12	25	0.85	19	---	e4.9
23	11	157	4.5	13	---	e0.67	19	---	e4.6
24	10	---	e4.4	13	---	e1.0	18	---	e4.3
25	8.7	---	e3.6	20	---	e5.6	16	---	e3.7
26	9.6	---	e4.2	15	54	2.2	19	85	4.4
27	38	283	49	90	921	785	18	---	e4.1
28	62	1,080	685	31	394	65	16	---	e3.7
29	25	949	144	122	1,320	1,420	18	---	e4.0
30	14	215	8.0	163	1,920	1,890	19	---	e4.3
31	13	91	3.2	622	3,730	15,700	---	---	---
TOTAL	504.9	---	1,084.54	1,445.9	---	20,591.11	898	---	756.2

e Estimated.

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD BELOW COLORADO SPRINGS, CO

LOCATION.--Lat 38°48'11", long 104°47'43", in NE¹/₄SE¹/₄ sec.29, T.14 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank at downstream side of bridge on Janitell Road, 0.1 mi downstream from Spring Creek, and 2.4 mi southeast of courthouse in Colorado Springs.

DRAINAGE AREA.--413 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 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=07105530

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,840 ft above NGVD of 1929, from topographic map. Prior to July 10, 1990, at site 500 ft upstream at datum 2.00 ft higher. July 10, 1990 to May 27, 1999, on right bank at upstream side of bridge on Janitell Road at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, transmountain diversions, diversions for irrigation and municipal use, return flows from irrigated areas, and flows from sewage-treatment plants.

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	52	80	e43	39	74	133	53	75	160	62	65	107
2	90	94	46	38	74	134	53	76	88	56	73	105
3	47	87	44	42	79	110	51	79	100	54	103	157
4	41	79	39	41	80	85	48	106	216	52	124	101
5	43	78	e34	40	93	80	67	109	229	53	81	86
6	43	77	e32	40	83	82	115	84	92	56	70	108
7	39	77	e35	37	86	63	54	78	99	60	66	118
8	52	77	e36	38	90	65	55	73	67	56	65	100
9	76	79	e34	35	93	57	56	73	89	53	116	84
10	63	81	e31	29	98	68	56	122	73	54	83	76
11	53	84	e40	33	96	75	52	76	63	54	80	78
12	51	70	43	35	95	62	51	72	62	61	93	76
13	53	63	42	33	87	59	54	69	77	62	66	81
14	54	63	45	30	97	54	51	66	205	60	64	83
15	46	61	43	31	77	54	61	97	73	77	60	77
16	41	63	44	28	73	55	69	101	70	71	62	74
17	42	63	43	30	79	64	62	73	262	70	63	71
18	45	56	41	29	77	196	67	69	159	61	70	75
19	45	52	40	29	120	131	83	64	565	115	74	75
20	48	53	41	33	84	146	78	68	254	126	68	72
21	50	47	41	31	78	99	78	67	130	66	67	73
22	53	46	40	33	80	71	175	66	99	60	61	72
23	62	48	39	42	80	68	230	77	85	56	64	68
24	55	47	38	60	68	166	208	71	85	58	80	65
25	55	47	32	82	71	126	88	205	103	54	93	66
26	77	43	33	85	74	59	69	79	312	61	72	70
27	180	45	42	84	83	59	57	65	78	128	173	73
28	75	45	44	78	102	58	64	51	79	360	138	71
29	66	45	42	77	---	57	93	50	98	93	207	71
30	69	44	41	74	---	e55	83	56	82	58	283	73
31	76	---	39	74	---	e53	---	117	---	55	871	---
TOTAL	1,842	1,894	1,227	1,410	2,371	2,644	2,381	2,534	4,154	2,362	3,655	2,506
MEAN	59.4	63.1	39.6	45.5	84.7	85.3	79.4	81.7	138	76.2	118	83.5
MAX	180	94	46	85	120	196	230	205	565	360	871	157
MIN	39	43	31	28	68	53	48	50	62	52	60	65
AC-FT	3,650	3,760	2,430	2,800	4,700	5,240	4,720	5,030	8,240	4,690	7,250	4,970

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

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	102	97.0	76.8	80.0	93.8	106	165	270	222	142	163	110		
MAX	179	150	140	122	139	161	658	1,022	693	319	467	200		
(WY)	(2000)	(2000)	(1998)	(1998)	(2000)	(1998)	(1999)	(1999)	(1997)	(1995)	(1999)	(1999)		
MIN	47.3	48.6	39.5	45.5	56.4	76.4	77.9	78.6	69.4	70.1	68.3	59.7		
(WY)	(1993)	(1990)	(1990)	(2003)	(1990)	(1991)	(2002)	(1993)	(1990)	(1993)	(2002)	(1992)		

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1990 - 2003

ANNUAL TOTAL	26,789	28,980		
ANNUAL MEAN	73.4	79.4		140
HIGHEST ANNUAL MEAN				312
LOWEST ANNUAL MEAN				76.0
HIGHEST DAILY MEAN	662	Jul 5	871	Aug 31
LOWEST DAILY MEAN	31	Dec 10	28	Jan 16
ANNUAL SEVEN-DAY MINIMUM	34	Dec 4	30	Jan 13
MAXIMUM PEAK FLOW			6,320	Aug 31
MAXIMUM PEAK STAGE			7.50	Aug 31
ANNUAL RUNOFF (AC-FT)	53,140	57,480		101,300
10 PERCENT EXCEEDS	104	116		227
50 PERCENT EXCEEDS	68	68		97
90 PERCENT EXCEEDS	43	41		57

e Estimated.

a From rating curve extended above 13,200 ft³/s.

b Maximum gage height, 11.11 ft, Sep 2, 1994.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1975 to June 1976, May 1979 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105530

PERIOD OF DAILY RECORD.--

DISSOLVED OXYGEN: October 1990 to January 1998.

pH: October 1990 to January 1998.

SPECIFIC CONDUCTANCE: October 1990 to January 1998.

WATER TEMPERATURE: October 1990 to January 1998.

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 05...	1530	91	8.0	7.9	807	15.5	55.8	19.4	1.70	150	1.5	4.09	1.1
DEC 03...	1115	60	9.5	8.0	793	13.0	54.8	19.1	1.40	150	0.027	3.14	0.98
FEB 13...	0930	107	8.9	7.9	806	11.5	50	17	1.4	156	0.034	3.10	0.71
APR 30...	0940	104	8.8	8.0	593	13.5	43	12	1.59	117	0.032	2.62	0.42
JUL 22...	1615	70	7.0	7.6	732	23.5	43.0	16.4	1.61	152	0.197	4.32	0.08

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

Date	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)
NOV 05...	1.32	5.0	--	E170	150	2.2	2.4	244	250	0.12	0.21	1.6	2.0
DEC 03...	1.13	4.0	--	180	230	4.0	4.0	264	253	E.10	E.12	2.5	2.1
FEB 13...	1.06	--	--	570	E1100	0.80	<2	212	231	0.163	0.136	E.5	E.6
APR 30...	0.784	--	180	--	360	--	2	150	145	--	--	--	--
JUL 22...	0.328	--	E140	--	700	--	<2	213	245	--	--	--	--

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Cyanide water unfltrd mg/L (00720)	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)	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)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
NOV 05...	2.3	5.9	<0.01	42.0	484	0.58	1.6	78	91	<0.018	<0.018	4.8	5.4
DEC 03...	4.6	7.0	<0.01	45.0	394	0.64	1.3	36	45	<0.018	<0.018	3.5	3.6
FEB 13...	3.82	8.24	<0.009	34	904	0.46	2.00	46.9	80.3	<0.018	E.011	4.88	6.60
APR 30...	3.47	7.86	--	--	--	--	6.52	24.3	143	--	--	--	4.46
JUL 22...	3.84	5.37	--	--	--	--	1.11	39.9	41.4	--	--	--	3.25

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD BELOW COLORADO SPRINGS, CO—Continued

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

Date	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)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 05...	5.8	5.6	<0.04	0.10	44	51	26	6.4
DEC 03...	6.4	6.5	<0.04	0.11	38	40	20	3.2
FEB 13...	4.83	4.79	<0.20	<0.16	57.3	68.7	--	
APR 30...	3.49	3.12	--	--	27.8	51.9	322	90
JUL 22...	3.21	3.16	--	--	38.0	38.9	18	3.4

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

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
APR 23...	1945	430	9.7	7.4	353	6.0	30	6.2	0.66	58.0	0.260	1.64	0.18
JUL 28...	1515	810	7.4	8.0	255	20.0	18.9	4.68	0.33	43.7	0.585	1.55	0.06

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)	Fecal coliform, M-FC, 0.7u MF col/100 mL (31625)	Arsenic, water, unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)
APR 23...	2.31	1,100	1,200	10	54	56	2.14	52.0	81.0	8.19	1,210	30.0	2.09
JUL 28...	1.08	E22000	>6000	4	42	51	1.34	26.5	80.6	26.8	477	14.7	1.53

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Selenium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	2,6-Diethyl-aniline, water, fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	9H-Fluorene, water, unfltrd ug/L (34381)	Ace-naphthene, water, unfltrd ug/L (34205)	Ace-naphthylene, water, unfltrd ug/L (34200)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Anthra-cene, water, unfltrd ug/L (34220)	Atra-zine, water, fltrd, ug/L (39632)
APR 23...	4.78	8.1	307	<0.006	<0.0060	E.2	E.1	E.2	<0.006	<0.004	<0.0046	E.3	0.0079
JUL 28...	1.91	7.8	179	<0.006	<0.006	--	--	--	<0.006	<0.004	<0.0046	--	0.0110

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD BELOW COLORADO SPRINGS, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benzo-[a]-anthra-cene, water, unfltrd ug/L (34526)	Benzo-[a]-pyrene, water, unfltrd ug/L (34247)	Benzo-[b]-fluor-anthene, water, unfltrd ug/L (34230)	Benzo-[g,h,i]-per-ylene, water, unfltrd ug/L (34521)	Benzo-[k]-fluor-anthene, water, unfltrd ug/L (34242)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos, water, fltrd, ug/L (38933)	Chrys-ene, water, unfltrd ug/L (34320)	cis-Per-methrin, water, fltrd 0.7u GF ug/L (82687)
APR 23...	<0.0500	<0.0100	E.6	E.8	E1	E.7	E.5	<0.002	E.466	<0.0200	<0.0050	E.9	<0.0060
JUL 28...	<0.05	<0.010	--	--	--	--	--	<0.002	E.421	<0.020	<0.005	--	<0.006

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water, fltrd 0.7u GF ug/L (82682)	Desulf-inyl fipron-il, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Di-benzo-[a,h]-anthra-cene, wat unf ug/L (34556)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Desulf-inyl-fipron-il amide, wat flt ug/L (62169)	Fipron- nil sulfide, water, fltrd, ug/L (62167)	Fipron- nil sulfone, water, fltrd, ug/L (62168)
APR 23...	<0.0180	<0.0030	<0.0040	0.0437	E.2	<0.0048	<0.0210	<0.0020	<0.0090	<0.0050	<0.0090	<0.0050	<0.0050
JUL 28...	<0.018	0.0049	<0.004	0.0571	--	<0.0048	<0.021	<0.0020	<0.009	<0.005	<0.009	<0.005	<0.005

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fipron- nil, water, fltrd, ug/L (62166)	Fluor-anthene, water, unfltrd ug/L (34376)	Fonofos, water, fltrd, ug/L (04095)	Indeno-[1,2,-3-cd]-pyrene, water, unfltrd ug/L (34403)	Lindane, water, fltrd, ug/L (39341)	Linuron, water, fltrd 0.7u GF ug/L (82666)	Malath-ion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Nitro-benzene, water, unfltrd ug/L (34447)
APR 23...	E.0050	E2	<0.0027	E.6	<0.0040	<0.0350	<0.0270	<0.0060	<0.0130	<0.0060	<0.0016	<0.0070	<2
JUL 28...	<0.007	--	<0.0027	--	<0.0040	<0.035	0.0385	<0.006	<0.013	<0.006	<0.0016	<0.007	--

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phenan-threne, water, unfltrd ug/L (34461)	Phorate, water, fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Pyrene, water, unfltrd ug/L (34469)	Sima-zine, water, fltrd, ug/L (04035)
APR 23...	<0.0025	<0.010	<0.004	E.017	E1	<0.0110	E.0108	<0.0041	<0.0100	<0.0110	<0.0230	E2	<0.005
JUL 28...	<0.0025	<0.010	<0.004	<0.022	--	<0.011	0.0191	<0.0041	<0.010	<0.011	<0.023	--	<0.005

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tebu-thiuron, water, fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb, water, fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)	Naphth-alene, water, unfltrd ug/L (34696)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)
APR 23...	<0.0160	<0.0340	<0.0170	<0.0048	<0.0023	E.0076	E.1	--	--
JUL 28...	<0.016	<0.034	<0.017	<0.0048	<0.0023	E.0016	--	1,180	2,580

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

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD BELOW COLORADO SPRINGS, CO—Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT				
22...	1310	69	731	--
NOV				
13...	1645	62	844	--
DEC				
10...	1335	35	806	13.0
27...	1500	69	799	--
JAN				
14...	1325	47	759	7.0
MAR				
06...	1150	95	843	--
28...	1320	82	748	--
APR				
29...	1435	101	599	--
JUN				
17...	1955	600	360	--
26...	1435	147	508	--
JUL				
17...	1825	73	715	--
AUG				
07...	1505	67	671	--
26...	1445	78	679	--
SEP				
19...	1715	83	739	--

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD BELOW COLORADO SPRINGS, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 2001 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=07105530

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.84 inches, July 5, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.21 inches, June 19.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.23	---	---	---	---	---	0.00	0.00	0.07	0.01	0.00	0.00
2	0.04	---	---	---	---	---	0.01	0.01	0.00	0.00	0.00	0.08
3	0.02	---	---	---	---	---	0.00	0.01	0.14	0.00	0.12	0.17
4	0.00	---	---	---	---	---	0.00	0.00	0.61	0.00	0.02	0.01
5	0.00	---	---	---	---	---	0.14	0.00	0.38	0.00	0.01	0.02
6	0.00	---	---	---	---	---	0.17	0.01	0.15	0.00	0.00	0.53
7	0.00	---	---	---	---	---	0.00	0.00	0.18	0.00	0.00	0.01
8	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00
9	0.00	---	---	---	---	---	0.00	0.02	0.07	0.00	0.01	0.00
10	0.00	---	---	---	---	---	0.00	0.18	0.00	0.00	0.00	0.00
11	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.13	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.03	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
14	0.00	---	---	---	---	---	0.00	0.00	0.28	0.00	0.00	0.00
15	0.00	---	---	---	---	---	0.02	0.26	0.00	0.13	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.00	0.07	0.03	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	0.07	0.00	0.00	0.00
18	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.05	0.00
19	0.00	---	---	---	---	---	0.07	0.06	1.21	0.30	0.00	0.00
20	0.00	---	---	---	---	---	0.00	0.02	0.01	0.00	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	0.01	---	---	---	---	---	0.18	0.00	0.00	0.00	0.00	0.00
23	0.00	---	---	---	---	---	0.12	0.08	0.00	0.00	0.16	0.00
24	0.05	---	---	---	---	---	0.13	0.01	0.00	0.00	0.00	0.00
25	0.11	---	---	---	---	---	0.00	0.71	0.58	0.00	0.12	0.00
26	0.44	---	---	---	---	---	0.00	0.05	0.02	0.19	0.02	0.00
27	0.25	---	---	---	---	---	0.00	0.01	0.00	0.04	0.05	0.00
28	0.00	---	---	---	---	---	0.00	0.00	0.24	1.07	0.25	0.00
29	0.00	---	---	---	---	---	0.00	0.00	0.03	0.01	0.00	0.00
30	0.00	---	---	---	---	---	0.00	0.01	0.00	0.06	0.43	0.00
31	0.00	---	---	---	---	---	---	0.05	---	0.00	0.22	---
TOTAL	1.15	---	---	---	---	---	0.84	1.49	4.15	1.84	1.60	0.82
MAX	0.44	---	---	---	---	---	0.18	0.71	1.21	1.07	0.43	0.53

07105600 SAND CREEK ABOVE MOUTH AT COLORADO SPRINGS, CO

LOCATION.--Lat 38°47'18", long 104°46'24", in NW¹/₄SW¹/₄ sec.34, T.14 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank 0.2 mi upstream from Las Vegas Street bridge at Colorado Springs, 0.7 mi upstream from mouth, and 4.0 mi southeast of courthouse in Colorado Springs.

DRAINAGE AREA.--52.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 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=07105600

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,837 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except for June 26 to July 7, which are poor. Natural flow of stream affected by several small storage reservoirs, ground-water withdrawals, and flows from sewage-treatment plants.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 3,200 ft³/s, Aug. 31, 2003, gage height, 4.56 ft, from rating curve extended above 304 ft³/s on basis of velocity-area study; minimum daily, 1.2 ft³/s, Aug. 21, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge during period April to September, 3,200 ft³/s, Aug. 31, gage height, 4.56 ft, from rating curve extended above 304 ft³/s on basis of velocity-area study; minimum daily, 1.2 ft³/s, Aug. 21.

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	---	---	---	---	---	---	19	2.0	3.3	10	3.8	14
2	---	---	---	---	---	---	17	2.6	2.8	9.6	2.9	18
3	---	---	---	---	---	---	20	2.4	7.8	6.8	5.1	26
4	---	---	---	---	---	---	18	2.6	53	5.4	4.0	7.1
5	---	---	---	---	---	---	27	2.9	34	4.4	2.3	5.3
6	---	---	---	---	---	---	29	2.3	9.4	4.8	2.4	20
7	---	---	---	---	---	---	18	2.3	22	4.2	2.1	4.6
8	---	---	---	---	---	---	13	2.6	3.9	3.7	2.8	3.6
9	---	---	---	---	---	---	11	2.8	5.8	3.6	2.3	3.1
10	---	---	---	---	---	---	8.8	6.5	7.1	3.8	2.6	3.0
11	---	---	---	---	---	---	3.9	3.3	5.2	4.0	18	3.0
12	---	---	---	---	---	---	3.2	3.2	7.5	3.8	5.1	2.9
13	---	---	---	---	---	---	3.9	2.7	9.0	4.3	2.4	5.2
14	---	---	---	---	---	---	3.6	2.9	49	3.9	2.8	3.5
15	---	---	---	---	---	---	3.5	23	6.6	5.0	2.3	4.2
16	---	---	---	---	---	---	2.8	9.0	7.1	4.2	2.0	3.5
17	---	---	---	---	---	---	3.2	3.2	65	3.3	2.0	3.4
18	---	---	---	---	---	---	4.0	2.7	29	3.0	11	3.6
19	---	---	---	---	---	---	4.8	3.0	181	31	2.7	3.2
20	---	---	---	---	---	---	4.4	3.2	45	18	1.5	2.5
21	---	---	---	---	---	---	3.4	2.3	7.1	6.1	1.2	2.7
22	---	---	---	---	---	---	3.6	2.0	5.0	3.7	1.9	2.5
23	---	---	---	---	---	---	31	5.7	5.6	3.3	2.3	2.8
24	---	---	---	---	---	---	51	3.6	7.4	2.4	4.0	2.7
25	---	---	---	---	---	---	4.2	11	67	1.8	24	2.8
26	---	---	---	---	---	---	2.1	3.2	147	3.0	2.7	2.7
27	---	---	---	---	---	---	1.8	3.3	42	13	7.7	3.0
28	---	---	---	---	---	---	2.2	2.9	31	196	18	2.2
29	---	---	---	---	---	---	2.0	2.3	28	83	8.8	2.1
30	---	---	---	---	---	---	2.0	2.9	16	6.2	120	2.4
31	---	---	---	---	---	---	---	3.1	---	3.8	301	---
TOTAL	---	---	---	---	---	---	321.4	127.5	909.6	459.1	571.7	165.6
MEAN	---	---	---	---	---	---	10.7	4.11	30.3	14.8	18.4	5.52
MAX	---	---	---	---	---	---	51	23	181	196	301	26
MIN	---	---	---	---	---	---	1.8	2.0	2.8	1.8	1.2	2.1
AC-FT	---	---	---	---	---	---	637	253	1,800	911	1,130	328

07105600 SAND CREEK ABOVE MOUTH AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105600

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT: April to September 2003 (seasonal records only).

INSTRUMENTATION.--Pumping sediment sampler with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 1,890 mg/L, July 28, 2003; minimum daily mean, 69 mg/L, Apr. 17, 2003.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 3,670 tons (estimated), Aug. 31, 2003; minimum daily, 0.22 ton (estimated), Aug. 21, 2003.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 1,890 mg/L, July 28; minimum daily mean, 69 mg/L, Apr. 17.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 3,670 tons (estimated), Aug. 31; minimum daily, 0.22 ton (estimated), Aug. 21.

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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Arsenic water unfltrd ug/L (01002)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)
APR 30...	1530	1.7	7.3	8.2	1,350	19.0	3	195	0.13	E.7	8.4	1,370	2.77
JUL 21...	1150	5.5	4.8	8.0	1,170	31.0	3	152	0.06	E.5	5.7	1,500	2.44

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

Date	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, unfltrd recover-able, ug/L (71900)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
APR 30...	98.7	<0.02	6.13	5.9	0.35	15	--	--
JUL 21...	79.5	<0.02	5.81	4.8	<0.16	12	94	1.4

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

E -- Estimated laboratory analysis value.

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, MF, water, col/100 mL (31633)	Fecal coliform, M-FC, 0.7u MF col/100 mL (31625)	Arsenic water unfltrd ug/L (01002)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)
APR 24...	1130	47	8.6	7.9	423	12.0	--	370	730	5	41	0.64	9.6
JUL 28...	1645	324	7.7	8.1	224	19.5	>8000	--	>6000	13	E34	1.84	19.7

07105600 SAND CREEK ABOVE MOUTH AT COLORADO SPRINGS, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury, water, unfltrd recover-able, ug/L (71900)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, unfltrd recover-able, ug/L (01147)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
APR 24...	41.4	28,600	41.8	826	--	18.9	5.3	0.35	177	--	--
JUL 28...	97.4	66,600	125	3,630	0.22	49.7	4.4	0.51	405	8,810	7,710

> -- Actual value is known to be greater than the value shown.
 E -- Estimated laboratory analysis value.

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
MAR 27...	1445	42	774	12.5	305	35
APR 08...	1700	14	--	16.5	128	4.8
08...	1705	15	842	--	--	--
17...	1315	3.0	1,410	22.0	66	0.53
23...	1845	102	435	5.5	5,140	1,420
23...	1850	102	435	--	--	--
MAY 12...	1215	3.0	1,360	23.5	77	0.62
13...	1520	2.4	1,380	17.5	--	--
JUN 05...	1415	89	337	16.5	1,680	404
05...	1420	85	344	--	--	--
09...	1315	2.6	1,180	26.0	67	0.47
09...	1505	2.7	1,180	26.0	--	--
18...	1500	7.9	867	--	--	--
JUL 22...	1610	2.2	1,250	--	--	--
AUG 18...	1455	1.9	1,320	--	--	--
26...	1245	1.7	1,080	28.0	112	0.51
SEP 03...	1400	35	475	18.0	2,120	200
03...	1410	39	484	--	--	--
16...	1150	3.1	1,250	--	--	--
16...	1215	3.8	1,200	22.5	110	1.1

07105600 SAND CREEK ABOVE MOUTH AT COLORADO SPRINGS, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
APRIL									
1	19	74	4.0	2.0	---	e0.36	3.3	---	e0.65
2	17	79	3.6	2.6	---	e0.47	2.8	---	e0.52
3	20	---	e5.0	2.4	---	e0.43	7.8	181	14
4	18	---	e4.8	2.6	---	e0.46	53	752	248
5	27	---	e7.7	2.9	---	e0.52	34	858	108
6	29	---	e8.8	2.3	---	e0.42	9.4	---	e5.4
7	18	---	e5.9	2.3	---	e0.41	22	184	22
8	13	127	4.6	2.6	---	e0.47	3.9	---	e0.73
9	11	---	e3.6	2.8	---	e0.50	5.8	79	1.6
10	8.8	---	e2.7	6.5	---	e2.3	7.1	---	e1.7
11	3.9	---	e1.1	3.3	---	e0.71	5.2	---	e1.1
12	3.2	---	e0.82	3.2	77	0.66	7.5	---	e4.5
13	3.9	---	e0.89	2.7	---	e0.55	9.0	---	e3.0
14	3.6	---	e0.75	2.9	---	e0.59	49	412	174
15	3.5	---	e0.72	23	315	96	6.6	---	e2.2
16	2.8	---	e0.66	9.0	306	21	7.1	---	e1.8
17	3.2	69	0.59	3.2	---	e0.76	65	1,600	1,050
18	4.0	---	e0.73	2.7	---	e0.54	29	1,310	242
19	4.8	---	e1.0	3.0	---	e0.59	181	780	1,830
20	4.4	---	e0.82	3.2	---	e0.61	45	---	e130
21	3.4	---	e0.62	2.3	---	e0.44	7.1	313	6.1
22	3.6	---	e0.78	2.0	---	e0.37	5.0	---	e2.8
23	31	1,090	215	5.7	96	5.5	5.6	---	e1.8
24	51	---	e311	3.6	---	e0.77	7.4	---	e2.2
25	4.2	---	e0.77	11	144	13	67	397	137
26	2.1	---	e0.38	3.2	---	e0.64	147	605	468
27	1.8	---	e0.33	3.3	---	e0.61	42	---	e37
28	2.2	---	e0.40	2.9	---	e0.53	31	---	e26
29	2.0	---	e0.36	2.3	---	e0.42	28	---	e19
30	2.0	---	e0.37	2.9	---	e0.54	16	100	4.6
31	---	---	---	3.1	---	e0.56	---	---	---
TOTAL	321.4	---	588.79	127.5	---	151.73	909.6	---	4,545.70
JULY									
AUGUST									
SEPTEMBER									
1	10	83	2.4	3.8	---	e0.69	14	---	e11
2	9.6	90	2.3	2.9	---	e0.55	18	---	e25
3	6.8	---	e1.7	5.1	---	e2.3	26	471	100
4	5.4	---	e1.3	4.0	---	e1.2	7.1	---	e1.9
5	4.4	---	e1.1	2.3	---	e0.43	5.3	---	e1.2
6	4.8	---	e1.1	2.4	---	e0.44	20	---	e56
7	4.2	---	e0.97	2.1	---	e0.38	4.6	---	e0.84
8	3.7	---	e0.83	2.8	---	e0.50	3.6	---	e0.64
9	3.6	---	e0.79	2.3	---	e0.42	3.1	---	e0.55
10	3.8	---	e0.82	2.6	---	e0.47	3.0	---	e0.53
11	4.0	---	e0.86	18	221	56	3.0	---	e0.52
12	3.8	---	e0.80	5.1	---	e2.6	2.9	---	e0.51
13	4.3	---	e0.88	2.4	---	e0.48	5.2	---	e1.5
14	3.9	---	e0.79	2.8	---	e0.54	3.5	---	e0.75
15	5.0	---	e1.0	2.3	---	e0.45	4.2	---	e1.1
16	4.2	---	e0.81	2.0	---	e0.38	3.5	108	1.0
17	3.3	---	e0.63	2.0	---	e0.37	3.4	---	e0.99
18	3.0	---	e0.55	11	156	23	3.6	---	e1.0
19	31	346	94	2.7	---	e0.56	3.2	---	e0.86
20	18	498	38	1.5	---	e0.28	2.5	---	e0.66
21	6.1	104	1.8	1.2	---	e0.22	2.7	---	e0.70
22	3.7	---	e0.85	1.9	---	e0.35	2.5	---	e0.63
23	3.3	---	e0.66	2.3	---	e0.50	2.8	---	e0.66
24	2.4	---	e0.46	4.0	---	e2.5	2.7	---	e0.62
25	1.8	---	e0.33	24	269	75	2.8	---	e0.64
26	3.0	---	e1.6	2.7	133	1.1	2.7	---	e0.59
27	13	295	22	7.7	202	18	3.0	---	e0.63
28	196	1,890	2,280	18	271	32	2.2	---	e0.43
29	83	1,300	559	8.8	---	e5.3	2.1	---	e0.40
30	6.2	---	e2.2	120	1,050	449	2.4	---	e0.43
31	3.8	---	e0.69	301	---	e3,670	---	---	---
TOTAL	459.1	---	3,021.22	571.7	---	4,346.01	165.6	---	212.28

e Estimated.

07105800 FOUNTAIN CREEK AT SECURITY, CO

LOCATION (REVISED).--Lat 38°43'46", long 104°44'00", in NE¼SW¼ sec.24, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank 20 ft downstream from Carson Road Bridge at Security, 0.9 mi southwest of South Security School, 3.5 mi northeast of Fountain, and 5.5 mi upstream from Jimmy Camp Creek. Prior to Mar. 24, 2003, at site 20 ft upstream on left bank.

DRAINAGE AREA.--495 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105800

REVISED RECORDS.--WDR CO-85-1: 1984 (M).

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,640 ft above NGVD of 1929, from topographic map.

July 19, 1972 to Feb. 20, 1980, at site 880 ft downstream at datum 1.00 ft higher. Prior to July 19, 1972, and from Feb. 21, 1980 to Mar. 23, 2003, at site 20 ft upstream on left bank; prior to July 19, 1972, and from Feb. 21, 1980 to June 30, 1986, at datum 7.00 ft higher; July 1, 1986 to Feb. 6, 1995, at datum 4.00 ft higher; Feb 7, 1995 to Nov. 29, 1995, at datum 3.00 ft higher; Nov. 30, 1995 to Apr. 4, 2001, at datum 2.00 ft higher; and Apr. 14, 2001 to Mar. 23, 2003, at present datum.

REMARKS.--Records fair except for June 19, Aug. 31, and estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power developments, transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage treatment plants.

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	62	97	66	57	86	162	110	107	151	77	70	93
2	110	106	66	55	85	165	111	110	94	68	70	117
3	58	101	65	60	88	130	112	113	102	64	96	171
4	50	92	62	60	87	107	113	131	242	62	116	104
5	46	87	56	57	94	98	134	138	225	61	83	88
6	44	85	55	57	86	96	200	133	75	65	76	123
7	40	84	59	55	85	93	120	131	96	65	73	116
8	44	82	60	57	85	103	111	133	66	60	77	105
9	86	80	58	56	84	96	105	126	88	61	112	93
10	84	79	57	50	88	101	91	171	105	62	92	89
11	79	82	61	51	87	98	77	114	103	62	84	97
12	75	81	65	57	87	97	76	111	82	65	108	e95
13	74	81	63	55	93	98	75	111	111	67	70	e98
14	70	79	65	54	108	98	73	118	270	64	67	e99
15	63	74	64	54	91	99	80	147	149	70	63	e85
16	57	69	62	51	89	102	87	165	140	74	65	76
17	57	69	59	52	91	119	82	111	283	70	66	75
18	59	65	55	52	89	219	86	106	258	61	78	e78
19	57	63	54	53	133	155	103	110	773	100	81	75
20	58	65	53	55	105	155	98	121	385	136	74	74
21	59	60	53	69	96	139	99	116	114	64	76	75
22	62	60	54	90	95	114	169	109	89	62	75	77
23	73	65	53	91	95	110	262	113	79	e65	83	77
24	66	65	56	95	90	159	225	108	78	64	85	74
25	65	68	50	92	93	211	96	225	83	63	125	76
26	72	65	49	92	100	113	78	112	323	65	82	79
27	213	68	57	92	107	103	73	83	129	131	159	83
28	100	68	61	83	133	101	80	64	93	402	159	81
29	81	67	59	81	---	102	107	59	100	157	186	84
30	85	67	57	82	---	104	110	67	97	77	295	86
31	91	---	55	82	---	109	---	112	---	68	913	---
TOTAL	2,240	2,274	1,809	2,047	2,650	3,756	3,343	3,675	4,983	2,632	3,859	2,743
MEAN	72.3	75.8	58.4	66.0	94.6	121	111	119	166	84.9	124	91.4
MAX	213	106	66	95	133	219	262	225	773	402	913	171
MIN	40	60	49	50	84	93	73	59	66	60	63	74
AC-FT	4,440	4,510	3,590	4,060	5,260	7,450	6,630	7,290	9,880	5,220	7,650	5,440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)
1965	83.6	317	(1985)	12.6	(1965)	75.9	198	(2000)	15.1	(1965)	64.9	168	(2000)	17.8	(1976)	69.2	146	(1998)	11.9	(1976)
1966	88.5	156	(2000)	14.1	(1972)	76.8	156	(2000)	14.1	(1972)	69.2	146	(1998)	11.9	(1976)	69.2	146	(1998)	11.9	(1976)
1967	124	738	(1999)	23.7	(1978)	88.5	195	(2000)	21.3	(1965)	88.5	195	(2000)	21.3	(1965)	88.5	195	(2000)	21.3	(1965)
1968	188	1,131	(1997)	17.8	(1968)	124	738	(1999)	23.7	(1978)	124	738	(1999)	23.7	(1978)	124	738	(1999)	23.7	(1978)
1969	123	886	(1995)	30.1	(1972)	123	886	(1995)	30.1	(1972)	123	886	(1995)	30.1	(1972)	123	886	(1995)	30.1	(1972)
1970	136	381	(1999)	23.5	(1974)	136	381	(1999)	23.5	(1974)	136	381	(1999)	23.5	(1974)	136	381	(1999)	23.5	(1974)
1971	87.8	561	(1999)	13.1	(1968)	87.8	561	(1999)	13.1	(1968)	87.8	561	(1999)	13.1	(1968)	87.8	561	(1999)	13.1	(1968)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1965 - 2003

ANNUAL TOTAL	32,867	36,011	111
ANNUAL MEAN	90.0	98.7	355
HIGHEST ANNUAL MEAN			31.5
LOWEST ANNUAL MEAN			1999
HIGHEST DAILY MEAN	792	913	Apr 30, 1999
LOWEST DAILY MEAN	40	40	Oct 7
ANNUAL SEVEN-DAY MINIMUM	53	53	Oct 3
MAXIMUM PEAK FLOW		a7,100	Aug 31
MAXIMUM PEAK STAGE		7.38	Aug 31
ANNUAL RUNOFF (AC-FT)	65,190	71,430	80,320
10 PERCENT EXCEEDS	113	138	198
50 PERCENT EXCEEDS	83	84	78
90 PERCENT EXCEEDS	60	57	25

e Estimated.

a From rating curve extended above 6,520 ft³/s on basis of slope-area measurement of peak flow at gage height 7.18 ft.

b From slope-area measurement of peak flow. Flood of May 30, 1935, may have been larger.

c From floodmarks, site and datum then in use.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1984 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105800

PERIOD OF DAILY RECORD.--

DISSOLVED OXYGEN: October 1990 to January 1998.

pH: October 1990 to January 1998.

SPECIFIC CONDUCTANCE: October 1990 to January 1998.

WATER TEMPERATURE: October 1990 to January 1998.

SUSPENDED SEDIMENT: April 1998 to current year (seasonal records only).

INSTRUMENTATION.--Pumping sediment sampler with satellite telemetry.

REMARKS.--Water-quality data collected July 24 were obtained to determine base-flow constituent concentrations.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 7,410 mg/L, June 24, 1999; minimum daily mean, 21 mg/L, May 15, 2002.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 400,000 tons (estimated), Apr. 30, 1999; minimum daily, 4.2 tons, July 10, 2003.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 3,400 mg/L, Apr. 23; minimum daily mean, 25 mg/L, July 10.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): Maximum daily, 15,800 tons, Aug. 31; minimum daily, 4.2 tons, July 10.

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

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd std units (00400)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Ammonia, water, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 04...	1430	110	8.2	8.4	820	12.5	53.5	17.5	1.40	150	0.228	3.84	0.29
DEC 03...	1200	51	10.4	8.5	994	7.0	77.4	25.6	1.30	220	0.320	4.93	1.0
FEB 12...	1015	61	10.7	8.4	975	5.5	72	23	1.3	198	0.383	4.42	1.1
MAY 01...	1050	91	8.5	8.3	715	13.0	56	16	1.51	149	0.117	3.30	0.54

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

Date	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC, MF, water, col/100 mL (31633)	Fecal coliform, M-FC, col/100 mL (31625)	Arsenic, water, fltrd, ug/L (01000)	Arsenic, water, unfltrd, ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium, water, fltrd, ug/L (01025)	Cadmium, water, unfltrd, ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)
NOV 04...	0.486	4.0	--	200	140	2.1	2.9	272	279	E.13	0.28	2.1	2.8
DEC 03...	1.16	2.0	--	E280	50	3.8	3.7	218	209	E.14	E.18	2.3	2.0
FEB 12...	1.37	--	--	E170	80	1.43	<2	211	207	0.109	0.096	<0.8	<0.8
MAY 01...	0.757	--	28	--	110	--	3	130	130	--	--	--	--

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Cyanide, water, unfltrd, mg/L (00720)	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)	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)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
NOV 04...	3.2	9.0	<0.01	46.0	1,870	0.57	3.6	12	87	<0.018	<0.018	5.1	6.5
DEC 03...	5.6	7.4	<0.01	14.0	329	0.63	0.92	15	26	<0.018	<0.018	5.0	4.8
FEB 12...	3.98	6.73	<0.009	20	770	0.35	1.32	37.5	67.8	<0.018	<0.018	5.60	7.39
MAY 01...	3.07	7.09	--	--	--	--	4.54	9.27	99.5	--	--	--	5.21

07105800 FOUNTAIN CREEK AT SECURITY, CO—Continued

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

Date	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)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 04...	6.5	6.3	0.16	0.10	40	58	89	26
DEC 03...	9.1	8.8	<0.04	0.05	23	E24	23	3.1
FEB 12...	6.46	5.73	<0.20	<0.16	34.8	41.9	44	7.3
MAY 01...	4.74	4.17	--	--	14.6	32.6	--	--

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

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, 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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
APR 23...	2115	406	9.1	7.5	391	7.5	32	7.3	0.67	68.7	0.339	1.79	0.19
JUL 24...	1745	65	6.3	8.4	790	27.5	47.9	15.0	1.53	158	0.153	3.04	0.24
JUL 28...	1745	440	7.0	8.0	298	20.0	25.2	4.98	0.35	51.1	0.432	1.63	0.10

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, col/100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Arsenic water unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)
APR 23...	2.29	1,200	1,600	12	58	62	2.37	55.8	69.3	9.39	1,180	31.6	2.93
JUL 24...	0.386	360	1,000	E1	190	228	4.58	6.14	1.73	6.64	43.7	5.07	3.73
JUL 28...	3.35	E22000	>6000	9	38	49	1.57	69.9	99.0	7.88	1,590	38.1	1.89

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Selenium, water, unfltrd ug/L (01147)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	9H-Fluorene, water, unfltrd ug/L (34381)	Ace-naphth-ene, water, unfltrd ug/L (34205)	Ace-naphth-ylene, water, unfltrd ug/L (34200)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Anthra-cene, water, unfltrd ug/L (34220)	Atra-zine, water, fltrd, ug/L (39632)
APR 23...	5.45	8.3	306	<0.006	<0.0060	E.2	E.10	E.2	<0.006	<0.004	<0.0046	E.3	0.0097
JUL 24...	3.81	25.7	31.9	<0.006	<0.006	<2	<2	<2	<0.006	<0.004	<0.0046	<2	<0.007
JUL 28...	3.51	4.2	328	<0.006	<0.006	E.0331	E.0338	<2	<0.006	<0.004	<0.0046	E.0612	0.0123

07105800 FOUNTAIN CREEK AT SECURITY, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benzo-[a]-anthra-cene, water, unfltrd ug/L (34526)	Benzo-[a]-pyrene, water, unfltrd ug/L (34247)	Benzo-[b]-fluor-anthene, water, unfltrd ug/L (34230)	Benzo-[g,h,i]-per-ylene, water, unfltrd ug/L (34521)	Benzo-[k]-fluor-anthene, water, unfltrd ug/L (34242)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyri-fos, water, fltrd, ug/L (38933)	Chrys-ene, water, unfltrd ug/L (34320)	cis-Per-methrin, water, fltrd 0.7u GF ug/L (82687)
APR 23...	<0.0500	<0.0100	E.5	E.6	E1.0	E.6	E.4	<0.002	E.679	<0.0200	<0.0050	E.8	<0.0060
JUL 24...	<0.05	<0.010	<2	<1	<2	<3	<2	<0.002	E.029	<0.020	<0.005	E.0117	<0.006
28...	<0.05	<0.010	E.1840	E.2280	E.3360	E.1650	E.1410	<0.002	E.371	<0.020	<0.005	E.2120	<0.006

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water, fltrd 0.7u GF ug/L (82682)	Desulf-nyl fipro-nil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Di-benzo-[a,h]-anthra-cene, wat unfltrd ug/L (34556)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Desulf-nyl fipro-nil amide, wat fltrd ug/L (62169)	Fipro-nil sulfide, water, fltrd, ug/L (62167)	Fipro-nil sulfone, water, fltrd, ug/L (62168)
APR 23...	<0.0180	<0.0030	<0.0040	0.0385	E.2	<0.0048	<0.0210	<0.0020	<0.0090	<0.0050	<0.0090	<0.0050	<0.0050
JUL 24...	<0.018	<0.0030	<0.004	0.0767	<3	<0.0048	<0.021	<0.0020	<0.009	<0.005	<0.009	<0.005	<0.005
28...	<0.018	0.0041	<0.004	0.0835	E.0407	<0.0048	<0.021	<0.0020	<0.009	<0.005	<0.009	<0.005	<0.005

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fipro-nil, water, fltrd, ug/L (62166)	Fluor-anthene, water, unfltrd ug/L (34376)	Fonofos, water, fltrd, ug/L (04095)	Indeno-[1,2,3-cd]-pyrene, water, unfltrd ug/L (34403)	Lindane, water, fltrd, ug/L (39341)	Linuron, water, fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Nitro-benzene, water, unfltrd ug/L (34447)
APR 23...	<0.0070	E1	<0.0027	E.5	<0.0040	<0.0350	<0.0270	<0.0060	<0.0130	<0.0060	<0.0016	<0.0070	<2
JUL 24...	<0.007	E.0676	<0.0027	<3	<0.0040	<0.035	<0.027	<0.006	<0.013	<0.006	<0.0016	<0.007	<2
28...	<0.007	E.5140	<0.0027	E.2150	<0.0040	<0.035	0.0278	<0.006	<0.013	<0.006	<0.0016	<0.007	<2

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phenan-threne, water, unfltrd ug/L (34461)	Phorate, water, fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Pyrene, water, unfltrd ug/L (34469)	Sima-zine, water, fltrd, ug/L (04035)
APR 23...	<0.0025	<0.010	<0.004	<0.022	E.7	<0.0110	E.0149	<0.0041	<0.0100	<0.0110	<0.0230	E1	<0.005
JUL 24...	<0.0025	<0.010	<0.004	<0.022	E.0253	<0.011	E.0112	<0.0041	<0.010	<0.011	<0.023	E.0604	<0.005
28...	<0.0025	<0.010	<0.004	<0.022	E.2160	<0.011	0.0215	<0.0041	<0.010	<0.011	<0.023	E.4350	<0.005

07105800 FOUNTAIN CREEK AT SECURITY, CO—Continued

WATER-QUALITY DATA DURING STORMWATER-RUNOFF SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Naphth- alene, water, unfltrd ug/L (34696)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
APR 23...	<0.0160	<0.0340	<0.0170	<0.0048	<0.0023	<0.0090	E.1	--	
JUL 24...	<0.016	<0.034	<0.017	<0.0048	<0.0023	<0.009	<2	44	7.7
28...	<0.016	<0.034	<0.017	<0.0048	<0.0023	E.0011	E.0529	4,310	5,120

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

WATER-QUALITY DATA DURING MICROBIOLOGICAL SAMPLING, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)
APR 09...	1645	115	825	20.0	60	E34
MAY 12...	1415	120	699	20.0	50	48
28...	1425	76	811	27.0	92	100
JUN 11...	1045	86	725	19.5	230	300
25...	1305	74	672	21.5	570	E850
JUL 08...	1415	65	807	28.0	150	390
AUG 06...	1005	53	725	22.5	460	1,100
21...	0945	59	--	15.5	450	580
SEP 03...	2015	260	470	--	6,600	E13000
18...	1020	e78	712	12.0	230	220

E -- Estimated laboratory analysis value
 e -- Estimated.

07105800 FOUNTAIN CREEK AT SECURITY, CO—Continued

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT						
03...	1305	74	945	--	--	--
04...	1310	62	950	17.5	79	13
22...	1530	76	807	--	--	--
28...	1645	97	762	--	--	--
28...	1700	97	766	14.5	40	10
NOV						
04...	1430	110	820	12.5	89	26
12...	1610	93	860	--	--	--
DEC						
03...	1200	51	994	7.0	23	3.1
09...	1405	65	888	8.5	--	--
31...	1455	58	962	--	--	--
JAN						
14...	1705	60	878	8.5	--	--
FEB						
12...	1015	61	975	5.5	44	7.3
13...	1530	121	1,070	--	--	--
MAR						
06...	1355	112	953	--	--	--
31...	1350	131	809	--	--	--
APR						
11...	1150	62	902	16.0	--	--
11...	1215	80	902	16.5	60	13
29...	1250	121	656	--	--	--
MAY						
13...	1320	108	704	--	--	--
13...	1330	118	704	16.0	144	46
JUN						
03...	1730	91	731	19.5	120	29
04...	1715	742	413	15.5	2,870	5,750
04...	1720	705	413	--	--	--
26...	1640	193	522	--	--	--
26...	1700	174	522	23.5	372	175
JUL						
09...	1700	76	774	27.5	43	8.8
22...	1745	76	762	--	--	--
24...	1745	65	790	27.5	44	7.7
25...	1530	74	748	26.0	48	9.6
28...	1745	440	298	20.0	4,310	5,120
29...	1345	104	662	--	--	--
AUG						
07...	1630	76	659	26.0	104	21
07...	1640	83	659	--	--	--
25...	1500	92	694	--	--	--
25...	1530	93	694	25.0	116	29
SEP						
02...	1415	118	734	25.5	134	43
02...	1425	123	734	--	--	--
11...	1455	107	759	--	--	--
16...	1820	81	773	--	--	--

07105800 FOUNTAIN CREEK AT SECURITY, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
OCTOBER			NOVEMBER			DECEMBER			
1	62	---	e8.9	97	---	---	66	---	---
2	110	---	e145	106	---	---	66	---	---
3	58	---	e20.0	101	---	---	65	---	---
4	50	93	14	92	---	---	62	---	---
5	46	---	e13.0	87	---	---	56	---	---
6	44	---	e12.0	85	---	---	55	---	---
7	40	---	e10.0	84	---	---	59	---	---
8	44	---	e13.0	82	---	---	60	---	---
9	86	174	42	80	---	---	58	---	---
10	84	---	e37.0	79	---	---	57	---	---
11	79	---	e27.0	82	---	---	61	---	---
12	75	---	e18.0	81	---	---	65	---	---
13	74	51	10	81	---	---	63	---	---
14	70	34	6.6	79	---	---	65	---	---
15	63	---	e5.6	74	---	---	64	---	---
16	57	---	e5.1	69	---	---	62	---	---
17	57	---	e5.2	69	---	---	59	---	---
18	59	---	e5.4	65	---	---	55	---	---
19	57	---	e5.3	63	---	---	54	---	---
20	58	---	e5.4	65	---	---	53	---	---
21	59	---	e5.5	60	---	---	53	---	---
22	62	---	e5.7	60	---	---	54	---	---
23	73	---	e6.7	65	---	---	53	---	---
24	66	---	e6.1	65	---	---	56	---	---
25	65	---	e6.2	68	---	---	50	---	---
26	72	---	e46.0	65	---	---	49	---	---
27	213	1,090	991	68	---	---	57	---	---
28	100	175	62	68	---	---	61	---	---
29	81	---	e17.0	67	---	---	59	---	---
30	85	---	e18.0	67	---	---	57	---	---
31	91	---	e20.0	---	---	---	55	---	---
TOTAL	2,240	---	1,592.7	2,274	---	---	1,809	---	---
JANUARY			FEBRUARY			MARCH			
1	57	---	---	86	---	---	162	---	---
2	55	---	---	85	---	---	165	---	---
3	60	---	---	88	---	---	130	---	---
4	60	---	---	87	---	---	107	---	---
5	57	---	---	94	---	---	98	---	---
6	57	---	---	86	---	---	96	---	---
7	55	---	---	85	---	---	93	---	---
8	57	---	---	85	---	---	103	---	---
9	56	---	---	84	---	---	96	---	---
10	50	---	---	88	---	---	101	---	---
11	51	---	---	87	---	---	98	---	---
12	57	---	---	87	---	---	97	---	---
13	55	---	---	93	---	---	98	---	---
14	54	---	---	108	---	---	98	---	---
15	54	---	---	91	---	---	99	---	---
16	51	---	---	89	---	---	102	---	---
17	52	---	---	91	---	---	119	---	---
18	52	---	---	89	---	---	219	---	---
19	53	---	---	133	---	---	155	---	---
20	55	---	---	105	---	---	155	---	---
21	69	---	---	96	---	---	139	---	---
22	90	---	---	95	---	---	114	---	---
23	91	---	---	95	---	---	110	---	---
24	95	---	---	90	---	---	159	---	---
25	92	---	---	93	---	---	211	---	---
26	92	---	---	100	---	---	113	---	---
27	92	---	---	107	---	---	103	---	---
28	83	---	---	133	---	---	101	---	---
29	81	---	---	---	---	---	102	---	---
30	82	---	---	---	---	---	104	---	---
31	82	---	---	---	---	---	109	---	---
TOTAL	2,047	---	---	2,650	---	---	3,756	---	---

07105800 FOUNTAIN CREEK AT SECURITY, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	
		APRIL			MAY			JUNE		
1	110	---	e39	107	137	40	151	680	423	
2	111	---	e35	110	112	34	94	414	115	
3	112	99	30	113	165	50	102	344	161	
4	113	67	20	131	168	59	242	1,010	1,270	
5	134	---	e24	138	---	e60	225	708	643	
6	200	458	264	133	---	e58	75	226	47	
7	120	157	52	131	---	e58	96	---	e70	
8	111	---	e37	133	---	e74	66	---	e27	
9	105	---	e31	126	170	58	88	189	61	
10	91	---	e23	171	473	273	105	266	75	
11	77	70	14	114	---	e64	103	118	33	
12	76	---	e12	111	131	39	82	75	17	
13	75	---	e11	111	120	37	111	---	e21	
14	73	---	e10	118	124	39	270	695	2,050	
15	80	---	e11	147	179	145	149	---	e125	
16	87	---	e11	165	339	266	140	102	38	
17	82	50	11	111	70	21	283	1,770	3,260	
18	86	---	e16	106	55	16	258	1,200	933	
19	103	---	e25	110	72	21	773	1,270	10,000	
20	98	---	e29	121	68	22	385	---	e1,330	
21	99	121	32	116	---	e19	114	241	75	
22	169	583	785	109	56	17	89	---	e34	
23	262	3,400	2,960	113	---	e81	79	---	e21	
24	225	1,090	725	108	314	111	78	---	e21	
25	96	---	e87	225	969	1,210	83	---	e27	
26	78	162	34	112	397	136	323	655	908	
27	73	---	e31	83	169	39	129	180	65	
28	80	167	36	64	86	15	93	---	e39	
29	107	269	79	59	---	e16	100	165	54	
30	110	---	e71	67	145	26	97	158	44	
31	---	---	---	112	391	207	---	---	---	
TOTAL	3,343	---	5,545	3,675	---	3,311	4,983	---	21,987	
		JULY			AUGUST			SEPTEMBER		
1	77	78	16	70	225	42	93	---	e49	
2	68	---	e12	70	201	38	117	149	49	
3	64	---	e8.5	96	655	176	171	369	226	
4	62	41	6.9	116	358	122	104	288	83	
5	61	---	e7.0	83	158	35	88	213	51	
6	65	---	e7.6	76	70	14	123	273	126	
7	65	---	e7.7	73	84	17	116	---	e82	
8	60	---	e7.3	77	92	19	105	382	109	
9	61	44	7.2	112	568	341	93	247	62	
10	62	25	4.2	92	475	131	89	---	e31	
11	62	---	e4.4	84	143	44	97	69	18	
12	65	35	6.2	108	307	108	e95	---	e16	
13	67	64	12	70	123	23	e98	---	e14	
14	64	67	12	67	---	e15	e99	---	e12	
15	70	91	28	63	81	14	e85	---	e10	
16	74	161	40	65	62	11	76	56	11	
17	70	59	11	66	77	14	75	64	13	
18	61	43	7.0	78	142	35	e78	---	e17	
19	100	218	165	81	---	e25	75	---	e17	
20	136	408	221	74	69	14	74	91	18	
21	64	117	20	76	47	9.8	75	73	15	
22	62	83	14	75	86	17	77	---	e12	
23	e65	---	e9.3	83	109	26	77	---	e10	
24	64	---	e6.9	85	132	36	74	44	8.7	
25	63	43	7.3	125	308	138	76	54	11	
26	65	47	8.3	82	76	18	79	52	11	
27	131	257	111	159	448	673	83	---	e9.9	
28	402	1,150	2,890	159	516	310	81	---	e7.9	
29	157	1,120	600	186	679	797	84	32	7.4	
30	77	---	e85	295	882	1,100	86	46	11	
31	68	314	58	913	1,790	15,800	---	---	---	
TOTAL	2,632	---	4,400.8	3,859	---	20,162.8	2,743	---	1,117.9	

e Estimated.

07105900 JIMMY CAMP CREEK AT FOUNTAIN, CO

LOCATION.--Lat 38°41'04", long 104°41'17", in NW¼SE¼ sec.5, T.16 S., R.65 W., El Paso County, Hydrologic Unit 11020003, on right bank 110 ft downstream of bridge on county road, 0.2 mi east of Fountain, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--65.6 mi².

PERIOD OF RECORD.--January 1976 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105900

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,530 ft above NGVD of 1929, from topographic map. Prior to Aug. 14, 1991, at site 110 ft upstream on downstream side of bridge; Jan. 1976 to Sept. 3, 1986, at datum 4.0 ft higher and Sept. 4, 1986 to Aug. 13, 1991, at present datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, ground-water withdrawals, diversions for irrigation, and return flows from irrigated areas. 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 OUTSIDE PERIOD OF RECORD.--Flood of June 17, 1965, reached an estimated discharge of 124,000 ft³/s, gage height, unknown.

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	0.89	1.5	1.2	0.96	0.90	e1.0	1.3	1.5	2.6	0.52	0.48	0.82
2	0.88	1.5	1.2	0.93	0.91	e1.0	1.3	1.4	2.2	0.45	0.51	0.54
3	1.1	1.4	1.2	0.98	0.91	1.1	1.3	1.3	2.1	0.42	0.47	0.41
4	1.0	1.4	1.2	1.0	e0.91	1.0	1.4	1.4	3.2	0.39	0.46	0.39
5	0.84	1.4	1.1	1.0	e0.90	1.1	1.4	1.4	3.0	0.39	0.43	0.33
6	0.77	1.4	1.1	1.0	e0.90	1.0	1.5	1.6	2.3	0.40	0.43	0.34
7	0.80	1.4	1.1	1.0	e0.91	1.0	1.4	1.5	2.2	0.42	0.42	0.34
8	0.79	1.3	1.1	1.0	e0.93	1.0	1.4	1.3	1.9	0.42	0.40	0.44
9	0.87	1.3	1.2	1.0	e0.95	1.0	1.5	1.3	1.7	0.38	0.36	0.63
10	0.81	1.3	1.2	e1.0	e1.0	1.0	1.4	1.3	1.7	0.35	0.33	0.80
11	0.79	1.2	1.2	1.0	e1.1	1.0	1.6	1.4	1.6	0.29	0.31	0.92
12	0.80	1.2	1.2	0.97	1.1	1.1	1.6	1.4	1.4	0.30	0.32	0.94
13	0.87	1.3	1.2	0.94	1.0	1.0	1.6	1.5	1.5	0.28	0.30	0.96
14	0.91	1.2	1.2	0.98	1.1	1.0	1.7	1.5	1.7	0.23	0.31	0.97
15	0.94	1.2	1.2	1.0	1.0	1.0	1.9	1.9	4.0	0.23	0.31	0.89
16	0.98	2.1	1.2	e1.0	1.0	1.0	1.9	1.4	1.1	0.25	0.30	0.77
17	1.0	1.0	1.2	e0.98	1.0	2.3	1.9	1.4	1.8	0.25	0.30	0.71
18	1.1	1.1	1.1	e1.0	1.0	1.9	2.0	1.4	2.5	0.19	0.33	0.64
19	1.2	1.1	1.1	e1.0	1.2	1.8	2.3	1.4	5.0	0.23	0.33	0.70
20	1.2	1.2	e1.1	1.0	1.0	1.8	1.8	1.5	e30	0.27	0.30	0.57
21	1.3	1.3	1.1	0.94	1.0	1.7	1.9	1.5	2.8	0.27	0.28	0.49
22	1.3	1.2	e1.1	0.91	1.1	1.5	1.9	1.4	0.95	0.22	0.28	0.47
23	1.4	1.2	1.0	0.90	1.0	1.5	2.1	1.4	0.71	0.25	0.27	0.45
24	1.4	1.2	1.2	0.90	e1.0	1.8	1.8	1.5	0.59	0.21	0.29	0.40
25	1.4	1.2	e1.1	0.89	e1.0	1.5	1.8	1.7	0.56	0.16	0.29	0.42
26	1.9	1.2	e1.1	e0.90	1.0	1.3	2.0	1.9	0.56	0.52	0.29	0.40
27	1.9	1.2	e1.1	0.90	1.0	1.3	2.1	1.4	0.56	0.31	0.27	0.41
28	1.3	1.2	1.1	0.90	e1.0	1.3	2.0	1.5	0.82	0.53	0.29	0.44
29	1.5	1.2	1.1	0.90	---	1.2	1.8	1.5	0.89	0.75	0.33	0.43
30	1.4	1.1	1.0	0.90	---	1.2	1.7	1.6	0.63	0.47	0.51	0.41
31	1.4	---	1.1	0.90	---	1.3	---	2.1	---	0.43	2.9	---
TOTAL	34.74	38.5	35.3	29.68	27.82	39.7	51.3	46.3	82.57	10.78	13.40	17.43
MEAN	1.12	1.28	1.14	0.96	0.99	1.28	1.71	1.49	2.75	0.35	0.43	0.58
MAX	1.9	2.1	1.2	1.0	1.2	2.3	2.3	2.1	30	0.75	2.9	0.97
MIN	0.77	1.0	1.0	0.89	0.90	1.0	1.3	1.3	0.56	0.16	0.27	0.33
AC-FT	69	76	70	59	55	79	102	92	164	21	27	35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

	2003	2003	1988	2003	1990	1990	1990	1986	1989	2003	2002	2003
MEAN	2.05	2.22	1.79	1.67	1.61	1.73	2.05	2.59	3.53	3.50	4.34	1.76
MAX	3.55	6.49	3.17	2.74	2.39	3.54	9.33	10.1	27.8	27.9	13.4	5.12
(WY)	(1985)	(1982)	(1995)	(1986)	(1977)	(1980)	(1999)	(1995)	(1995)	(1985)	(1984)	(1994)
MIN	1.12	1.28	0.87	0.96	0.79	1.05	0.56	0.91	0.98	0.35	0.33	0.58
(WY)	(2003)	(2003)	(1988)	(2003)	(1990)	(1990)	(1990)	(1986)	(1989)	(2003)	(2002)	(2003)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1976 - 2003

ANNUAL TOTAL	471.60	427.52	
ANNUAL MEAN	1.29	1.17	
HIGHEST ANNUAL MEAN			2.40
LOWEST ANNUAL MEAN			5.12 1995
HIGHEST DAILY MEAN	3.8 Apr 1	30 Jun 20	1.17 2003
LOWEST DAILY MEAN	0.23 Aug 17	0.16 Jul 25	700 Jul 28, 1985
ANNUAL SEVEN-DAY MINIMUM	0.25 Aug 12	0.23 Jul 19	a0.00 Apr 12, 1990
MAXIMUM PEAK FLOW		233 Jun 20	0.07 Apr 10, 1990
MAXIMUM PEAK STAGE		c6.31 Jun 20	b4,810 Jun 3, 1994
ANNUAL RUNOFF (AC-FT)	935	848	c9.51 Jun 3, 1994
10 PERCENT EXCEEDS	1.9	1.8	1,740
50 PERCENT EXCEEDS	1.3	1.0	2.8
90 PERCENT EXCEEDS	0.39	0.33	1.7
			0.93

e Estimated.

a Also occurred Apr 13, 15, 1990.

b From contracted-opening measurement of peak flow.

c From floodmarks.

ARKANSAS RIVER BASIN

07105900 JIMMY CAMP CREEK AT FOUNTAIN, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105900

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)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, filtered, mg/L as N (00608)	Nitrite + nitrate water filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L (00665)	E coli, modified, water, col/100 mL (90902)	E coli, m-TEC, MF, water, col/100 mL (31633)	Fecal coliform, M-FC, 0.7u MF col/100 mL (31625)
MAY 01...	1255	1.5	14.0	8.3	2,920	16.5	0.079	0.19	<0.02	E.03	--	100	170
JUL 21...	1430	0.25	6.9	8.0	3,240	24.5	0.084	0.15	<0.02	E.03	E910	--	1,500

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

Date	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
MAY 01...	7	0.03
JUL 21...	8	0.01

< -- 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)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 04...	1200	1.1	2,880	12.5	MAY 01...	1535	1.4	2,890	17.5
NOV 12...	1355	1.3	2,840	8.5	JUN 20...	1305	18	753	--
DEC 09...	1410	1.2	2,780	7.0	JUL 11...	1235	0.28	3,280	20.0
FEB 13...	1625	1.0	2,960	9.5	AUG 06...	1310	0.40	2,990	23.5
MAR 26...	1605	1.3	3,020	17.0	SEP 19...	1450	0.65	3,200	19.0

07105945 ROCK CREEK ABOVE FORT CARSON RESERVATION, CO

LOCATION.--Lat 38°42'27", long 104°50'46", in NW¹/₄NW¹/₄ sec.36, T.15 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on right bank 20 ft upstream from county road bridge, 0.6 mi northwest of Rock Creek Park, 1.2 mi upstream from State Highway 115, and 3.2 mi southwest of Fort Carson Military Reservation.

DRAINAGE AREA.--6.79 mi².

PERIOD OF RECORD.--May 1978 to current year. Water-quality data available, April 1978 to August 1979. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07105945

REVISED RECORDS.--WDR CO-85-1: 1982 (M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,390 ft above NGVD of 1929, from topographic map. Prior to Oct. 10, 1997, at site 50 ft downstream.

REMARKS.--Records fair except for estimated daily discharges, which are poor. 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	0.02	0.15	e0.21	0.13	0.13	0.24	3.3	3.0	1.5	0.66	0.22	1.4
2	0.01	0.15	e0.22	0.13	0.15	0.21	5.5	2.8	1.5	0.57	0.21	0.93
3	0.02	0.17	e0.23	0.14	0.14	0.23	6.1	2.6	1.2	0.50	0.23	0.84
4	0.04	0.16	e0.24	0.16	0.12	0.26	5.3	2.5	1.2	0.47	0.33	0.80
5	0.06	0.16	e0.25	0.17	0.15	0.26	4.6	2.3	1.4	0.41	0.25	0.62
6	0.06	0.14	e0.26	0.17	e0.10	0.31	4.0	2.1	1.6	0.37	0.23	0.59
7	0.06	0.15	e0.26	0.17	e0.10	0.39	3.6	1.9	1.4	0.35	0.18	1.2
8	0.06	0.20	0.26	0.13	e0.10	0.46	3.1	1.8	1.3	0.31	0.16	0.84
9	0.04	0.32	0.26	0.07	e0.11	0.55	3.1	1.7	1.1	0.28	0.24	0.71
10	0.03	0.30	0.26	0.05	e0.11	0.65	3.4	1.7	1.1	0.25	0.20	0.57
11	0.03	0.29	0.26	0.07	0.13	0.78	3.8	1.5	1.0	0.23	0.20	0.50
12	0.02	0.29	0.25	0.08	0.15	0.90	4.5	1.3	0.93	0.22	0.71	0.43
13	0.02	0.24	0.24	0.08	0.18	0.98	5.5	1.2	1.1	0.21	0.35	0.38
14	0.02	0.20	0.23	0.08	0.23	1.2	5.9	1.1	1.3	0.20	0.26	0.42
15	0.02	0.22	0.20	0.07	0.26	1.3	5.8	1.1	1.2	e0.50	0.22	0.33
16	0.02	0.22	0.20	0.07	0.24	1.4	5.3	1.1	1.1	e0.40	0.18	0.23
17	0.02	0.21	0.20	0.08	0.25	1.4	4.8	1.0	1.1	0.26	0.15	0.20
18	0.02	0.19	0.19	0.07	0.27	2.0	4.3	0.88	0.99	0.18	0.14	0.18
19	0.01	0.20	0.19	0.07	0.25	1.7	4.0	0.82	1.1	0.14	0.16	0.16
20	0.00	0.20	0.13	0.08	0.25	1.7	3.6	0.90	1.8	0.15	0.11	0.15
21	0.00	0.17	0.20	0.08	0.29	1.9	3.3	0.82	1.5	0.13	0.09	0.12
22	0.00	0.17	0.17	0.09	0.28	2.0	3.1	0.76	1.2	0.11	0.08	0.11
23	0.02	0.19	0.16	0.08	e0.25	2.6	3.2	0.76	1.1	0.11	0.07	0.09
24	0.02	0.20	e0.12	0.09	e0.10	3.5	3.2	1.1	0.99	0.09	0.06	0.07
25	0.04	0.20	e0.10	0.10	e0.15	4.1	3.1	7.2	0.94	0.07	0.05	0.07
26	0.06	0.19	e0.12	0.10	0.26	5.0	3.0	2.6	1.0	0.05	0.03	0.05
27	0.17	e0.18	0.14	0.12	0.25	6.0	3.1	2.2	0.88	0.04	0.01	0.04
28	0.24	e0.18	0.14	0.12	0.26	4.4	3.2	1.8	0.78	0.09	0.00	0.03
29	0.22	e0.18	0.16	0.12	---	2.9	3.3	1.4	0.79	0.23	0.00	0.02
30	0.24	e0.20	0.15	0.12	---	2.8	3.3	1.2	0.72	0.31	0.05	0.02
31	0.19	---	0.14	0.12	---	2.7	---	1.2	---	0.27	2.5	---
TOTAL	1.78	6.02	6.14	3.21	5.26	54.82	121.3	54.34	34.82	8.16	7.67	12.10
MEAN	0.057	0.20	0.20	0.10	0.19	1.77	4.04	1.75	1.16	0.26	0.25	0.40
MAX	0.24	0.32	0.26	0.17	0.29	6.0	6.1	7.2	1.8	0.66	2.5	1.4
MIN	0.00	0.14	0.10	0.05	0.10	0.21	3.0	0.76	0.72	0.04	0.00	0.02
AC-FT	3.5	12	12	6.4	10	109	241	108	69	16	15	24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	1.39	0.93	0.48	0.45	0.47	1.00	4.65	10.1	4.97	1.79	3.04	1.18														
MAX	20.7	10.7	2.25	1.42	1.33	2.56	20.7	39.1	32.7	7.23	18.1	7.75														
(WY)	(1985)	(1985)	(1985)	(1985)	(1985)	(1998)	(1999)	(1995)	(1997)	(1985)	(1999)	(1982)														
MIN	0.000	0.028	0.051	0.073	0.12	0.27	0.26	0.095	0.015	0.010	0.000	0.000														
(WY)	(1979)	(1979)	(1979)	(1979)	(1979)	(2002)	(2002)	(2002)	(2002)	(1978)	(1978)	(1978)														

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1978 - 2003
ANNUAL TOTAL	48.94	315.62	
ANNUAL MEAN	0.13	0.86	2.58
HIGHEST ANNUAL MEAN			7.70 1985
LOWEST ANNUAL MEAN			0.14 2002
HIGHEST DAILY MEAN	3.2 Jul 3	7.2 May 25	397 Apr 30, 1999
LOWEST DAILY MEAN	0.00 Jun 13	0.00 Oct 20	a0.00 Jul 6, 1978
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 13	0.01 Oct 16	0.00 Jul 6, 1978
MAXIMUM PEAK FLOW		40 May 25	b770 Jun 10, 1997
MAXIMUM PEAK STAGE		3.38 May 25	c9.71 Jun 10, 1997
ANNUAL RUNOFF (AC-FT)	97	626	1,870
10 PERCENT EXCEEDS	0.28	3.0	5.4
50 PERCENT EXCEEDS	0.11	0.24	0.62
90 PERCENT EXCEEDS	0.00	0.06	0.14

e Estimated.

a No flow on many days during many years.

b From rating curve extended above 133 ft³/s on basis of width-contraction measurement of peak flow at gage height 5.28 ft.

c From floodmark, site then in use.

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO

LOCATION (REVISED).--Lat 38°36'06", long 104°40'11", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.4, T.17 S., R.65 W., El Paso County, Hydrologic Unit 11020003, on left bank 10 ft downstream from Old Pueblo Road bridge, 190 ft downstream from Denver & Rio Grande Railroad bridge, 0.9 mi downstream from Little Fountain Creek, and 5.6 mi south of Fountain. Prior to October 31, 2002, at site 90 ft upstream on right bank.

DRAINAGE AREA.--681 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to February 1940 (monthly records only), March 1940 to September 1954; July 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07106000

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,355 ft above NGVD of 1929, from topographic map. Sept. 18, 1938 to Mar. 1, 1940, nonrecording gage at site 40 ft upstream on right bank at different datum. Mar. 2, 1940 to Sept. 30, 1954, at site 290 ft upstream on right bank at different datum. July 2, 1985 to Sept. 2, 1987, at site 590 ft upstream on right bank at different datum. Sept. 3, 1987 to Mar. 12, 1990, at site 1,190 ft upstream on right bank at different datum. March 13, 1990 to October 30, 2002, at site 90 ft upstream on right bank.

REMARKS.--Records fair except for estimated daily discharges and those above 1,000 ft³/s, which are poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, transmountain diversions, diversions for irrigation and municipal use, return flows from irrigated areas, and flows from sewage-treatment plants.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 14.4 ft, at different datum, May 30, 1935, discharge undetermined. Floods of May 1935 and June 1965 probably exceeded flood of May 1940.

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	61	88	87	90	105	150	90	82	161	80	63	e140
2	103	94	89	89	105	165	87	85	144	72	68	108
3	35	102	88	89	112	151	89	80	97	67	97	170
4	41	87	90	90	108	134	86	75	319	64	132	144
5	50	85	79	85	114	113	96	98	431	63	82	100
6	49	83	68	77	113	113	146	82	147	62	65	117
7	49	94	67	74	108	110	103	80	150	64	60	143
8	44	110	71	78	107	112	90	82	106	54	64	116
9	66	102	77	78	104	103	82	83	96	59	75	90
10	63	101	74	70	117	101	74	133	138	74	131	82
11	58	e107	76	70	117	101	48	93	124	74	84	86
12	60	e110	80	79	110	95	33	81	97	76	108	87
13	65	e112	76	80	114	100	34	78	126	81	69	85
14	63	111	74	80	119	99	35	71	356	79	66	97
15	66	110	75	82	119	101	41	74	169	73	64	91
16	63	93	85	80	106	104	52	177	90	87	65	89
17	62	85	87	78	98	138	45	98	242	67	62	89
18	58	83	81	78	100	230	49	87	295	72	71	93
19	53	70	78	78	126	171	74	86	726	86	95	100
20	55	78	79	80	133	152	78	78	935	207	76	103
21	54	76	74	87	112	156	71	81	152	68	61	100
22	56	e78	80	114	111	116	77	76	126	51	69	e98
23	75	e82	79	104	115	109	276	74	124	55	65	e94
24	71	e81	83	107	115	112	280	113	130	67	66	89
25	76	e85	86	112	114	311	114	205	137	70	114	90
26	64	87	87	118	118	100	79	172	518	86	116	89
27	246	87	91	129	120	98	70	102	155	151	78	90
28	121	90	100	118	128	99	68	70	127	628	210	91
29	66	87	97	114	---	91	83	61	132	310	163	85
30	63	88	94	105	---	93	87	62	115	107	457	83
31	72	---	91	103	---	94	---	79	---	70	1,390	---
TOTAL	2,128	2,746	2,543	2,816	3,168	3,922	2,637	2,898	6,665	3,224	4,386	3,039
MEAN	68.6	91.5	82.0	90.8	113	127	87.9	93.5	222	104	141	101
MAX	246	112	100	129	133	311	280	205	935	628	1,390	170
MIN	35	70	67	70	98	91	33	61	90	51	60	82
AC-FT	4,220	5,450	5,040	5,590	6,280	7,780	5,230	5,750	13,220	6,390	8,700	6,030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

	73.0	89.4	74.8	76.2	80.6	90.7	130	230	178	116	145	73.8
MEAN	73.0	89.4	74.8	76.2	80.6	90.7	130	230	178	116	145	73.8
MAX	266	253	231	214	201	224	787	1,602	1,080	432	713	242
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(1999)	(1997)	(1995)	(1999)	(1999)
MIN	3.70	10.0	5.14	6.99	6.07	6.39	4.30	9.78	4.50	3.47	3.15	1.31
(WY)	(1954)	(1940)	(1953)	(1952)	(1941)	(1941)	(1954)	(1950)	(1953)	(1952)	(1954)	(1939)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1939 - 2003

ANNUAL TOTAL	36,324	40,172		
ANNUAL MEAN	99.5	110		
HIGHEST ANNUAL MEAN			113	
LOWEST ANNUAL MEAN			430	1999
HIGHEST DAILY MEAN	829	Jul 6	1,390	Aug 31
LOWEST DAILY MEAN	35	Oct 3	33	Apr 12
ANNUAL SEVEN-DAY MINIMUM	48	Oct 3	41	Apr 11
MAXIMUM PEAK FLOW			8,060	Aug 31
MAXIMUM PEAK STAGE			8.09	Aug 31
ANNUAL RUNOFF (AC-FT)	72,050	79,680	81,840	
10 PERCENT EXCEEDS	141	148	222	
50 PERCENT EXCEEDS	88	89	70	
90 PERCENT EXCEEDS	61	63	7.6	

e Estimated.

a Also occurred Sep 30, 1939.

b From contracted-opening and slope-area measurement of peak flow.

c Site and datum then in use; maximum gage height, 12.06 ft, Apr 30, 1999, from floodmarks.

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO—Continued

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Cyanide water unfltrd mg/L (00720)	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)	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)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
NOV 04...	2.9	8.2	<0.01	16.0	1,630	0.48	3.1	E5.0	73	<0.018	<0.018	6.6	8.1
DEC 02...	4.0	6.1	<0.01	<10.0	616	E.34	1.4	E4.0	34	<0.018	<0.018	6.5	6.8
FEB 11...	--	--	--	--	--	--	--	10.1	106	--	--	--	--
APR 29...	--	--	--	--	--	--	--	4.04	61.7	--	--	--	--
JUL 23...	--	--	--	--	--	--	--	6.83	33.2	--	--	--	--

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

Date	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)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)
NOV 04...	7.7	7.5	0.08	0.06	27	32	105	22
DEC 02...	8.0	7.4	<0.04	<0.04	E19	E21	58	11
FEB 11...	5.87	5.38	--	--	--	--	157	48
APR 29...	6.35	5.79	--	--	--	--	186	34
JUL 23...	5.43	4.91	--	--	--	--	38	4.5

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

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.4	8.2	8.3	8.1	8.1	8.1	8.2	8.1	8.1	8.3	8.2	8.2
2	8.2	8.1	8.2	8.1	8.0	8.1	8.2	8.0	8.1	8.3	8.1	8.2
3	8.2	8.1	8.2	8.1	7.9	8.0	8.2	8.1	8.1	8.3	8.2	8.2
4	8.3	8.2	8.2	8.1	8.0	8.0	8.2	8.1	8.1	8.3	8.2	8.2
5	8.3	8.1	8.2	8.1	8.0	8.0	8.2	8.0	8.1	8.3	8.2	8.2
6	8.2	8.1	8.1	8.1	8.0	8.1	8.2	8.0	8.1	8.3	8.2	8.2
7	8.2	8.0	8.1	8.2	8.0	8.1	8.2	8.0	8.1	8.2	8.1	8.2
8	8.2	7.9	8.0	8.2	8.1	8.1	8.2	8.0	8.1	8.2	8.1	8.2
9	8.2	7.9	8.0	8.2	8.1	8.1	8.2	8.0	8.1	8.2	8.1	8.1
10	8.1	8.0	8.0	8.1	8.0	8.1	8.2	8.0	8.1	8.2	8.0	8.1
11	8.1	7.9	8.0	8.2	8.0	8.1	8.2	8.0	8.0	8.2	8.1	8.2
12	8.1	8.0	8.0	8.2	8.0	8.1	8.2	8.0	8.0	8.3	8.1	8.2
13	8.1	7.9	8.0	8.2	8.1	8.1	8.2	7.9	8.1	8.4	8.1	8.2
14	8.1	7.9	8.0	8.2	8.1	8.1	8.2	8.0	8.1	8.4	8.2	8.3
15	8.1	7.9	8.0	8.2	8.0	8.1	8.2	8.0	8.1	8.5	8.2	8.3
16	8.2	8.0	8.0	8.1	7.9	8.0	8.2	8.0	8.1	8.4	8.2	8.3
17	8.1	8.0	8.0	8.1	8.0	8.1	8.3	8.1	8.1	8.3	8.1	8.2
18	8.1	8.0	8.0	8.1	8.0	8.1	8.2	8.0	8.1	8.3	8.1	8.2
19	8.2	8.0	8.0	8.1	8.0	8.0	8.2	8.0	8.1	8.4	8.1	8.3
20	8.2	8.0	8.1	8.1	8.0	8.1	8.2	7.9	8.0	8.4	8.1	8.3
21	8.1	8.0	8.1	8.2	8.0	8.1	8.2	8.0	8.1	8.3	8.2	8.2
22	8.2	8.0	8.1	8.2	8.0	8.2	8.2	8.0	8.1	8.3	8.2	8.2
23	8.1	8.0	8.1	8.3	8.1	8.2	8.2	8.0	8.1	8.3	8.1	8.2
24	8.2	8.0	8.1	8.2	8.1	8.2	8.2	8.0	8.1	8.3	8.1	8.2
25	8.2	8.0	8.1	8.2	8.1	8.1	8.2	7.9	8.1	8.3	8.1	8.2
26	8.2	8.0	8.1	8.2	8.1	8.1	8.2	8.0	8.0	8.3	8.1	8.2
27	8.1	7.8	7.8	8.2	8.0	8.1	8.2	8.0	8.1	8.3	8.1	8.2
28	8.1	7.8	7.9	8.2	8.0	8.2	8.2	8.1	8.1	8.3	8.1	8.2
29	8.2	7.9	8.1	8.2	8.1	8.2	8.2	8.1	8.2	8.3	8.1	8.2
30	8.1	8.0	8.1	8.2	8.1	8.2	8.2	8.1	8.1	8.2	8.1	8.1
31	8.1	8.0	8.1	---	---	---	8.3	8.0	8.2	8.3	8.1	8.2
MAX	8.4	8.2	8.3	8.3	8.1	8.2	8.3	8.1	8.2	8.5	8.2	8.3
MIN	8.1	7.8	7.8	8.1	7.9	8.0	8.2	7.9	8.0	8.2	8.0	8.1
	FEBRUARY			MARCH			APRIL			MAY		
1	8.2	8.1	8.1	8.0	7.8	7.9	8.2	8.0	8.1	8.3	8.2	8.2
2	8.3	8.1	8.1	7.9	7.7	7.8	8.2	8.0	8.1	8.3	8.2	8.2
3	8.2	8.0	8.1	7.9	7.8	7.9	8.3	8.1	8.1	8.3	8.2	8.2
4	8.2	8.0	8.1	7.9	7.8	7.9	8.2	8.1	8.1	8.3	8.1	8.2
5	8.1	7.9	8.0	8.0	7.8	7.9	8.2	8.0	8.1	8.2	8.0	8.1
6	8.1	7.9	8.0	8.0	7.9	7.9	8.1	7.9	8.0	8.2	8.1	8.1
7	8.1	7.8	7.9	8.1	7.9	8.0	8.1	8.0	8.0	8.2	8.0	8.1
8	8.1	7.8	8.0	8.1	8.0	8.0	8.2	8.0	8.1	8.1	7.9	8.0
9	8.1	7.8	8.0	8.0	8.0	8.0	8.2	8.1	8.1	8.1	7.9	8.0
10	8.1	7.8	8.0	8.0	7.9	8.0	8.3	8.1	8.1	7.9	7.7	7.8
11	8.1	7.8	8.0	8.1	8.0	8.0	8.2	8.0	8.1	8.0	7.8	7.9
12	8.1	7.8	7.9	8.2	8.0	8.1	8.1	8.0	8.1	8.0	7.9	7.9
13	8.1	7.9	8.0	8.2	8.0	8.1	8.2	8.1	8.1	8.0	7.9	8.0
14	8.1	7.9	8.0	8.2	8.0	8.1	8.2	8.1	8.1	8.0	7.9	8.0
15	8.0	7.8	7.9	8.1	8.0	8.1	8.2	8.1	8.1	8.0	7.9	7.9
16	8.0	7.9	7.9	8.0	7.9	8.0	8.3	8.0	8.1	7.9	7.7	7.8
17	8.0	7.8	7.9	8.0	7.8	8.0	8.2	8.1	8.2	8.0	7.6	7.7
18	7.9	7.8	7.9	7.9	7.8	7.9	8.3	8.1	8.2	8.0	7.9	8.0
19	8.0	7.8	7.9	8.0	7.8	7.9	8.2	8.1	8.1	8.0	7.9	8.0
20	8.2	7.7	7.8	8.0	7.9	8.0	8.3	8.1	8.1	8.0	7.9	8.0
21	8.0	7.8	7.9	8.0	7.9	8.0	8.3	8.1	8.2	8.1	7.9	8.0
22	8.0	7.8	7.9	8.1	8.0	8.0	8.4	8.0	8.2	8.1	8.0	8.0
23	7.9	7.8	7.9	8.1	8.0	8.0	8.0	7.8	8.0	8.1	7.9	8.0
24	7.9	7.7	7.8	8.1	7.9	8.0	8.0	7.8	7.9	8.0	7.9	7.9
25	8.0	7.7	7.9	8.0	7.7	7.8	8.1	8.0	8.1	8.0	7.6	7.8
26	8.0	7.8	7.9	8.1	7.9	8.0	8.1	8.0	8.1	---	---	---
27	8.0	7.8	7.9	8.1	8.0	8.0	8.2	8.1	8.1	---	---	---
28	8.0	7.9	7.9	8.1	7.9	8.0	8.2	8.1	8.1	8.2	8.1	8.1
29	---	---	---	8.0	7.9	8.0	8.3	8.1	8.2	8.2	8.1	8.2
30	---	---	---	8.1	7.9	8.0	8.3	8.1	8.2	8.2	8.1	8.2
31	---	---	---	8.1	7.9	8.0	---	---	---	8.2	8.1	8.2
MAX	8.3	8.1	8.1	8.2	8.0	8.1	8.4	8.1	8.2	---	---	---
MIN	7.9	7.7	7.8	7.9	7.7	7.8	8.0	7.8	7.9	---	---	---

ARKANSAS RIVER BASIN

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
1	8.1	7.7	7.9	8.1	7.7	8.1	8.0	7.7	7.9	8.1	8.0	8.0
2	7.9	7.6	7.8	8.2	8.0	8.1	7.9	7.8	7.9	8.2	8.0	8.1
3	8.1	7.8	8.0	8.2	8.1	8.1	7.9	7.8	7.9	8.1	7.9	8.1
4	8.1	7.8	7.9	8.2	8.1	8.2	7.9	7.8	7.8	8.1	7.9	8.0
5	7.9	7.7	7.8	8.2	8.1	8.2	8.0	7.9	7.9	8.1	8.0	8.1
6	8.1	7.9	8.0	8.2	8.1	8.2	8.0	7.9	7.9	8.1	8.0	8.0
7	8.0	7.7	8.0	8.3	8.1	8.2	8.0	7.9	8.0	8.2	8.0	8.1
8	8.1	8.0	8.0	8.3	8.1	8.2	8.0	7.9	8.0	8.2	8.1	8.1
9	8.1	8.0	8.1	8.4	8.2	8.3	8.1	7.9	8.0	8.1	8.0	8.1
10	8.0	7.9	8.0	8.3	8.1	8.2	8.0	7.8	7.9	8.1	7.9	8.0
11	8.0	7.9	8.0	8.3	8.1	8.3	8.1	8.0	8.0	8.0	7.9	7.9
12	8.0	7.9	8.0	8.3	8.1	8.3	8.0	7.8	8.0	8.0	7.9	7.9
13	8.0	7.9	8.0	8.3	8.1	8.2	8.1	7.9	8.0	8.1	7.9	8.0
14	8.0	7.6	7.9	8.3	8.0	8.2	8.1	8.0	8.0	8.1	7.9	8.0
15	7.9	7.6	7.8	8.2	8.0	8.1	8.1	8.0	8.1	8.2	7.9	8.1
16	8.0	7.8	7.9	8.1	7.9	8.1	8.2	8.0	8.1	8.3	8.0	8.1
17	8.0	7.7	7.9	8.2	8.0	8.1	8.1	8.0	8.1	8.3	8.1	8.2
18	7.9	7.7	7.8	8.2	8.0	8.1	8.1	8.0	8.1	8.4	8.0	8.1
19	7.9	7.5	7.6	8.2	8.0	8.1	8.2	7.9	8.1	8.4	8.1	8.2
20	7.9	7.6	7.8	8.0	7.8	7.9	8.2	8.0	8.1	8.3	8.1	8.2
21	8.0	7.9	8.0	8.1	7.8	8.1	8.3	8.1	8.2	8.3	8.1	8.2
22	8.0	8.0	8.0	8.2	8.0	8.1	8.3	8.1	8.2	8.4	8.0	8.1
23	8.1	7.9	8.0	8.2	8.0	8.1	8.3	8.1	8.2	8.4	8.1	8.2
24	8.1	8.0	8.0	8.2	8.0	8.1	8.2	8.1	8.2	8.3	8.0	8.1
25	8.1	8.0	8.0	8.2	8.0	8.1	8.2	8.0	8.1	8.2	7.9	8.0
26	8.0	7.8	7.9	8.2	7.9	8.1	8.2	8.0	8.1	8.3	7.9	8.0
27	8.0	7.9	7.9	8.0	7.9	7.9	8.2	8.0	8.1	8.2	7.9	8.0
28	8.0	7.8	7.9	8.2	7.6	7.9	8.0	7.8	7.9	8.2	7.9	8.0
29	8.0	7.9	8.0	8.0	7.6	7.8	8.0	7.7	7.8	8.2	7.9	8.0
30	8.0	7.6	7.9	---	---	---	8.0	7.9	7.9	8.3	8.0	8.1
31	---	---	---	7.9	7.6	7.7	8.3	7.9	8.0	---	---	---
MAX	8.1	8.0	8.1	---	---	---	8.3	8.1	8.2	8.4	8.1	8.2
MIN	7.9	7.5	7.6	---	---	---	7.9	7.7	7.8	8.0	7.9	7.9

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, 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	1,100	919	1,040	1,040	936	987	1,080	1,000	1,040	1,060	955	1,010
2	1,040	786	907	1,060	953	1,000	1,090	998	1,040	1,060	976	1,020
3	1,150	987	1,070	1,080	964	1,040	1,080	1,020	1,050	1,070	994	1,030
4	1,130	1,050	1,100	1,060	965	997	1,090	1,030	1,050	1,070	976	1,020
5	1,140	1,050	1,090	1,040	966	995	1,120	1,040	1,080	1,080	998	1,030
6	1,150	1,070	1,100	1,060	975	1,010	1,150	1,070	1,100	1,110	1,000	1,040
7	1,150	1,050	1,100	1,030	953	992	1,150	1,070	1,100	1,090	984	1,040
8	1,160	1,060	1,110	1,010	945	969	1,140	1,040	1,090	1,100	1,000	1,050
9	1,100	998	1,040	1,020	947	979	1,140	1,040	1,090	1,080	1,010	1,040
10	1,080	993	1,030	1,010	928	967	1,140	1,050	1,090	1,110	1,020	1,060
11	1,110	1,030	1,050	1,000	922	956	1,100	1,030	1,080	1,130	1,020	1,080
12	1,120	1,030	1,070	1,020	929	975	1,090	1,030	1,060	1,120	1,040	1,080
13	1,100	1,020	1,060	1,050	970	998	1,120	1,020	1,070	1,120	1,010	1,060
14	1,110	1,000	1,050	---	---	---	1,120	1,050	1,090	1,120	1,050	1,080
15	1,100	1,000	1,050	1,060	976	1,020	1,080	1,010	1,040	1,130	1,060	1,090
16	1,140	1,030	1,080	1,060	976	1,030	1,060	982	1,020	1,130	1,050	1,090
17	1,150	1,060	1,090	1,090	1,020	1,060	1,050	992	1,020	1,130	1,020	1,080
18	1,160	1,050	1,090	1,100	1,020	1,060	1,050	989	1,010	1,140	1,050	1,100
19	1,190	1,040	1,110	1,110	1,050	1,080	1,060	992	1,020	1,130	1,030	1,090
20	1,150	1,030	1,080	1,120	1,060	1,090	1,130	976	1,020	1,120	1,030	1,070
21	1,160	1,040	1,070	1,180	1,070	1,110	1,070	978	1,030	1,110	1,010	1,060
22	1,110	1,010	1,070	1,110	1,020	1,060	1,050	997	1,030	1,020	957	986
23	1,060	987	1,020	1,080	993	1,040	1,040	969	1,000	1,030	930	985
24	1,080	960	1,020	1,080	993	1,030	1,140	969	1,030	1,020	964	994
25	1,090	948	1,030	1,060	1,000	1,030	1,060	1,000	1,040	1,040	947	982
26	1,120	924	1,050	1,110	1,020	1,070	---	---	---	1,040	942	975
27	924	533	686	1,100	1,020	1,070	1,050	974	1,020	1,020	921	958
28	1,040	596	755	1,100	1,020	1,060	1,050	969	1,000	1,020	930	960
29	1,040	955	998	1,090	1,000	1,050	1,040	964	1,000	1,020	929	967
30	1,070	969	1,010	1,080	1,020	1,050	1,040	969	998	997	929	959
31	1,120	967	1,030	---	---	---	1,070	968	1,010	1,030	923	962
MONTH	1,190	533	1,030	---	---	---	---	---	---	1,140	921	1,030
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	989	935	954	1,460	1,120	1,250	1,010	918	964	1,020	922	961
2	1,020	925	968	1,620	1,110	1,280	1,040	949	986	1,090	932	976
3	1,010	925	961	1,620	1,070	1,250	1,040	953	993	1,080	939	994
4	1,080	974	1,020	1,140	1,020	1,080	1,030	953	977	1,080	901	999
5	1,000	904	957	1,120	1,020	1,080	1,050	935	970	1,000	888	926
6	1,080	929	1,020	1,160	1,060	1,110	944	782	859	1,010	906	948
7	1,030	928	981	1,140	1,060	1,090	960	846	903	1,020	905	958
8	1,070	971	1,040	1,110	995	1,070	993	885	938	1,090	909	963
9	1,030	934	995	1,120	996	1,060	1,030	911	953	998	934	957
10	997	919	961	1,100	1,000	1,040	1,020	907	955	1,020	764	859
11	1,020	944	989	1,110	1,010	1,050	1,140	962	1,020	1,000	829	924
12	1,000	926	965	1,100	1,020	1,050	1,160	1,040	1,090	1,000	888	934
13	1,010	910	954	1,100	1,030	1,050	1,160	1,050	1,090	973	880	913
14	993	847	938	1,110	1,030	1,060	1,180	998	1,100	945	875	903
15	1,040	854	977	1,100	1,020	1,060	1,170	952	1,090	942	818	883
16	998	902	951	1,100	1,020	1,050	1,120	926	1,020	825	622	694
17	1,020	902	951	1,070	709	963	1,110	984	1,060	---	---	---
18	1,020	919	966	1,100	855	993	1,120	922	1,030	923	812	859
19	1,210	918	1,000	1,200	905	1,010	1,020	912	964	955	830	882
20	1,240	1,020	1,090	1,260	995	1,120	1,040	922	963	973	852	906
21	1,080	1,000	1,040	1,030	937	982	1,100	933	997	976	844	907
22	1,090	999	1,040	1,070	996	1,020	1,080	896	1,020	981	887	924
23	1,060	991	1,020	1,060	988	1,020	896	377	638	1,100	808	969
24	1,070	973	1,020	1,060	835	1,000	670	490	577	1,080	734	933
25	1,080	981	1,020	868	559	724	844	670	768	906	547	728
26	1,090	975	1,040	1,040	868	978	---	---	---	---	---	---
27	1,090	974	1,030	1,040	945	993	1,060	873	978	---	---	---
28	1,300	1,020	1,080	1,020	947	969	1,100	963	1,020	1,260	1,100	1,160
29	---	---	---	1,010	951	976	965	907	942	1,280	1,100	1,200
30	---	---	---	1,040	949	975	1,020	888	935	1,280	1,070	1,170
31	---	---	---	1,040	914	969	---	---	---	1,260	857	1,160
MONTH	1,300	847	997	1,620	559	1,040	---	---	---	---	---	---

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1,030	683	886	---	---	---	1,170	907	991	842	631	768
2	1,010	664	848	---	---	---	1,040	926	976	937	832	883
3	1,130	779	1,030	1,100	1,000	1,030	1,020	886	955	900	581	789
4	1,060	443	844	1,120	1,000	1,040	933	750	853	812	516	683
5	714	437	569	1,120	1,010	1,050	1,010	883	949	959	812	890
6	862	510	760	1,120	972	1,050	1,080	948	1,000	972	675	911
7	880	740	826	1,090	1,000	1,030	1,090	986	1,020	861	675	794
8	1,060	843	986	1,140	1,010	1,070	1,110	964	1,030	912	714	869
9	1,070	992	1,040	1,130	1,020	1,070	1,040	881	1,000	1,000	885	938
10	998	843	902	1,100	990	1,030	954	638	846	988	922	953
11	1,020	872	956	1,060	984	1,020	1,030	905	962	1,020	950	981
12	1,070	990	1,020	1,050	968	1,000	966	803	906	1,030	949	986
13	990	893	947	1,040	941	981	1,100	942	1,010	980	905	952
14	981	433	844	1,050	957	991	1,120	991	1,030	994	904	948
15	953	464	763	1,080	926	1,000	1,120	991	1,040	967	883	916
16	1,090	904	987	1,060	914	986	1,100	987	1,030	976	893	927
17	1,060	461	932	1,080	961	1,010	1,090	966	1,030	987	917	943
18	766	457	662	1,060	961	1,010	1,070	957	1,010	1,010	914	956
19	828	295	732	1,070	824	994	1,080	856	967	1,020	931	963
20	763	295	524	953	635	795	1,090	940	1,010	1,010	923	963
21	838	669	790	1,060	882	986	1,090	988	1,030	992	911	951
22	---	---	---	1,120	998	1,040	1,080	932	997	1,010	900	938
23	---	---	---	1,100	994	1,050	1,070	935	1,010	1,020	930	960
24	---	---	---	1,070	983	1,020	1,070	912	1,000	1,030	950	973
25	984	912	937	1,000	871	945	992	828	930	1,030	953	977
26	925	388	608	922	576	849	1,020	720	903	1,030	937	968
27	---	---	---	767	420	587	1,060	931	995	1,020	931	969
28	---	---	---	553	324	456	999	539	712	1,040	916	962
29	---	---	---	453	329	380	957	429	801	1,040	899	967
30	---	---	---	---	---	---	666	374	498	1,020	925	962
31	---	---	---	1,130	801	957	634	248	449	---	---	---
MONTH	---	---	---	---	---	---	1,170	248	934	1,040	516	921

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, 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
1	18.3	10.1	14.0	6.1	2.6	4.0	9.5	1.3	4.7	4.6	1.2	2.8
2	14.2	10.9	12.1	8.7	3.9	5.9	9.6	2.3	5.4	7.0	0.0	2.7
3	17.3	10.2	12.3	11.4	4.8	7.1	5.4	3.4	4.2	8.1	0.7	3.9
4	18.6	7.9	12.3	10.9	4.3	6.9	6.4	3.4	4.6	8.4	2.2	4.7
5	18.5	8.3	12.7	12.6	3.7	7.3	8.6	2.5	4.9	5.5	2.2	4.1
6	18.8	8.7	12.9	13.5	3.8	7.7	9.0	1.7	4.4	9.3	3.4	5.5
7	20.4	8.4	13.5	12.3	3.9	7.9	8.1	1.0	3.9	9.5	1.3	4.7
8	20.8	9.5	14.3	12.5	6.2	8.9	8.0	1.8	3.9	10.3	1.4	5.1
9	21.0	11.5	15.4	13.5	6.8	9.4	8.2	0.3	3.5	7.4	1.2	3.6
10	21.0	10.8	14.9	11.8	4.4	7.5	8.2	0.0	3.3	5.6	0.0	1.6
11	19.9	9.7	14.1	9.2	4.1	6.2	7.2	0.9	3.5	5.0	0.0	2.0
12	16.4	9.5	12.0	10.7	2.3	5.9	7.2	0.7	3.2	8.7	2.2	4.2
13	17.9	7.0	11.6	12.2	5.1	8.1	8.5	0.3	3.7	8.9	0.6	4.1
14	17.6	7.3	11.8	11.2	6.4	8.5	8.5	0.9	4.6	7.4	1.3	3.7
15	17.2	6.7	11.2	8.9	3.7	6.2	5.8	1.6	3.5	8.7	0.6	3.4
16	16.8	6.2	10.7	10.3	1.9	5.6	7.4	0.6	3.6	6.3	0.0	2.0
17	16.9	5.9	10.6	11.1	4.0	6.8	9.0	1.9	4.7	6.9	0.0	2.3
18	17.9	7.1	11.4	11.0	4.8	7.2	6.5	0.8	3.5	6.1	0.0	1.8
19	16.4	6.9	10.9	12.0	3.3	6.7	6.5	0.1	2.6	9.5	0.0	3.4
20	17.7	6.5	11.0	12.2	3.4	7.0	5.2	0.0	1.4	9.8	0.2	4.1
21	16.5	6.9	10.8	12.9	4.2	7.7	5.7	0.0	1.8	6.7	0.5	3.2
22	15.9	6.8	10.0	13.1	4.0	7.9	6.0	0.0	1.7	2.9	0.4	1.4
23	8.2	5.7	6.9	11.0	4.9	7.2	3.5	0.1	1.4	6.2	0.0	2.1
24	8.5	4.9	6.5	4.9	2.8	4.1	4.8	0.0	1.4	6.9	1.3	3.8
25	14.2	5.9	9.2	5.1	2.0	3.2	4.9	0.0	1.2	8.0	1.6	4.5
26	14.3	6.1	9.7	6.0	0.8	2.9	3.6	0.0	0.8	9.4	1.0	4.8
27	13.6	8.0	10.1	8.2	0.0	3.3	6.1	0.0	2.1	10.0	3.7	6.3
28	15.4	8.6	10.9	9.4	1.0	4.5	7.7	0.7	3.6	10.2	3.8	6.6
29	9.8	2.5	6.4	10.4	3.2	6.1	7.5	1.9	3.8	11.1	4.7	7.1
30	6.0	2.6	3.8	8.5	2.5	4.7	7.4	1.3	3.6	8.3	2.7	5.3
31	5.9	2.3	3.9	---	---	---	7.0	0.0	3.1	10.0	3.8	6.4
MONTH	21.0	2.3	10.9	13.5	0.0	6.4	9.6	0.0	3.3	11.1	0.0	3.9
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.8	4.9	7.1	10.2	2.3	5.0	18.9	6.7	12.4	18.5	9.1	13.4
2	10.0	2.8	6.2	9.9	1.6	4.8	16.8	8.0	11.6	21.2	9.7	13.8
3	8.2	0.8	3.6	12.7	1.5	6.6	15.4	6.0	10.4	20.7	9.5	14.0
4	9.7	0.0	3.9	7.4	0.9	4.6	14.5	5.8	9.9	18.2	8.4	12.6
5	5.5	0.0	2.9	9.3	0.0	3.9	11.3	6.1	8.3	20.3	8.0	13.6
6	5.2	0.0	1.5	12.7	1.7	6.8	11.3	5.5	8.1	17.1	9.4	12.8
7	5.9	0.0	1.4	13.8	3.2	8.0	11.4	6.4	8.7	20.3	10.1	14.0
8	6.4	0.0	1.7	14.7	3.6	8.6	17.9	5.1	10.9	19.5	9.9	13.9
9	6.3	0.0	1.8	14.9	3.6	8.6	19.8	5.7	12.5	21.5	8.8	13.7
10	9.4	0.0	3.5	14.5	4.1	9.1	21.0	8.1	14.0	15.7	8.1	11.4
11	8.3	0.1	3.9	16.1	4.9	9.9	20.3	9.0	13.6	20.8	6.8	13.1
12	10.4	0.5	5.3	16.1	5.6	10.6	19.9	7.8	13.5	22.2	8.4	14.9
13	10.1	4.8	7.2	16.7	5.7	10.8	22.2	7.9	14.1	20.2	9.6	14.5
14	8.7	5.3	7.0	16.3	6.0	11.2	18.3	8.8	13.0	24.7	10.3	16.8
15	8.9	4.3	5.7	18.3	8.4	12.3	17.5	8.7	12.2	21.7	12.0	15.0
16	7.6	3.5	5.0	13.6	6.5	9.8	21.0	7.4	13.5	23.5	12.3	17.3
17	12.1	2.9	7.0	9.4	5.4	7.7	20.8	8.0	13.2	24.2	12.5	17.9
18	7.8	4.9	6.2	7.9	2.2	4.6	19.5	7.5	13.1	20.4	13.2	16.7
19	11.1	2.2	6.1	7.1	2.0	4.2	11.3	7.6	9.4	18.8	11.2	14.6
20	10.0	2.1	5.5	12.3	3.4	7.8	18.7	7.1	12.2	19.0	9.9	13.1
21	10.4	2.5	6.1	10.1	6.4	7.8	20.4	8.7	14.1	23.8	9.1	16.2
22	9.8	2.9	6.2	15.8	4.4	9.6	20.5	10.0	13.6	25.3	11.5	18.1
23	7.1	0.3	3.5	15.4	5.5	10.4	12.8	8.6	10.7	25.8	12.9	18.0
24	6.2	0.0	1.1	16.2	6.5	10.6	14.6	6.1	10.1	23.2	13.3	17.1
25	7.3	0.0	2.5	14.9	6.9	10.3	20.3	7.4	13.1	20.7	14.0	16.2
26	6.9	1.4	3.8	16.0	6.0	10.8	21.1	8.5	14.2	---	---	---
27	11.1	1.7	5.6	11.4	2.9	7.4	21.1	8.3	14.1	27.3	---	---
28	9.8	2.2	5.2	10.8	1.1	5.5	22.4	11.3	15.3	27.7	15.6	20.5
29	---	---	---	10.1	1.7	5.9	21.7	10.1	15.2	28.3	14.6	20.0
30	---	---	---	15.9	2.0	8.5	21.3	10.2	14.7	28.7	15.1	19.6
31	---	---	---	18.1	5.2	11.1	---	---	---	26.4	15.2	18.9
MONTH	12.1	0.0	4.5	18.3	0.0	8.2	22.4	5.1	12.3	---	---	---

ARKANSAS RIVER BASIN

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	22.5	15.4	18.4	26.7	17.0	21.8	27.6	16.6	21.0	25.0	15.5	19.2
2	25.8	13.9	19.2	29.5	16.5	22.2	29.2	16.6	22.0	26.5	15.5	20.3
3	24.4	13.2	18.4	29.4	16.6	22.5	29.2	18.2	22.6	20.0	16.3	18.1
4	19.8	14.9	16.4	29.3	16.9	22.1	29.5	18.2	22.8	25.1	14.0	18.7
5	15.9	12.7	14.2	28.8	16.7	21.8	29.3	17.9	23.0	26.2	15.1	20.0
6	22.0	11.7	16.3	28.6	16.4	21.0	29.0	17.7	22.1	22.8	16.8	18.8
7	19.0	12.2	14.9	27.2	15.9	20.2	28.8	17.7	22.1	21.5	15.9	17.9
8	24.7	11.5	17.7	28.4	15.7	21.4	27.0	18.3	21.2	24.9	15.3	19.2
9	24.8	13.2	17.7	28.4	14.8	21.3	26.9	17.3	21.0	20.5	15.2	17.5
10	25.1	14.0	17.9	29.8	16.0	22.4	28.0	16.9	22.4	22.7	13.3	17.0
11	25.0	13.4	18.8	28.2	16.6	21.9	29.6	18.2	23.0	22.3	12.0	16.4
12	26.4	14.2	19.1	26.9	17.5	22.1	29.1	17.9	22.6	23.2	11.6	17.0
13	21.3	14.6	17.1	28.9	17.8	22.9	28.5	17.0	22.0	15.1	10.3	12.2
14	24.5	13.4	18.0	28.7	17.1	22.3	28.0	16.0	21.5	20.8	9.0	14.1
15	26.2	13.3	19.2	28.9	17.3	21.7	27.8	16.3	21.3	22.9	10.1	15.9
16	26.6	15.6	20.0	29.8	17.6	22.3	28.1	16.2	21.4	22.1	11.7	16.6
17	25.8	14.5	18.6	29.5	17.0	23.1	27.0	16.2	20.8	21.3	11.3	15.6
18	20.3	13.9	16.9	30.2	17.5	23.3	26.5	16.7	20.4	19.1	9.9	13.7
19	24.9	14.9	18.7	30.5	18.4	22.3	27.9	16.0	21.2	21.0	9.2	14.5
20	21.8	15.6	18.0	29.6	19.0	22.3	28.7	16.8	22.2	21.2	11.0	15.8
21	24.2	13.8	18.6	30.6	17.8	23.6	28.2	17.0	22.0	21.2	11.6	16.0
22	25.9	14.4	19.8	29.4	18.0	22.8	28.2	17.2	21.8	21.1	10.7	15.3
23	26.4	14.9	20.0	30.1	18.0	22.8	26.1	16.6	21.0	22.0	11.2	16.3
24	25.3	15.0	19.5	31.3	17.5	23.6	28.5	16.5	21.6	21.4	11.7	16.0
25	25.2	13.2	18.5	30.9	18.5	22.8	27.3	17.3	21.2	22.0	10.7	16.0
26	23.9	15.4	19.0	30.1	18.3	22.7	27.4	17.9	21.2	22.5	11.5	16.5
27	27.3	14.9	20.6	26.1	18.9	21.7	28.3	16.7	21.1	21.1	11.4	15.7
28	27.7	15.3	20.3	24.2	17.8	19.7	21.7	18.3	19.7	20.4	10.6	15.0
29	26.3	15.8	19.9	25.7	17.5	20.2	26.6	15.7	20.1	20.9	10.4	15.1
30	28.0	16.2	21.5	27.9	---	---	19.3	16.5	17.6	20.3	12.1	15.2
31	---	---	---	28.9	16.8	21.0	16.7	14.4	15.5	---	---	---
MONTH	28.0	11.5	18.4	31.3	---	---	29.6	14.4	21.3	26.5	9.0	16.5

383347104373401 WILLIAMS CREEK AT THE MOUTH NEAR WIGWAM, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°33'47", long 104°37'34", in NW¹/₄NW¹/₄ sec.24, T.17 S., R.65 W., El Paso County, Hydrologic Unit 11020003, 0.3 mi upstream from mouth, 1.7 mi northeast of Wigwam, and 9.3 mi southeast of Fountain. Elevation of gage is 5,240 ft above NGVD of 1929, from topographic map.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--May to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=383347104373401

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)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
MAY 01...	1400	0.18	9.5	8.0	1,940	16.5	0.196	0.15	0.02	0.07	--	E4	78
JUL 21...	1610	0.49	4.4	7.8	1,590	28.0	0.087	E.05	0.24	0.49	E160	--	144

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

Date	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
MAY 01...	24	0.01
JUL 21...	20	0.03

E -- Estimated laboratory analysis value.

382625104353701 SUTHERLAND DITCH AT MOUTH NEAR PINON, CO

WATER-QUALITY RECORD

LOCATION.--Lat 38°26'25", long 104°35'37", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.31, T.18 S., R.64 W., Pueblo County, Hydrologic Unit 11020003, at the mouth 0.5 mi south of Pinon Road bridge on Fountain Creek, and 0.9 mi northeast of Pinon. Elevation of gage is 4,980 ft above NGVD of 1929, from topographic map.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--February to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382625104353701

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, modif. m-TEC, water, col/100 mL (90902)
FEB 11...	1240	2.5	12.4	8.5	1,160	10.0	1.88	314	0.024	1.85	0.08	0.06	--
APR 29...	1400	3.1	12.6	8.5	1,180	16.5	2.15	296	0.023	1.04	0.05	0.07	10
JUL 23...	1400	2.3	6.1	7.6	1,210	19.0	2.1	301	0.046	0.58	0.06	0.11	66

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

Date	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd, ug/L (01147)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
FEB 11...	E1	E2	12.7	16.0	7.2	6.1	9	0.06
APR 29...	--	7	4.0	4.9	7.1	5.9	7	0.06
JUL 23...	--	73	6.7	21.9	4.0	3.6	10	0.06

E -- Estimated laboratory analysis value.

07106300 FOUNTAIN CREEK NEAR PINON, CO

LOCATION.--Lat 38°26'23", long 104°35'35", in NW¹/₄SE¹/₄ sec.31, T.18 S., R.64 W., Pueblo County, Hydrologic Unit 11020003, on right bank 0.5 mi below Pinon Road bridge, 0.9 mi northeast of Pinon, and 2.7 mi upstream from Steele Hollow Creek.

DRAINAGE AREA.--849 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1973 to current year. Low-flow records may not be equivalent prior to October 1995, as a result of varying underflow (diversion system) entering between the sites. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07106300

REVISED RECORDS.--WDR CO-80-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,990 ft above NGVD of 1929, from topographic map. Apr. 10, 1973 to Apr. 22, 1976, non-recording gage, and Apr. 23, 1976 to Sept. 30, 1995, water-stage recorder at site 0.5 mi upstream at different datum. Oct. 1, 1995 to present at various locations within 70 ft downstream from underflow mouth (see district office for location history).

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, transmountain diversions, diversions for irrigation and municipal use, return flows from irrigated areas, and flows from sewage-treatment plants.

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	28	76	66	92	90	120	115	50	60	69	46	322
2	54	88	65	93	94	151	111	47	105	51	46	153
3	45	95	65	98	94	157	107	48	50	43	57	137
4	20	85	67	96	94	133	104	42	61	38	76	190
5	e33	89	65	89	94	106	108	52	328	31	63	108
6	e35	89	58	84	104	103	159	56	261	22	45	87
7	e35	85	59	76	87	97	142	58	131	20	39	129
8	27	99	62	73	88	94	111	56	118	17	40	115
9	38	106	63	69	87	102	102	62	87	14	51	86
10	48	107	61	63	89	94	91	87	96	21	88	68
11	46	109	60	60	108	91	66	93	86	27	62	63
12	38	105	e65	68	107	87	40	71	67	34	69	64
13	39	108	e66	69	114	87	36	67	74	39	49	64
14	43	100	69	71	115	83	34	66	77	39	39	73
15	47	93	67	65	121	82	33	57	278	38	40	66
16	54	77	67	62	98	82	37	121	98	50	43	65
17	50	60	75	60	91	96	35	77	86	32	47	64
18	50	50	73	61	91	195	33	62	310	35	47	63
19	48	46	74	64	100	258	54	58	164	38	50	68
20	48	51	73	62	131	182	61	47	1,430	224	36	68
21	49	46	75	61	98	196	53	45	302	72	33	65
22	44	50	75	72	94	150	49	42	171	39	39	68
23	64	63	80	94	92	127	171	40	122	30	37	69
24	e65	69	87	100	89	129	297	54	96	34	41	67
25	81	70	82	101	86	369	181	139	82	35	49	65
26	78	74	76	103	94	165	88	142	332	34	59	63
27	215	66	80	106	98	131	64	87	139	70	38	65
28	187	69	90	101	102	128	48	57	104	145	101	68
29	77	70	96	96	---	117	45	36	108	425	79	70
30	69	68	93	95	---	115	51	20	91	177	285	64
31	68	---	88	94	---	118	---	20	---	79	1,290	---
TOTAL	1,823	2,363	2,242	2,498	2,750	4,145	2,626	1,959	5,514	2,022	3,084	2,717
MEAN	58.8	78.8	72.3	80.6	98.2	134	87.5	63.2	184	65.2	99.5	90.6
MAX	215	109	96	106	131	369	297	142	1,430	425	1,290	322
MIN	20	46	58	60	86	82	33	20	50	14	33	63
AC-FT	3,620	4,690	4,450	4,950	5,450	8,220	5,210	3,890	10,940	4,010	6,120	5,390

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2003, BY WATER YEAR (WY)

MEAN	83.7	105	94.5	102	109	118	137	277	191	108	152	78.4
MAX	457	289	201	174	180	229	664	1,599	1,083	365	794	241
(WY)	(1985)	(1985)	(2000)	(1996)	(2000)	(1998)	(1999)	(1999)	(1997)	(1985)	(1999)	(1999)
MIN	0.81	5.77	30.0	19.0	35.2	20.0	3.36	0.96	8.39	4.34	3.87	0.000
(WY)	(1976)	(1979)	(1977)	(1979)	(1978)	(1978)	(1975)	(1975)	(1978)	(1976)	(1974)	(1975)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1973 - 2003

ANNUAL TOTAL	28,294	33,743	
ANNUAL MEAN	77.5	92.4	129
HIGHEST ANNUAL MEAN			438 1999
LOWEST ANNUAL MEAN			29.4 1978
HIGHEST DAILY MEAN	859 Jul 6	1,430 Jun 20	11,000 Apr 30, 1999
LOWEST DAILY MEAN	20 Oct 4	14 Jul 9	a0.00 Jul 6, 1973
ANNUAL SEVEN-DAY MINIMUM	31 May 6	22 Jul 5	0.00 Aug 18, 1973
MAXIMUM PEAK FLOW		3,230 Jun 20	b19,100 Apr 30, 1999
MAXIMUM PEAK STAGE		4.40 Jun 20	c9.80 Apr 30, 1999
ANNUAL RUNOFF (AC-FT)	56,120	66,930	93,590
10 PERCENT EXCEEDS	138	139	234
50 PERCENT EXCEEDS	62	72	87
90 PERCENT EXCEEDS	39	38	7.0

e Estimated.

a No flow at times many years.

b From rating curve extended above 9,590 ft³/s.

c From floodmark.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1976 to December 1983, December 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=07106300

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1976 to September 1979.

WATER TEMPERATURE: October 1976 to September 1979.

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 05...	0915	85	11.3	8.3	1,120	4.5	86.4	28.2	1.60	290	E.014	3.31	0.30
DEC 02...	1405	80	9.6	8.4	1,120	9.5	90.4	29.1	1.60	290	0.039	3.49	0.41
FEB 11...	1110	126	11.5	8.3	1,110	2.5	--	--	1.4	265	0.126	3.86	0.58
APR 29...	1140	45	7.8	8.4	1,150	19.0	--	--	1.82	302	0.016	2.51	0.30
JUL 23...	1230	28	6.4	8.2	1,130	28.0	--	--	1.88	295	0.017	1.79	0.20

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

Date	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC, 0.7u MF col/100 mL (31625)	Arsenic, water, fltrd, ug/L (01000)	Arsenic, water, unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium, water, fltrd, ug/L (01025)	Cadmium, water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)
NOV 05...	0.560	<2.0	--	E120	140	2.8	3.9	232	233	<0.10	0.42	2.0	3.6
DEC 02...	0.652	<2.0	--	E33	<72	2.9	3.7	227	217	--	E.21	3.5	4.1
FEB 11...	1.52	--	--	84	52	--	--	--	--	--	--	--	--
APR 29...	0.410	--	E12	--	E16	--	--	--	--	--	--	--	--
JUL 23...	0.308	--	240	--	E400	--	--	--	--	--	--	--	--

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Cyanide, water, unfltrd mg/L (00720)	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)	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)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
NOV 05...	2.7	9.8	<0.01	<10.0	3,500	0.34	6.2	E4.0	164	<0.018	E.010	7.1	9.6
DEC 02...	4.2	10	<0.01	<10.0	2,640	E.28	4.3	E3.0	126	<0.018	<0.018	6.6	8.2
FEB 11...	--	--	--	--	--	--	--	3.43	462	--	--	--	--
APR 29...	--	--	--	--	--	--	--	3.08	63.6	--	--	--	--
JUL 23...	--	--	--	--	--	--	--	4.05	50.2	--	--	--	--

07106300 FOUNTAIN CREEK NEAR PINON, CO—Continued

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

Date	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)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 05...	8.4	8.5	<0.04	0.08	12	34	169	39
DEC 02...	8.3	8.5	<0.04	0.05	E13	E27	130	28
FEB 11...	6.34	6.13	--	--	--	--	828	282
APR 29...	2.72	6.58	--	--	--	--	88	11
JUL 23...	5.75	5.15	--	--	--	--	77	5.8

< -- 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 unflab, uS/cm 25 degC (90095)	Specif. conductance, wat unfl 25 degC (00095)	Temperature, water, deg C (00010)
JAN 02...	1115	89	--	1,130	1.0
MAY 06...	1215	62	--	1,090	18.5
JUN 05...	1015	345	--	647	13.5
JUN 09...	1245	83	1,080	--	--
JUL 08...	1100	20	1,160	--	--
AUG 05...	1100	70	1,030	--	--
SEP 05...	1030	112	946	--	--

07106300 FOUNTAIN CREEK NEAR PINON, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 2001 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=07106300

GAGE.--Tipping-bucket rain gage with satellite telemetry.

REMARKS.--Estimated daily precipitation records are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.51 inches, Apr. 19, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.51 inches, Apr. 19.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	---	---	---	---	---	0.00	0.00	0.17	0.00	0.00	0.00
2	0.19	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
3	0.09	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.35
4	0.00	---	---	---	---	---	0.00	0.00	0.04	0.00	0.00	0.01
5	e0.00	---	---	---	---	---	0.00	0.00	0.27	0.00	0.00	0.00
6	e0.00	---	---	---	---	---	0.01	0.01	0.00	0.00	0.00	0.00
7	e0.00	---	---	---	---	---	0.07	0.00	0.04	0.00	0.00	0.05
8	0.08	---	---	---	---	---	0.00	0.00	0.00	0.00	0.07	0.00
9	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.07
10	0.00	---	---	---	---	---	0.00	0.06	0.21	0.00	0.00	0.01
11	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	0.28	0.00	0.00	0.15
14	0.00	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.01
15	0.00	---	---	---	---	---	0.36	1.23	0.00	0.12	0.00	0.00
16	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	0.14	0.00	0.06	0.00
18	0.00	---	---	---	---	---	0.00	0.14	0.06	0.00	0.01	0.00
19	0.00	---	---	---	---	---	1.51	0.01	0.14	0.20	0.00	0.00
20	0.00	---	---	---	---	---	0.00	0.00	0.39	0.00	0.00	0.00
21	0.00	---	---	---	---	---	0.05	0.00	0.00	0.00	0.00	0.00
22	0.01	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	0.01	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00	0.00
24	0.00	---	---	---	---	---	0.02	0.00	0.00	0.00	0.00	0.00
25	0.00	---	---	---	---	---	0.00	0.63	0.00	0.00	0.07	0.00
26	0.18	---	---	---	---	---	0.00	0.01	0.00	0.19	0.00	0.00
27	0.22	---	---	---	---	---	0.00	0.00	0.00	0.06	0.00	0.00
28	0.00	---	---	---	---	---	0.01	0.00	0.27	0.07	0.14	0.00
29	0.14	---	---	---	---	---	0.00	0.00	0.00	0.23	0.01	0.00
30	0.00	---	---	---	---	---	0.00	0.06	0.00	0.00	0.25	0.00
31	0.00	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	0.95	---	---	---	---	---	2.03	2.16	2.04	0.87	0.63	0.65
MAX	0.22	---	---	---	---	---	1.51	1.23	0.39	0.23	0.25	0.35

e Estimated.

07106500 FOUNTAIN CREEK AT PUEBLO, CO

LOCATION.--Lat 38°17'16", long 104°36'02", in SE¹/₄SW¹/₄ sec.19, T.20 S., R.64 W., Pueblo County, Hydrologic Unit 11020003, on left bank at upstream side of bridge on U.S. Highway 50 at Pueblo and 2.6 mi upstream from mouth.

DRAINAGE AREA.--926 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1922 to September 1925, October 1940 to September 1965, February 1971 to current year. Monthly discharge only for some periods, published in WSP 1311. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07106500

REVISED RECORDS.--WDR CO-79-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 4,705 ft above NGVD of 1929, from topographic map. See WSP 1711 or 1731 for history of changes prior to Oct. 1, 1940, and WSP 1921 for changes Oct. 2, 1940 to Sept. 30, 1965. Feb. 1, 1971 to Sept. 30, 1976, water-stage recorder at site 1.4 mi upstream at datum 4,725.30 ft above sea level (unadjusted).

REMARKS.--Records fair except for estimated daily discharges and those above 1,000 ft³/s, which are poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, transmountain diversions, diversions for irrigation and municipal use, return flows from irrigated areas, and flows from sewage-treatment plants.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 4, 1921, reached a discharge of 34,000 ft³/s, on basis of slope-area measurement of peak flow, gage height unknown. Flood of May 30, 1935, reached a discharge of 35,000 ft³/s, on basis of slope-area measurement of peak flow, gage height unknown.

**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	33	87	61	107	105	158	124	53	35	73	54	410
2	53	84	69	110	131	180	118	56	62	64	44	103
3	72	110	86	100	136	175	115	49	57	50	40	111
4	38	97	83	102	131	169	109	49	52	26	50	177
5	28	92	72	99	132	143	97	55	194	24	60	135
6	27	82	69	102	140	127	152	64	264	23	46	94
7	30	97	68	94	134	121	181	74	101	19	32	124
8	28	110	65	88	e132	119	136	71	100	16	34	112
9	34	103	72	83	133	125	132	75	98	13	42	104
10	43	92	72	72	132	118	112	69	198	13	69	93
11	51	88	72	71	128	108	99	77	111	17	70	82
12	44	83	70	70	122	103	59	78	90	35	51	70
13	44	79	66	72	145	100	51	83	135	45	49	71
14	59	92	75	72	138	99	47	66	139	37	30	81
15	52	108	80	69	151	88	48	101	279	38	23	86
16	58	80	76	62	138	91	43	108	133	43	26	83
17	54	68	74	64	138	99	42	98	137	34	29	75
18	53	64	90	65	146	180	38	72	337	27	94	75
19	63	54	105	74	147	260	129	69	181	27	50	77
20	50	63	90	92	167	183	88	62	1,810	144	e43	73
21	45	65	92	77	149	172	63	59	390	98	28	74
22	36	64	94	77	128	142	43	49	228	51	30	69
23	48	58	95	98	122	115	97	46	145	29	39	76
24	e80	59	109	93	121	130	189	49	128	26	31	69
25	89	64	109	93	111	310	179	130	116	29	38	68
26	84	72	103	101	130	137	85	150	285	29	63	65
27	178	84	95	96	147	110	59	66	148	52	44	65
28	184	65	106	99	142	100	46	48	95	117	88	62
29	138	67	106	102	---	96	46	41	101	478	106	56
30	83	61	107	87	---	96	50	29	75	133	285	53
31	84	---	104	101	---	111	---	27	---	88	1,270	---
TOTAL	1,963	2,392	2,635	2,692	3,776	4,265	2,777	2,123	6,224	1,898	2,958	2,893
MEAN	63.3	79.7	85.0	86.8	135	138	92.6	68.5	207	61.2	95.4	96.4
MAX	184	110	109	110	167	310	189	150	1,810	478	1,270	410
MIN	27	54	61	62	105	88	38	27	35	13	23	53
AC-FT	3,890	4,740	5,230	5,340	7,490	8,460	5,510	4,210	12,350	3,760	5,870	5,740

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	58.5	74.3	69.4	71.5	77.7	77.0	94.9	197	146	85.2	129	52.8
MAX	513	303	225	193	190	260	677	1,504	1,104	429	852	242
(WY)	(1985)	(1985)	(2000)	(2000)	(2000)	(2000)	(1999)	(1999)	(1997)	(1995)	(1999)	(1999)
MIN	0.61	0.90	1.10	1.90	1.40	1.00	1.10	0.28	0.71	0.96	0.71	0.37
(WY)	(1963)	(1955)	(1955)	(1954)	(1954)	(1954)	(1955)	(1950)	(1963)	(1964)	(1960)	(1978)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1922 - 2003
ANNUAL TOTAL	29,540	36,596	
ANNUAL MEAN	80.9	100	96.3
HIGHEST ANNUAL MEAN			440 1999
LOWEST ANNUAL MEAN			4.42 1953
HIGHEST DAILY MEAN	983 Jul 6	1,810 Jun 20	11,400 Apr 30, 1999
LOWEST DAILY MEAN	e14 Jul 2	13 Jul 9	a0.00 May 12, 1923
ANNUAL SEVEN-DAY MINIMUM	24 Jun 27	18 Jul 5	0.00 Sep 9, 1945
MAXIMUM PEAK FLOW		3,580 Jun 20	b47,000 Jun 17, 1965
MAXIMUM PEAK STAGE		5.90 Jun 20	c19.00 Jun 17, 1965
ANNUAL RUNOFF (AC-FT)	58,590	72,590	69,800
10 PERCENT EXCEEDS	139	147	198
50 PERCENT EXCEEDS	65	83	44
90 PERCENT EXCEEDS	33	38	1.1

e Estimated.

a No flow at times many years.

b From contracted-opening measurement of peak flow.

c From floodmarks, site and datum then in use.

07106500 FOUNTAIN CREEK AT PUEBLO, CO—Continued

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

Date	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Cyanide water unfltrd mg/L (00720)	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)	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)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)
NOV 04...	3.3	16	<0.01	<10.0	7,660	E.20	12	E3.0	322	<0.018	0.021	9.0	14
DEC 02...	--	12	<0.01	<10.0	3,720	E.21	5.4	E3.0	151	<0.018	E.014	7.0	10
FEB 11...	--	--	--	--	--	--	--	4.12	471	--	--	--	--
APR 29...	--	--	--	--	--	--	--	3.98	46.8	--	--	--	--
JUL 24...	--	--	--	--	--	--	--	11.7	36.4	--	--	--	--

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

Date	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)	Sus-pended sedi-ment concentration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)
NOV 04...	18	18	<0.04	0.11	E6.0	49	372	110
DEC 02...	24	24	<0.04	0.07	E7.0	E25	190	38
FEB 11...	12.7	11.3	--	--	--	--	757	260
APR 29...	28.6	24.9	--	--	--	--	69	8.8
JUL 24...	30.6	28.6	--	--	--	--	38	2.5

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

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, cfs (00061)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd std units (00400)	Specif. conduc-tance, wat un f uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat un f fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)
DEC 02...	1146	75	10.7	8.5	1,310	7.0	108	40.8	5.10	128	206	61.4	1.57
MAR 10...	1415	116	8.8	8.4	1,280	14.0	93.7	35.1	6.09	126	186	79.5	1.75
MAY 28...	1315	48	6.5	8.4	1,280	26.0	93.7	33.0	6.18	116	195	62.4	1.9
AUG 26...	1315	75	6.3	8.4	1,270	27.5	108	41.1	8.27	133	260	63.8	2.0

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sulfate water, fltrd, mg/L (00945)
DEC 02...	391
MAR 10...	334
MAY 28...	365
AUG 26...	372

07106500 FOUNTAIN CREEK AT PUEBLO, 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	1,410	1,370	1,400	1,270	1,250	1,260	1,280	1,230	1,270	1,220	1,200	1,210
2	1,960	1,270	1,480	1,260	1,240	1,250	1,290	1,240	1,250	1,250	1,170	1,210
3	1,400	1,210	1,310	1,260	1,230	1,250	1,260	1,200	1,230	1,240	1,190	1,220
4	1,500	1,400	1,450	1,250	1,230	1,240	1,240	1,210	1,220	1,240	1,210	1,230
5	1,540	1,440	1,500	1,270	1,210	1,240	1,260	1,230	1,250	1,240	1,170	1,220
6	1,530	1,460	1,490	1,260	1,200	1,220	1,260	1,240	1,250	1,200	1,170	1,200
7	1,500	1,440	1,470	1,230	1,190	1,210	1,260	1,250	1,250	1,210	1,190	1,210
8	1,520	1,420	1,460	1,250	1,210	1,220	1,280	1,260	1,270	1,220	1,210	1,220
9	1,730	1,210	1,390	1,240	1,180	1,220	1,280	1,270	1,270	1,220	1,210	1,220
10	1,360	1,310	1,340	1,270	1,200	1,230	1,280	1,270	1,280	1,240	1,200	1,220
11	1,350	1,310	1,340	1,210	1,180	1,200	1,290	1,230	1,280	1,250	1,210	1,230
12	1,360	1,340	1,350	1,210	1,150	1,180	1,280	1,270	1,280	1,240	1,220	1,230
13	1,380	1,340	1,360	1,210	1,170	1,190	1,280	1,260	1,270	1,250	1,230	1,240
14	1,370	1,320	1,350	1,210	1,160	1,180	1,270	1,260	1,260	1,240	1,230	1,240
15	1,380	1,330	1,360	1,210	1,180	1,190	1,300	1,240	1,290	1,240	1,230	1,240
16	1,360	1,330	1,350	1,240	1,190	1,200	1,310	1,270	1,290	1,240	1,220	1,230
17	1,340	1,330	1,340	1,280	1,210	1,230	1,310	1,260	1,280	1,260	1,220	1,250
18	1,360	1,320	1,350	1,290	1,230	1,250	1,290	1,220	1,270	1,270	1,250	1,260
19	1,390	1,330	1,360	1,370	1,260	1,290	1,240	1,220	1,240	1,290	1,230	1,260
20	1,420	1,340	1,380	1,350	1,280	1,300	1,300	1,210	1,250	1,300	1,230	1,260
21	1,410	1,320	1,370	1,300	1,280	1,280	1,260	1,200	1,240	1,300	1,250	1,270
22	1,430	1,370	1,400	1,330	1,280	1,290	1,310	1,210	1,240	1,330	1,230	1,280
23	1,400	1,320	1,350	1,310	1,250	1,280	1,240	1,160	1,220	1,290	1,230	1,260
24	---	---	---	1,280	1,250	1,270	1,250	1,170	1,220	1,250	1,200	1,230
25	1,290	1,250	1,270	1,280	1,240	1,250	1,330	1,180	1,250	1,220	1,130	1,180
26	1,250	1,210	1,230	1,260	1,210	1,240	1,360	1,200	1,270	1,190	1,140	1,170
27	1,360	912	1,170	1,280	1,160	1,230	1,320	1,200	1,250	1,180	1,150	1,170
28	1,020	905	951	1,260	1,220	1,240	1,240	1,200	1,220	1,170	1,150	1,170
29	1,160	999	1,110	1,270	1,240	1,250	1,230	1,210	1,220	1,170	1,150	1,160
30	1,320	1,160	1,230	1,280	1,240	1,250	1,250	1,200	1,220	1,170	1,160	1,170
31	1,320	1,270	1,290	---	---	---	1,240	1,180	1,210	1,180	1,160	1,170
MONTH	---	---	---	1,370	1,150	1,240	1,360	1,160	1,250	1,330	1,130	1,220
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1,200	1,150	1,180	1,280	1,190	1,220	1,180	1,130	1,150	1,330	1,280	1,310
2	1,210	1,160	1,180	1,380	1,200	1,290	1,180	1,160	1,180	1,340	1,270	1,300
3	1,190	1,150	1,170	1,430	1,250	1,330	1,180	1,160	1,180	1,310	1,280	1,300
4	1,200	1,150	1,170	1,360	1,220	1,290	1,180	1,130	1,160	1,340	1,290	1,310
5	1,200	1,110	1,180	1,260	1,200	1,230	1,170	1,130	1,160	---	---	---
6	1,210	1,110	1,170	1,270	1,230	1,250	1,190	1,140	1,150	1,280	1,270	1,270
7	1,340	1,120	1,240	1,270	1,200	1,240	1,190	1,100	1,140	1,330	1,270	1,290
8	1,280	1,100	1,190	1,220	1,210	1,220	1,200	1,120	1,160	1,300	1,270	1,280
9	1,320	1,120	1,220	1,230	1,180	1,210	1,190	1,160	1,180	1,290	1,230	1,250
10	1,290	1,170	1,230	1,210	1,190	1,210	1,230	1,180	1,200	1,240	1,170	1,220
11	1,200	1,160	1,180	1,210	1,200	1,210	1,240	1,200	1,220	1,200	1,100	1,150
12	1,200	1,180	1,190	1,210	1,200	1,200	1,330	1,230	1,290	1,210	1,150	1,180
13	1,220	1,170	1,190	1,220	1,200	1,210	1,370	1,320	1,340	1,220	1,180	1,200
14	1,180	1,150	1,170	1,230	1,200	1,210	1,390	1,300	1,350	1,230	1,200	1,220
15	1,190	1,120	1,160	1,230	1,200	1,220	1,420	1,360	1,390	1,280	923	1,210
16	1,200	1,160	1,180	1,220	1,200	1,210	1,480	1,370	1,430	1,280	1,020	1,180
17	1,180	1,160	1,170	1,360	1,180	1,220	1,420	1,380	1,400	1,140	1,020	1,090
18	1,180	1,140	1,160	1,320	1,070	1,170	1,420	1,400	1,410	1,180	1,130	1,160
19	1,510	1,130	1,210	1,190	1,070	1,110	1,580	783	1,280	1,200	1,160	1,180
20	1,220	1,120	1,170	1,240	1,140	1,180	1,340	1,330	1,340	1,210	1,170	1,190
21	1,190	1,160	1,170	1,240	1,130	1,180	1,360	1,330	1,340	1,220	1,190	1,210
22	1,190	1,160	1,180	1,200	1,150	1,170	1,400	1,340	1,360	1,240	1,220	1,230
23	---	---	---	1,240	1,190	1,210	1,370	1,120	1,300	1,280	1,240	1,260
24	---	---	---	1,230	1,190	1,210	---	1,120	---	1,280	1,170	1,240
25	---	---	---	1,270	827	1,060	---	---	---	1,240	966	1,180
26	---	---	---	1,100	838	980	---	---	---	1,170	916	1,030
27	1,200	1,170	1,180	1,140	1,100	1,120	---	---	---	1,170	1,060	1,120
28	1,220	1,170	1,190	1,150	1,130	1,140	---	---	---	1,230	1,140	1,180
29	---	---	---	1,140	1,130	1,140	1,360	1,310	---	1,380	1,200	1,290
30	---	---	---	1,140	1,130	1,140	1,350	1,310	1,330	1,520	1,380	1,420
31	---	---	---	1,150	1,140	1,140	---	---	---	1,530	1,440	1,490
MONTH	---	---	---	1,430	827	1,190	---	---	---	---	---	---

07106500 FOUNTAIN CREEK AT PUEBLO, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1,480	1,210	1,370	1,220	1,160	1,190	1,270	1,170	1,230	889	635	763
2	1,300	1,060	1,180	1,270	1,210	1,240	1,350	1,270	1,320	1,100	847	965
3	1,320	1,140	1,250	1,330	1,270	1,310	1,400	1,330	1,370	1,250	1,070	1,120
4	1,340	1,200	1,280	1,390	1,330	1,360	1,360	1,320	1,340	1,120	901	996
5	1,260	826	1,060	1,440	1,380	1,410	1,320	1,200	1,270	1,130	996	1,080
6	1,060	733	868	1,520	1,440	1,490	1,270	1,190	1,210	1,160	1,120	1,140
7	1,110	986	1,080	1,580	1,510	1,550	1,280	1,210	1,240	1,180	1,010	1,110
8	1,140	1,050	1,100	1,620	1,560	1,590	1,300	1,100	1,250	1,130	1,060	1,090
9	1,210	1,140	1,180	1,700	1,620	1,660	1,230	1,150	1,190	1,140	1,090	1,120
10	1,450	812	1,220	1,740	1,620	1,700	1,180	975	1,100	1,250	1,140	1,210
11	1,310	1,200	1,230	1,620	1,450	1,560	1,170	1,040	1,100	1,240	1,200	1,220
12	1,260	1,220	1,240	1,540	1,420	1,490	1,240	1,160	1,210	1,260	1,220	1,240
13	1,290	689	1,220	1,470	1,370	1,420	1,300	1,170	1,260	1,280	1,240	1,260
14	1,270	1,190	1,220	1,430	1,360	1,390	1,420	1,300	1,370	1,260	1,200	1,230
15	1,260	783	1,030	1,450	1,370	1,400	1,500	1,410	1,440	1,260	1,200	1,230
16	1,190	1,030	1,090	1,420	1,280	1,360	1,490	1,400	1,430	1,260	1,210	1,240
17	1,260	840	1,190	1,420	1,290	1,360	1,470	1,350	1,400	1,280	1,240	1,250
18	1,260	469	962	1,480	1,400	1,430	1,660	503	1,340	1,290	1,200	1,210
19	1,020	908	982	1,500	1,420	1,440	1,680	1,300	1,460	1,250	1,190	1,210
20	1,120	505	786	1,470	704	1,050	1,360	1,330	1,340	1,310	1,190	1,230
21	1,020	820	906	1,140	979	1,080	1,460	1,360	1,420	1,320	1,220	1,260
22	1,080	1,020	1,050	1,340	1,140	1,220	1,480	1,380	1,420	1,260	1,210	1,230
23	1,120	1,080	1,100	1,470	1,340	1,400	1,540	1,360	1,420	1,270	1,210	1,240
24	1,180	1,120	1,160	1,490	1,390	1,450	1,560	1,360	1,470	1,250	1,230	1,240
25	1,200	1,170	1,190	1,470	1,390	1,420	1,510	1,310	1,420	1,260	1,230	1,250
26	1,210	672	1,030	1,460	1,400	1,420	1,440	1,220	1,320	1,310	1,250	1,280
27	1,020	734	906	1,420	1,380	1,410	1,380	1,290	1,340	1,320	1,280	1,300
28	1,110	1,000	1,060	1,410	1,250	1,320	1,530	915	1,260	1,310	1,280	1,300
29	1,170	1,090	1,130	1,250	684	857	1,280	992	1,150	1,310	1,260	1,290
30	1,170	1,120	1,150	1,070	823	977	1,230	824	1,060	1,310	1,260	1,280
31	---	---	---	1,170	1,000	1,050	824	537	599	---	---	---
MONTH	1,480	469	1,110	1,740	684	1,350	1,680	503	1,280	1,320	635	1,190

07106500 FOUNTAIN CREEK AT PUEBLO, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	23.0	15.9	19.4	26.7	18.5	22.2	29.5	17.2	23.1	23.6	15.7	19.2
2	26.1	15.1	20.0	29.6	17.5	23.4	31.0	18.3	24.0	24.8	17.6	20.8
3	27.0	14.8	20.3	30.6	17.2	23.4	31.3	19.3	24.2	22.0	16.8	19.1
4	25.8	16.0	19.1	31.0	17.4	23.4	31.4	19.5	24.5	22.5	14.8	18.5
5	16.3	14.2	15.2	31.7	17.5	23.7	30.3	20.8	24.7	26.7	15.9	20.8
6	19.4	12.7	15.9	30.4	17.5	22.5	30.4	18.9	23.9	22.1	17.9	19.7
7	17.7	13.8	15.5	30.3	16.5	22.1	32.1	18.5	24.1	20.7	17.4	19.0
8	23.3	14.1	17.6	30.8	17.0	23.0	29.8	20.4	23.7	23.7	17.1	19.5
9	25.3	14.4	18.7	29.3	16.1	22.1	30.6	18.4	23.1	19.8	16.9	18.4
10	22.3	15.1	17.9	31.0	16.8	23.0	29.6	17.3	23.2	20.0	17.4	18.5
11	26.7	---	---	31.7	16.9	23.4	29.9	18.8	23.7	21.4	15.7	18.4
12	25.5	15.6	19.8	30.9	18.0	23.8	29.8	18.8	23.7	24.1	12.1	18.5
13	26.8	15.1	19.0	30.8	19.1	24.4	30.0	17.6	22.9	16.7	11.5	13.6
14	23.7	14.5	18.3	30.6	17.9	23.7	30.0	16.3	22.3	21.1	9.1	14.8
15	20.6	14.3	17.9	31.1	18.0	23.4	30.0	16.7	22.2	23.1	10.8	16.5
16	---	---	---	31.0	18.9	24.2	30.2	16.3	22.1	23.2	12.2	17.2
17	27.4	14.9	19.8	31.8	19.0	24.5	29.4	16.2	21.8	18.5	14.0	16.4
18	22.0	17.1	19.5	32.5	18.1	24.6	25.1	18.4	21.0	18.9	13.9	15.7
19	19.5	17.9	18.8	32.7	19.8	24.6	30.2	16.8	22.3	20.5	10.6	15.4
20	20.9	14.0	17.4	24.5	18.4	22.0	30.7	---	---	19.5	12.7	16.1
21	23.1	15.1	18.2	31.4	19.3	25.1	29.7	17.9	22.8	19.6	13.4	16.7
22	24.2	15.6	20.0	31.4	19.8	24.9	31.2	18.4	23.1	19.9	14.4	16.8
23	---	---	---	28.6	20.0	23.6	32.2	18.4	24.1	20.6	14.8	17.1
24	26.3	---	---	32.9	18.0	24.5	31.0	19.5	24.5	19.7	13.2	17.0
25	24.3	14.6	19.3	32.5	18.8	24.5	32.0	20.0	23.6	19.4	13.3	16.9
26	25.0	15.7	20.2	30.8	19.5	24.4	28.6	18.8	22.6	22.8	15.3	18.4
27	24.7	16.4	20.8	24.5	20.3	22.6	29.8	17.2	22.5	20.0	11.0	15.4
28	26.9	18.3	21.4	23.8	22.2	22.8	22.6	19.1	20.6	17.4	13.3	15.0
29	25.6	17.3	20.9	24.9	19.6	22.1	21.9	17.5	20.1	18.4	13.0	15.2
30	25.1	18.5	20.9	28.3	21.0	23.6	21.4	17.6	19.7	18.1	12.5	14.3
31	---	---	---	25.6	19.4	21.8	19.6	16.8	17.9	---	---	---
MONTH	---	---	---	32.9	16.1	23.5	32.2	---	---	26.7	9.1	17.3

ARKANSAS RIVER BASIN

07106500 FOUNTAIN CREEK AT PUEBLO, CO—Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT					
03...	1300	56	16.0	344	52
NOV					
04...	1200	110	6.5	372	110
04...	1330	100	8.5	363	98
DEC					
02...	1145	75	7.0	190	38
FEB					
11...	1430	127	6.0	757	260
MAR					
31...	1030	113	10.0	431	131
APR					
02...	1045	123	12.5	358	119
16...	1100	36	14.0	41	4.0
29...	1600	47	23.5	69	8.8
MAY					
06...	0830	66	11.0	303	54
29...	1415	36	30.0	61	5.9
JUN					
11...	1100	110	20.0	1,100	327
23...	1330	116	21.5	334	105
27...	0800	220	16.5	836	497
JUL					
11...	1030	16	24.5	28	1.2
23...	1145	28	27.0	43	3.3
24...	1020	24	24.5	38	2.5
29...	1045	495	20.0	4,250	5,680
AUG					
13...	1030	52	22.0	426	60
28...	1000	25	21.0	103	7.0
SEP					
12...	1330	64	22.0	238	41

07106500 FOUNTAIN CREEK AT PUEBLO, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
OCTOBER			NOVEMBER			DECEMBER			
1	33	---	e16.0	87	---	---	61	---	---
2	53	---	e61.0	84	---	---	69	---	---
3	72	428	93	110	---	---	86	---	---
4	38	---	e16.0	97	---	---	83	---	---
5	28	---	e10.0	92	---	---	72	---	---
6	27	---	e8.6	82	---	---	69	---	---
7	30	101	8.2	97	---	---	68	---	---
8	28	101	7.5	110	---	---	65	---	---
9	34	---	e24.0	103	---	---	72	---	---
10	43	361	42	92	---	---	72	---	---
11	51	377	52	88	---	---	72	---	---
12	44	348	41	83	---	---	70	---	---
13	44	297	35	79	---	---	66	---	---
14	59	---	e41.0	92	---	---	75	---	---
15	52	262	36	108	---	---	80	---	---
16	58	295	45	80	---	---	76	---	---
17	54	194	28	68	---	---	74	---	---
18	53	179	27	64	---	---	90	---	---
19	63	---	e28.0	54	---	---	105	---	---
20	50	127	18	63	---	---	90	---	---
21	45	---	e17.0	65	---	---	92	---	---
22	36	130	14	64	---	---	94	---	---
23	48	---	e35.0	58	---	---	95	---	---
24	e80	---	e83.0	59	---	---	109	---	---
25	89	337	88	64	---	---	109	---	---
26	84	296	74	72	---	---	103	---	---
27	178	1,810	1,440	84	---	---	95	---	---
28	184	---	e611	65	---	---	106	---	---
29	138	561	207	67	---	---	106	---	---
30	83	237	50	61	---	---	107	---	---
31	84	171	35	---	---	---	104	---	---
TOTAL	1,963	---	3,291.3	2,392	---	---	2,635	---	---
JANUARY			FEBRUARY			MARCH			
1	107	---	---	105	---	---	158	---	---
2	110	---	---	131	---	---	180	---	---
3	100	---	---	136	---	---	175	---	---
4	102	---	---	131	---	---	169	---	---
5	99	---	---	132	---	---	143	---	---
6	102	---	---	140	---	---	127	---	---
7	94	---	---	134	---	---	121	---	---
8	88	---	---	e132	---	---	119	---	---
9	83	---	---	133	---	---	125	---	---
10	72	---	---	132	---	---	118	---	---
11	71	---	---	128	---	---	108	---	---
12	70	---	---	122	---	---	103	---	---
13	72	---	---	145	---	---	100	---	---
14	72	---	---	138	---	---	99	---	---
15	69	---	---	151	---	---	88	---	---
16	62	---	---	138	---	---	91	---	---
17	64	---	---	138	---	---	99	---	---
18	65	---	---	146	---	---	180	---	---
19	74	---	---	147	---	---	260	---	---
20	92	---	---	167	---	---	183	---	---
21	77	---	---	149	---	---	172	---	---
22	77	---	---	128	---	---	142	---	---
23	98	---	---	122	---	---	115	---	---
24	93	---	---	121	---	---	130	---	---
25	93	---	---	111	---	---	310	---	---
26	101	---	---	130	---	---	137	---	---
27	96	---	---	147	---	---	110	---	---
28	99	---	---	142	---	---	100	---	---
29	102	---	---	---	---	---	96	---	---
30	87	---	---	---	---	---	96	---	---
31	101	---	---	---	---	---	111	---	---
TOTAL	2,692	---	---	3,776	---	---	4,265	---	---

ARKANSAS RIVER BASIN

07106500 FOUNTAIN CREEK AT PUEBLO, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	124	---	e131	53	106	15	35	240	30
2	118	355	113	56	98	15	62	1,140	212
3	115	---	e82	49	133	18	57	939	148
4	109	164	48	49	166	22	52	---	e123
5	97	---	e37	55	---	e41	194	1,500	1,090
6	152	485	220	64	284	49	264	2,010	1,960
7	181	604	300	74	195	39	101	1,020	279
8	136	258	95	71	250	48	100	407	115
9	132	175	63	75	357	72	98	---	e41
10	112	---	e42	69	---	e109	198	3,490	4,780
11	99	125	33	77	619	139	111	2,040	705
12	59	123	20	78	---	e75	90	531	128
13	51	87	12	83	---	e79	135	905	451
14	47	56	7.1	66	---	e62	139	---	e414
15	48	---	e7.4	101	---	e340	279	3,040	3,570
16	43	47	5.5	108	---	e166	133	1,240	450
17	42	37	4.2	98	---	e111	137	975	442
18	38	26	2.7	72	---	e70	337	3,930	5,150
19	129	1,820	908	69	309	58	181	---	e631
20	88	---	e126	62	---	e33	1,810	6,650	42,600
21	63	218	37	59	144	23	390	---	e1,620
22	43	152	18	49	140	19	228	---	e655
23	97	1,800	711	46	138	17	145	414	162
24	189	2,400	1,400	49	286	43	128	---	e92
25	179	---	e692	130	---	e1,140	116	206	65
26	85	491	113	150	2,370	1,790	285	1,120	1,550
27	59	274	45	66	428	78	148	724	319
28	46	102	13	48	172	22	95	244	63
29	46	70	8.7	41	72	8.2	101	---	e48
30	50	---	e13	29	---	e3.6	75	170	34
31	---	---	---	27	38	2.8	---	---	---
TOTAL	2,777	---	5,307.6	2,123	---	4,707.6	6,224	---	67,927
		JULY			AUGUST			SEPTEMBER	
1	73	137	27	54	181	28	410	1,520	2,040
2	64	159	27	44	167	20	103	477	136
3	50	86	12	40	---	e62	111	285	94
4	26	---	e5.4	50	895	122	177	999	541
5	24	74	4.8	60	---	e151	135	349	139
6	23	43	2.7	46	941	118	94	---	e42
7	19	26	1.4	32	---	e73	124	370	149
8	16	26	1.1	34	---	e65	112	284	86
9	13	22	0.77	42	---	e68	104	484	136
10	13	25	0.88	69	798	165	93	322	82
11	17	29	1.3	70	928	178	82	---	e50
12	35	38	3.8	51	910	130	70	221	42
13	45	76	9.0	49	482	66	71	198	39
14	37	---	e11	30	132	11	81	488	108
15	38	132	14	23	70	4.3	86	325	76
16	43	136	16	26	76	5.3	83	---	e38
17	34	102	9.3	29	89	7.0	75	288	59
18	27	106	7.7	94	---	e877	75	774	158
19	27	---	e8.2	50	---	e43	77	358	75
20	144	1,880	915	e43	---	e85	73	228	45
21	98	754	207	28	---	e47	74	---	e33
22	51	189	29	30	---	e48	69	170	31
23	29	49	3.9	39	570	63	76	246	51
24	26	53	3.9	31	---	e47	69	270	50
25	29	84	6.5	38	475	49	68	303	56
26	29	69	5.4	63	532	92	65	---	e47
27	52	1,250	216	44	---	e55	65	211	37
28	117	4,210	3,060	88	997	399	62	223	37
29	478	4,980	9,360	106	1,070	317	56	342	52
30	133	795	285	285	3,360	3,680	53	269	38
31	88	537	130	1,270	5,550	24,300	---	---	---
TOTAL	1,898	---	14,385.05	2,958	---	31,375.6	2,893	---	4,567

e Estimated.

07108900 ST. CHARLES RIVER AT VINELAND, CO

LOCATION.--Lat 38°14'44", long 104°29'09", in NE¹/₄SW¹/₄ sec.6, T.21 S., R.63 W., Pueblo County, Hydrologic Unit 11020002, on left bank at left downstream end of downstream bridge on U.S. Highway 50 Business, 1.6 mi west of Vineland, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--474 mi².

PERIOD OF RECORD.--October 1978 to current year. Records for October 1967 to September 1974 (discharge measurements only prior to March 1968), published as St. Charles River near Vineland (station 07108800) at site 2.6 mi upstream, are not equivalent because of tributary inflow. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07108900

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 4,581.58 ft above NGVD of 1929, (Colorado Division of Highways benchmark). Prior to May 10, 2001, on right bank at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoir, diversions for irrigation and industrial use, ground-water withdrawals, and return flows from irrigated areas. 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 OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1901, 56,000 ft³/s, June 3, 1921, gage height unknown, at site 5.0 mi upstream.

**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	4.2	4.9	4.1	6.2	3.9	e4.0	3.7	36	83	7.8	3.3	6.2
2	6.2	5.1	4.3	6.1	3.7	3.9	3.7	45	79	6.4	3.1	5.5
3	6.6	4.9	4.7	5.9	3.6	3.8	3.1	42	72	4.6	3.1	4.9
4	4.6	4.8	4.7	6.1	3.9	3.6	34	39	68	4.2	3.2	4.7
5	5.0	4.6	4.5	6.4	3.8	3.9	46	39	77	3.9	3.1	3.4
6	6.1	4.6	4.4	6.3	3.6	3.9	42	39	86	3.6	3.1	3.2
7	5.6	4.6	4.1	11	e3.4	3.6	31	39	78	3.7	3.0	3.8
8	5.2	4.1	4.5	13	e3.4	3.6	21	36	75	3.4	3.1	3.4
9	4.9	4.4	4.4	12	e3.7	3.6	17	36	69	3.4	3.2	3.5
10	4.7	4.0	4.3	10	e4.0	3.7	14	34	51	3.6	161	3.3
11	4.3	4.3	4.5	11	3.8	4.0	8.0	34	45	3.5	8.7	3.2
12	5.2	3.3	4.1	11	3.8	3.9	7.6	31	42	3.0	3.8	3.2
13	5.2	3.2	4.7	9.1	3.9	3.7	5.2	32	44	3.0	3.0	3.2
14	5.0	4.1	5.4	8.2	4.2	3.4	5.0	35	41	3.3	3.7	3.6
15	4.3	6.6	6.0	8.3	3.7	6.1	3.7	41	34	3.4	3.2	3.3
16	5.2	4.3	5.8	5.2	3.6	3.1	15	51	33	3.4	3.3	3.1
17	5.2	4.2	6.1	4.1	3.3	3.3	20	48	33	3.2	2.9	3.1
18	5.3	4.1	5.6	e3.8	3.7	3.8	19	44	35	3.1	3.0	3.2
19	5.2	3.9	e5.5	e3.9	4.3	4.1	29	47	69	2.6	3.0	3.2
20	5.9	4.1	e5.4	3.9	3.9	2.9	35	50	115	3.0	2.8	3.2
21	4.8	4.1	e5.8	3.9	3.6	2.9	31	49	69	3.2	2.8	3.2
22	5.2	3.9	e6.3	3.9	4.4	2.8	25	44	60	3.0	2.8	3.2
23	6.0	3.4	6.6	e3.8	e4.0	3.1	22	44	52	3.1	2.8	3.2
24	6.5	4.2	e6.2	e3.9	e3.5	3.2	24	52	37	3.0	2.8	3.3
25	6.5	3.8	e6.0	3.8	e3.5	3.0	24	70	28	2.9	2.6	3.3
26	5.9	3.8	e5.8	3.1	e4.0	2.7	23	136	20	3.0	2.9	2.9
27	7.0	e3.8	e6.0	3.4	e4.5	6.2	22	87	13	3.0	2.9	2.8
28	73	4.0	e6.3	3.9	e4.2	12	23	81	11	3.1	3.1	3.0
29	9.8	4.2	6.5	3.7	---	9.0	22	73	9.8	3.2	3.4	3.1
30	5.1	4.4	6.3	4.1	---	5.8	23	71	8.4	3.1	18	3.2
31	5.3	---	6.4	3.7	---	e4.7	---	84	---	3.2	10	---
TOTAL	239.0	127.7	165.3	192.7	106.9	131.3	602.0	1,589	1,537.2	109.9	280.7	105.4
MEAN	7.71	4.26	5.33	6.22	3.82	4.24	20.1	51.3	51.2	3.55	9.05	3.51
MAX	73	6.6	6.6	13	4.5	12	46	136	115	7.8	161	6.2
MIN	4.2	3.2	4.1	3.1	3.3	2.7	3.1	31	8.4	2.6	2.6	2.8
AC-FT	474	253	328	382	212	260	1,190	3,150	3,050	218	557	209

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

	1979	1983	1987	1991	1995	1999	2003	2002	2002	2002	2002	2003
MEAN	14.3	15.6	12.7	12.5	13.0	20.7	66.2	152	77.2	34.2	43.1	18.6
MAX	39.5	32.3	24.3	22.6	25.1	127	306	484	358	108	207	120
(WY)	(1983)	(1999)	(1998)	(1998)	(1998)	(1998)	(1987)	(1980)	(1983)	(1995)	(1982)	(1982)
MIN	3.50	4.26	5.33	6.22	3.82	4.24	4.99	3.17	2.09	1.82	2.02	3.51
(WY)	(1979)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1979 - 2003

ANNUAL TOTAL	1,856.43	5,187.1	
ANNUAL MEAN	5.09	14.2	
HIGHEST ANNUAL MEAN			40.2
LOWEST ANNUAL MEAN			88.4 1987
HIGHEST DAILY MEAN	130 Sep 14	161 Aug 10	5.75 2002
LOWEST DAILY MEAN	0.61 Aug 19	2.6 Jul 19	0.25 Apr 25, 1979
ANNUAL SEVEN-DAY MINIMUM	0.69 Aug 16	2.8 Aug 20	0.69 Aug 16, 2002
MAXIMUM PEAK FLOW		1,580 Aug 10	a7,560 Aug 11, 1982
MAXIMUM PEAK STAGE		8.09 Aug 10	b12.70 Aug 11, 1982
ANNUAL RUNOFF (AC-FT)	3,680	10,290	29,120
10 PERCENT EXCEEDS	7.6	44	83
50 PERCENT EXCEEDS	4.4	4.4	14
90 PERCENT EXCEEDS	1.3	3.1	5.9

e Estimated.

a From rating curve extended above 1,750 ft³/s.

b Maximum gage height, 13.68 ft, Apr 30, 1999.

07109500 ARKANSAS RIVER NEAR AVONDALE, CO

LOCATION.--Lat 38°14'53", long 104°23'55", in NE¼SW¼ sec.1, T.21 S., R.63 W., Pueblo County, Hydrologic Unit 11020002, on right bank 15 ft downstream from bridge on Nyberg Road (revised), 0.3 mi upstream from Sixmile Creek, and 2.6 mi west of Avondale.

DRAINAGE AREA.--6,327 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1939 to September 1951, February 1965 to current year. Statistical summary computed for 1975 to current year, subsequent to partial regulation by Pueblo Reservoir. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07109500

REVISED RECORDS.--WSP 1087: 1942. WSP 1311: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,509.53 ft above NGVD of 1929. Prior to Feb. 1, 1965, at site 550 ft downstream at datum 0.37 ft lower. Feb. 1, 1965 to Sept. 30, 1991, at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transbasin and transmountain diversions, storage reservoirs, power development, ground-water withdrawals, diversions for irrigation and municipal use, return flows from irrigated areas, and flows from sewage-treatment plants. Flow partly regulated by Pueblo Reservoir (station 07099350) 21 mi upstream since Jan. 9, 1974.

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	115	245	145	179	198	242	235	385	3,780	958	395	892
2	150	244	149	172	193	257	314	375	4,720	888	483	522
3	196	252	156	174	186	268	385	360	4,960	769	495	347
4	225	e265	163	180	182	259	489	345	4,720	702	482	325
5	217	282	165	179	186	251	537	336	3,900	716	515	307
6	214	278	165	178	e180	226	580	371	3,040	753	492	281
7	213	277	160	171	e170	212	627	376	1,920	755	487	292
8	218	290	156	173	e180	192	584	356	1,650	761	425	325
9	212	299	148	168	e190	197	475	250	1,330	752	260	359
10	186	294	148	163	e195	202	442	250	1,280	743	390	422
11	182	294	153	161	215	205	415	280	1,500	710	280	466
12	170	308	152	162	225	204	364	251	1,830	603	260	468
13	153	317	157	161	219	202	332	254	1,910	601	246	516
14	146	318	161	164	231	200	321	454	2,050	597	234	512
15	155	271	158	166	238	213	301	496	2,060	663	223	520
16	167	197	157	158	228	211	306	704	2,000	620	227	505
17	174	170	170	162	211	220	330	746	2,030	637	218	457
18	161	148	175	157	205	309	307	790	2,060	556	252	349
19	146	146	179	153	230	459	660	780	2,040	523	386	270
20	144	145	175	152	255	447	504	895	2,630	544	263	278
21	144	143	174	153	248	477	425	1,040	2,170	493	236	300
22	150	135	173	158	233	486	396	1,210	1,960	425	223	276
23	160	133	177	e165	222	429	437	1,200	1,780	398	225	265
24	181	e135	177	e190	e210	398	574	1,370	1,450	384	241	239
25	197	e145	e170	219	e210	403	614	1,600	1,340	331	225	221
26	200	152	e165	219	e215	453	462	2,260	1,240	302	282	207
27	206	155	e175	215	230	343	369	2,260	1,200	289	309	183
28	369	155	181	216	233	339	331	2,180	1,070	324	296	175
29	262	144	183	208	---	293	311	2,170	1,050	582	428	178
30	238	138	180	203	---	277	307	2,470	1,030	571	633	188
31	244	---	181	203	---	249	---	3,070	---	488	961	---
TOTAL	5,895	6,475	5,128	5,482	5,918	9,123	12,734	29,884	65,700	18,438	11,072	10,645
MEAN	190	216	165	177	211	294	424	964	2,190	595	357	355
MAX	369	318	183	219	255	486	660	3,070	4,960	958	961	892
MIN	115	133	145	152	170	192	235	250	1,030	289	218	175
AC-FT	11,690	12,840	10,170	10,870	11,740	18,100	25,260	59,270	130,300	36,570	21,960	21,110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)																																								
1975	514	1,631	(1985)	187	(1979)	467	985	(1985)	170	(1979)	354	718	(1987)	165	(2003)	375	770	(1985)	177	(2003)	412	1,103	(1985)	211	(2003)	534	994	(1985)	219	(1978)	843	1,884	(1987)	220	(1978)	1,600	4,170	(1980)	460	(2002)	2,603	4,971	(1997)	426	(2002)	1,784	4,432	(1995)	352	(2002)	1,273	3,210	(1984)	120	(2002)	610	1,511	(1982)	138	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1975 - 2003

ANNUAL TOTAL	103,745	186,494	
ANNUAL MEAN	284	511	a949
HIGHEST ANNUAL MEAN			1,626 1985
LOWEST ANNUAL MEAN			324 2002
HIGHEST DAILY MEAN	899 Jul 7	4,960 Jun 3	12,300 May 1, 1999
LOWEST DAILY MEAN	87 Sep 7	115 Oct 1	b87 Sep 7, 2002
ANNUAL SEVEN-DAY MINIMUM	90 Sep 3	140 Nov 19	90 Sep 3, 2002
MAXIMUM PEAK FLOW		5,000 Jun 2	c20,900 Apr 30, 1999
MAXIMUM PEAK STAGE		5.32 Jun 2	d10.60 Apr 30, 1999
ANNUAL RUNOFF (AC-FT)	205,800	369,900	687,800
10 PERCENT EXCEEDS	443	1,200	2,180
50 PERCENT EXCEEDS	281	265	577
90 PERCENT EXCEEDS	120	158	264

e Estimated.

a Average discharge for 20 years (water years 1940-51, 1966-73), 867 ft³/s; 628,100 acre-ft/yr, prior to completion of Pueblo Dam.

b Minimum daily discharge for period of record, 50 ft³/s, Apr 2, 1940.

c From rating curve extended above 11,500 ft³/s on basis of velocity-area study. Maximum discharge and stage for period of record, about 50,000 ft³/s.

d June 18, 1965, gage height, 9.77 ft, datum then in use, from rating curve extended above 6,700 ft³/s, on basis of records for station near Pueblo and indirect measurements of peak flow on Fountain Creek at Pueblo, Chico Creek near North Avondale, and Arkansas River near Avondale.

d From floodmark.

07109500 ARKANSAS RIVER NEAR AVONDALE, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1976, April 1979 to September 1980, December 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07109500

PERIOD OF DAILY RECORD.--

DISSOLVED OXYGEN: July 1979 to September 1980, August 1988 to current year.
 pH: July 1979 to September 1980, September 1988 to current year.
 SPECIFIC CONDUCTANCE: July 1979 to September 1980, December 1985 to current year.
 WATER TEMPERATURE: July 1979 to September 1980, December 1985 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Daily dissolved-oxygen records are poor. Daily pH records are fair except for Oct. 1, 8, which are poor. Daily specific-conductance records are good except for Feb. 7-10 and Mar. 5-25, which are fair. Daily water-temperature records are good. Daily data that are not published are either missing or of unacceptable quality. Daily mean pH records are available from the district office.

EXTREMES FOR PERIOD OF RECORD.--

DISSOLVED OXYGEN: Maximum, 14.0 mg/L, Feb. 16, 1996; minimum, 2.6 mg/L, July 14, 1992.
 pH: Maximum, 9.2 units, Apr. 19, 2002; minimum, 7.2 units, on many days in 1992, 1995-96.
 SPECIFIC CONDUCTANCE: Maximum, 1,800 microsiemens/cm, Sept. 14, 2002; minimum, 246 microsiemens/cm, June 16, 1980.
 WATER TEMPERATURE: Maximum, 31.5°C, Aug. 6, 1980; minimum, 0.0°C, on many days.

EXTREMES FOR CURRENT YEAR.--

DISSOLVED OXYGEN: Maximum, 13.1 mg/L, Dec. 18, 22; minimum, 3.9 mg/L, May 14.
 pH: Maximum, 8.9 units, Oct. 1, Sept. 29; minimum, 7.4 units, May 13-14, 16.
 SPECIFIC CONDUCTANCE: Maximum, 1,400 microsiemens/cm, Aug. 10; minimum, 472 microsiemens/cm, June 4.
 WATER TEMPERATURE: Maximum, 30.3° C, July 25; minimum, 0.0° C, on many days.

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN,
 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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
DEC 17...	1500	163	12.7	8.6	1,270	7.5	119	46.3	4.92	100	E173	43.7	1.26
MAR 10...	1545	196	9.9	8.4	1,240	14.0	110	40.6	5.00	101	168	53.8	1.34
MAY 28...	1115	2,200	7.6	8.2	712	17.0	69.0	22.3	3.42	39.4	150	15.8	0.7
AUG 26...	1630	285	7.3	8.4	795	27.5	76.5	28.6	4.22	56.9	130	23.8	0.9

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN,
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sulfate water, fltrd, mg/L (00945)
DEC 17...	424
MAR 10...	377
MAY 28...	206
AUG 26...	240

E -- Estimated laboratory analysis value.

ARKANSAS RIVER BASIN

07109500 ARKANSAS RIVER NEAR AVONDALE, CO—Continued

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	12.0	4.8	8.0	12.2	10.8	11.6	11.9	8.5	10.2	11.2	8.7	9.6
2	9.7	6.3	7.3	11.6	9.1	10.5	11.9	8.3	9.9	12.0	8.5	10.1
3	8.4	6.5	7.5	10.3	8.7	9.5	11.8	8.7	10.1	11.8	8.0	9.9
4	8.8	7.0	7.9	10.3	8.6	9.5	12.3	9.1	10.6	11.5	8.1	9.4
5	9.4	6.8	8.1	10.5	8.5	9.5	12.3	9.1	10.2	10.9	8.2	9.5
6	9.8	7.0	8.4	10.4	8.3	9.5	12.7	8.6	10.5	11.9	7.8	9.3
7	9.7	7.1	8.4	10.3	8.0	9.2	12.1	8.5	10.1	11.6	7.5	9.4
8	9.8	7.0	8.4	10.1	8.1	9.1	12.6	8.7	10.3	11.9	7.0	9.2
9	9.5	6.8	7.9	9.4	7.3	8.4	12.8	8.7	10.6	11.9	7.5	9.4
10	9.3	6.4	7.6	10.2	7.8	9.0	12.9	8.5	10.4	12.5	8.5	10.0
11	9.8	6.5	7.8	10.4	8.2	9.3	12.4	8.6	10.2	11.7	8.3	9.9
12	10.3	6.9	8.3	10.7	8.5	9.6	13.0	8.7	10.4	12.1	7.6	9.5
13	10.3	6.7	8.5	10.4	8.6	9.4	12.7	8.1	10.2	12.2	7.1	9.4
14	10.2	6.9	8.3	10.2	8.2	9.0	12.4	8.0	9.9	11.9	7.3	9.1
15	10.6	7.0	8.6	10.6	8.5	9.3	11.6	8.5	9.8	11.7	7.7	9.2
16	10.6	6.8	8.4	10.2	8.1	9.2	12.7	8.1	10.1	12.1	7.9	9.6
17	10.2	6.2	8.0	9.5	7.5	8.7	12.7	7.8	9.5	12.0	7.5	9.5
18	10.2	6.2	7.9	9.2	7.6	8.5	13.1	8.4	10.2	12.1	7.7	9.6
19	10.6	6.3	8.2	9.3	7.7	8.6	12.7	8.8	10.5	11.9	6.7	9.3
20	10.9	6.3	8.5	9.5	7.4	8.6	---	---	---	11.2	6.4	8.5
21	11.8	6.9	8.9	9.8	7.5	8.7	12.7	9.2	10.7	11.4	6.6	8.6
22	12.4	7.8	9.6	9.8	7.4	8.7	13.1	8.9	10.9	11.1	7.7	9.5
23	12.2	8.1	10.4	10.0	7.9	9.1	12.8	9.3	10.8	11.9	8.3	9.6
24	---	---	---	---	---	---	12.6	9.3	10.8	11.4	7.9	9.7
25	---	---	---	---	---	---	12.3	8.5	9.9	10.5	7.7	9.2
26	---	---	---	---	---	---	12.1	8.7	9.9	11.7	8.0	9.7
27	---	---	---	12.0	9.1	10.5	12.1	8.7	9.9	11.1	7.1	9.1
28	---	---	---	11.3	8.5	10.0	11.3	8.8	9.9	10.8	7.1	8.7
29	11.1	10.4	10.8	10.9	8.4	9.6	11.3	8.3	9.7	11.8	7.6	9.4
30	11.6	10.2	11.0	11.6	8.8	10.0	11.8	8.5	9.7	12.0	7.9	9.7
31	12.0	10.9	11.3	---	---	---	11.7	8.6	10.0	12.1	7.6	9.5
MONTH	---	---	---	---	---	---	---	---	---	12.5	6.4	9.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	11.3	6.9	8.8	11.1	7.9	9.7	8.6	6.3	7.5	9.3	7.5	8.3
2	11.2	7.3	8.9	11.5	7.9	9.8	8.8	6.9	7.8	9.9	6.9	8.4
3	12.0	7.9	9.4	10.5	7.1	9.0	9.2	7.4	8.0	9.8	6.3	8.1
4	11.8	7.9	9.8	10.6	7.7	9.5	9.7	7.4	8.4	9.1	6.2	7.7
5	11.8	8.4	9.8	11.4	7.9	10.1	9.3	7.8	8.4	9.7	6.4	7.9
6	12.2	9.1	10.6	10.1	6.9	8.8	9.8	8.4	8.9	10.0	6.7	8.0
7	11.8	8.4	9.8	10.3	6.9	8.7	9.7	8.5	9.1	9.8	5.8	7.7
8	11.3	8.4	9.6	9.9	6.5	8.3	10.0	7.5	8.6	9.9	5.9	7.5
9	11.6	8.6	9.9	10.6	7.0	8.8	9.6	7.4	8.5	9.9	5.1	7.4
10	11.7	8.3	9.6	10.5	6.8	8.6	9.4	7.1	8.3	9.8	5.3	7.4
11	11.1	8.8	10.0	10.0	5.9	8.0	9.4	7.3	8.2	9.0	5.2	7.2
12	11.3	7.9	9.9	10.2	6.2	8.0	9.4	7.0	8.2	9.5	5.3	7.2
13	10.2	7.6	8.8	9.7	5.5	7.7	9.5	6.7	8.1	8.8	4.0	6.6
14	10.2	7.4	8.5	9.9	5.8	7.7	9.5	6.9	8.1	7.2	3.9	5.5
15	10.4	7.6	8.9	9.9	5.5	7.5	9.3	7.3	8.1	7.0	4.2	5.7
16	10.6	8.6	9.4	10.1	6.0	7.9	10.1	6.9	8.4	6.4	4.5	5.4
17	10.4	7.4	9.2	9.9	6.4	8.0	10.5	6.8	8.2	6.9	4.9	5.9
18	10.6	7.6	8.9	9.0	6.8	8.1	10.6	6.6	8.3	7.6	5.5	6.6
19	11.6	7.6	9.4	10.0	8.6	9.3	8.2	6.7	7.7	8.1	6.3	7.3
20	10.8	8.1	9.3	9.4	7.3	8.5	8.6	7.0	7.7	8.5	6.9	7.7
21	10.3	7.2	9.1	9.6	8.3	8.9	8.5	6.3	7.5	8.3	6.8	7.5
22	9.8	6.9	8.5	9.7	7.1	8.7	8.0	6.3	7.1	8.0	6.4	7.2
23	11.1	7.4	9.5	9.6	7.3	8.5	8.0	6.5	7.3	7.9	6.3	7.1
24	12.2	9.5	10.9	9.6	7.6	8.5	8.7	6.9	7.8	8.1	6.6	7.4
25	12.3	9.1	10.3	8.7	6.7	7.8	8.5	6.9	7.7	8.3	7.2	7.7
26	12.0	9.6	10.8	8.6	6.9	7.8	8.0	6.4	7.3	7.8	7.2	7.4
27	11.4	8.2	10.0	8.9	7.1	8.1	8.6	6.6	7.7	8.1	7.2	7.7
28	11.5	8.7	10.2	10.3	8.5	9.4	8.6	6.8	7.7	8.0	7.3	7.7
29	---	---	---	9.8	7.8	8.9	8.9	6.6	7.6	8.0	7.2	7.7
30	---	---	---	9.9	7.3	8.8	9.2	6.9	8.0	8.0	7.0	7.6
31	---	---	---	9.2	6.6	8.1	---	---	---	7.9	7.1	7.5
MONTH	12.3	6.9	9.6	11.5	5.5	8.6	10.6	6.3	8.0	10.0	3.9	7.3

07109500 ARKANSAS RIVER NEAR AVONDALE, CO—Continued

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

DAY	MAX	MIN	MEAN	JUNE			JULY			AUGUST			SEPTEMBER		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.5	7.0	7.4	7.3	5.9	6.6	7.4	6.0	6.6	6.9	5.4	6.3			
2	7.8	7.0	7.4	7.4	5.9	6.6	7.2	6.0	6.6	6.3	5.1	5.7			
3	7.6	7.1	7.4	7.4	6.0	6.7	7.3	5.5	6.6	6.0	5.3	5.6			
4	7.5	7.1	7.4	7.5	6.1	6.7	7.0	5.4	6.1	6.3	5.0	5.8			
5	7.6	7.4	7.5	7.6	6.1	6.8	7.1	5.1	6.0	6.9	5.1	5.9			
6	7.8	6.6	7.3	7.4	6.0	6.7	7.0	5.3	6.1	7.2	5.5	6.3			
7	7.8	6.9	7.4	7.7	6.0	6.8	7.6	5.4	6.4	7.2	5.7	6.4			
8	7.7	6.5	7.2	7.8	6.0	6.9	7.5	5.1	6.1	7.4	5.9	6.6			
9	7.6	6.6	7.1	8.0	6.2	7.0	6.9	4.5	5.7	7.6	6.2	6.8			
10	7.6	6.8	7.3	8.0	6.0	7.0	---	---	---	7.7	6.5	6.9			
11	---	---	---	7.8	6.0	6.9	---	---	---	8.1	6.0	7.1			
12	---	---	---	8.0	5.9	7.0	---	---	---	7.9	6.0	6.9			
13	7.4	6.5	7.1	7.9	6.0	6.9	---	---	---	8.5	6.4	7.6			
14	7.5	6.6	7.1	8.1	6.0	7.0	8.1	5.6	6.7	8.6	6.5	7.7			
15	7.6	6.5	7.1	7.9	6.1	7.1	8.8	5.4	7.0	8.6	6.3	7.3			
16	7.5	6.7	7.1	---	---	---	8.6	5.1	6.7	8.2	6.0	7.0			
17	7.6	6.6	7.1	---	---	---	8.6	4.5	6.4	7.8	6.0	6.8			
18	7.4	6.7	7.0	7.8	5.7	6.8	7.9	4.4	5.9	8.3	6.2	7.2			
19	7.6	6.7	7.2	7.3	5.5	6.7	---	---	---	8.1	5.6	6.9			
20	7.3	6.2	7.0	---	---	---	---	---	---	8.3	5.9	6.9			
21	7.5	6.6	7.1	---	---	---	---	---	---	8.6	5.7	6.9			
22	7.7	6.6	7.2	---	---	---	---	---	---	8.6	5.7	7.1			
23	7.6	6.3	7.0	---	---	---	7.8	5.1	6.2	9.1	5.6	7.1			
24	7.4	6.4	6.9	7.6	5.4	6.7	7.7	4.5	5.8	10.1	5.6	7.5			
25	7.7	6.5	7.1	7.5	5.8	6.5	6.3	4.1	5.1	11.1	6.5	8.3			
26	7.6	6.5	7.1	7.7	5.6	6.7	7.2	4.6	5.5	11.5	6.4	8.5			
27	7.5	6.3	6.9	---	---	---	7.2	5.0	5.9	11.9	6.4	8.6			
28	7.5	6.4	6.9	---	---	---	6.7	5.1	5.8	12.3	6.3	8.8			
29	7.5	6.5	7.0	---	---	---	---	---	---	12.6	5.9	8.6			
30	7.3	6.1	6.7	---	---	---	---	---	---	11.2	5.9	7.7			
31	---	---	---	---	---	---	---	---	---	---	---	---			
MONTH	---	---	---	---	---	---	---	---	---	12.6	5.0	7.1			

ARKANSAS RIVER BASIN

07109500 ARKANSAS RIVER NEAR AVONDALE, CO—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
1	8.9	8.1	8.6	8.4	7.9	8.2	8.4	8.1	8.3	8.6	8.3	8.3
2	8.5	8.0	8.1	8.4	8.0	8.3	8.5	8.1	8.2	8.6	8.3	8.4
3	8.3	7.9	8.1	8.2	7.9	8.1	8.5	8.1	8.3	8.6	8.2	8.4
4	8.4	7.9	8.1	8.3	7.9	8.1	8.5	8.1	8.3	8.6	8.2	8.3
5	8.4	8.0	8.0	8.3	7.9	8.1	8.5	8.1	8.2	8.5	8.2	8.3
6	8.5	7.9	8.0	8.2	7.9	8.1	8.5	8.1	8.2	8.6	8.2	8.2
7	8.6	7.9	8.1	8.2	8.0	8.1	8.5	8.1	8.2	8.6	8.1	8.3
8	8.7	8.0	8.2	8.3	8.0	8.2	8.6	8.1	8.2	8.7	8.1	8.3
9	8.7	8.1	8.2	8.2	7.8	8.0	8.5	8.1	8.2	8.6	8.1	8.3
10	8.7	8.0	8.2	8.3	7.8	8.1	8.6	8.1	8.3	8.7	8.2	8.4
11	8.2	7.6	8.0	8.3	7.8	8.0	8.6	8.1	8.2	8.6	8.2	8.4
12	8.1	7.5	7.6	8.2	7.8	8.0	8.6	8.1	8.2	8.7	8.1	8.3
13	8.2	7.5	7.8	8.2	8.0	8.1	8.6	8.1	8.3	8.7	8.1	8.3
14	8.2	7.6	7.8	8.2	8.0	8.0	8.6	8.1	8.2	8.6	8.1	8.2
15	8.3	7.6	7.8	8.2	7.9	8.1	8.4	8.1	8.2	8.6	8.1	8.2
16	8.2	7.6	7.7	8.2	7.9	8.1	8.6	8.1	8.2	8.5	8.1	8.3
17	8.2	7.6	7.7	8.1	7.9	8.1	8.7	8.1	8.2	8.5	8.1	8.2
18	8.3	7.7	7.8	8.1	7.9	8.0	8.7	8.1	8.3	8.5	8.1	8.3
19	8.4	7.7	7.8	8.1	8.0	8.1	8.6	8.2	8.3	8.6	8.0	8.3
20	8.5	7.7	7.9	8.1	7.9	8.1	8.7	8.3	8.4	8.7	8.0	8.2
21	8.6	7.8	7.8	8.2	8.0	8.0	8.6	8.3	8.4	8.6	8.0	8.2
22	8.7	7.8	8.1	8.2	7.9	8.1	8.6	8.2	8.4	8.5	8.2	8.3
23	8.5	7.8	8.0	8.3	8.0	8.1	8.7	8.3	8.3	8.5	8.2	8.3
24	---	---	---	---	---	---	8.6	8.3	8.4	8.4	8.1	8.3
25	8.5	7.8	8.0	---	---	---	8.6	8.3	8.4	8.3	8.1	8.2
26	8.4	7.8	7.8	8.4	8.2	8.2	8.5	8.3	8.4	8.4	8.1	8.3
27	---	---	---	8.4	8.2	8.4	8.5	8.2	8.4	8.5	8.0	8.2
28	---	---	---	8.3	8.1	8.3	8.5	8.2	8.3	8.3	7.8	8.1
29	---	7.8	8.0	8.4	8.1	8.2	8.5	8.2	8.3	8.5	8.0	8.2
30	8.2	7.9	8.0	8.4	8.1	8.2	8.6	8.2	8.3	8.5	8.1	8.2
31	8.2	7.8	8.0	---	---	---	8.6	8.3	8.4	8.7	8.1	8.2
MAX	---	---	---	---	---	---	8.7	8.3	8.4	8.7	8.3	8.4
MIN	---	---	---	---	---	---	8.4	8.1	8.2	8.3	7.8	8.1
	FEBRUARY			MARCH			APRIL			MAY		
1	8.6	7.9	8.2	8.4	8.1	8.3	8.2	7.9	7.9	8.3	8.0	8.1
2	8.7	8.1	8.3	8.4	8.2	8.3	8.2	7.9	8.1	8.4	7.9	8.0
3	8.7	8.2	8.3	8.3	8.1	8.2	8.2	8.0	8.1	8.2	7.9	7.9
4	8.5	8.1	8.4	8.4	8.1	8.3	8.3	8.1	8.2	8.3	7.9	8.0
5	8.6	8.1	8.3	8.4	8.1	8.3	8.3	8.1	8.1	8.4	7.9	8.0
6	8.6	8.3	8.4	8.3	8.1	8.3	8.4	8.2	8.3	8.4	7.8	7.9
7	8.6	8.3	8.4	8.3	8.0	8.2	8.3	8.2	8.3	8.4	7.8	7.9
8	8.6	8.3	8.4	8.3	8.0	8.2	8.3	8.2	8.2	8.4	7.8	7.9
9	8.6	8.3	8.5	8.4	8.0	8.2	8.3	8.2	8.2	8.3	7.6	7.8
10	8.5	8.3	8.4	8.4	8.0	8.2	8.3	8.2	8.2	8.3	7.6	7.7
11	8.4	8.2	8.4	8.3	7.9	8.1	8.4	8.1	8.2	8.2	7.5	7.7
12	8.5	8.2	8.4	8.3	7.9	8.1	8.4	8.1	8.2	8.3	7.5	7.8
13	8.4	8.2	8.2	8.2	7.9	8.0	8.4	8.1	8.2	8.2	7.4	7.7
14	8.4	8.1	8.2	8.3	7.9	8.0	8.5	8.1	8.2	7.8	7.4	7.6
15	8.5	8.2	8.3	8.2	7.9	8.0	8.4	8.1	8.2	7.9	7.5	7.6
16	8.5	8.2	8.3	8.3	7.9	8.0	8.5	8.0	8.2	7.6	7.4	7.5
17	8.5	8.2	8.3	8.1	7.8	8.0	8.6	8.1	8.2	7.7	7.5	7.5
18	8.5	8.2	8.3	7.9	7.7	7.8	8.7	8.1	8.2	7.8	7.6	7.7
19	8.6	8.2	8.3	8.0	7.8	7.9	8.1	8.0	8.1	8.0	7.7	7.9
20	8.4	8.2	8.3	7.9	7.7	7.8	8.3	8.0	8.1	8.0	7.8	7.9
21	8.4	8.1	8.3	7.9	7.8	7.8	8.2	8.0	8.1	7.9	7.7	7.9
22	8.3	8.0	8.1	7.9	7.7	7.8	8.3	8.0	8.1	7.9	7.8	7.9
23	8.4	8.0	8.3	7.9	7.8	7.9	8.2	7.9	8.1	8.0	7.8	7.9
24	8.5	8.2	8.4	7.9	7.8	7.8	8.1	8.0	8.1	8.0	7.8	7.9
25	8.5	8.2	8.3	8.0	7.7	7.8	8.1	8.0	8.1	8.1	7.9	7.9
26	8.5	8.3	8.4	8.0	7.8	7.9	8.3	8.0	8.1	8.1	7.8	8.0
27	8.4	8.2	8.3	8.1	7.9	8.0	8.2	8.0	8.1	8.2	8.0	8.1
28	8.5	8.2	8.3	8.2	8.0	8.2	8.2	7.9	8.0	8.2	8.0	8.1
29	---	---	---	8.1	7.9	8.0	8.3	7.8	8.0	8.2	8.0	8.1
30	---	---	---	8.1	8.0	8.1	8.3	7.9	8.1	8.2	8.1	8.1
31	---	---	---	8.2	7.9	8.0	---	---	---	8.1	8.1	8.1
MAX	8.7	8.3	8.5	8.4	8.2	8.3	8.7	8.2	8.3	8.4	8.1	8.1
MIN	8.3	7.9	8.1	7.9	7.7	7.8	8.1	7.8	7.9	7.6	7.4	7.5

07109500 ARKANSAS RIVER NEAR AVONDALE, CO—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
1	8.1	8.0	8.0	8.3	8.1	8.2	8.2	8.0	8.1	8.0	7.9	8.0
2	8.1	7.9	8.0	8.4	8.0	8.2	8.3	8.1	8.1	8.0	7.9	8.0
3	8.0	7.9	7.9	8.5	8.1	8.2	8.3	8.1	8.1	8.0	7.9	7.9
4	8.0	7.9	7.9	8.4	8.1	8.2	8.3	8.0	8.1	7.9	7.8	7.8
5	8.0	7.9	8.0	8.4	8.1	8.3	8.3	8.0	8.1	7.9	7.8	7.8
6	8.0	7.9	8.0	8.4	8.1	8.2	8.3	8.1	8.1	8.0	7.8	7.8
7	8.0	7.9	8.0	8.3	8.0	8.2	8.4	8.0	8.2	8.0	7.8	7.8
8	8.0	7.9	8.0	8.4	8.1	8.3	8.4	8.0	8.2	8.0	7.7	7.8
9	8.0	7.9	7.9	8.4	8.1	8.3	8.4	8.0	8.1	8.1	7.8	7.8
10	8.0	7.9	7.9	8.4	8.1	8.3	8.1	7.8	8.0	8.0	7.8	7.9
11	---	---	---	8.4	8.1	8.2	8.3	8.0	8.1	8.1	7.8	7.9
12	---	---	---	8.4	8.1	8.2	8.4	8.1	8.1	8.1	7.8	7.8
13	8.0	7.8	7.9	8.5	8.2	8.3	8.5	8.0	8.1	8.0	7.8	7.9
14	8.0	7.8	7.9	8.5	8.2	8.3	8.7	8.0	8.2	8.1	7.8	7.9
15	8.0	7.9	8.0	8.5	8.2	8.2	8.8	8.0	8.3	8.1	7.8	7.9
16	8.0	8.0	8.0	---	---	---	8.8	8.0	8.2	8.2	7.8	7.9
17	8.1	7.9	8.0	---	---	---	8.8	8.0	8.2	8.1	7.7	7.8
18	8.0	7.9	8.0	8.2	7.9	8.1	8.7	7.9	8.1	8.2	7.8	7.9
19	8.0	8.0	8.0	8.2	7.9	8.0	---	---	---	8.2	7.8	7.9
20	8.0	7.9	7.9	8.2	7.9	7.9	8.4	8.1	8.3	8.4	7.8	8.0
21	8.1	7.9	8.0	8.1	7.9	8.0	8.4	8.0	8.1	8.6	7.9	8.1
22	8.1	8.0	8.1	8.2	8.0	8.0	8.6	8.0	8.1	8.5	8.0	8.1
23	8.1	8.0	8.1	8.2	8.0	8.0	8.5	8.0	8.1	8.7	8.0	8.2
24	8.1	8.0	8.1	8.3	8.0	8.1	8.4	7.9	8.0	8.6	8.0	8.2
25	8.1	8.0	8.1	8.3	8.0	8.1	8.4	7.8	8.0	8.6	7.8	8.1
26	8.2	8.0	8.1	8.4	8.0	8.1	8.5	7.9	8.1	8.7	7.8	8.0
27	8.3	8.0	8.1	8.3	7.8	8.0	8.5	8.0	8.1	8.7	7.8	8.0
28	8.3	8.1	8.2	8.2	7.9	8.0	8.3	7.9	8.0	8.8	7.8	8.1
29	8.3	8.1	8.2	8.0	7.8	7.9	8.1	7.9	8.0	8.9	7.8	8.0
30	8.3	8.0	8.2	8.0	7.9	8.0	8.0	7.8	7.9	8.7	7.7	7.8
31	---	---	---	8.1	8.0	8.1	8.1	7.9	8.0	---	---	---
MAX	---	---	---	---	---	---	---	---	---	8.9	8.0	8.2
MIN	---	---	---	---	---	---	---	---	---	7.9	7.7	7.8

ARKANSAS RIVER BASIN

07109500 ARKANSAS RIVER NEAR AVONDALE, 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	1,250	1,200	1,220	1,130	1,100	1,120	---	---	---	1,320	1,300	1,310
2	1,320	1,170	1,240	1,140	1,100	1,120	---	---	---	1,320	1,300	1,310
3	1,300	1,180	1,220	1,140	1,110	1,120	---	---	---	1,330	1,290	1,310
4	1,220	1,100	1,150	1,140	1,100	1,120	---	---	---	1,330	1,300	1,310
5	1,100	1,050	1,070	1,140	1,080	1,110	---	---	---	1,330	1,290	1,300
6	1,070	1,020	1,040	1,110	1,080	1,100	---	---	---	1,320	1,290	1,300
7	1,050	1,010	1,030	1,100	1,080	1,090	1,320	1,280	1,300	1,370	1,300	1,320
8	1,080	1,000	1,040	1,100	1,070	1,080	1,320	1,280	1,300	1,390	1,290	1,340
9	1,090	1,060	1,070	1,110	1,080	1,090	1,330	1,300	1,310	1,360	1,300	1,320
10	1,120	1,080	1,100	1,110	1,070	1,080	1,340	1,280	1,310	1,340	1,300	1,310
11	1,140	1,100	1,120	1,100	1,070	1,090	1,320	1,280	1,300	1,340	1,290	1,310
12	1,170	1,120	1,140	1,100	1,050	1,070	1,300	1,260	1,280	1,330	1,300	1,310
13	1,190	1,160	1,170	1,090	1,060	1,070	1,280	1,260	1,270	1,320	1,290	1,300
14	1,190	1,160	1,180	1,100	1,070	1,090	1,290	1,260	1,270	1,340	1,300	1,310
15	1,180	1,130	1,160	1,250	1,090	1,130	1,300	1,270	1,280	1,330	1,280	1,300
16	1,160	1,120	1,140	1,240	1,190	1,210	1,300	1,280	1,290	1,320	1,280	1,310
17	1,140	1,080	1,120	1,240	1,190	1,210	1,300	1,260	1,280	1,310	1,270	1,290
18	1,170	1,110	1,140	1,260	1,230	1,240	1,300	1,260	1,280	1,340	1,270	1,290
19	1,190	1,140	1,160	1,260	1,230	1,250	1,300	1,260	1,280	1,340	1,280	1,300
20	1,190	1,120	1,170	1,250	1,240	1,240	1,300	1,260	1,280	1,320	1,290	1,300
21	1,200	1,150	1,190	1,290	1,240	1,260	1,310	1,270	1,290	1,320	1,280	1,300
22	1,240	1,200	1,220	1,300	1,270	1,280	1,300	1,240	1,280	1,310	1,260	1,280
23	1,240	1,200	1,220	1,300	1,270	1,290	1,300	1,250	1,270	1,290	1,240	1,250
24	---	---	---	---	---	---	1,290	1,270	1,280	1,260	1,230	1,240
25	1,220	1,190	1,200	---	---	---	1,290	1,260	1,280	1,260	1,230	1,240
26	1,220	1,180	1,210	---	---	---	1,300	1,260	1,290	1,260	1,230	1,240
27	---	---	---	1,280	1,250	1,270	1,320	1,280	1,300	1,250	1,230	1,240
28	---	---	---	1,310	1,260	1,280	1,320	1,290	1,300	1,250	1,220	1,230
29	---	---	---	1,330	1,290	1,300	1,310	1,280	1,290	1,250	1,220	1,230
30	1,210	1,140	1,170	---	---	---	1,340	1,290	1,310	1,240	1,220	1,230
31	1,150	1,100	1,130	---	---	---	1,340	1,300	1,320	1,270	1,230	1,240
MONTH	---	---	---	---	---	---	---	---	---	1,390	1,220	1,290
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1,270	1,250	1,260	1,190	1,170	1,180	1,180	1,140	1,150	1,050	990	1,010
2	1,280	1,220	1,250	1,220	1,190	1,210	1,170	1,020	1,090	1,000	963	980
3	1,250	1,220	1,230	1,250	1,210	1,240	1,020	980	1,010	1,030	983	997
4	1,250	1,230	1,240	1,280	1,240	1,260	1,200	944	1,020	1,020	972	993
5	1,240	1,230	1,240	1,280	1,240	1,250	976	899	933	1,040	953	993
6	1,240	1,210	1,220	1,280	1,260	1,270	934	908	921	1,020	984	1,000
7	1,240	1,200	1,220	1,320	1,270	1,290	941	905	920	1,020	984	1,000
8	1,270	1,170	1,210	1,300	1,230	1,250	957	904	924	1,060	974	1,000
9	1,260	1,200	1,220	1,260	1,240	1,250	980	949	963	1,140	1,060	1,100
10	1,240	1,180	1,190	1,260	1,240	1,240	984	962	973	1,140	1,070	1,110
11	1,180	1,170	1,180	1,290	1,260	1,270	978	952	967	1,120	1,070	1,090
12	1,190	1,160	1,180	1,290	1,270	1,280	997	960	975	1,130	1,090	1,110
13	1,190	1,170	1,180	1,290	1,240	1,270	995	961	977	1,140	1,080	1,110
14	1,200	1,160	1,180	1,270	1,160	1,230	994	966	978	1,200	931	982
15	1,200	1,180	1,180	1,210	1,140	1,170	999	979	989	950	859	920
16	1,200	1,170	1,190	1,260	1,210	1,230	1,080	990	1,020	961	825	920
17	1,200	1,170	1,180	1,270	1,240	1,260	1,060	963	991	967	859	884
18	1,200	1,180	1,190	1,330	1,170	1,250	1,030	944	982	864	833	847
19	1,180	1,140	1,160	1,220	1,150	1,200	1,030	857	936	856	829	843
20	1,210	1,150	1,180	1,200	1,120	1,140	981	943	961	839	816	830
21	1,190	1,160	1,180	1,120	1,030	1,070	1,020	971	987	816	788	806
22	1,190	1,170	1,180	1,030	1,000	1,010	1,030	992	1,010	795	772	784
23	1,250	1,180	1,190	1,020	987	1,000	1,050	982	1,000	790	774	782
24	1,250	1,190	1,210	1,090	1,020	1,030	1,010	914	956	777	752	770
25	1,220	1,150	1,180	1,150	1,000	1,090	946	892	917	770	735	761
26	1,190	1,150	1,170	1,070	943	1,000	1,050	946	1,000	838	750	772
27	1,190	1,170	1,180	1,120	1,070	1,090	1,070	1,030	1,040	753	739	745
28	1,180	1,160	1,170	1,140	1,090	1,110	1,070	1,040	1,060	748	736	741
29	---	---	---	1,160	1,110	1,140	1,070	1,030	1,050	738	722	731
30	---	---	---	1,150	1,110	1,130	1,070	1,030	1,050	727	705	719
31	---	---	---	1,170	1,130	1,150	---	---	---	725	665	713
MONTH	1,280	1,140	1,200	1,330	943	1,180	1,200	857	992	1,200	665	905

07109500 ARKANSAS RIVER NEAR AVONDALE, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	715	626	667	561	542	552	785	733	749	764	597	679
2	680	531	630	554	539	547	791	621	664	764	745	757
3	535	491	512	569	525	552	641	596	617	809	758	792
4	534	472	499	584	557	565	664	632	646	884	808	842
5	561	482	523	574	518	544	692	650	674	839	803	821
6	618	510	564	519	508	515	676	651	664	840	818	828
7	589	527	565	516	501	508	659	618	633	853	820	830
8	637	544	596	524	507	513	778	598	648	879	811	834
9	626	588	609	516	503	510	843	778	811	873	833	845
10	926	586	641	516	506	510	1,400	836	967	841	782	804
11	861	552	659	544	505	519	909	854	879	807	735	758
12	565	517	542	564	529	541	909	843	870	774	730	752
13	576	499	527	571	556	563	896	846	877	747	705	721
14	582	527	545	586	568	577	891	829	853	760	729	739
15	566	496	521	586	545	561	879	819	846	757	735	746
16	517	498	509	---	---	---	868	806	836	765	729	742
17	597	473	511	---	---	---	863	807	837	826	741	763
18	597	504	537	602	584	595	929	821	838	882	824	840
19	574	496	523	606	579	599	---	---	---	970	882	931
20	640	494	546	726	598	636	---	---	---	967	897	928
21	640	506	561	742	705	721	870	828	846	932	869	889
22	519	476	502	723	704	712	856	825	835	937	875	901
23	536	484	502	721	696	705	846	814	832	938	895	919
24	532	514	526	709	683	693	857	809	835	958	916	938
25	569	503	523	743	709	732	846	811	834	991	956	971
26	654	527	550	808	739	762	857	800	823	1,020	960	983
27	617	544	558	850	774	808	857	810	833	1,060	1,000	1,020
28	560	545	554	863	826	850	864	772	808	1,080	1,030	1,050
29	557	538	547	1,040	668	782	870	752	777	1,090	1,040	1,070
30	562	537	549	749	693	726	855	616	730	1,100	1,050	1,080
31	---	---	---	749	721	732	746	595	663	---	---	---
MONTH	926	472	553	---	---	---	---	---	---	1,100	597	859

ARKANSAS RIVER BASIN

07109500 ARKANSAS RIVER NEAR AVONDALE, 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
1	17.5	12.5	15.3	5.9	4.3	5.2	7.4	1.8	4.8	5.4	3.1	4.1
2	15.0	12.6	13.6	7.1	5.2	6.2	8.2	3.3	5.9	5.6	1.0	3.5
3	15.6	11.5	13.1	10.5	5.8	7.9	6.2	3.2	4.4	6.5	1.3	4.0
4	17.8	9.9	13.7	9.4	5.3	7.3	5.5	3.1	4.3	6.4	2.9	4.8
5	20.0	10.8	15.2	10.5	4.8	7.7	6.5	4.2	5.3	5.2	2.8	4.2
6	18.8	11.9	15.3	10.8	4.7	7.8	6.5	1.9	4.3	8.2	4.3	6.1
7	19.5	11.3	15.3	11.0	5.3	8.3	6.7	2.3	4.7	7.5	2.6	5.2
8	20.1	12.0	16.0	11.4	6.6	9.1	7.1	3.4	5.1	8.0	2.3	5.3
9	21.0	14.5	17.4	12.7	7.8	10.2	6.8	1.7	4.3	6.3	2.5	4.5
10	21.5	14.6	17.6	10.2	6.8	8.6	6.5	1.4	4.1	4.4	0.4	2.5
11	20.3	12.6	16.5	10.0	5.2	7.5	6.4	1.9	4.3	3.6	1.1	2.3
12	16.7	12.5	14.6	9.2	4.0	6.7	6.3	2.1	4.2	7.4	2.5	4.6
13	17.9	9.5	13.6	9.4	5.4	7.4	6.6	1.3	4.1	7.4	1.6	4.6
14	17.6	9.8	13.7	10.4	7.5	8.8	7.0	2.1	4.7	6.8	2.3	4.6
15	16.9	9.0	13.0	8.8	6.1	7.3	5.9	2.3	4.4	7.1	1.8	4.1
16	16.4	9.1	12.7	8.6	3.5	6.3	5.7	1.9	4.1	5.5	0.6	3.0
17	16.5	8.4	12.5	9.6	4.2	6.9	7.4	3.1	5.3	6.0	1.0	3.4
18	16.9	9.5	13.2	10.3	5.6	7.9	5.9	2.2	4.3	5.1	0.0	2.6
19	16.1	9.2	12.7	10.1	4.6	7.4	5.6	2.1	3.8	7.2	0.1	3.7
20	17.0	8.4	12.7	10.5	4.3	7.5	3.6	0.0	1.6	8.8	2.6	5.7
21	16.3	9.6	11.8	10.9	5.1	8.1	4.6	0.4	2.3	6.0	2.8	4.3
22	15.2	9.0	12.0	10.5	5.0	8.0	4.0	0.0	1.9	3.1	0.4	1.2
23	10.8	7.9	8.6	10.2	5.4	7.6	2.7	1.4	1.9	3.4	0.0	1.4
24	---	---	---	---	---	---	3.2	0.1	1.5	4.8	0.0	2.4
25	13.5	7.8	10.7	---	---	---	1.8	0.0	0.5	6.5	1.2	3.9
26	13.0	7.6	10.4	---	---	---	1.1	0.0	0.2	7.0	0.9	4.1
27	---	---	---	5.9	0.1	3.2	3.1	0.0	1.3	9.5	3.0	6.3
28	---	---	---	7.0	1.2	4.3	5.7	1.9	3.7	8.8	4.6	6.9
29	---	---	---	8.4	3.6	5.9	5.7	2.0	3.8	8.9	3.8	6.4
30	8.8	5.2	6.8	7.3	3.0	5.2	6.3	2.7	4.4	6.9	2.7	4.9
31	6.0	4.8	5.4	---	---	---	4.7	0.8	3.0	8.6	4.4	6.7
MONTH	---	---	---	---	---	---	8.2	0.0	3.6	9.5	0.0	4.2
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.7	5.0	7.3	9.6	3.2	6.1	18.1	8.5	13.4	18.7	12.8	15.6
2	9.2	4.8	6.8	10.7	3.6	6.9	16.6	9.3	12.8	19.6	12.7	15.6
3	7.9	3.2	5.3	11.2	3.2	7.2	15.0	8.6	11.5	20.3	12.9	16.1
4	7.4	0.7	4.1	7.5	2.4	4.8	14.8	8.3	11.2	18.5	11.8	14.8
5	5.4	1.9	3.7	8.4	1.0	4.4	11.9	8.3	10	21.0	11.0	15.6
6	4.0	0.6	2.2	11.0	2.7	6.8	11.6	7.7	9.5	19.8	12.9	16.0
7	2.3	0.0	0.5	13.0	4.1	8.6	10.5	7.0	8.8	21.2	13.1	16.8
8	2.1	0.0	0.5	13.6	5.3	9.4	14.8	6.8	10.4	20.4	13.2	16.5
9	2.5	0.0	0.7	13.7	4.6	9.3	16.8	7.7	12.0	20.7	11.7	15.9
10	4.8	0.0	2.0	14.2	5.1	9.7	18.0	9.6	13.5	20.0	12.3	15.9
11	5.2	0.5	3.0	15.0	6.1	10.6	18.3	10.4	14.1	20.7	10.7	15.4
12	7.9	1.0	4.6	15.8	7.2	11.4	18.3	10.6	14.3	22.4	11.7	16.9
13	8.6	4.6	6.6	17.0	7.4	12.2	20.1	10.5	14.9	19.9	13.2	16.8
14	8.9	5.2	7.1	16.7	7.9	12.5	18.4	11.2	14.7	23.0	13.9	18.2
15	7.8	4.9	6.4	17.5	9.5	13.3	15.2	10.9	13.1	19.9	15.1	17.3
16	6.8	3.7	5.1	15.1	8.3	11.9	18.9	9.2	13.5	22.9	14.6	18.2
17	10.1	2.9	6.6	11.6	8.1	9.7	18.5	10.5	14.3	21.1	15.8	18.5
18	8.1	5.7	6.6	9.0	5.0	7.6	18.0	10.4	14.2	19.9	14.9	17.4
19	6.9	4.1	5.5	5.5	3.5	4.6	14.1	9.0	10.4	17.9	14.0	16.0
20	7.0	2.9	5.1	12.0	5.0	8.4	17.8	9.5	13.0	17.2	12.4	14.6
21	9.8	2.6	6.3	9.5	7.5	8.3	19.4	11.6	15.1	19.8	12.5	16.1
22	10.0	4.1	7.1	13.6	5.6	9.5	18.9	12.5	15.4	21.0	13.5	17.2
23	7.2	2.4	4.9	15.2	7.4	11.2	14.4	10.2	12.7	21.4	14.5	17.9
24	2.4	0.0	1.0	14.1	8.5	11.2	15.6	8.4	11.5	19.7	14.4	17.3
25	3.3	0.0	1.3	16.2	9.3	12.3	18.0	10.4	13.9	18.3	14.7	16.4
26	5.4	0.9	3.2	14.6	8.8	11.8	20.9	11.7	15.8	18.4	14.6	16.5
27	8.5	1.9	5.3	11.6	6.3	9.6	20.4	12.5	16.3	20.3	14.5	17.2
28	6.6	2.9	5.1	10.4	4.6	7.2	21.4	13.7	17.1	20.7	15.4	17.8
29	---	---	---	12.5	4.3	8.3	22.9	13.4	17.6	20.8	15.0	17.6
30	---	---	---	15.2	4.8	9.9	21.1	13.6	17.0	20.5	15.1	17.6
31	---	---	---	17.3	7.0	12.0	---	---	---	18.8	15.9	17.1
MONTH	10.1	0.0	4.4	17.5	1.0	9.2	22.9	6.8	13.4	23.0	10.7	16.7

07109500 ARKANSAS RIVER NEAR AVONDALE, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.5	15.8	17.2	25.9	18.9	22.4	27.6	20.0	23.6	23.8	18.0	20.5
2	20.0	16.2	18.0	26.0	19.0	22.6	28.0	20.8	24.1	25.7	19.0	22.2
3	19.5	16.2	17.7	26.8	19.2	23.0	28.2	21.5	24.7	22.8	19.6	21.2
4	19.2	16.5	17.6	26.4	19.7	23.0	29.1	21.4	24.7	25.8	17.0	21.2
5	17.0	16.1	16.6	26.6	19.6	23.1	28.6	21.8	24.9	26.3	18.6	22.4
6	20.4	15.6	17.8	25.1	19.1	22.2	28.4	21.4	24.6	23.5	19.0	21.1
7	17.9	14.7	16.3	25.4	18.6	21.8	28.5	21.5	24.8	22.9	18.6	20.5
8	21.2	14.8	17.8	26.6	18.9	22.6	26.6	21.8	24.0	25.1	17.7	21.2
9	20.5	15.5	18.1	25.7	18.8	22.3	29.2	20.6	24.3	21.4	18.4	20.1
10	21.1	15.7	18.1	26.8	18.9	22.8	28.2	14.9	22.6	23.3	17.6	20.0
11	22.2	15.6	18.7	27.5	19.3	23.2	29.3	21.3	25.0	23.3	16.3	19.4
12	20.8	16.1	18.7	26.7	19.7	23.2	29.4	21.1	24.9	23.6	16.1	19.8
13	20.4	16.4	18.2	27.6	20.7	24.0	28.7	19.9	24.0	20.3	15.1	16.7
14	21.6	16.2	18.6	26.8	20.0	23.4	28.6	19.4	23.7	21.1	13.4	17.0
15	22.4	16.3	19.2	26.9	19.9	22.9	28.5	19.3	23.5	22.6	14.8	18.4
16	21.5	17.1	19.3	---	---	---	28.3	19.3	23.6	23.1	15.8	19.3
17	22.7	16.8	19.3	---	---	---	28.4	19.0	23.3	19.8	15.5	17.9
18	21.5	17.2	19.3	---	---	---	26.5	20.0	23.0	19.5	13.1	15.9
19	21.6	17.3	19.2	28.5	21.2	24.5	---	---	---	20.6	12.2	16.3
20	20.4	17.2	18.5	27.0	21.3	24.0	28.8	20.1	24.4	21.4	13.4	17.2
21	22.6	16.7	19.3	29.1	21.1	24.8	28.8	20.2	24.5	22.1	14.5	18.2
22	22.7	17.0	19.9	28.2	21.5	24.8	28.3	20.1	23.7	21.6	13.5	17.5
23	23.2	17.1	20.1	28.1	21.5	24.7	27.8	19.5	23.1	22.9	14.1	18.4
24	23.0	17.3	20.3	29.8	20.6	24.9	29.2	19.5	23.9	21.5	14.4	17.9
25	22.6	16.5	19.7	30.3	21.4	25.4	29.0	20.0	23.8	22.0	13.6	17.7
26	23.5	17.3	20.4	29.2	21.6	25.2	27.7	20.6	23.8	22.5	13.7	18.0
27	24.4	17.9	21.1	25.9	22.2	24.0	28.7	20.3	24.2	21.5	13.7	17.7
28	24.2	17.7	21.0	27.0	21.5	23.9	24.1	21.1	22.2	21.0	12.9	17.0
29	23.0	17.7	20.5	25.7	19.9	22.7	24.4	19.4	21.7	21.1	13.1	17.1
30	25.1	18.0	21.5	27.5	20.9	24.0	22.3	19.7	20.8	19.0	14.5	16.3
31	---	---	---	25.7	20.9	23.4	22.1	18.8	20.0	---	---	---
MONTH	25.1	14.7	18.9	---	---	---	---	---	---	26.3	12.2	18.8

07116500 HUERFANO RIVER NEAR BOONE, CO

LOCATION.--Lat 38°13'30", long 104°15'37", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.18, T.21 S., R.61 W., Pueblo County, Hydrologic Unit 11020006, at right upstream end of bridge on U.S. Highway 50, 0.8 mi upstream from mouth, and 1.6 mi south of Boone.

DRAINAGE AREA.--1,875 mi².

PERIOD OF RECORD.--January 1922 to September 1925 (monthly and annual discharge only, published in WSP 1311 as "near Nepesta"), October 1979 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07116500.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gages. Datum of gage is 4,443.74 ft above NGVD of 1929. Jan. 1922 to Sept. 1925, at different datum.

REMARKS.--No estimated daily discharges. Records fair. Natural flow of stream affected by storage reservoirs, diversions for irrigation, ground-water withdrawals, and return flows from irrigated areas. Several measurements of water temperature and specific conductance 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.1	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.4	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.9	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.9	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.3	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.6	8.0	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.4	8.0	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	1.7	0.00	2.4	5.1	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.17	0.00	1.2	4.6	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	19	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	22	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.2	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.4	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.2	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.9	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.68	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.2	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.63	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	3.1	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	16	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	1.87	0.01	37.17	208.66	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.060	0.000	1.20	6.96	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	1.7	0.01	16	22	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	3.7	0.02	74	414	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

	9.72	15.6	14.9	19.7	22.8	20.5	31.3	144	92.3	23.2	26.9	5.83
MEAN	9.72	15.6	14.9	19.7	22.8	20.5	31.3	144	92.3	23.2	26.9	5.83
MAX	46.7	46.0	40.2	65.1	65.2	129	224	1,113	667	226	254	26.5
(WY)	(1985)	(1986)	(1998)	(1984)	(1998)	(1984)	(1998)	(1987)	(1983)	(1995)	(1981)	(1995)
MIN	0.000	0.000	0.000	0.000	0.000	0.060	0.000	0.47	0.000	0.000	0.000	0.000
(WY)	(1990)	(1990)	(1990)	(1990)	(2003)	(2003)	(2003)	(2002)	(2002)	(1989)	(2002)	(1980)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1980 - 2003

ANNUAL TOTAL	254.69	247.71	
ANNUAL MEAN	0.70	0.68	
HIGHEST ANNUAL MEAN			35.7
LOWEST ANNUAL MEAN			153
HIGHEST DAILY MEAN			0.68
LOWEST DAILY MEAN	21	Mar 17	2,900
ANNUAL SEVEN-DAY MINIMUM	0.00	May 30	a0.00
MAXIMUM PEAK FLOW	0.00	May 30	0.00
MAXIMUM PEAK STAGE			82
ANNUAL RUNOFF (AC-FT)	505		8.44
10 PERCENT EXCEEDS	2.0		0.07
50 PERCENT EXCEEDS	0.00		0.00
90 PERCENT EXCEEDS	0.00		0.00

a No flow on many days during most years.

b From rating curve extended above 1,130 ft³/s. Maximum discharge for period of record, 19,400 ft³/s, Aug 1, 1923, from slope-area measurement of peak flow, gage height, 9.4 ft, datum then in use.

c From flood marks. Maximum gage height for period of record, 11.75 ft, Jul 19, 1995.

07119500 APISHAPA RIVER NEAR FOWLER, CO

LOCATION.--Lat 38°05'28", long 103°58'52", in SE 1/4 NW 1/4 sec.35, T.22 S., R.59 W., Otero Country, Hydrologic Unit 11020007, on left bank on downstream side of bridge on county road HH.5, 3.5 mi southeast of Fowler, and 5.4 mi upstream from mouth.

DRAINAGE AREA.--1,125 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1922 to September 1925, May 1939 to current year. Monthly discharge only for some periods, published in WSP 1311. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07119500

REVISED RECORDS.--WSP 957: 1939, 1941. WSP 1117: Drainage area. WSP 1241: 1923(M). WRD Colo. 1974: 1973(M).

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gages. Elevation of gage is 4,317.05 ft above NGVD of 1929. See WSP 1711 or 1731 for history of changes prior to May 27, 1939. May 27, 1939 to July 30, 1940, at different datum. July 30, 1940 to Sept. 30, 1985, at site on right bank at datum 2.0 ft higher. Sept. 30, 1985 to July 2, 2002, at site on right bank at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by erosion-control and livestock-watering reservoirs, diversions for irrigation, ground-water withdrawals, return flows from irrigated areas, and waste-water flows from Oxford Farmers Co. and Rocky Ford Highline canals. 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	2.6	4.0	3.2	2.3	2.3	2.2	2.6	2.7	93	105	8.5	10
2	3.3	5.2	2.7	2.3	2.5	2.1	2.7	2.8	55	15	5.8	4.1
3	3.1	4.7	2.8	2.3	3.0	2.1	2.6	3.0	25	4.6	5.3	3.4
4	3.0	3.9	2.8	2.6	2.2	2.1	2.5	2.7	5.8	2.8	5.3	3.2
5	3.2	3.1	2.8	2.4	2.1	2.1	2.4	2.6	5.9	2.7	9.8	3.3
6	2.9	3.2	2.7	2.3	2.3	2.0	2.6	2.8	3.6	2.7	2.8	3.0
7	2.9	3.5	2.7	2.3	2.3	2.1	2.6	2.7	5.1	3.0	2.7	2.9
8	e2.9	2.9	2.6	2.3	2.3	2.1	2.7	2.8	9.0	2.7	2.7	2.7
9	e2.9	2.9	2.6	2.2	2.3	2.1	2.4	2.9	6.2	2.6	254	2.6
10	2.9	3.0	2.6	2.1	2.2	2.2	2.6	2.9	5.9	3.0	57	2.5
11	2.9	2.9	2.5	2.1	2.2	2.1	2.6	3.3	7.3	2.7	19	2.5
12	2.9	2.9	2.4	2.2	2.1	2.1	2.5	3.5	5.5	2.8	6.5	2.6
13	3.3	3.1	2.5	2.3	2.2	2.1	2.8	3.3	6.5	2.9	3.3	2.6
14	3.2	7.8	e2.6	2.3	2.3	2.1	3.1	3.1	6.1	3.1	2.9	2.7
15	3.2	28	e2.6	2.3	2.3	2.3	3.0	3.0	5.5	3.1	2.8	2.6
16	3.5	5.9	e2.5	2.3	2.2	4.7	3.4	3.0	4.2	3.2	2.8	2.6
17	3.5	3.6	2.5	2.3	2.2	2.2	3.1	3.0	4.2	2.9	2.8	2.5
18	3.5	3.3	2.8	2.3	2.3	2.4	3.4	2.9	4.8	2.9	2.8	2.6
19	3.3	3.2	2.6	2.3	2.3	2.6	5.7	2.7	306	2.8	2.9	2.7
20	3.5	3.1	2.5	2.4	2.3	4.2	4.3	2.5	36	3.1	2.9	2.7
21	3.5	3.1	2.5	2.3	2.2	4.5	3.7	2.7	8.9	3.3	2.8	2.8
22	3.5	3.3	2.4	2.3	2.1	2.8	3.3	2.7	3.5	2.9	2.9	2.8
23	3.4	3.1	2.6	2.3	2.2	5.8	3.2	2.8	4.8	3.0	3.1	2.8
24	3.4	3.2	2.5	2.2	2.1	4.4	3.1	168	5.0	2.9	3.4	2.7
25	3.5	3.2	2.4	2.2	2.0	3.5	3.6	266	3.0	2.9	3.5	2.6
26	3.6	3.1	2.3	2.2	2.1	3.0	3.3	133	3.8	3.0	3.6	2.5
27	3.4	3.1	2.3	2.2	2.1	3.7	3.2	30	3.0	3.1	3.8	2.4
28	3.5	3.0	2.4	2.2	2.2	3.2	3.1	8.7	2.5	3.3	3.7	2.4
29	3.4	3.1	2.5	2.2	---	3.3	3.0	5.1	2.3	895	4.0	2.4
30	3.3	3.1	2.4	2.2	---	2.5	2.7	3.9	2.8	91	4.6	2.6
31	3.6	---	2.2	2.7	---	2.6	---	29	---	19	14	---
TOTAL	100.6	131.5	79.5	70.9	62.9	87.2	91.8	710.1	640.2	1,203.0	452.0	89.8
MEAN	3.25	4.38	2.56	2.29	2.25	2.81	3.06	22.9	21.3	38.8	14.6	2.99
MAX	3.6	28	3.2	2.7	3.0	5.8	5.7	266	306	895	254	10
MIN	2.6	2.9	2.2	2.1	2.0	2.0	2.4	2.5	2.3	2.6	2.7	2.4
AC-FT	200	261	158	141	125	173	182	1,410	1,270	2,390	897	178

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	15.3	16.2	10.6	6.82	8.93	11.2	21.3	42.4	43.7	51.5	62.1	18.8
MAX	87.2	83.1	54.7	30.4	54.0	59.6	530	576	290	306	628	154
(WY)	(1924)	(1966)	(1966)	(1966)	(1971)	(1924)	(1942)	(1955)	(1948)	(1958)	(1923)	(1940)
MIN	1.06	0.90	1.33	2.29	1.85	1.35	0.94	1.65	1.13	1.53	1.56	1.07
(WY)	(1965)	(1940)	(1955)	(2003)	(1976)	(1955)	(1955)	(1975)	(1954)	(1974)	(1974)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1922 - 2003

ANNUAL TOTAL	1,596.0	3,719.5	
ANNUAL MEAN	4.37	10.2	
HIGHEST ANNUAL MEAN			25.9
LOWEST ANNUAL MEAN			105
HIGHEST DAILY MEAN	360	Aug 30	895
LOWEST DAILY MEAN	1.7	Aug 17	2.0
ANNUAL SEVEN-DAY MINIMUM	1.8	Aug 16	2.1
MAXIMUM PEAK FLOW			a3,080
MAXIMUM PEAK STAGE			13.42
ANNUAL RUNOFF (AC-FT)	3,170		7,380
10 PERCENT EXCEEDS	3.7		5.8
50 PERCENT EXCEEDS	2.9		2.9
90 PERCENT EXCEEDS	2.2		2.2

e Estimated.

a From rating curve extended above 2,920 ft³/s.

b From slope-area measurement of peak flow at site 2 mi upstream from present site, caused by failure of Apishapa Dam 31 mi upstream.

c Site and datum then in use. Peak stage for flood of Aug 22, 1923, unknown.

ARKANSAS RIVER BASIN

07119500 APISHAPA RIVER NEAR FOWLER, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 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=07119500

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.84 inches, Apr. 19, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation during period April to September, 1.84 inches, Apr. 19.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	0.00	0.07	0.24	0.00	0.00	0.00
2	---	---	---	---	---	---	0.00	0.00	0.16	0.00	0.00	0.00
3	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.08	0.21
4	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.55	0.00
5	---	---	---	---	---	---	0.15	0.00	0.39	0.00	0.00	0.00
6	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.26
7	---	---	---	---	---	---	0.21	0.00	0.02	0.00	0.00	0.03
8	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.01
9	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.09
10	---	---	---	---	---	---	0.00	0.00	0.34	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.35
14	---	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
15	---	---	---	---	---	---	0.42	0.19	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.07	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.62	0.00	0.00	0.00
19	---	---	---	---	---	---	1.84	0.00	0.04	0.02	0.00	0.00
20	---	---	---	---	---	---	0.00	0.01	0.10	0.45	0.00	0.00
21	---	---	---	---	---	---	0.01	0.00	0.00	0.01	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.01	0.00
29	---	---	---	---	---	---	0.00	0.00	0.00	0.02	0.00	0.00
30	---	---	---	---	---	---	0.00	0.06	0.00	0.00	0.10	0.00
31	---	---	---	---	---	---	---	0.17	---	0.00	0.01	---
TOTAL	---	---	---	---	---	---	2.63	0.51	2.05	0.50	0.75	0.95
MAX	---	---	---	---	---	---	1.84	0.19	0.62	0.45	0.55	0.35

07119700 ARKANSAS RIVER AT CATLIN DAM NEAR FOWLER, CO

LOCATION.--Lat 38°07'33", long 103°54'41", in NE¹/₄NE¹/₄ sec.20, T.22 S., R.58 W., Otero County, Hydrologic Unit 11020005, on right bank at Catlin Canal flume gage, 2.2 mi downstream from diversion dam for Catlin Canal, 2.3 mi downstream from Apishapa River, and 6.0 mi east of Fowler.

DRAINAGE AREA.--10,901 mi², of which 54 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year. Statistical summary computed for 1975 to current year, subsequent to completion of Pueblo Reservoir. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07119700

GAGE.--Water-stage recorder with satellite telemetry on river; water-stage recorder with satellite telemetry and Parshall flume on Catlin Canal. Datum of gage on river is 4,245.92 ft and on canal is 4,257.87 ft above NGVD of 1929. Prior to May 13, 1971, gage on river at site 2.2 mi upstream at datum 24.08 ft higher, and gage on canal at site 1.7 mi upstream at datum 3.26 ft higher.

REMARKS.--Records good, except for estimated daily discharges, which are poor. Discharge computed by combining discharge of river downstream from canal with that of Catlin Canal. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Flow partly regulated by Pueblo Reservoir (station 07099350) about 69 mi upstream since Jan. 9, 1974.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	157	30	94	27	81	196	261	2,210	942	319	673
2	41	184	39	74	28	73	152	334	2,870	838	234	552
3	39	189	40	73	35	58	195	319	3,450	765	263	381
4	65	171	50	73	30	26	265	281	3,530	640	270	268
5	87	197	47	72	29	24	317	264	3,170	577	275	217
6	110	198	46	67	32	33	370	255	2,650	570	278	205
7	e110	207	48	51	e30	34	416	283	1,410	595	270	192
8	115	209	46	29	e30	27	453	282	1,100	589	271	187
9	107	199	42	23	e40	27	448	246	1,420	586	511	213
10	96	218	45	22	e60	29	382	166	1,170	584	255	242
11	89	220	44	28	e75	29	378	113	1,210	565	207	270
12	79	228	31	51	e77	22	356	111	1,340	520	139	304
13	88	231	30	66	e75	15	328	93	1,520	437	125	312
14	88	256	30	93	78	62	297	73	1,660	428	112	340
15	77	231	32	74	74	97	276	172	1,680	417	100	313
16	80	67	27	65	73	148	260	311	1,750	390	95	312
17	88	36	25	68	74	152	231	516	1,660	346	97	298
18	96	29	22	63	65	166	239	507	1,980	315	96	268
19	92	14	23	64	30	237	330	567	1,730	248	96	205
20	79	15	e22	56	32	298	535	546	1,520	234	175	154
21	75	34	e20	30	29	326	466	647	2,220	310	97	135
22	90	34	e45	e21	29	351	420	808	1,640	338	69	134
23	83	32	e60	e22	e32	363	363	956	1,630	270	58	127
24	90	30	e80	e22	e35	334	411	1,060	1,370	241	46	119
25	101	25	e62	e26	e40	325	531	1,230	1,210	230	49	106
26	105	26	e56	e31	e50	297	597	1,550	1,100	187	39	96
27	92	36	e55	32	e70	315	468	1,950	1,040	165	59	88
28	81	37	e75	27	e75	278	356	1,880	1,010	155	90	78
29	147	37	e85	26	---	273	305	1,840	935	1,050	95	68
30	156	29	98	26	---	252	278	1,980	914	381	132	57
31	136	---	82	26	---	227	---	2,290	---	400	310	---
TOTAL	2,814	3,576	1,437	1,495	1,354	4,979	10,619	21,891	52,099	14,313	5,232	6,914
MEAN	90.8	119	46.4	48.2	48.4	161	354	706	1,737	462	169	230
MAX	156	256	98	94	78	363	597	2,290	3,530	1,050	511	673
MIN	32	14	20	21	27	15	152	73	914	155	39	57
AC-FT	5,580	7,090	2,850	2,970	2,690	9,880	21,060	43,420	103,300	28,390	10,380	13,710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

	401	436	385	408	376	412	599	1,266	2,038	1,316	964	430
MEAN	401	436	385	408	376	412	599	1,266	2,038	1,316	964	430
MAX	1,234	925	804	854	1,249	912	1,526	3,901	4,420	4,108	2,384	1,209
(WY)	(1985)	(1985)	(2000)	(1985)	(1985)	(1998)	(1987)	(1999)	(1995)	(1995)	(1984)	(1982)
MIN	90.8	119	46.4	48.2	48.4	161	86.6	212	280	176	25.2	34.7
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(1978)	(1981)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1975 - 2003

ANNUAL TOTAL	52,623.54		126,723			
ANNUAL MEAN	144		347			
HIGHEST ANNUAL MEAN					a,754	
LOWEST ANNUAL MEAN					1,327	1995
HIGHEST DAILY MEAN	686	Jun 11	3,530	Jun 4	206	2002
LOWEST DAILY MEAN	0.00	Sep 11	14	Nov 19	e,b,16,300	May 1, 1999
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 5	24	Dec 15	c,0.00	Sep 11, 2002
MAXIMUM PEAK FLOW			d,3,610	Jun 4	1.2	Sep 5, 2002
MAXIMUM PEAK STAGE			g,5.41	Jun 4	e,d,f,26,000	May 1, 1999
ANNUAL RUNOFF (AC-FT)	104,400				11.30	May 1, 1999
10 PERCENT EXCEEDS	302			251,400	546,200	
50 PERCENT EXCEEDS	105			1,020	1,620	
90 PERCENT EXCEEDS	22			148	450	
				29	175	

e Estimated.

a Average discharge for 9 years (water years 1965-73), 636 ft³/s, 460,800 acre-ft/yr, prior to completion of Pueblo Dam.

b Maximum daily discharge for period of record, 18,300 ft³/s, Jun 18, 1965.

c Also minimum daily discharge for period of record.

d Maximum combined instantaneous discharge.

f Maximum discharge and gage height for period of record, 43,200 ft³/s, Jun 18, 1965, gage height, 7.95 ft, site and datum then in use, from rating curve extended above 13,000 ft³/s on basis of flow-over-dam computation of peak flow.

g Gage height at Arkansas River gage.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 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=07119700

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1990 to current year.

WATER TEMPERATURE: May 1990 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

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

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,150 microsiemens/cm, Aug. 30, 2002; minimum, 244 microsiemens/cm, May 25, 1993.

WATER TEMPERATURE: Maximum, 33.9°C, Aug. 11, 2002; minimum, 0.0°C, on many days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,960 microsiemens/cm, Aug. 9; minimum, 587 microsiemens/cm, June 18-19.

WATER TEMPERATURE: Maximum, 31.9°C, July 19, 24; minimum, 0.0°C, on many days.

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN,
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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
DEC 18...	1500	22	11.0	8.5	1,840	9.0	213	75.3	3.40	129	E175	34.9	1.08
MAR 11...	1150	30	11.5	8.4	1,840	15.5	187	72.1	3.80	126	166	41.3	1.05
MAY 29...	0915	1,520	7.2	8.2	757	20.5	72.2	23.5	3.52	42.0	171	17.2	0.8
AUG 27...	0945	62	8.0	8.3	1,240	22.5	133	51.5	4.58	91.0	164	30.1	1.1

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sulfate water, fltrd, mg/L (00945)
DEC 18...	812
MAR 11...	761
MAY 29...	222
AUG 27...	483

E -- Estimated laboratory analysis value.

07119700 ARKANSAS RIVER AT CATLIN DAM NEAR FOWLER, 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	1,780	1,550	1,720	1,440	1,420	1,430	1,830	1,770	1,810	1,650	1,590	1,610
2	1,730	1,540	1,670	1,420	1,390	1,400	1,820	1,730	1,760	1,690	1,640	1,670
3	1,640	1,590	1,620	1,400	1,350	1,380	1,800	1,750	1,770	1,680	1,630	1,660
4	1,670	1,570	1,600	1,390	1,320	1,360	1,750	1,700	1,730	1,660	1,630	1,650
5	1,580	1,490	1,530	1,400	1,350	1,370	1,760	1,720	1,740	1,680	1,640	1,660
6	1,500	1,390	1,440	1,380	1,320	1,360	1,790	1,730	1,760	1,930	1,620	1,670
7	1,390	1,370	1,380	1,350	1,320	1,340	1,770	1,730	1,750	1,770	1,660	1,700
8	1,390	1,340	1,370	1,340	1,300	1,320	1,780	1,720	1,750	1,840	1,770	1,810
9	1,370	1,330	1,360	1,360	1,300	1,330	1,810	1,740	1,780	1,880	1,830	1,850
10	1,380	1,350	1,370	1,310	1,300	1,300	1,830	1,750	1,790	1,910	1,820	1,870
11	1,440	1,380	1,400	1,330	1,300	1,320	1,840	1,730	1,780	1,920	1,760	1,870
12	1,490	1,440	1,470	1,330	1,290	1,310	1,860	1,820	1,840	1,760	1,670	1,730
13	1,470	1,430	1,450	1,300	1,280	1,290	1,880	1,800	1,840	1,900	1,560	1,710
14	1,480	1,430	1,460	---	---	---	1,880	1,800	1,840	1,650	1,610	1,620
15	1,520	1,470	1,500	1,510	1,320	1,400	1,910	1,800	1,850	1,680	1,630	1,650
16	1,530	1,500	1,510	1,540	1,350	1,470	1,890	1,810	1,850	1,710	1,640	1,680
17	1,520	1,480	1,500	1,760	1,540	1,590	1,860	1,790	1,830	1,700	1,630	1,670
18	1,500	1,460	1,480	1,700	1,590	1,600	1,870	1,810	1,840	1,730	1,630	1,690
19	1,490	1,460	1,470	1,760	1,730	1,740	1,880	1,830	1,850	1,720	1,610	1,680
20	1,510	1,470	1,490	1,790	1,730	1,750	1,900	1,770	1,850	1,840	1,620	1,690
21	1,530	1,510	1,520	1,740	1,640	1,680	1,930	1,800	1,860	1,890	1,820	1,850
22	1,590	1,510	1,530	1,660	1,620	1,640	1,910	1,660	1,790	1,930	1,880	1,900
23	1,560	1,530	1,540	1,680	1,640	1,660	1,660	1,630	1,650	1,950	1,850	1,920
24	---	---	---	1,740	1,680	1,700	1,720	1,640	1,660	1,950	1,710	1,860
25	1,500	1,470	1,480	1,770	1,730	1,750	1,810	1,720	1,780	1,830	1,570	1,700
26	1,490	1,400	1,450	1,810	1,640	1,760	1,920	1,770	1,830	1,790	1,640	1,680
27	1,510	1,390	1,470	1,840	1,630	1,720	1,930	1,720	1,830	1,790	1,740	1,760
28	1,500	1,490	1,500	1,780	1,630	1,720	1,740	1,560	1,650	1,790	1,750	1,770
29	1,570	1,480	1,520	1,760	1,690	1,730	1,600	1,530	1,580	1,790	1,730	1,760
30	1,500	1,400	1,430	1,810	1,760	1,790	1,620	1,540	1,590	1,780	1,720	1,750
31	1,440	1,420	1,440	---	---	---	1,670	1,570	1,630	1,760	1,690	1,730
MONTH	---	---	---	---	---	---	1,930	1,530	1,770	1,950	1,560	1,740
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1,780	1,680	1,730	1,650	1,600	1,630	1,360	1,280	1,330	1,330	1,280	1,320
2	1,750	1,660	1,720	1,670	1,610	1,640	1,460	1,290	1,380	1,280	1,200	1,250
3	1,710	1,660	1,690	1,810	1,600	1,660	1,460	1,300	1,400	1,250	1,210	1,230
4	1,760	1,680	1,720	1,920	1,810	1,880	1,350	1,240	1,280	1,280	1,250	1,270
5	1,740	1,670	1,700	1,930	1,810	1,890	1,260	1,190	1,230	1,290	1,260	1,270
6	1,740	1,650	1,690	1,900	1,750	1,800	1,270	1,140	1,210	1,280	1,260	1,270
7	1,790	1,630	1,700	1,800	1,720	1,740	1,160	1,120	1,140	1,270	1,230	1,250
8	1,840	1,580	1,700	1,810	1,780	1,790	1,140	1,060	1,100	1,260	1,220	1,240
9	1,800	1,600	1,700	1,810	1,770	1,790	1,100	1,070	1,080	1,260	1,220	1,240
10	1,740	1,500	1,630	1,800	1,760	1,780	1,160	1,100	1,130	1,370	1,230	1,310
11	1,580	1,520	1,550	1,790	1,650	1,750	1,200	1,080	1,190	1,480	1,370	1,440
12	1,640	1,550	1,600	---	1,660	---	1,210	1,060	1,180	1,460	1,420	1,450
13	1,630	1,600	1,610	---	1,740	---	1,210	1,180	1,200	1,560	1,420	1,470
14	1,650	1,600	1,630	1,810	1,610	1,720	1,230	1,200	1,220	1,570	1,490	1,510
15	1,650	1,620	1,630	1,660	1,530	1,570	1,250	1,190	1,230	1,620	1,140	1,340
16	1,670	1,630	1,650	1,580	1,490	1,530	1,230	1,200	1,210	1,140	1,050	1,090
17	1,680	1,620	1,650	1,540	1,440	1,510	1,260	1,220	1,240	1,080	1,020	1,060
18	1,810	1,630	1,660	1,520	1,420	1,470	1,290	1,220	1,260	1,090	989	1,040
19	1,870	1,810	1,840	1,450	1,360	1,390	1,230	1,030	1,110	1,000	964	982
20	1,890	1,780	1,840	1,400	1,340	1,380	1,170	1,060	1,100	984	949	973
21	1,880	1,800	1,840	1,370	1,280	1,320	1,200	1,060	1,150	966	921	940
22	1,880	1,820	1,850	1,290	1,240	1,270	1,230	1,200	1,220	927	891	908
23	1,890	1,800	1,840	1,260	1,220	1,240	1,270	1,220	1,250	891	844	868
24	1,930	1,790	1,840	1,260	1,210	1,240	1,270	1,220	1,250	1,430	833	883
25	1,880	1,660	1,790	1,230	1,200	1,210	1,220	1,140	1,180	966	761	831
26	1,690	1,550	1,620	1,290	1,220	1,270	1,150	1,100	1,120	825	786	815
27	1,600	1,530	1,570	1,270	1,170	1,210	1,230	1,110	1,180	840	789	806
28	1,640	1,580	1,620	1,280	1,240	1,270	1,300	1,230	1,280	789	778	782
29	---	---	---	1,310	1,280	1,290	1,330	1,290	1,310	787	775	781
30	---	---	---	1,330	1,290	1,320	1,340	1,310	1,330	784	756	771
31	---	---	---	1,330	1,320	1,320	---	---	---	764	750	757
MONTH	1,930	1,500	1,700	---	1,170	---	1,460	1,030	1,220	1,620	750	1,100

07119700 ARKANSAS RIVER AT CATLIN DAM NEAR FOWLER, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	891	753	772	723	696	707	1,140	1,100	1,130	1,280	885	1,030
2	838	736	776	711	696	704	1,210	1,140	1,180	989	904	951
3	777	690	747	714	702	706	---	---	---	1,080	989	1,040
4	709	595	648	758	703	734	---	---	---	1,180	1,080	1,140
5	637	595	624	776	756	763	979	905	930	1,240	1,180	1,210
6	644	598	625	787	722	757	952	906	927	1,230	1,210	1,220
7	735	626	663	724	702	712	979	952	968	1,220	1,180	1,200
8	791	690	716	705	687	697	989	956	971	1,200	1,160	1,180
9	737	681	702	697	690	693	1,960	963	1,100	1,160	1,130	1,150
10	738	676	721	698	688	692	1,240	1,070	1,160	1,140	1,100	1,120
11	751	642	703	697	689	694	1,380	1,190	1,300	1,140	1,090	1,110
12	815	638	727	745	690	703	1,390	1,360	1,380	1,090	1,040	1,060
13	652	640	649	777	745	768	1,410	1,370	1,390	1,050	1,020	1,040
14	653	636	646	807	777	796	1,430	1,380	1,400	1,020	940	988
15	649	643	646	814	801	805	1,470	1,410	1,440	1,000	957	982
16	644	627	636	837	771	806	1,490	1,440	1,460	1,010	976	988
17	633	611	623	908	778	846	1,470	1,440	1,450	1,000	978	990
18	619	587	598	1,020	794	891	1,500	1,440	1,470	1,060	991	1,030
19	1,000	587	648	957	876	894	1,480	1,430	1,460	1,170	1,060	1,130
20	650	613	634	1,060	779	970	1,430	1,260	1,310	1,270	1,160	1,220
21	642	621	631	1,080	917	1,000	1,420	1,320	1,370	1,290	1,260	1,270
22	653	636	643	1,070	935	1,020	1,460	1,400	1,430	1,280	1,240	1,260
23	648	626	636	1,130	1,060	1,100	1,500	1,440	1,470	1,280	1,240	1,260
24	626	611	621	1,140	1,100	1,120	1,510	1,450	1,480	1,290	1,270	1,280
25	646	622	634	1,150	1,120	1,130	1,450	1,410	1,420	1,320	1,280	1,300
26	671	645	651	1,190	1,120	1,160	1,510	1,420	1,470	1,360	1,310	1,330
27	680	664	673	---	---	---	1,460	1,310	1,400	1,360	1,330	1,350
28	695	674	688	---	---	---	1,330	1,280	1,310	1,420	1,360	1,400
29	701	692	697	1,790	921	1,200	1,370	1,270	1,310	1,460	1,410	1,440
30	701	691	697	1,410	1,120	1,320	1,300	1,180	1,240	1,490	1,450	1,470
31	---	---	---	1,120	1,070	1,090	1,280	1,050	1,160	---	---	---
MONTH	1,000	587	669	---	---	---	---	---	---	1,490	885	1,170

07119700 ARKANSAS RIVER AT CATLIN DAM NEAR FOWLER, CO—Continued

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	22.3	10.8	15.4	2.8	0.5	1.7	9.8	0.9	4.4	5.4	2.0	3.4
2	13.7	10.6	12.3	5.9	2.3	3.8	10.3	1.9	5.5	7.3	0.0	3.2
3	16.4	9.4	11.7	9.7	3.0	5.6	5.3	2.2	3.5	8.1	0.5	3.9
4	17.9	7.8	12.5	9.0	3.2	5.5	6.5	2.1	4.2	9.3	1.9	4.9
5	19.6	8.6	14.2	9.2	3.1	6.1	8.8	3.4	5.6	7.7	2.6	5.1
6	18.6	10.4	14.4	9.0	2.6	6.0	9.4	1.3	4.6	10.5	3.6	6.4
7	19.3	10.4	14.8	9.0	3.3	6.5	8.9	1.6	4.7	9.8	1.8	4.9
8	19.8	10.5	15.1	10.4	5.3	8.0	8.9	2.4	4.9	10.8	1.2	5.1
9	21.6	13.9	17.2	12.4	6.7	9.5	8.9	1.2	4.1	8.3	1.5	4.0
10	22.3	14.1	17.6	10.6	6.4	8.6	8.7	0.7	3.7	4.2	0.7	2.0
11	20.1	11.9	15.7	8.3	4.2	6.3	8.4	1.1	4.0	3.1	1.1	2.1
12	16.5	10.3	12.8	7.7	2.3	5.0	8.0	1.6	4.1	8.2	0.2	3.5
13	16.5	7.2	11.9	7.5	2.8	5.2	9.3	1.3	4.2	9.1	0.8	3.6
14	16.1	7.8	12.1	8.9	5.6	6.2	9.5	1.5	4.4	7.7	1.0	4.0
15	16.1	6.8	11.4	8.3	3.8	6.6	8.4	1.3	4.5	8.3	0.9	3.4
16	15.6	6.9	11.1	9.8	1.0	5.0	7.9	1.4	4.2	6.6	0.0	2.3
17	15.3	5.9	10.7	10.2	2.2	5.8	9.8	2.9	5.7	7.6	0.0	2.9
18	15.2	7.3	11.3	---	3.3	---	9.2	2.5	5.3	6.1	0.0	2.0
19	14.9	7.4	10.8	11.6	---	---	7.8	1.1	4.3	8.6	0.0	3.1
20	15.9	6.4	11.0	12.0	2.2	6.3	4.1	0.0	1.8	10.2	0.0	4.4
21	15.0	7.7	10.7	12.3	2.8	7.0	5.5	0.6	2.9	5.8	0.7	2.8
22	14.0	7.7	9.9	12.6	3.2	7.3	3.7	0.0	1.7	1.5	0.0	0.8
23	7.7	4.5	6.0	11.1	4.2	7.0	1.7	0.0	0.9	2.2	1.0	1.5
24	---	---	---	5.5	3.2	4.5	1.9	0.0	0.5	3.3	1.1	2.0
25	14.3	5.0	9.4	5.7	1.0	3.1	2.0	0.0	0.4	7.5	0.1	2.9
26	13.5	5.6	9.6	7.1	0.0	2.3	1.3	0.0	0.5	9.5	0.0	3.9
27	15.6	8.6	11.3	6.9	0.0	2.3	2.2	0.5	1.1	12.3	2.1	6.3
28	16.3	9.1	11.6	8.7	0.0	3.4	2.1	0.7	1.2	11.8	4.5	7.4
29	10.0	3.7	7.6	10.4	2.6	5.6	1.6	0.8	1.1	12.1	3.4	6.8
30	6.4	2.2	3.8	9.3	1.7	4.8	3.9	0.7	2.0	9.2	2.6	5.6
31	3.2	1.0	2.0	---	---	---	5.2	0.0	2.0	12.6	3.0	7.1
MONTH	---	---	---	---	---	---	10.3	0.0	3.3	12.6	0.0	3.9
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.4	5.2	7.7	11.4	1.4	5.7	20.4	9.8	15.0	19.5	12.2	15.8
2	11.2	3.1	7.2	13.5	2.8	6.9	17.5	10.4	13.6	19.5	12.4	15.0
3	10.7	2.8	5.6	15.2	1.4	7.3	16.3	7.6	11.8	21.2	12.9	16.2
4	10.3	1.4	4.7	5.5	0.7	3.1	16.7	8.1	12.0	18.8	10.9	14.6
5	7.5	1.6	4.2	11.7	0.0	4.0	14.4	7.6	10.7	23.2	11.4	16.9
6	7.2	1.5	3.5	14.4	0.8	6.4	13.0	6.5	9.2	21.8	13.4	17.1
7	4.3	0.0	1.5	17.1	2.4	8.7	9.6	6.6	8.4	22.4	12.6	16.7
8	4.4	0.0	2.1	17.5	3.6	9.4	14.7	6.0	10	20.4	13.0	16.1
9	3.5	0.5	1.7	18.3	4.4	9.5	17.6	8.8	13.0	20.6	10.7	15.0
10	3.9	0.5	1.8	17.5	3.0	9.1	19.9	10.9	15.1	19.6	11.3	15.0
11	4.7	0.0	1.9	18.6	3.9	10.2	20.2	11.6	15.7	22.3	9.7	15.1
12	9.7	0.0	4.1	---	5.5	---	20.1	11.9	16.0	23.4	10.2	16.2
13	10.5	4.1	6.7	19.4	---	---	21.9	12.2	16.8	20.7	11.9	16.4
14	9.4	3.7	6.5	18.8	7.1	12.2	21.5	13.1	17.2	25.4	11.9	18.5
15	8.5	3.4	5.5	18.5	9.1	13.1	19.1	11.9	15.2	24.4	15.3	18.1
16	9.6	1.7	4.9	16.3	8.6	12.2	19.9	9.7	14.4	24.3	14.2	18.8
17	12.0	1.4	6.1	14.4	8.3	11.1	20.6	11.5	15.6	23.8	17.4	20.4
18	9.2	4.5	6.5	10.6	5.9	8.8	19.9	10.0	14.9	20.9	17.1	19.0
19	10.3	3.9	6.5	5.9	3.0	4.2	15.3	9.0	10.8	20.7	16.3	18.1
20	13.3	2.6	6.5	12.4	4.4	8.1	16.4	9.3	12.7	20.0	14.3	16.7
21	13.6	1.7	6.6	9.6	6.9	8.2	20.3	12.3	15.8	22.2	14.3	18.2
22	13.3	3.0	7.4	14.7	5.1	9.8	19.7	13.3	16.0	23.6	16.6	20.0
23	10.3	0.0	4.2	16.8	8.3	12.3	15.8	11.0	13.2	24.3	18.7	21.3
24	2.0	0.0	0.9	15.6	10.1	12.6	13.4	8.8	10.9	23.1	19.1	20.9
25	2.3	0.5	1.2	17.7	9.7	13.2	18.8	9.6	13.6	21.8	16.5	19.7
26	2.8	0.0	1.3	16.3	9.6	13.0	20.7	11.7	15.6	21.6	17.3	19.4
27	10.7	0.1	4.2	12.6	6.3	10.2	21.5	12.5	16.7	21.9	17.4	19.7
28	6.2	0.7	3.4	9.7	4.1	6.8	22.2	14.3	17.3	23.7	19.2	21.5
29	---	---	---	12.1	3.8	7.7	23.4	13.5	18.0	24.2	19.7	22.0
30	---	---	---	15.0	4.9	9.8	23.1	14.3	17.9	23.5	19.4	21.5
31	---	---	---	18.0	7.5	10.6	---	---	---	21.6	19.2	20.3
MONTH	13.6	0.0	4.4	---	---	---	23.4	6.0	14.1	25.4	9.7	18.1

ARKANSAS RIVER BASIN

07119700 ARKANSAS RIVER AT CATLIN DAM NEAR FOWLER, 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
1	20.3	18.4	19.4	27.2	21.9	24.5	28.5	19.6	23.9	23.5	17.8	20.6
2	21.4	18.0	20.0	28.6	22.2	25.4	29.9	20.1	24.5	25.3	18.9	21.9
3	20.7	17.8	19.4	28.6	22.8	25.9	---	---	---	23.9	19.5	21.4
4	19.8	18.4	19.0	28.6	23.1	25.8	---	---	---	26.6	17.1	21.3
5	18.4	16.1	17.3	29.6	22.7	25.8	30.7	22.4	27.8	28.2	18.3	22.8
6	19.7	15.2	17.3	28.7	21.2	24.2	29.9	22.6	25.9	23.1	18.7	20.7
7	19.2	15.9	17.7	27.0	20.7	23.8	31.1	21.7	26.0	23.5	17.9	20.0
8	21.2	14.8	19.3	29.0	20.8	24.7	28.0	21.9	24.7	25.9	17.2	20.9
9	22.2	17.7	20.0	28.1	21.3	24.7	28.4	21.2	23.3	22.1	18.1	20.0
10	22.9	18.1	20.3	29.4	21.6	25.3	29.5	18.8	24.0	21.2	15.9	18.3
11	23.9	18.5	21.1	29.3	22.0	25.6	29.9	20.9	24.4	22.8	13.7	17.8
12	23.4	19.1	21.2	28.6	21.3	24.9	29.5	19.2	23.5	23.7	14.3	18.7
13	22.5	18.9	20.8	29.7	22.1	25.5	28.8	17.8	22.5	18.8	13.4	15.5
14	22.5	17.7	20.2	28.7	21.1	24.7	28.4	17.0	21.9	19.8	11.3	15.4
15	23.6	18.5	21.1	29.2	21.8	24.9	28.1	16.7	21.6	22.3	13.0	17.5
16	23.7	19.8	21.7	30.0	21.1	24.9	28.3	16.7	21.9	22.7	14.7	18.5
17	23.9	19.3	21.6	30.6	22.2	26.1	28.9	17.5	22.8	18.4	13.6	16.9
18	22.1	19.8	20.7	31.2	22.2	25.8	28.5	18.3	22.8	18.8	11.5	14.5
19	22.1	19.0	20.3	31.9	22.9	28.0	30.7	17.4	23.4	20.6	10.7	15.3
20	22.7	19.6	21.2	30.8	21.4	25.2	30.6	19.7	24.4	21.6	12.2	16.5
21	21.7	18.5	20.2	30.6	20.4	25.4	29.2	18.6	23.6	23.1	13.2	17.6
22	23.3	18.4	20.9	29.1	21.5	25.1	29.1	18.5	23.1	22.3	12.6	17.0
23	24.6	19.6	22.1	31.3	20.8	25.5	28.8	18.1	22.9	23.8	12.9	17.9
24	24.5	19.6	22.1	31.9	20.7	25.9	29.7	17.3	23.1	21.9	12.9	17.1
25	23.6	18.8	21.3	31.8	21.3	26.3	30.4	18.2	23.3	23.2	12.1	17.1
26	24.5	19.2	21.8	31.6	21.3	26.2	29.7	18.3	23.5	23.3	12.1	17.2
27	25.5	19.7	22.6	26.4	21.6	23.8	30.6	18.3	24.0	22.4	12.1	16.9
28	25.7	20.9	23.2	26.7	19.9	22.5	26.6	20.1	22.6	21.2	11.4	15.9
29	24.9	20.0	22.5	22.5	18.5	19.9	23.9	18.8	20.7	21.1	11.0	15.7
30	26.5	20.7	23.5	27.5	19.2	23.1	22.6	17.6	19.6	15.1	11.8	13.6
31	---	---	---	28.4	20.8	24.1	22.8	17.5	19.6	---	---	---
MONTH	26.5	14.8	20.7	31.9	18.5	25.0	---	---	---	28.2	10.7	18.0

07120480 LAKE MEREDITH OUTLET AT HIGHWAY 71 NEAR ORDWAY, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°08'53", long 103°44'49". in NW¹/₄SW¹/₄ sec.12, T.22 S., R.57 W., Crowley County, Hydrologic Unit 11020005, on right wingwall 5 ft upstream from Lake Meredith outlet gate, 200 ft upstream from State Highway 71, 0.7 mi downstream from Lake Meredith, and 4.6 mi south of Ordway.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.--November 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=07120480

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 2001 to current year.

WATER TEMPERATURE: November 2001 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Daily specific-conductance records are fair. Daily water-temperature records are good. Daily data that are not published are either missing, of unacceptable quality, or occurred during period of canal construction, August 29 to September 30, when canal was dry. Reported values for daily specific conductance and water temperature may not be representative of the lake outflow.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 7,740 microsiemens/cm, Nov. 19, 2002; minimum, 1,270 microsiemens/cm, June 25, 2003.

WATER TEMPERATURE: Maximum, 31.3°C, July 25, 2003; minimum, 0.1°C, Oct. 30, 2003.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 7,740 microsiemens/cm, Nov. 19; minimum, 1,270 microsiemens/cm, June 25.

WATER TEMPERATURE: Maximum, 31.3°C, July 25; minimum, 0.1°C, Oct. 30.

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN,
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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
DEC 18...	1340	--	19.2	9.0	4,010	5.0	294	166	9.70	475	E107	241	1.64
MAR 11...	1420	--	12.1	9.2	1,740	7.5	118	64.4	5.97	165	70	82.3	1.41
MAY 29...	1300	4.9	6.5	8.0	2,340	22.5	170	94.5	8.37	217	117	108	1.7

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sulfate water, fltrd, mg/L (00945)
DEC 18...	1,970
MAR 11...	735
MAY 29...	1,050

E -- Estimated laboratory analysis value.

07120480 LAKE MEREDITH OUTLET AT HIGHWAY 71 NEAR ORDWAY, 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	4,490	4,340	4,390	5,090	5,020	5,070	5,720	5,580	5,620	4,030	4,020	4,020
2	4,670	4,470	4,610	5,060	4,890	4,990	5,580	5,470	5,510	4,030	4,020	4,020
3	4,700	4,500	4,590	5,020	4,910	4,970	5,470	5,380	5,410	4,030	4,020	4,020
4	4,550	4,440	4,500	5,040	4,960	5,010	5,380	5,300	5,350	4,020	4,020	4,020
5	4,560	4,450	4,510	5,000	4,870	4,950	5,500	5,260	5,380	4,030	4,020	4,030
6	4,560	4,490	4,530	4,960	4,900	4,910	5,420	5,280	5,360	4,030	4,020	4,030
7	4,740	4,510	4,590	4,940	4,700	4,840	5,280	4,920	5,080	4,030	4,030	4,030
8	4,670	4,560	4,620	4,700	4,460	4,570	4,920	4,820	4,860	4,030	4,030	4,030
9	4,720	4,560	4,650	4,460	4,270	4,360	4,820	4,800	4,810	4,030	4,030	4,030
10	4,750	4,580	4,670	4,290	4,240	4,260	4,800	4,780	4,790	4,030	4,030	4,030
11	4,670	4,580	4,640	4,320	4,180	4,270	4,780	4,760	4,770	4,040	4,030	4,030
12	4,680	4,550	4,630	4,250	4,040	4,180	4,760	4,720	4,740	4,040	4,030	4,040
13	---	---	---	---	---	---	4,720	4,660	4,700	4,040	4,040	4,040
14	---	---	---	4,410	3,890	4,150	4,660	4,590	4,630	4,040	3,960	4,020
15	4,810	4,730	4,770	4,580	4,270	4,450	4,590	4,540	4,560	4,020	4,020	4,020
16	4,810	4,710	4,770	4,580	4,520	4,550	4,540	4,420	4,500	4,020	4,010	4,020
17	4,810	4,680	4,780	4,530	4,370	4,450	4,460	4,120	4,350	4,020	4,000	4,010
18	---	---	---	7,720	4,300	6,510	4,120	4,070	4,090	4,000	3,980	3,990
19	---	---	---	7,740	7,620	7,660	4,100	4,070	4,090	3,980	3,960	3,970
20	---	---	---	7,660	7,640	7,650	4,080	4,060	4,070	3,960	3,910	3,930
21	---	---	---	7,650	7,620	7,640	4,080	4,020	4,040	3,910	3,860	3,890
22	---	---	---	7,660	7,620	7,630	4,040	4,030	4,030	3,860	3,800	3,830
23	5,700	5,060	5,570	7,660	7,620	7,650	4,040	4,030	4,040	3,800	3,730	3,760
24	5,630	5,370	5,500	7,650	7,630	7,640	4,040	4,040	4,040	3,730	3,650	3,690
25	5,380	5,330	5,360	7,640	7,600	7,620	4,040	4,030	4,040	3,650	3,560	3,610
26	5,330	5,090	5,210	7,600	7,520	7,570	4,040	4,030	4,040	3,560	3,450	3,510
27	5,100	4,890	4,990	7,520	7,380	7,450	4,040	4,030	4,030	3,450	3,340	3,400
28	---	---	---	7,380	7,180	7,290	4,030	4,030	4,030	3,340	2,830	3,220
29	---	---	---	7,180	6,680	6,980	4,030	4,020	4,030	3,110	2,830	2,990
30	5,280	4,620	5,140	6,680	5,720	6,130	4,030	4,020	4,030	2,830	2,120	2,600
31	5,210	5,090	5,160	---	---	---	4,030	4,020	4,020	2,390	2,170	2,240
MONTH	---	---	---	---	---	---	5,720	4,020	4,550	4,040	2,120	3,780
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2,180	2,070	2,140	1,850	1,750	1,810	1,590	1,520	1,540	1,790	1,680	1,710
2	2,120	2,060	2,080	1,750	1,750	1,750	1,560	1,540	1,550	1,720	1,640	1,660
3	2,070	2,050	2,050	1,750	1,750	1,750	1,560	1,530	1,550	1,890	1,650	1,700
4	2,060	2,050	2,050	1,750	1,740	1,740	1,580	1,540	1,550	1,730	1,680	1,700
5	2,060	2,020	2,050	1,750	1,740	1,750	1,620	1,570	1,590	1,710	1,680	1,700
6	2,020	1,990	2,000	1,750	1,750	1,750	1,620	1,540	1,580	1,710	1,680	1,690
7	2,010	2,000	2,000	1,760	1,750	1,750	1,590	1,550	1,570	1,760	1,690	1,730
8	2,030	2,010	2,020	1,760	1,750	1,760	1,600	1,540	1,560	1,900	1,750	1,810
9	2,050	2,020	2,030	1,750	1,750	1,750	1,620	1,540	1,580	2,010	1,770	1,820
10	2,060	2,050	2,060	1,760	1,750	1,760	1,640	1,550	1,580	2,010	1,800	1,840
11	2,070	2,060	2,070	1,770	1,760	1,770	1,650	1,560	1,600	1,900	1,810	1,830
12	2,080	2,070	2,080	1,770	1,750	1,760	1,650	1,580	1,620	1,910	1,830	1,850
13	2,080	2,080	2,080	1,750	1,730	1,740	1,640	1,600	1,620	1,980	1,830	1,860
14	2,080	2,060	2,070	1,730	1,720	1,730	1,600	1,570	1,590	1,850	1,810	1,820
15	2,070	1,820	1,920	1,730	1,720	1,720	1,610	1,570	1,590	2,270	1,810	1,920
16	1,860	1,830	1,850	1,730	1,720	1,720	1,620	1,560	1,590	2,210	2,080	2,100
17	1,860	1,830	1,850	1,720	1,710	1,720	1,630	1,590	1,620	2,640	2,060	2,150
18	1,840	1,820	1,830	1,720	1,710	1,710	1,630	1,590	1,610	2,800	1,910	2,320
19	1,840	1,830	1,840	1,710	1,700	1,700	1,660	1,530	1,630	1,930	1,820	1,880
20	1,850	1,840	1,850	1,710	1,700	1,700	1,610	1,480	1,570	1,910	1,820	1,870
21	1,850	1,820	1,830	1,710	1,700	1,710	1,690	1,580	1,640	1,870	1,820	1,840
22	1,840	1,820	1,830	1,820	1,690	1,710	1,650	1,540	1,580	1,900	1,840	1,870
23	1,820	1,820	1,820	1,910	1,720	1,830	1,650	1,540	1,620	1,950	1,880	1,920
24	1,820	1,810	1,820	1,720	1,700	1,710	1,690	1,630	1,660	2,040	1,880	1,950
25	1,840	1,820	1,830	1,720	1,680	1,690	1,660	1,630	1,640	2,070	1,930	2,010
26	1,850	1,840	1,840	1,690	1,680	1,680	1,680	1,640	1,670	2,100	2,070	2,090
27	1,850	1,850	1,850	1,710	1,680	1,700	1,750	1,680	1,700	2,120	2,100	2,110
28	1,850	1,850	1,850	1,770	1,710	1,730	1,720	1,680	1,700	2,320	2,120	2,200
29	---	---	---	1,840	1,540	1,640	1,730	1,690	1,700	2,320	2,290	2,310
30	---	---	---	1,570	1,540	1,560	1,770	1,680	1,720	2,330	2,200	2,310
31	---	---	---	1,530	1,510	1,520	---	---	---	2,330	2,310	2,330
MONTH	2,180	1,810	1,950	1,910	1,510	1,720	1,770	1,480	1,610	2,800	1,640	1,930

07120480 LAKE MEREDITH OUTLET AT HIGHWAY 71 NEAR ORDWAY, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2,330	2,190	2,290	1,600	1,430	1,500	2,140	2,090	2,110	---	---	---
2	2,260	2,230	2,250	1,640	1,500	1,570	2,210	2,140	2,180	---	---	---
3	2,260	2,160	2,210	1,580	1,500	1,540	2,300	2,200	2,250	---	---	---
4	2,240	1,770	2,130	1,680	1,520	1,580	2,270	2,160	2,240	---	---	---
5	1,920	1,640	1,750	1,600	1,530	1,570	2,190	2,150	2,170	---	---	---
6	1,760	1,570	1,640	1,630	1,550	1,580	2,210	2,180	2,190	---	---	---
7	1,880	1,690	1,770	1,760	1,550	1,590	2,220	2,160	2,200	---	---	---
8	1,860	1,690	1,730	1,620	1,570	1,590	2,240	2,150	2,190	---	---	---
9	2,250	1,860	1,990	1,650	1,590	1,610	2,340	2,240	2,290	---	---	---
10	2,360	2,110	2,180	1,750	1,640	1,670	2,370	2,320	2,350	---	---	---
11	2,360	2,120	2,190	1,750	1,660	1,690	2,390	2,330	2,360	---	---	---
12	2,400	2,150	2,240	1,720	1,660	1,690	2,390	2,340	2,360	---	---	---
13	2,220	1,920	2,110	1,810	1,720	1,770	2,440	2,380	2,400	---	---	---
14	2,410	2,080	2,170	1,850	1,800	1,820	2,460	2,420	2,440	---	---	---
15	2,420	2,090	2,220	1,950	1,810	1,900	2,520	2,460	2,490	---	---	---
16	2,510	1,840	2,140	2,050	1,920	1,970	2,570	2,520	2,550	---	---	---
17	2,140	1,330	1,840	1,920	1,660	1,770	2,660	2,570	2,620	---	---	---
18	1,550	1,340	1,500	1,720	1,660	1,690	2,690	2,650	2,670	---	---	---
19	1,660	1,430	1,590	1,690	1,620	1,650	2,790	2,670	2,730	---	---	---
20	1,710	1,390	1,520	1,680	1,640	1,660	2,810	2,760	2,790	---	---	---
21	1,590	1,490	1,530	1,720	1,650	1,690	2,820	2,800	2,810	---	---	---
22	1,690	1,440	1,580	1,740	1,670	1,700	2,850	2,810	2,830	---	---	---
23	1,680	1,430	1,550	2,120	1,740	1,950	2,900	2,850	2,870	---	---	---
24	1,720	1,340	1,530	2,100	1,840	1,900	3,010	2,900	2,970	---	---	---
25	1,440	1,270	1,360	2,280	2,040	2,150	3,350	3,010	3,130	---	---	---
26	1,550	1,330	1,430	2,170	2,030	2,090	4,040	3,350	3,660	---	---	---
27	1,580	1,430	1,540	2,100	2,080	2,090	4,040	3,930	3,960	---	---	---
28	1,660	1,530	1,580	2,100	2,060	2,090	4,310	3,940	4,160	---	---	---
29	1,700	1,490	1,620	2,070	2,060	2,060	---	---	---	---	---	---
30	1,660	1,480	1,560	2,080	2,070	2,080	---	---	---	---	---	---
31	---	---	---	2,100	2,080	2,080	---	---	---	---	---	---
MONTH	2,510	1,270	1,820	2,280	1,430	1,780	---	---	---	---	---	---

07120480 LAKE MEREDITH OUTLET AT HIGHWAY 71 NEAR ORDWAY, 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
1	20.1	13.7	16.8	1.2	0.2	0.7	4.3	4.0	4.1	3.5	3.2	3.4
2	16.0	11.9	13.5	3.4	1.2	1.9	4.3	4.0	4.1	3.5	3.2	3.4
3	13.3	9.5	11.3	5.8	2.6	4.1	4.2	4.0	4.1	3.5	3.3	3.4
4	17.5	8.3	12.3	6.6	4.3	5.3	4.2	4.0	4.1	3.5	3.4	3.4
5	18.9	10.5	14.1	8.2	2.4	5.9	4.3	4.1	4.2	3.6	3.4	3.5
6	19.9	11.2	15.2	8.1	4.5	6.3	4.2	4.0	4.1	3.7	3.6	3.7
7	21.1	11.4	15.1	7.8	5.0	6.5	4.0	3.9	3.9	3.8	3.7	3.7
8	20.6	10.9	15.3	8.3	5.8	7.1	3.9	2.6	3.8	3.9	3.8	3.8
9	18.8	14.6	15.4	10.2	6.4	8.3	3.9	3.7	3.8	3.9	3.9	3.9
10	18.8	14.7	16.2	9.7	6.7	8.2	3.9	3.7	3.8	4.0	3.9	4.0
11	20.0	14.6	17.4	8.4	3.5	6.3	4.0	3.7	3.9	4.1	4.0	4.1
12	15.9	10.1	13.0	5.6	1.9	4.1	3.8	3.4	3.6	4.3	4.1	4.2
13	---	---	---	---	---	---	3.6	3.4	3.5	4.3	4.2	4.3
14	---	---	---	6.7	4.5	5.8	3.8	3.6	3.7	4.4	4.2	4.3
15	13.5	7.5	10.0	7.2	4.2	6.1	4.1	3.8	4.0	4.4	4.3	4.3
16	12.9	7.5	10.7	6.2	2.9	4.9	4.2	4.1	4.2	4.4	4.2	4.3
17	16.3	9.0	11.4	7.9	3.5	5.2	4.5	4.1	4.3	4.4	4.1	4.3
18	---	---	---	6.8	1.1	4.8	4.3	3.9	4.0	4.3	4.2	4.2
19	---	---	---	6.8	6.1	6.4	4.2	4.0	4.1	4.2	4.2	4.2
20	---	---	---	6.1	5.6	5.8	4.1	3.7	3.9	4.2	4.1	4.2
21	---	---	---	5.7	5.7	5.7	4.0	2.3	3.0	4.2	4.1	4.1
22	---	---	---	5.9	5.7	5.8	2.9	2.6	2.8	4.3	4.1	4.2
23	7.8	5.5	5.9	5.9	5.8	5.9	3.2	2.9	3.1	4.5	4.3	4.4
24	5.9	4.9	5.3	6.0	5.9	5.9	3.4	3.2	3.3	4.6	4.5	4.5
25	7.0	4.7	5.1	6.1	6.0	6.0	3.5	3.4	3.4	4.8	4.6	4.7
26	9.6	6.9	8.0	6.1	6.0	6.1	3.5	3.4	3.5	4.7	4.6	4.7
27	13.2	8.6	10.2	6.1	5.8	5.9	3.6	3.3	3.5	4.8	4.7	4.8
28	---	---	---	5.8	5.4	5.6	3.6	3.3	3.5	5.2	4.8	4.9
29	---	---	---	5.4	5.0	5.2	3.5	3.4	3.5	5.2	5.0	5.1
30	3.9	0.1	2.3	5.0	4.3	4.6	3.6	3.2	3.4	5.0	4.6	4.9
31	3.2	1.0	1.7	---	---	---	3.5	3.2	3.4	4.8	4.6	4.8
MONTH	---	---	---	---	---	---	4.5	2.3	3.7	5.2	3.2	4.2
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4.8	4.7	4.8	4.4	3.6	4.0	13.9	11.0	12.8	18.2	12.7	15.4
2	5.3	4.8	5.0	4.1	3.6	3.8	13.4	12.3	12.9	16.6	12.1	14.0
3	4.8	4.1	4.5	4.0	3.8	3.9	12.3	10.1	10.9	18.8	12.4	15.1
4	4.6	3.7	3.9	4.0	3.2	3.7	11.9	8.4	10.2	17.8	11.7	14.4
5	4.3	3.7	3.9	3.3	2.4	2.9	11.0	8.8	10.2	21.4	11.7	16.1
6	4.1	2.8	3.2	3.9	3.1	3.4	9.0	5.5	7.5	19.7	13.2	16.3
7	3.4	3.1	3.2	4.0	3.5	3.7	9.4	5.6	7.7	19.4	12.2	15.6
8	3.2	3.0	3.1	5.5	3.8	4.4	10.6	5.3	7.1	17.1	12.8	15.0
9	3.6	3.2	3.4	5.4	5.1	5.2	12.8	8.9	10.4	18.5	11.1	14.2
10	3.8	3.6	3.7	5.3	5.1	5.2	16.1	10.9	13.1	14.8	10.1	12.5
11	4.1	3.8	4.0	6.4	5.2	5.4	16.3	13.6	14.9	19.6	9.1	13.7
12	4.2	4.1	4.1	6.5	5.4	5.8	16.4	14.7	15.5	21.6	8.9	15.0
13	4.2	4.2	4.2	8.2	6.5	7.2	17.5	15.0	15.8	18.8	12.9	16.0
14	4.2	3.8	4.1	9.1	8.2	8.8	17.5	15.4	16.3	24.9	13.4	18.5
15	4.8	3.9	4.3	9.8	9.1	9.5	17.1	14.7	15.6	21.9	15.8	18.7
16	4.5	4.4	4.4	10.4	9.7	9.9	16.2	9.4	12.7	19.1	18.2	18.4
17	4.5	3.7	4.2	11.5	10.4	11.1	15.9	12.6	14.0	20.1	18.3	18.9
18	5.2	4.3	4.7	11.3	10.1	10.9	14.8	11.8	13.4	20.3	17.9	19.3
19	4.9	4.8	4.8	10.1	7.4	8.4	14.8	5.9	10.0	20.5	15.7	18.1
20	4.8	4.6	4.7	8.0	7.0	7.5	13.3	6.8	9.4	16.9	13.4	15.1
21	5.6	4.5	5.1	7.8	7.5	7.7	14.9	12.5	13.5	19.7	13.2	15.8
22	5.4	5.0	5.2	7.7	7.3	7.5	14.6	13.3	14.0	23.3	16.9	19.5
23	5.3	4.2	4.7	7.9	7.5	7.7	14.2	11.9	12.8	24.2	20.0	22.2
24	4.2	2.8	3.3	9.6	7.5	8.9	11.9	7.5	9.0	25.4	18.2	21.8
25	3.6	3.2	3.5	10.9	9.6	10.2	13.7	9.6	10.9	25.4	22.5	23.0
26	3.7	3.6	3.6	10.1	9.8	9.9	15.6	10.9	12.9	23.3	20.8	21.8
27	3.8	3.6	3.7	10.4	9.2	10.1	18.3	13.2	15.0	22.2	21.0	21.5
28	3.9	3.8	3.9	9.2	8.2	8.6	18.5	14.4	16.6	24.9	21.5	22.6
29	---	---	---	8.4	4.9	6.5	19.4	13.7	16.3	23.6	21.9	22.6
30	---	---	---	9.1	4.4	5.9	19.8	14.4	17.2	24.2	22.3	23.1
31	---	---	---	11.2	8.2	8.9	---	---	---	23.9	22.7	23.3
MONTH	5.6	2.8	4.1	11.5	2.4	7.0	19.8	5.3	12.6	25.4	8.9	18.0

07120480 LAKE MEREDITH OUTLET AT HIGHWAY 71 NEAR ORDWAY, CO—Continued

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

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	23.8	21.5	22.4	29.5	21.7	26.0	26.7	23.5	24.3	---	---	---
2	22.8	20.5	21.0	30.2	21.0	26.1	26.5	23.5	24.3	---	---	---
3	22.8	21.5	21.9	30.9	23.2	27.4	24.9	24.1	24.6	---	---	---
4	22.6	19.6	21.3	28.4	21.8	25.7	28.1	24.3	25.2	---	---	---
5	19.6	15.5	16.7	31.2	21.7	26.2	26.5	24.3	25.1	---	---	---
6	22.8	13.5	17.7	28.0	18.8	24.0	25.6	24.8	25.2	---	---	---
7	22.3	14.5	17.7	27.3	19.2	23.5	26.0	24.2	24.8	---	---	---
8	24.0	15.5	19.7	25.0	20.6	22.2	25.6	23.9	24.3	---	---	---
9	24.2	18.0	21.6	25.3	22.7	23.7	25.7	24.2	24.9	---	---	---
10	25.1	17.9	21.7	25.1	22.6	23.6	26.3	24.5	25.5	---	---	---
11	27.1	19.0	23.0	26.6	23.7	25.0	27.3	24.9	25.8	---	---	---
12	26.3	19.9	23.4	26.6	22.7	24.3	27.4	23.7	25.2	---	---	---
13	26.0	18.4	22.2	26.2	24.1	25.0	25.8	22.7	23.9	---	---	---
14	28.0	19.1	23.1	26.3	23.8	25.2	24.9	22.0	23.2	---	---	---
15	29.1	20.5	24.6	25.8	23.3	24.2	23.1	21.6	22.4	---	---	---
16	28.0	18.4	23.3	28.0	22.7	25.0	22.8	21.0	21.9	---	---	---
17	27.9	18.4	22.5	29.3	21.8	26.0	23.0	20.9	21.7	---	---	---
18	22.3	18.0	19.9	29.6	24.3	27.5	24.3	22.4	23.0	---	---	---
19	25.7	20.1	22.5	29.3	26.5	27.8	25.0	22.2	23.1	---	---	---
20	24.2	20.0	22.1	29.1	26.3	27.4	26.1	23.0	24.2	---	---	---
21	23.5	18.1	20.6	29.9	25.4	27.2	26.3	24.1	25.3	---	---	---
22	26.6	21.2	23.3	29.6	23.4	27.4	26.0	22.8	24.0	---	---	---
23	25.5	22.5	24.1	29.1	21.7	26.1	25.1	23.1	24.2	---	---	---
24	23.7	19.3	21.5	30.3	22.0	26.9	25.5	22.6	24.3	---	---	---
25	23.8	16.6	19.6	31.3	23.0	27.6	27.7	23.2	25.1	---	---	---
26	25.4	20.2	22.7	28.8	24.4	25.7	30.6	20.3	24.2	---	---	---
27	27.2	21.4	24.2	26.4	24.9	25.5	25.5	19.9	21.1	---	---	---
28	27.5	22.9	25.4	25.9	24.6	25.2	---	20.3	---	---	---	---
29	25.8	18.8	22.4	25.6	22.5	23.9	---	---	---	---	---	---
30	28.0	20.5	24.5	24.7	23.6	23.9	---	---	---	---	---	---
31	---	---	---	25.0	23.9	24.4	---	---	---	---	---	---
MONTH	29.1	13.5	21.9	31.3	18.8	25.5	---	---	---	---	---	---

07120500 ARKANSAS RIVER NEAR ROCKY FORD, CO

WATER-QUALITY RECORDS

LOCATION (REVISED).--Lat 38°03'55", long 103°41'08", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.9, T.23 S., R.56 W., Otero County, Hydrologic Unit 11020005, on right bank 250 feet upstream from Hwy 266 bridge, 2.1 mi northeast of city hall in Rocky Ford, and 9.8 mi downstream from Fort Lyon Canal diversion dam.

DRAINAGE AREA.--11,090 mi², of which 54 mi² is probably noncontributing.

PERIOD OF RECORD.--January 2002 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07120500

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN,
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 unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
DEC 18...	1130	18	12.3	8.5	1,850	6.0	197	75.9	4.23	148	E177	43.1	1.15
MAR 11...	1530	47	10.0	8.4	1,900	18.5	182	75.4	4.26	142	160	45.4	1.09
MAY 29...	1115	1,150	6.3	8.3	800	23.5	75.6	24.7	3.77	46.0	188	18.5	0.8
AUG 27...	1125	22	7.2	8.4	1,570	26.5	172	66.0	5.12	117	175	37.5	1.1

WATER-QUALITY DATA COLLECTED AS PART OF PREFERRED STORAGE OPTIONS PLAN,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sulfate water, fltrd, mg/L (00945)
DEC 18...	806
MAR 11...	826
MAY 29...	243
AUG 27...	648

E -- Estimated laboratory analysis value.

MISCELLANEOUS FIELD MEASUREMENTS,
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 22...	1330	51	1,760	15.0	APR 29...	1230	320	1,560	20.5
NOV 07...	1330	129	1,460	11.0	JUL 24...	1545	124	1,180	34.0
JAN 21...	1345	43	1,810	2.0	SEP 16...	1430	159	1,010	25.0
FEB 12...	1415	31	1,790	10.0					

07121500 TIMPAS CREEK AT MOUTH NEAR SWINK, CO

LOCATION.--Lat 38°00'11", long 103°39'20", in NW¼SW¼ sec.35, T.23 S., R.56 W., Otero County, Hydrologic Unit 11020005, on right bank at downstream side of 23rd Rd. Bridge, 1.7 mi southwest of Swink, and 2.9 mi upstream from mouth.

DRAINAGE AREA.--496 mi².

PERIOD OF RECORD.--January 1922 to September 1925, March 1968 to current year. Monthly discharge only for some periods, published in WSP 1311. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07121500

REVISED RECORDS.--WDR CO 76-1: 1975.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,120 ft above NGVD of 1929, from topographic map. Jan. 1922 to Sept. 1925 at several sites downstream at different datum. Mar. 1968 to May 29, 1975, at site 140 ft downstream at datum 0.13 ft lower. May 30, 1975 to Nov. 25, 1980, at site on left bank at same datum.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by erosion-control and livestock-watering reservoirs, diversions for irrigation, ground-water withdrawals, and return flows from irrigated areas and from Catlin and Rocky Ford Highline Canals. 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 OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1922, 21,400 ft³/s, June 17, 1965, gage height unknown.

**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	6.8	18	17	9.4	15	7.7	27	30	79	133	42	39
2	7.0	19	15	9.5	24	7.4	11	32	89	95	37	44
3	7.4	14	15	9.5	40	7.2	9.4	32	100	82	38	53
4	8.3	12	28	9.7	42	6.8	27	31	90	80	38	45
5	9.5	12	31	9.9	40	6.6	32	31	94	79	42	36
6	7.7	13	31	9.9	42	7.1	33	31	95	78	33	34
7	8.9	13	31	10	26	7.0	35	33	92	74	42	34
8	8.0	14	31	31	6.9	7.0	36	36	87	74	42	34
9	7.7	15	28	22	6.4	6.7	35	35	80	72	42	35
10	7.8	18	22	17	6.6	7.0	34	34	75	74	46	34
11	7.9	14	23	24	6.7	7.0	34	34	75	74	41	33
12	8.3	12	26	8.3	7.3	6.8	33	31	74	74	41	34
13	8.8	11	18	7.8	7.8	6.9	33	32	85	69	40	34
14	9.7	11	18	7.9	8.3	23	32	29	83	65	38	37
15	9.3	19	18	8.3	8.2	26	33	29	95	62	37	37
16	9.4	15	19	8.2	8.2	28	36	25	78	55	33	44
17	9.2	13	17	8.5	8.4	28	33	36	102	55	32	50
18	8.9	15	17	8.8	29	28	35	40	248	56	30	49
19	11	15	17	8.9	10	32	44	41	164	56	29	42
20	10	16	24	9.0	10	30	41	43	131	48	32	37
21	9.2	13	34	9.0	8.1	13	46	44	117	47	36	34
22	10	14	33	9.2	8.2	16	40	52	96	45	35	34
23	10	15	41	9.3	9.5	41	40	65	98	45	30	34
24	11	15	16	9.5	10	60	36	74	100	44	27	34
25	9.7	14	8.5	9.7	7.1	14	35	80	89	43	28	34
26	10	13	8.2	9.8	6.9	24	34	75	86	43	31	34
27	9.6	22	8.2	10	7.9	32	32	77	80	44	27	33
28	9.6	34	8.5	10	8.4	32	31	89	75	44	37	33
29	9.8	22	9.0	12	---	33	32	81	83	44	38	34
30	12	21	9.2	39	---	32	30	70	864	60	40	34
31	13	---	9.2	21	---	30	---	77	---	49	42	---
TOTAL	285.5	472	630.8	386.1	418.9	613.2	989.4	1,449	3,704	1,963	1,126	1,123
MEAN	9.21	15.7	20.3	12.5	15.0	19.8	33.0	46.7	123	63.3	36.3	37.4
MAX	13	34	41	39	42	60	46	89	864	133	46	53
MIN	6.8	11	8.2	7.8	6.4	6.6	9.4	25	74	43	27	33
AC-FT	566	936	1,250	766	831	1,220	1,960	2,870	7,350	3,890	2,230	2,230

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	87.1	75.3	34.2	22.8	30.0	58.8	63.8	76.2	81.6	72.8	83.2	70.7
MAX	265	210	109	60.4	84.6	201	170	187	318	200	401	159
(WY)	(1924)	(1924)	(1971)	(1923)	(1924)	(1924)	(1924)	(1995)	(1923)	(1923)	(1923)	(1986)
MIN	9.21	15.7	9.80	7.87	11.4	19.8	11.0	14.0	21.9	13.0	10.6	9.60
(WY)	(2003)	(2003)	(1979)	(1975)	(1976)	(2003)	(1978)	(1981)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1922 - 2003

ANNUAL TOTAL	5,921.3		13,160.9								63.3	
ANNUAL MEAN	16.2		36.1								23.7	1923
HIGHEST ANNUAL MEAN											130	2002
LOWEST ANNUAL MEAN											23.7	2002
HIGHEST DAILY MEAN	114	Mar 16					864	Jun 30		2,670	Aug 17, 1923	
LOWEST DAILY MEAN	6.8	Oct 1					6.4	Feb 9		3.3	Aug 7, 1977	
ANNUAL SEVEN-DAY MINIMUM	7.8	Sep 28					6.9	Mar 4		5.7	Dec 16, 1978	
MAXIMUM PEAK FLOW							a2,820	Jun 30		b12,300	Jul 10, 1978	
MAXIMUM PEAK STAGE							14.58	Jun 30		c21.11	Jul 10, 1978	
ANNUAL RUNOFF (AC-FT)	11,740						26,100			45,820		
10 PERCENT EXCEEDS	24						77			123		
50 PERCENT EXCEEDS	14						31			48		
90 PERCENT EXCEEDS	8.8						8.2			15		

a From rating curve extended above 2,260 ft³/s on basis of contracted-opening measurement of peak flow.
b From contracted-opening measurement of peak flow.
c From floodmark.

07123000 ARKANSAS RIVER AT LA JUNTA, CO

LOCATION.--Lat 37°59'26", long 103°31'55", in SE¹/₄NE¹/₄ sec.2, T.24 S., R.55 W., Otero County, Hydrologic Unit 11020005, on right bank at upstream side of bridge on State Highway 109 in La Junta, and 450 ft upstream from King Arroyo.

DRAINAGE AREA.--12,210 mi², of which 115 mi² is probably noncontributing.

PERIOD OF RECORD.--May to August 1889 and September 1893 to December 1895 (gage heights, discharge measurements, and flood data only), April to October 1903 and June to November 1908 (gage heights and discharge measurements only), April 1912 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as "near La Junta" in 1903. Statistical summary computed for 1975 to current year subsequent to completion of Pueblo Dam. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07123000

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1922.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,039.60 ft above NGVD of 1929. See WSP 1711 or 1731 for history of changes prior to June 13, 1940. June 13, 1940 to June 6, 1967, water-stage recorder at site 300 ft upstream at present datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Flow partly regulated by Pueblo Reservoir (station 07099350) about 82 mi upstream since Jan. 9, 1974.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	8.3	57	e57	43	42	23	42	937	403	135	69
2	25	8.2	53	e56	42	39	19	41	555	339	101	128
3	34	7.1	52	e55	48	39	18	40	1,160	258	61	92
4	35	8.6	65	50	53	35	19	40	1,500	203	34	86
5	42	14	77	47	52	30	19	42	1,540	221	29	64
6	47	13	76	46	50	59	20	57	970	185	14	53
7	28	13	74	59	e45	59	46	66	782	160	29	52
8	20	11	74	78	e43	62	71	64	206	134	59	48
9	18	13	76	67	e42	56	54	54	397	105	70	38
10	23	14	68	56	e43	54	35	52	674	92	99	16
11	23	18	66	54	e45	55	24	61	687	79	62	20
12	19	20	68	60	45	48	30	41	687	65	46	40
13	17	21	58	76	45	55	21	20	696	52	57	52
14	17	25	53	67	46	40	20	18	696	74	51	70
15	18	12	53	52	43	20	20	18	710	67	50	71
16	17	8.5	54	46	38	16	21	17	661	73	49	47
17	15	37	53	47	43	20	19	15	553	74	48	55
18	15	65	50	42	74	19	19	55	674	59	48	55
19	15	63	49	43	68	46	32	19	324	28	48	75
20	15	54	e48	45	49	31	64	16	437	24	47	61
21	17	47	e55	42	38	47	76	22	581	50	48	59
22	16	46	e55	e45	33	57	51	49	511	92	47	60
23	13	53	e52	e45	30	58	33	61	542	109	46	57
24	13	51	e50	e50	e19	57	22	94	425	74	45	60
25	13	48	e45	e55	e20	56	19	123	400	78	43	59
26	15	44	e47	e60	e30	34	32	146	554	88	47	52
27	17	50	e55	e65	e40	22	37	230	513	84	43	47
28	17	61	e58	73	49	29	26	327	451	80	46	49
29	15	72	e60	64	---	23	19	404	406	73	53	47
30	9.4	69	e62	58	---	31	18	514	821	323	58	49
31	8.3	---	e59	51	---	36	---	721	---	136	60	---
TOTAL	619.7	974.7	1,822	1,711	1,216	1,275	927	3,469	20,050	3,882	1,673	1,731
MEAN	20.0	32.5	58.8	55.2	43.4	41.1	30.9	112	668	125	54.0	57.7
MAX	47	72	77	78	74	62	76	721	1,540	403	135	128
MIN	8.3	7.1	4.5	4.2	1.9	1.6	1.8	1.5	206	24	14	16
AC-FT	1,230	1,930	3,610	3,390	2,410	2,530	1,840	6,880	39,770	7,700	3,320	3,430

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	161	123	119	160	150	108	131	556	869	499	314	118																	
MAX	1,189	545	335	569	620	517	821	3,375	4,307	3,634	1,345	464																	
(WY)	(1985)	(1987)	(1987)	(1998)	(1985)	(1998)	(1998)	(1999)	(1995)	(1995)	(1984)	(1982)																	
MIN	8.82	4.21	13.5	9.50	6.37	19.6	6.67	15.1	20.0	21.0	19.1	9.59																	
(WY)	(1978)	(1979)	(1976)	(1976)	(1976)	(1978)	(1978)	(2002)	(2002)	(2002)	(2002)	(1977)																	

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1975 - 2003

ANNUAL TOTAL	12,632.0	39,350.4	
ANNUAL MEAN	34.6	108	a276
HIGHEST ANNUAL MEAN			832
LOWEST ANNUAL MEAN			47.7
HIGHEST DAILY MEAN	135	Jan 4	1,540
LOWEST DAILY MEAN	5.5	May 15	7.1
ANNUAL SEVEN-DAY MINIMUM	6.8	May 10	9.1
MAXIMUM PEAK FLOW			1,690
MAXIMUM PEAK STAGE			9.35
ANNUAL RUNOFF (AC-FT)	25,060	78,050	200,100
10 PERCENT EXCEEDS	69	284	597
50 PERCENT EXCEEDS	22	50	95
90 PERCENT EXCEEDS	9.7	18	21

e Estimated.

a Average discharge for 61 years (water years 1913-73), 244 ft³/s; 176,800 acre-ft/yr, prior to completion of Pueblo Dam.

b Maximum daily discharge for period of record, 61,100 ft³/s, Jun 4, 1921.

c Also occurred Dec 9, 1978; minimum daily discharge for period of record, no flow, Jan 20-23 and Mar 20-23, 1915.

d Peak discharge includes 7,600 ft³/s (estimated) that bypassed the main channel; maximum discharge for period of record, 200,000 ft³/s, Jun 4, 1921, from rating curve extended above 15,000 ft³/s on basis of slope-area measurement of peak flow.

f Gage height reflects the discharge flowing in the main channel; maximum gage height for period of record, 18.4 ft, Jun 4, 1921, site and datum then in use.

07124000 ARKANSAS RIVER AT LAS ANIMAS, CO

LOCATION.--Lat 38°04'51", long 103°13'09", in SE¹/₄NE¹/₄ sec.3, T.23 S., R.52 W., Bent County, Hydrologic Unit 11020009, on right bank at upstream side of bridge on U.S. Highway 50, 1.1 mi north of courthouse in Las Animas, and 4.2 mi upstream from Purgatoire River.

DRAINAGE AREA.--14,417 mi², of which 441 mi² are probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to November 1898 (gage heights only), August to November 1909 (gage heights and discharge measurements only), May 1939 to current year.

Statistical summary computed for 1975 to current year, subsequent to partial regulation by Pueblo Reservoir. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07124000

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 3,883.97 ft above NGVD of 1929. May 13 to Nov. 12, 1898, and Aug. 1 to Nov. 10, 1909, nonrecording gages near present site at different datums. May 23, 1939 to Apr. 27, 1967, water-stage recorder at site 0.4 mi downstream at datum 9.00 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Flow partly regulated by Pueblo Reservoir (station 07099350) about 104 mi upstream since Jan. 9, 1974.

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	14	77	e80	75	80	15	12	505	697	99	50
2	17	14	76	e85	71	73	15	13	437	433	90	53
3	16	13	73	87	71	69	14	12	439	349	69	69
4	16	13	73	80	71	67	13	11	877	273	51	56
5	16	13	72	77	76	65	13	11	1,090	231	45	53
6	16	14	77	73	77	64	15	12	940	221	37	61
7	16	12	83	70	e70	77	14	12	736	187	31	58
8	16	12	83	72	e65	83	15	11	567	157	31	57
9	15	12	84	e75	64	84	15	11	237	131	44	55
10	15	12	87	e75	71	83	14	11	525	109	52	44
11	13	12	85	e74	90	84	14	11	682	94	65	17
12	13	12	83	73	92	83	15	11	681	77	61	19
13	13	12	83	75	80	81	14	14	693	65	45	37
14	13	13	81	83	74	78	14	11	723	53	45	51
15	12	28	77	84	71	67	14	19	693	52	39	56
16	13	34	76	e75	68	35	14	21	625	46	37	52
17	13	30	76	69	65	46	14	18	613	42	36	38
18	13	28	75	e68	66	30	13	15	595	41	36	38
19	12	51	71	e66	82	30	15	17	569	33	37	50
20	12	62	e65	66	86	27	15	24	414	24	37	53
21	12	64	e65	66	77	26	15	16	425	20	37	51
22	13	62	e63	e65	67	24	14	14	596	22	37	50
23	13	60	e60	e60	63	23	16	17	465	51	36	50
24	13	63	e63	e65	e62	21	25	20	506	80	36	48
25	13	65	e65	e75	e60	20	15	20	463	53	35	48
26	13	64	e65	e80	e62	18	15	27	512	41	39	46
27	15	64	e67	90	65	17	14	51	560	64	41	36
28	14	64	e70	93	91	17	14	41	511	82	40	35
29	13	69	e75	88	---	16	14	82	480	79	41	40
30	14	74	e80	82	---	16	12	139	545	64	45	40
31	14	---	e75	77	---	16	---	251	---	159	49	---
TOTAL	432	1,060	2,305	2,348	2,032	1,520	439	955	17,704	4,030	1,423	1,411
MEAN	13.9	35.3	74.4	75.7	72.6	49.0	14.6	30.8	590	130	45.9	47.0
MAX	17	74	87	93	92	84	25	251	1,090	697	99	69
MIN	12	12	60	60	60	16	12	11	237	20	31	17
AC-FT	857	2,100	4,570	4,660	4,030	3,010	871	1,890	35,120	7,990	2,820	2,800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	153	145	142	183	190	119	123	562	855	465	295	108																		
MAX	1,092	810	398	641	761	422	877	4,043	4,263	3,339	1,343	373																		
(WY)	(1985)	(1998)	(1998)	(1998)	(1985)	(1998)	(1987)	(1999)	(1995)	(1995)	(1999)	(1984)																		
MIN	5.13	6.05	8.40	8.45	18.5	9.44	10.8	14.1	16.8	10.0	14.5	9.12																		
(WY)	(1978)	(1975)	(1978)	(1978)	(1978)	(1975)	(1978)	(1981)	(2002)	(2002)	(2002)	(1977)																		

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1975 - 2003

ANNUAL TOTAL	16,201.7	35,659	
ANNUAL MEAN	44.4	97.7	a279
HIGHEST ANNUAL MEAN			841
LOWEST ANNUAL MEAN			59.8
HIGHEST DAILY MEAN	222	Jan 5	1,090
LOWEST DAILY MEAN	7.5	Aug 17	11
ANNUAL SEVEN-DAY MINIMUM	7.8	Aug 12	11
MAXIMUM PEAK FLOW			1,220
MAXIMUM PEAK STAGE			8.03
ANNUAL RUNOFF (AC-FT)	32,140	70,730	d32,900
10 PERCENT EXCEEDS	114	225	f14.02
50 PERCENT EXCEEDS	21	53	112
90 PERCENT EXCEEDS	9.4	13	16

e Estimated.

a Average discharge for 34 years (water years 1940-73), 203 ft³/s; 147,100 acre-ft/yr, prior to completion of Pueblo Dam.

b Maximum daily discharge for period of record, 25,800 ft³/s, May 20, 1955.

c Minimum daily discharge for period of record, 0.9 ft³/s, Jul 31, Aug 1 and 3, 1964.

d From rating curve extended above 21,600 ft³/s; maximum discharge and stage for period of record, 44,000 ft³/s, May 20, 1955, gage height, 15.03 ft, from current-meter measurement and slope-area measurement of over-flow channel, site and datum then in use.

f From floodmark.

07124000 ARKANSAS RIVER AT LAS ANIMAS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07124000

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1985 to current year.

WATER TEMPERATURE: December 1985 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

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

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 7,950 microsiemens/cm, Jan. 22, 1986; minimum, 310 microsiemens/cm, July 21, 1990.

WATER TEMPERATURE: Maximum, 35.3°C, July 8, 2002; minimum, 0.0°C, on many days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 3,530 microsiemens/cm, Apr. 23; minimum, 670 microsiemens/cm, June 5.

WATER TEMPERATURE: Maximum, 33.6°C, July 24; minimum, 0.0°C, on many days.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3,150	2,890	3,090	3,300	3,250	3,270	2,390	2,200	2,310	2,100	1,880	1,960
2	3,120	3,080	3,100	3,310	3,290	3,300	2,450	2,070	2,310	2,260	2,100	2,200
3	3,120	3,080	3,100	3,340	3,300	3,310	2,470	2,280	2,420	2,320	2,060	2,230
4	3,130	3,080	3,100	3,330	3,290	3,310	2,430	2,220	2,400	2,420	2,230	2,350
5	3,120	3,090	3,110	3,360	3,320	3,330	2,550	2,310	2,450	2,500	2,170	2,410
6	3,130	3,100	3,110	3,350	2,990	3,300	2,500	2,170	2,340	2,510	2,180	2,450
7	3,110	3,060	3,100	3,310	3,290	3,300	2,340	2,170	2,280	2,480	2,280	2,370
8	3,120	3,070	3,100	3,310	3,050	3,290	2,340	2,220	2,300	2,390	2,330	2,370
9	3,160	3,120	3,130	3,280	2,900	3,120	2,340	2,280	2,320	2,330	2,190	2,240
10	3,180	3,140	3,160	3,380	2,730	3,250	2,320	2,050	2,240	2,310	2,230	2,270
11	3,200	3,160	3,180	3,320	3,060	3,290	2,250	2,140	2,210	2,390	2,260	2,350
12	3,210	3,180	3,190	3,320	3,040	3,260	2,300	2,170	2,280	2,400	2,340	2,380
13	3,270	3,170	3,200	3,310	3,140	3,280	2,320	2,230	2,290	2,380	2,200	2,330
14	3,240	3,160	3,210	3,260	3,140	3,230	2,300	2,270	2,290	2,320	2,160	2,260
15	3,250	3,200	3,220	3,140	2,380	2,610	2,350	2,280	2,320	2,270	2,210	2,240
16	3,240	3,200	3,220	2,600	2,400	2,490	2,330	2,220	2,310	2,390	2,250	2,330
17	3,240	3,190	3,220	2,780	2,500	2,620	2,330	2,130	2,300	2,400	2,170	2,370
18	3,270	3,180	3,230	2,830	2,730	2,790	2,320	2,200	2,300	2,420	2,360	2,400
19	3,260	3,220	3,240	2,730	2,330	2,500	2,330	2,060	2,220	2,440	2,360	2,410
20	3,280	3,230	3,260	2,420	2,320	2,400	2,400	2,150	2,310	2,420	2,280	2,400
21	3,280	3,240	3,260	2,440	2,240	2,410	2,440	2,210	2,360	2,400	2,370	2,390
22	3,290	3,150	3,240	2,560	2,370	2,470	2,450	2,250	2,390	2,480	2,370	2,400
23	3,250	3,120	3,210	2,560	2,390	2,530	2,330	2,160	2,290	2,590	2,460	2,530
24	3,290	3,130	3,220	2,510	2,350	2,470	2,350	2,170	2,310	2,500	2,270	2,420
25	3,300	3,250	3,280	2,460	2,390	2,440	2,520	2,320	2,420	2,410	2,190	2,340
26	3,300	3,030	3,270	2,520	2,400	2,470	2,610	2,430	2,520	2,320	2,240	2,280
27	3,270	3,030	3,210	2,550	2,300	2,470	2,610	2,380	2,500	2,300	2,180	2,230
28	3,310	3,270	3,290	2,570	2,370	2,500	2,480	2,320	2,400	2,230	2,050	2,200
29	3,310	3,180	3,270	2,510	2,200	2,450	2,340	2,140	2,260	2,270	2,040	2,220
30	3,290	3,200	3,260	2,480	2,300	2,430	2,140	1,930	2,060	2,320	2,270	2,300
31	3,280	3,250	3,270	---	---	---	1,970	1,700	1,910	2,390	2,270	2,330
MONTH	3,310	2,890	3,200	3,380	2,200	2,860	2,610	1,700	2,310	2,590	1,880	2,320

ARKANSAS RIVER BASIN

07124000 ARKANSAS RIVER AT LAS ANIMAS, 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
1	24.0	11.7	16.9	6.5	2.7	4.4	5.1	0.1	2.4	2.3	0.7	1.3
2	15.2	11.7	13.3	9.2	4.7	6.7	6.3	0.7	3.4	4.6	0.0	1.8
3	20.4	10.4	14.1	11.9	4.8	7.3	3.8	0.0	1.7	5.7	0.3	2.8
4	21.1	8.9	14.0	12.0	4.1	7.5	2.8	0.0	1.3	6.7	1.6	4.0
5	22.4	9.3	15.0	12.6	4.2	7.6	6.6	1.6	3.6	7.6	2.9	5.1
6	21.0	10.0	14.8	13.6	3.1	7.4	6.1	1.0	3.3	9.2	4.5	6.3
7	22.5	10.3	15.5	14.9	3.9	8.8	5.7	1.0	3.2	8.2	2.4	5.0
8	22.3	10.1	15.5	14.4	6.2	9.8	5.4	1.7	3.2	8.4	1.7	4.8
9	23.4	13.5	17.3	16.0	7.7	11.1	5.2	0.2	2.5	6.0	1.9	3.7
10	22.5	12.3	16.4	14.8	6.2	9.7	5.3	0.1	2.5	3.2	0.0	1.3
11	22.3	11.7	16.2	12.3	4.1	7.4	5.1	0.4	2.5	1.3	0.0	0.5
12	17.9	10.5	13.4	12.0	3.0	6.7	5.6	1.5	3.1	5.6	0.0	2.2
13	18.6	7.4	12.2	11.6	3.4	7.2	5.9	0.5	3.0	5.8	0.0	2.6
14	18.2	7.4	12.1	13.1	6.6	9.0	6.5	0.9	3.3	5.8	1.1	3.2
15	17.4	6.5	11.2	10.1	4.8	7.7	6.8	0.8	3.7	5.2	0.6	2.6
16	17.5	6.9	11.3	9.6	2.2	5.5	6.0	1.5	3.7	4.7	0.0	1.7
17	18.2	5.9	11.4	10.2	2.7	6.1	7.6	2.4	4.6	6.1	0.5	2.7
18	18.6	7.8	12.7	11.2	4.1	7.0	7.4	3.1	5.0	5.3	0.0	2.1
19	17.4	8.1	11.9	9.9	3.7	6.3	6.1	1.7	3.8	7.2	0.0	2.9
20	18.4	6.7	11.7	9.9	3.7	6.3	4.7	0.0	1.7	7.6	0.5	3.7
21	16.3	7.2	11.2	10.4	3.8	6.8	4.9	0.0	1.8	3.8	0.8	2.1
22	17.4	8.6	11.5	10.0	4.2	6.8	3.6	0.0	1.2	0.8	0.0	0.4
23	8.6	5.8	7.2	8.5	4.1	6.0	0.7	0.0	0.2	1.4	0.0	0.4
24	8.3	5.3	6.5	4.7	2.4	3.7	1.1	0.0	0.2	2.9	0.0	1.1
25	14.4	6.5	9.5	3.3	0.3	1.9	0.5	0.0	0.1	5.2	0.0	1.9
26	14.8	7.6	10.8	3.7	0.0	1.0	0.1	0.0	0.0	4.8	0.0	1.6
27	14.9	9.1	11.4	4.0	0.0	1.0	0.3	0.0	0.0	7.1	0.3	3.4
28	16.9	8.9	11.9	5.2	0.0	1.8	1.3	0.0	0.4	8.9	3.5	5.7
29	11.4	3.9	8.7	6.7	1.3	3.6	1.4	0.0	0.5	9.3	2.9	5.8
30	9.6	3.3	5.6	6.1	1.5	3.6	3.3	0.0	1.1	6.9	2.3	4.6
31	5.5	3.2	4.2	---	---	---	2.0	0.0	0.6	9.4	2.1	5.6
MONTH	24.0	3.2	12.1	16.0	0.0	6.2	7.6	0.0	2.2	9.4	0.0	3.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.0	4.6	6.9	10.7	2.2	5.6	23.3	7.3	14.4	23.5	11.4	16.6
2	9.8	4.0	6.8	11.1	3.0	6.2	21.7	8.2	13.7	23.1	11.9	15.7
3	7.8	1.5	4.0	12.6	2.2	6.9	19.7	7.1	12.0	25.2	11.9	16.6
4	6.8	0.0	3.0	6.2	0.0	3.1	21.1	6.4	12.3	22.1	10.1	15.5
5	6.3	0.3	3.2	8.1	0.0	2.9	17.1	4.6	9.9	27.1	9.6	17.3
6	4.5	0.7	2.3	12.0	0.8	5.9	16.2	3.7	8.5	24.9	11.8	17.2
7	3.3	0.0	0.8	14.5	3.1	8.4	11.7	5.7	8.2	25.7	11.3	16.9
8	3.3	0.0	0.9	15.8	4.8	9.3	20.5	3.1	10.7	22.9	12.3	16.6
9	2.7	0.0	0.7	13.6	5.1	8.4	23.3	5.2	13.3	24.2	9.7	15.9
10	4.9	0.0	1.7	14.2	3.7	8.5	23.9	7.2	14.5	19.9	10.8	14.9
11	4.1	0.0	1.4	16.1	4.7	10.1	24.1	7.6	14.8	25.9	8.7	16.1
12	7.6	0.0	3.2	16.6	6.6	11.1	24.5	8.5	15.5	27.3	10.0	17.5
13	8.1	3.6	5.5	18.3	7.3	12.4	25.1	9.6	16.1	23.1	11.8	17.0
14	7.7	3.7	5.7	19.5	8.0	13.4	24.5	9.0	16.1	28.6	11.1	19.2
15	7.8	3.7	5.2	19.6	10.3	13.9	22.2	10.9	15.2	25.5	14.6	17.8
16	9.8	1.6	5.4	16.9	7.8	12.2	22.4	8.7	14.5	26.9	14.5	19.5
17	11.4	2.9	6.7	17.2	7.8	11.3	23.5	8.6	14.8	29.3	14.3	20.7
18	8.2	5.4	6.6	14.6	7.9	10.5	24.2	8.0	15.1	25.4	15.5	19.4
19	10.5	4.1	7.0	7.9	6.2	7.0	12.8	8.2	10.0	23.6	14.7	18.0
20	11.1	3.2	6.8	13.4	5.5	9.3	20.5	6.4	12.9	24.6	13.1	17.4
21	11.1	3.6	6.9	10.1	7.1	8.7	22.1	9.2	14.9	28.3	11.4	18.8
22	10.8	3.9	7.3	19.1	5.4	11.3	22.4	10.2	14.8	30.4	13.7	21.1
23	8.3	0.0	3.9	20.3	6.6	12.7	17.0	10.4	13.3	29.6	15.6	21.8
24	0.9	0.0	0.2	20.4	7.8	12.5	17.4	8.0	12.3	29.6	16.5	22.0
25	2.0	0.0	0.5	20.5	8.6	13.3	24.0	8.1	14.8	25.5	16.3	20.3
26	5.2	0.0	2.0	19.0	7.2	12.3	26.1	8.9	16.6	29.3	16.0	21.5
27	10.0	0.8	4.6	13.6	3.9	8.8	24.0	11.3	17.1	---	---	---
28	5.1	1.6	3.4	13.5	3.1	7.3	24.5	13.1	16.9	---	---	---
29	---	---	---	17.2	2.5	8.5	27.3	11.2	18.3	32.5	21.2	26.2
30	---	---	---	18.8	4.0	10.9	25.9	13.3	18.3	31.2	21.7	26.2
31	---	---	---	20.8	6.0	10.2	---	---	---	26.0	21.9	23.7
MONTH	11.4	0.0	4.0	20.8	0.0	9.4	27.3	3.1	14.0	---	---	---

07124000 ARKANSAS RIVER AT LAS ANIMAS, 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
1	24.8	20.9	22.5	24.6	18.9	21.8	29.4	20.0	24.2	26.9	16.2	21.0
2	25.9	19.8	22.3	28.3	22.3	24.9	29.9	20.7	24.8	28.0	17.5	22.1
3	24.4	19.5	21.6	29.3	22.8	25.6	31.9	20.8	25.3	22.7	19.0	20.7
4	21.2	19.4	20.2	28.4	22.7	25.3	31.7	19.9	25.1	27.2	18.0	21.8
5	19.4	17.3	18.5	31.0	22.2	26.0	33.0	19.3	25.6	28.3	17.3	22.3
6	20.9	16.2	18.3	30.0	21.4	24.9	32.2	20.8	25.6	24.4	19.0	21.7
7	20.2	17.1	18.2	29.9	21.3	24.8	33.5	19.9	25.6	20.5	18.6	19.5
8	23.1	16.2	19.4	31.4	20.5	25.1	32.5	20.2	25.3	27.1	17.4	22.9
9	22.8	18.1	20.3	29.8	20.8	24.9	32.8	21.0	26.1	24.9	18.6	21.2
10	25.1	19.8	22.2	31.9	19.9	25.3	32.8	21.4	26.2	24.5	18.3	20.3
11	26.2	20.3	22.8	31.4	20.7	25.4	30.6	21.6	25.5	26.5	17.2	22.7
12	26.1	20.9	23.1	30.7	18.9	24.1	29.1	20.1	23.9	27.4	13.0	19.6
13	24.7	20.9	22.4	32.6	20.4	24.8	28.3	18.4	22.5	18.1	13.1	15.3
14	24.8	20.2	22.2	---	---	---	27.6	18.1	22.1	22.9	11.3	16.3
15	26.2	20.9	23.3	---	---	---	27.8	17.5	21.9	24.6	13.3	18.2
16	26.3	21.5	23.7	---	---	---	28.2	18.4	22.5	24.7	14.3	19.0
17	26.8	22.0	24.0	---	---	---	28.5	18.6	23.0	23.2	13.9	18.4
18	23.9	21.9	23.0	---	---	---	30.3	19.5	24.2	20.9	11.6	15.5
19	23.9	20.2	21.8	---	---	---	31.8	20.0	24.8	22.0	11.3	16.0
20	26.6	20.0	22.6	---	---	---	32.2	19.8	25.3	21.0	13.4	16.6
21	25.4	19.6	22.2	---	---	---	30.5	20.5	24.8	23.8	13.8	18.1
22	25.2	20.0	22.4	---	---	---	30.6	20.4	24.5	23.3	14.2	18.1
23	26.1	20.0	22.7	---	---	---	30.0	20.3	24.1	24.0	14.5	18.8
24	24.9	19.9	22.1	---	---	---	30.6	18.9	23.9	21.4	14.1	17.3
25	24.6	18.6	21.3	33.4	22.0	26.9	32.1	19.6	24.7	22.6	12.4	16.8
26	23.3	19.9	21.7	32.7	20.8	25.8	30.6	20.5	24.8	22.5	12.8	17.0
27	25.2	21.4	22.9	26.5	21.4	23.9	31.3	20.5	25.2	22.4	12.4	16.9
28	27.3	21.6	24.0	26.0	21.1	23.3	27.2	20.9	23.2	21.1	11.9	16.0
29	25.6	20.6	22.6	31.0	19.9	24.7	23.3	19.7	21.0	21.4	12.1	16.1
30	24.7	20.4	22.0	31.4	20.7	25.2	21.4	18.0	19.4	15.3	11.6	13.6
31	---	---	---	29.0	21.4	24.5	23.0	17.7	19.9	---	---	---
MONTH	27.3	16.2	21.9	---	---	---	33.5	17.5	24.0	28.3	11.3	18.7

07124200 PURGATOIRE RIVER AT MADRID, CO

LOCATION.--Lat 37°07'46", long 104°38'22", in SW¹/₄NE¹/₄ sec.35, T.33 S., R.65 W., Las Animas County, Hydrologic Unit 11020010, on left bank 70 ft downstream from county road bridge, 0.3 mi northeast of Madrid, 1.0 mi downstream from Burro Canyon, and 9 mi west of Trinidad.

DRAINAGE AREA.--505 mi².

PERIOD OF RECORD.--March 1972 to current year. Daily record for water temperature and specific conductance available, March 1979 to July 1981. Daily record for suspended sediment available, October 1978 to September 1981. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07124200

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 6,261.61 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good except for June 16, Sept. 3, and estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation and municipal use, ground-water withdrawals, and return flows from irrigated areas. 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	18	15	e12	e13	10	12	17	30	217	56	33	110
2	19	14	13	e13	10	14	19	31	186	54	30	99
3	22	14	e13	e13	11	12	18	29	177	47	31	291
4	21	15	e12	e12	8.6	14	19	27	163	46	32	160
5	20	14	e11	e12	8.6	13	19	27	226	43	45	144
6	19	13	e10	e13	e9.0	12	18	24	177	44	42	137
7	18	13	e10	e12	e9.0	12	19	22	144	53	35	179
8	18	14	e10	e13	e9.0	12	18	25	134	52	33	133
9	18	13	e11	e12	e10	12	18	24	117	47	34	116
10	18	17	e9.0	e12	e12	12	18	23	113	43	35	173
11	16	15	e9.0	e12	e13	13	18	23	118	43	32	181
12	16	13	e9.0	e13	e13	14	19	22	126	42	34	168
13	16	13	e9.0	e13	e14	14	20	21	117	41	35	160
14	16	16	e10	e12	e14	13	20	24	108	39	35	159
15	15	15	e9.0	e12	e13	14	21	27	102	44	34	143
16	15	13	e9.0	e11	e13	14	22	35	171	42	33	129
17	15	14	e9.0	e12	e12	15	21	41	98	38	32	116
18	15	14	e10	e11	e12	16	20	54	99	36	43	111
19	15	13	e10	e11	e11	19	32	71	153	35	50	107
20	15	13	e9.0	e12	e10	19	39	83	139	44	48	96
21	14	e12	e10	e12	e11	23	40	80	95	45	42	89
22	14	e11	e10	12	11	22	32	74	79	83	41	80
23	15	e10	e9.0	e12	12	19	36	87	71	52	47	75
24	15	e10	e10	e12	11	18	32	108	67	27	46	69
25	15	e9.0	e11	11	11	18	29	106	63	19	46	66
26	14	e9.0	e11	11	e13	18	27	84	70	20	63	62
27	16	e9.0	e10	13	e14	19	26	78	69	34	63	58
28	16	e9.0	e10	12	e12	21	29	94	78	59	57	58
29	15	e10	e11	11	---	17	28	121	61	98	128	59
30	15	e11	e10	9.5	---	17	29	154	60	64	187	52
31	13	---	e12	11	---	18	---	208	---	44	134	---
TOTAL	507	381.0	318.0	370.5	317.2	486	723	1,857	3,598	1,434	1,580	3,580
MEAN	16.4	12.7	10.3	12.0	11.3	15.7	24.1	59.9	120	46.3	51.0	119
MAX	22	17	13	13	14	23	40	208	226	98	187	291
MIN	13	9.0	9.0	9.5	8.6	12	17	21	60	19	30	52
AC-FT	1,010	756	631	735	629	964	1,430	3,680	7,140	2,840	3,130	7,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

	29.8	24.5	20.7	18.6	19.2	20.6	45.3	140	190	120	108	55.6
MEAN	29.8	24.5	20.7	18.6	19.2	20.6	45.3	140	190	120	108	55.6
MAX	78.5	39.2	40.3	36.6	37.2	55.9	204	547	589	313	342	232
(WY)	(1983)	(1999)	(1984)	(1984)	(1983)	(1987)	(1987)	(1999)	(1983)	(1983)	(1981)	(1981)
MIN	9.89	12.7	8.47	7.60	5.80	9.72	11.0	14.4	9.51	12.5	8.12	11.0
(WY)	(1973)	(1977)	(1977)	(1973)	(1977)	(1979)	(2002)	(2002)	(2002)	(2002)	(2002)	(1978)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1972 - 2003

ANNUAL TOTAL	4,638.1		15,151.7			
ANNUAL MEAN	12.7		41.5			67.7
HIGHEST ANNUAL MEAN						145
LOWEST ANNUAL MEAN						13.0
HIGHEST DAILY MEAN	133	Sep 19	291	Sep 3	1,640	Sep 7, 1981
LOWEST DAILY MEAN	1.4	Sep 7	8.6	Feb 4	1.4	Sep 7, 2002
ANNUAL SEVEN-DAY MINIMUM	2.8	Aug 26	9.1	Dec 10	2.8	Aug 26, 2002
MAXIMUM PEAK FLOW			a2,360	Sep 3	b14,300	Jul 20, 1976
MAXIMUM PEAK STAGE			6.61	Sep 3	c12.80	Jul 20, 1976
ANNUAL RUNOFF (AC-FT)	9,200		30,050		49,010	
10 PERCENT EXCEEDS	17		114		171	
50 PERCENT EXCEEDS	12		19		29	
90 PERCENT EXCEEDS	5.3		10		13	

e Estimated.

a From rating curve extended above 832 ft³/s on basis of slope-area measurement of peak flow at gage height 10.90 ft and timed-drift measurement of peak flow at gage height 12.80 ft.

b From timed-drift measurement of peak flow.

c From floodmarks.

07124400 TRINIDAD LAKE NEAR TRINIDAD, CO

LOCATION.--Lat 37°08'28", long 104°33'05", in NE¹/₄SW¹/₄ sec.27, T.33 S., R.64 W., Las Animas County, Hydrologic Unit 11020010, in valve house near center of dam on Purgatoire River and 3.2 mi southwest of courthouse in Trinidad.

DRAINAGE AREA.--672 mi².

PERIOD OF RECORD.--August 1977 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07124400

REVISED RECORDS.--WDR CO-78-1: 1977(M). WDR CO-83-1: 1981-82 (contents). WDR CO-89-1: 1988 (contents).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,073.64 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by a rock and earthfill dam completed in 1977. Storage began Aug. 19, 1977. Recreation pool reached June 4, 1979. All figures represent total contents from area-capacity table effective Nov. 1, 1999, and based on a 1999 resurvey by the U.S. Army Corp of Engineers. Total capacity at top of parapet wall, 180,000 acre-ft at elevation 6,284.00 ft. Maximum pool, 167,700 acre-ft at elevation 6,279.30 ft. Top of flood control storage, 123,200 acre-ft at elevation 6,260.00 ft. Capacity at high crest of spillway, 119,100 acre-ft at elevation 6,258.00 ft. Capacity at notch crest of spillway, 91,300 acre-ft at elevation 6,243.00 ft. Top of irrigation storage, 71,000 acre-ft at elevation 6,230.00 ft. Recreation pool, 14,895 acre-ft at elevation 6,171.86 ft. Elevation of no contents, 6,115.00 ft. No dead storage. Reservoir is used for flood control, recreation, storage for irrigation, and sediment retention.

COOPERATION.--Capacity tables provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 72,800 acre-ft, Aug. 8, 1999, elevation, 6,230.35 ft; minimum contents since recreation pool was reached, 4,260 acre-feet, Oct. 5, 1992, elevation, 6,142.41 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 20,000 acre-ft, May 2-7, maximum elevation, 6,180.20 ft, May 6; minimum contents, 11,200 acre-ft, Sept. 27-30, minimum elevation, 6,164.46 ft, Sept. 28.

Capacity table
(Elevation, in feet, and contents, in acre-feet, effective Nov. 1, 1999)

Elevation	Capacity	Elevation	Capacity	Elevation	Capacity
6,150.0	5,660	6,180.0	19,900	6,210.0	45,800
6,155.0	7,320	6,185.0	23,400	6,215.0	51,500
6,160.0	9,220	6,190.0	27,200	6,220.0	57,600
6,165.0	11,400	6,195.0	31,400	6,225.0	64,100
6,170.0	13,900	6,200.0	35,800	6,230.0	71,000
6,175.0	16,700	6,205.0	40,600	6,235.0	78,400

RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13,200	14,000	14,500	15,200	15,900	16,500	17,700	19,900	16,100	13,600	12,700	11,600
2	13,300	14,000	14,600	15,200	15,900	16,500	17,700	20,000	15,900	13,600	12,700	11,600
3	13,300	14,000	14,600	15,200	15,900	16,500	17,800	20,000	15,800	13,500	12,600	12,400
4	13,300	14,100	14,600	15,200	15,900	16,600	17,900	20,000	15,800	13,500	12,600	12,200
5	13,400	14,100	14,600	15,300	16,000	16,600	17,900	20,000	15,800	13,400	12,600	11,600
6	13,400	14,100	14,600	15,300	16,000	16,600	18,000	20,000	15,500	13,400	12,600	11,400
7	13,400	14,100	14,700	15,400	16,000	16,600	18,000	19,900	15,100	13,400	12,600	11,800
8	13,500	14,100	14,700	15,400	16,000	16,700	18,100	19,800	14,700	13,500	12,600	11,800
9	13,500	14,200	14,700	15,400	16,000	16,700	18,100	19,700	14,300	13,400	12,500	11,700
10	13,500	14,200	14,700	15,400	16,000	16,700	18,200	19,500	13,800	13,400	12,500	11,800
11	13,600	14,200	14,700	15,400	16,100	16,700	18,200	19,400	13,600	13,400	12,400	11,800
12	13,600	14,200	14,800	15,400	16,100	16,800	18,200	19,200	13,700	13,300	12,400	11,700
13	13,600	14,300	14,800	15,400	16,200	16,800	18,300	19,000	13,700	13,200	12,300	11,500
14	13,600	14,300	14,800	15,500	16,200	16,800	18,300	18,800	13,700	13,200	12,300	11,500
15	13,700	14,300	14,800	15,500	16,300	16,800	18,400	18,500	13,700	13,200	12,200	11,500
16	13,700	14,300	14,900	15,500	16,300	16,800	18,400	18,300	14,000	13,100	12,100	11,600
17	13,700	14,400	14,900	15,500	16,300	16,800	18,400	17,900	14,000	13,100	12,000	11,600
18	13,700	14,400	14,900	15,500	16,300	16,900	18,500	17,600	13,900	13,000	12,000	11,600
19	13,800	14,400	14,900	15,600	16,400	17,000	18,600	17,300	13,900	13,000	12,000	11,600
20	13,800	14,400	14,900	15,600	16,300	17,000	18,800	17,000	13,800	13,000	12,000	11,600
21	13,800	14,400	14,900	15,600	16,300	17,100	18,900	16,800	13,700	13,000	11,900	11,600
22	13,800	14,400	14,900	15,600	16,300	17,200	19,000	16,500	13,600	13,200	11,900	11,500
23	13,900	14,400	15,000	15,700	16,300	17,300	19,200	16,400	13,600	13,200	11,900	11,500
24	13,900	14,400	15,000	15,700	16,300	17,300	19,400	16,400	13,500	12,900	11,800	11,400
25	13,900	14,500	15,000	15,700	16,400	17,400	19,500	16,400	13,600	12,800	11,800	11,400
26	13,900	14,500	15,000	15,700	16,400	17,400	19,600	16,200	13,700	12,700	11,800	11,300
27	13,900	14,500	15,100	15,800	16,400	17,500	19,600	16,000	13,700	12,800	11,700	11,200
28	13,900	14,500	15,100	15,800	16,400	17,500	19,700	15,900	13,800	12,900	11,600	11,200
29	13,900	14,500	15,100	15,800	---	17,500	19,800	15,900	13,700	13,000	11,700	11,200
30	13,900	14,500	15,100	15,800	---	17,600	19,900	15,900	13,600	12,900	11,800	11,200
31	14,000	---	15,100	15,900	---	e17,600	---	16,000	---	12,800	11,700	---
MAX	14,000	14,500	15,100	15,900	16,400	17,600	19,900	20,000	16,100	13,600	12,700	12,400
MIN	13,200	14,000	14,500	15,200	15,900	16,500	17,700	15,900	13,500	12,700	11,600	11,200

07124410 PURGATOIRE RIVER BELOW TRINIDAD LAKE, CO

LOCATION.--Lat 37°08'38", long 104°32'50", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.33 S., R.64 W., Las Animas County, Hydrologic Unit 11020010, on left bank of flip bucket outlet 500 ft downstream from base of Trinidad Dam, 0.8 mi upstream from Santa Fe Railroad bridge, and 3.0 mi southwest of courthouse in Trinidad.

DRAINAGE AREA.--672 mi².

PERIOD OF RECORD.--December 1976 to current year. Suspended-sediment data available, March 1977 to September 1984. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07124410

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Datum of gage is 6,073.64 ft above NGVD of 1929 (levels by U.S. Army, Corps of Engineers). Supplementary water-stage recorder about 1,000 ft downstream at same datum, for use when flows exceed approximately 1,500 ft³/s.

REMARKS.--Records good except for those below 0.5 ft³/s, which are fair, and estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation and municipal use, ground-water withdrawals, and return flows from irrigated areas. Flow completely regulated by Trinidad Lake (station 07124400) immediately upstream since Aug. 19, 1977. 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	0.03	0.05	0.44	0.19	0.56	0.87	0.68	11	189	83	74	123
2	e0.01	0.03	0.44	0.18	0.51	0.87	0.61	e16	264	70	55	82
3	e0.01	0.03	11	0.18	0.51	0.87	0.51	e19	233	68	41	65
4	e0.01	0.03	6.0	0.18	0.51	0.80	0.51	e19	200	66	40	257
5	e0.01	0.03	0.58	0.18	0.51	0.77	0.51	e19	234	66	43	421
6	e0.01	1.5	0.52	0.18	0.51	0.71	0.51	e29	347	55	43	182
7	e0.01	2.1	0.44	0.18	0.51	0.58	0.51	56	348	41	45	51
8	e0.01	1.8	0.44	0.18	0.51	0.58	0.51	87	345	44	53	119
9	e0.01	1.5	0.44	0.18	0.51	0.58	0.51	97	343	54	56	124
10	0.00	1.2	0.44	5.0	0.51	0.58	0.51	94	340	58	55	121
11	0.00	0.44	0.44	7.5	0.51	0.58	0.51	92	232	65	55	182
12	0.00	0.03	0.51	7.2	0.51	0.58	0.51	92	113	68	55	247
13	0.00	0.03	0.51	7.2	0.51	0.55	0.51	122	109	67	62	232
14	0.00	0.03	0.51	4.9	0.52	8.5	0.51	137	109	60	65	170
15	0.00	0.03	0.51	0.58	0.51	13	5.5	143	109	55	61	126
16	0.00	0.02	0.51	0.58	0.51	13	8.0	178	109	55	58	97
17	0.02	0.01	0.51	0.58	0.51	6.3	8.0	205	109	55	59	96
18	0.02	9.7	0.51	0.58	9.3	0.58	8.0	208	173	53	49	109
19	0.02	9.2	0.51	0.58	18	0.55	3.1	213	205	52	44	112
20	0.02	8.0	0.51	0.58	20	0.51	0.61	215	217	52	44	106
21	0.02	8.0	0.45	0.58	17	0.51	0.68	198	188	59	46	96
22	0.02	6.6	0.44	0.58	15	0.51	0.66	191	141	63	47	106
23	0.02	0.04	0.44	0.58	8.1	0.51	0.61	154	111	86	47	81
24	0.45	0.04	0.44	0.58	4.5	0.51	0.52	118	81	125	47	67
25	17	0.04	0.38	0.58	4.5	0.74	0.51	150	57	69	53	74
26	25	0.36	0.33	0.58	2.4	0.87	0.53	177	50	36	63	96
27	25	0.50	0.32	0.58	1.1	0.77	0.53	183	60	35	81	105
28	12	0.44	0.27	0.58	1.1	0.77	0.55	130	76	47	79	65
29	1.0	0.44	0.19	0.58	---	0.70	0.47	119	116	69	61	46
30	0.11	0.44	0.21	0.58	---	0.68	8.2	150	117	100	124	50
31	0.08	---	0.22	0.58	---	0.68	---	163	---	111	184	---
TOTAL	80.89	52.66	29.46	43.29	109.73	58.61	53.88	3,785	5,325	1,987	1,889	3,808
MEAN	2.61	1.76	0.95	1.40	3.92	1.89	1.80	122	178	64.1	60.9	127
MAX	25	9.7	11	7.5	20	13	8.2	215	348	125	184	421
MIN	0.00	0.01	0.19	0.18	0.51	0.51	0.47	11	50	35	40	46
AC-FT	160	104	58	86	218	116	107	7,510	10,560	3,940	3,750	7,550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2003, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	22.6	5.29	2.34	2.56	3.00	2.89	30.0	161	198	168	143	112															
MAX	96.0	25.9	11.9	14.7	13.1	17.8	106	375	614	306	310	283															
(WY)	(1984)	(1984)	(1979)	(1977)	(1977)	(1977)	(2000)	(1994)	(1983)	(1983)	(1999)	(1984)															
MIN	0.35	0.015	0.001	0.012	0.046	0.007	0.073	25.5	33.8	17.0	8.81	5.15															
(WY)	(1989)	(1982)	(1995)	(1985)	(2001)	(1982)	(1984)	(1980)	(2002)	(2002)	(2002)	(1987)															

SUMMARY STATISTICS

ANNUAL TOTAL
ANNUAL MEAN
HIGHEST ANNUAL MEAN
LOWEST ANNUAL MEAN
HIGHEST DAILY MEAN
LOWEST DAILY MEAN
ANNUAL SEVEN-DAY MINIMUM
MAXIMUM PEAK FLOW
MAXIMUM PEAK STAGE
ANNUAL RUNOFF (AC-FT)
10 PERCENT EXCEEDS
50 PERCENT EXCEEDS
90 PERCENT EXCEEDS

FOR 2002 CALENDAR YEAR

4,563.43
12.5
130 Sep 20
0.00 Oct 10
0.00 Oct 10
9,050
36
3.1
0.05

FOR 2003 WATER YEAR

17,222.52
47.2
421 Sep 5
0.00 Oct 10
0.00 Oct 10
458 Sep 5
7.01 Sep 5
34,160
146
5.0
0.05

WATER YEARS 1977 - 2003

73.1
146 1983
12.6 2002
917 Sep 11, 1981
a0.00 Aug 20, 1977
0.00 Nov 18, 1979
b963 Sep 10, 1981
7.89 Sep 10, 1981
52,960
238
8.8
0.04

e Estimated.

a No flow on many days during many years.

b From rating curve extended above 919 ft³/s.

07126140 VAN BREMER ARROYO NEAR TYRONE, CO

LOCATION.--Lat 37°23'58", long 104°06'55", in SW¹/₄SW¹/₄, sec.27, T.30 S., R.60 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site, on left bank 200 ft downstream from military road at gas line crossing near Brown Sheep Camp, 6 mi southeast of Tyrone, and 11 mi upstream from mouth.

DRAINAGE AREA.--132 mi², of which 11.8 mi² is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1985 to September 1998, October 1998 to current year (seasonal records only). Daily records of specific conductance and water temperature available, May 1985 to April 1998. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07126140

REVISED RECORDS.--WDR CO-01-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, crest-stage gages, and V-notch sharp-crested weir. Elevation of gage is 5,310 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for June 17, which is poor. Natural flow of stream affected by storage reservoirs, erosion-control and livestock-watering reservoirs, diversions for irrigation, ground-water withdrawals, and return flows from irrigated areas. Several measurements of specific conductance and water temperature, when obtained, are published in the "Supplemental Water-Quality Data for Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 511 ft³/s, Aug. 23, 1986, from flow through culvert computation, gage height, 10.02 ft; maximum gage height, 11.64 ft, Aug. 3, 1998; no flow on many days during most years (some estimated).

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 125 ft³/s, June 17, gage height, 7.56 ft; no flow on many days.

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	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
2	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
3	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
4	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
5	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.02
7	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.25
8	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.75	0.00
9	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.31	0.00
10	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.11	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	9.9	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	2.7	0.00	0.00	0.00
19	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
20	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
30	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
31	---	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	0.00	12.60	0.00	1.17	0.27
MEAN	---	---	---	---	---	---	---	0.000	0.42	0.000	0.038	0.009
MAX	---	---	---	---	---	---	---	0.00	9.9	0.00	0.75	0.25
MIN	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	0.00	25	0.00	2.3	0.5

e Estimated.

07126140 VAN BREMER ARROYO NEAR TYRONE, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--June 1993 to current year (seasonal records only).

GAGE.--Tipping-bucket rain gage with satellite telemetry.

REMARKS.--Records during Apr. 8 to June 5 and estimated daily precipitation are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 3.00 inches, Sept. 9, 1995.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 2.04 inches, June 17.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	---	---	---	---	---	---	0.00	0.03	0.00	0.00	0.00
2	---	---	---	---	---	---	---	0.02	0.01	0.00	0.00	0.00
3	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.26
4	---	---	---	---	---	---	---	0.00	0.13	0.00	0.34	0.00
5	---	---	---	---	---	---	---	0.00	0.50	0.00	0.18	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.72
7	---	---	---	---	---	---	---	0.00	0.02	0.00	0.00	0.15
8	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	1.33	0.01
9	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.20	0.09
10	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	e0.05
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	e0.00
15	---	---	---	---	---	---	0.12	0.14	0.00	0.02	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	2.04	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
19	---	---	---	---	---	---	0.28	0.02	0.00	0.01	0.00	0.00
20	---	---	---	---	---	---	0.00	0.03	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.01	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.14	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.26	0.00	0.00
28	---	---	---	---	---	---	0.00	0.00	0.00	0.03	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.12	0.00	0.34	0.00
30	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.55	0.00
31	---	---	---	---	---	---	---	0.11	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	0.46	2.87	0.32	2.94	1.28
MAX	---	---	---	---	---	---	---	0.14	2.04	0.26	1.33	0.72

e Estimated.

07126200 VAN BREMER ARROYO NEAR MODEL, CO

LOCATION.--Lat 37°20'44", long 103°57'27", in SE¹/₄NE¹/₄ sec.13, T.31 S., R.59 W., Las Animas County, Hydrologic Unit 11020010, on right bank 3 mi upstream from mouth, 16 mi east of Model, and 33 mi northeast of Trinidad.

DRAINAGE AREA.--175 mi², of which 11.8 mi² is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1966 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07126200

REVISIONS.--WDR CO-84-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gages. Elevation of gage is 4,960 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. Natural flow of stream affected by erosion-control and livestock-watering reservoirs, diversions for irrigation, ground-water withdrawals, and return flows 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	0.08	0.14	0.14	0.23	0.14	0.19	0.19	0.07	0.08	0.10	0.07	0.12
2	0.08	0.14	0.15	0.21	0.15	0.18	0.18	0.10	0.10	0.09	0.07	0.10
3	0.10	0.13	0.22	0.17	0.16	0.17	0.14	0.09	0.10	0.07	0.07	0.11
4	0.10	0.13	0.23	0.16	0.14	0.16	0.16	0.06	0.10	0.07	0.08	0.11
5	0.10	0.14	0.20	0.18	0.13	0.16	0.16	0.07	0.21	0.06	0.10	0.09
6	0.11	0.14	0.19	0.20	0.15	0.17	0.22	0.07	0.17	0.06	0.10	0.08
7	0.11	0.12	0.19	0.18	0.14	0.17	0.17	0.06	0.14	0.06	0.09	10
8	0.11	0.12	0.18	0.18	0.14	0.17	0.17	0.05	0.14	0.06	0.09	4.1
9	0.11	0.13	0.18	0.17	0.16	0.15	0.14	0.06	0.11	0.05	26	0.45
10	0.11	0.18	0.18	0.15	0.16	0.15	0.14	0.07	0.10	0.05	38	0.31
11	0.10	0.17	0.18	0.15	0.17	0.15	0.15	0.07	0.10	0.05	3.6	0.22
12	0.09	0.17	0.15	0.17	0.18	0.15	0.17	0.08	0.10	0.05	0.70	0.20
13	0.10	0.17	0.14	0.16	0.19	0.16	0.16	0.08	0.14	0.05	0.23	0.18
14	0.10	0.17	0.15	0.17	0.19	0.17	0.14	0.07	0.14	0.05	0.12	0.15
15	0.10	0.19	0.16	0.19	0.17	0.16	0.14	0.08	0.13	0.06	0.07	0.14
16	0.10	0.18	0.17	0.19	0.17	0.17	0.14	0.10	0.12	0.06	0.05	0.10
17	0.09	0.19	0.17	0.18	0.17	0.20	0.11	0.08	0.26	0.05	0.05	0.10
18	0.10	0.17	0.18	0.17	0.16	0.24	0.11	0.08	65	0.05	0.05	0.10
19	0.10	0.16	0.22	0.16	0.21	0.49	0.15	0.08	5.2	0.05	19	0.10
20	0.11	0.15	0.18	0.17	0.21	0.58	0.18	0.08	1.1	0.05	3.0	0.10
21	0.12	0.16	0.18	0.17	0.20	0.43	0.16	0.08	0.41	0.05	0.29	0.11
22	0.13	0.16	0.18	0.15	0.17	0.35	0.14	0.07	0.19	0.06	0.15	0.08
23	0.14	0.17	0.18	0.15	0.15	0.25	0.12	0.06	0.11	0.06	0.11	0.09
24	0.11	0.17	0.17	0.17	0.14	0.20	0.10	0.05	0.08	0.06	0.07	0.09
25	0.10	0.17	0.16	0.17	0.14	0.18	0.10	0.07	0.08	0.05	0.06	0.10
26	0.12	0.17	0.16	0.16	0.15	0.18	0.11	0.06	0.10	0.05	0.05	0.10
27	0.21	0.16	0.15	0.16	0.18	0.17	0.10	0.06	0.09	0.07	0.05	0.10
28	0.16	0.17	0.15	0.17	0.20	0.17	0.08	0.06	0.08	0.07	0.06	0.09
29	0.12	0.18	0.16	0.15	---	0.17	0.07	0.05	0.08	0.08	0.09	0.09
30	0.12	0.16	0.18	0.15	---	0.17	0.06	0.05	0.10	0.07	0.25	0.10
31	0.13	---	0.17	0.15	---	0.18	---	0.06	---	0.07	0.15	---
TOTAL	3.46	4.76	5.40	5.29	4.62	6.59	4.16	2.17	74.86	1.88	92.87	17.81
MEAN	0.11	0.16	0.17	0.17	0.17	0.21	0.14	0.070	2.50	0.061	3.00	0.59
MAX	0.21	0.19	0.23	0.23	0.21	0.58	0.22	0.10	65	0.10	38	10
MIN	0.08	0.12	0.14	0.15	0.13	0.15	0.06	0.05	0.08	0.05	0.05	0.08
AC-FT	6.9	9.4	11	10	9.2	13	8.3	4.3	148	3.7	184	35

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

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	1.24	0.20	0.17	0.18	0.20	0.18	0.19	2.65	1.89	3.85	7.78	1.75																										
MAX	16.0	0.74	0.32	0.43	0.59	0.40	0.73	30.1	20.6	36.4	104	9.89																										
(WY)	(1986)	(1998)	(1998)	(1973)	(1987)	(1973)	(1973)	(1981)	(1969)	(1977)	(1981)	(1972)																										
MIN	0.059	0.067	0.031	0.064	0.11	0.072	0.074	0.070	0.030	0.039	0.065	0.041																										
(WY)	(1992)	(1984)	(1984)	(1984)	(1992)	(1979)	(2002)	(2003)	(1968)	(1978)	(2002)	(1991)																										

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1966 - 2003

ANNUAL TOTAL	39.23	223.87	
ANNUAL MEAN	0.11	0.61	1.70
HIGHEST ANNUAL MEAN			12.3 1981
LOWEST ANNUAL MEAN			0.10 2002
HIGHEST DAILY MEAN	0.45 Jul 22	65 Jun 18	802 May 30, 1981
LOWEST DAILY MEAN	0.03 Jul 9	0.05 May 8	a0.00 Jun 7, 1968
ANNUAL SEVEN-DAY MINIMUM	0.04 Jul 8	0.05 Jul 8	0.00 Jun 7, 1968
MAXIMUM PEAK FLOW		b332 Jun 18	c6,240 May 26, 1967
MAXIMUM PEAK STAGE		3.86 Jun 18	d9.40 May 26, 1967
ANNUAL RUNOFF (AC-FT)	78	444	1,230
10 PERCENT EXCEEDS	0.17	0.20	0.38
50 PERCENT EXCEEDS	0.10	0.14	0.15
90 PERCENT EXCEEDS	0.05	0.06	0.07

a Also occurred Jun 8-13, 1968.

b From rating curve extended above 134 ft³/s on basis of slope-area measurements of peak flow at gage heights 5.48 ft and 9.98 ft.

c From slope-area measurement of peak flow.

d From floodmarks. Maximum gage height, 9.98 ft, Aug 9, 1979, from floodmark.

07126200 VAN BREMER ARROYO NEAR MODEL, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1983 to April 1998, May 1999 to current year (seasonal peak flows only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07126200

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1983 to April 1998.

WATER TEMPERATURE: January 1983 to April 1998.

SUSPENDED SEDIMENT: May 1999 to current year (seasonal peak flows only).

INSTRUMENTATION.--Pumping sediment sampler with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATION (seasonal peak flows only): Maximum daily mean, 1,810 mg/L, June 18, 2003; minimum daily mean, 111 mg/L, Aug. 12, 2003.

SUSPENDED-SEDIMENT DISCHARGE (seasonal peak flows only): Maximum daily, 4,000 tons (estimated), Aug. 3, 1999; minimum daily, 0.02 ton, (estimated), June 22, Aug 14, 23, 2003.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION (seasonal peak flows only): Maximum daily mean, 1,810 mg/L, June 18; minimum daily mean, 111 mg/L, Aug. 12.

SUSPENDED-SEDIMENT DISCHARGE (seasonal peak flows only): Maximum daily, 545 tons, June 18; minimum daily, 0.02 ton, (estimated), June 22, Aug 14, 23.

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT					
03...	1640	0.10	16.5	--	--
NOV					
13...	1500	0.18	10.5	--	--
JAN					
09...	0940	0.16	4.0	--	--
MAR					
04...	1030	0.14	7.5	--	--
APR					
09...	1100	0.14	12.0	--	--
JUN					
06...	1340	0.16	22.0	--	--
30...	1550	0.10	27.0	--	--
AUG					
12...	1315	0.58	26.5	101	0.16
SEP					
16...	1710	0.09	22.5	--	--

07126200 VAN BREMER ARROYO NEAR MODEL, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
OCTOBER			NOVEMBER			DECEMBER			
1	0.08	---	---	0.14	---	---	0.14	---	---
2	0.08	---	---	0.14	---	---	0.15	---	---
3	0.10	---	---	0.13	---	---	0.22	---	---
4	0.10	---	---	0.13	---	---	0.23	---	---
5	0.10	---	---	0.14	---	---	0.20	---	---
6	0.11	---	---	0.14	---	---	0.19	---	---
7	0.11	---	---	0.12	---	---	0.19	---	---
8	0.11	---	---	0.12	---	---	0.18	---	---
9	0.11	---	---	0.13	---	---	0.18	---	---
10	0.11	---	---	0.18	---	---	0.18	---	---
11	0.10	---	---	0.17	---	---	0.18	---	---
12	0.09	---	---	0.17	---	---	0.15	---	---
13	0.10	---	---	0.17	---	---	0.14	---	---
14	0.10	---	---	0.17	---	---	0.15	---	---
15	0.10	---	---	0.19	---	---	0.16	---	---
16	0.10	---	---	0.18	---	---	0.17	---	---
17	0.09	---	---	0.19	---	---	0.17	---	---
18	0.10	---	---	0.17	---	---	0.18	---	---
19	0.10	---	---	0.16	---	---	0.22	---	---
20	0.11	---	---	0.15	---	---	0.18	---	---
21	0.12	---	---	0.16	---	---	0.18	---	---
22	0.13	---	---	0.16	---	---	0.18	---	---
23	0.14	---	---	0.17	---	---	0.18	---	---
24	0.11	---	---	0.17	---	---	0.17	---	---
25	0.10	---	---	0.17	---	---	0.16	---	---
26	0.12	---	---	0.17	---	---	0.16	---	---
27	0.21	---	---	0.16	---	---	0.15	---	---
28	0.16	---	---	0.17	---	---	0.15	---	---
29	0.12	---	---	0.18	---	---	0.16	---	---
30	0.12	---	---	0.16	---	---	0.18	---	---
31	0.13	---	---	---	---	---	0.17	---	---
TOTAL	3.46	---	0	4.76	---	0	5.40	---	0
JANUARY			FEBRUARY			MARCH			
1	0.23	---	---	0.14	---	---	0.19	---	---
2	0.21	---	---	0.15	---	---	0.18	---	---
3	0.17	---	---	0.16	---	---	0.17	---	---
4	0.16	---	---	0.14	---	---	0.16	---	---
5	0.18	---	---	0.13	---	---	0.16	---	---
6	0.20	---	---	0.15	---	---	0.17	---	---
7	0.18	---	---	0.14	---	---	0.17	---	---
8	0.18	---	---	0.14	---	---	0.17	---	---
9	0.17	---	---	0.16	---	---	0.15	---	---
10	0.15	---	---	0.16	---	---	0.15	---	---
11	0.15	---	---	0.17	---	---	0.15	---	---
12	0.17	---	---	0.18	---	---	0.15	---	---
13	0.16	---	---	0.19	---	---	0.16	---	---
14	0.17	---	---	0.19	---	---	0.17	---	---
15	0.19	---	---	0.17	---	---	0.16	---	---
16	0.19	---	---	0.17	---	---	0.17	---	---
17	0.18	---	---	0.17	---	---	0.20	---	---
18	0.17	---	---	0.16	---	---	0.24	---	---
19	0.16	---	---	0.21	---	---	0.49	---	---
20	0.17	---	---	0.21	---	---	0.58	---	---
21	0.17	---	---	0.20	---	---	0.43	---	---
22	0.15	---	---	0.17	---	---	0.35	---	---
23	0.15	---	---	0.15	---	---	0.25	---	---
24	0.17	---	---	0.14	---	---	0.20	---	---
25	0.17	---	---	0.14	---	---	0.18	---	---
26	0.16	---	---	0.15	---	---	0.18	---	---
27	0.16	---	---	0.18	---	---	0.17	---	---
28	0.17	---	---	0.20	---	---	0.17	---	---
29	0.15	---	---	---	---	---	0.17	---	---
30	0.15	---	---	---	---	---	0.17	---	---
31	0.15	---	---	---	---	---	0.18	---	---
TOTAL	5.29	---	0	4.62	---	0	6.59	---	0

ARKANSAS RIVER BASIN

07126200 VAN BREMER ARROYO NEAR MODEL, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	APRIL			MAY			JUNE		
		Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	
1	0.19	---	---	0.07	---	---	0.08	---	---	
2	0.18	---	---	0.10	---	---	0.10	---	---	
3	0.14	---	---	0.09	---	---	0.10	---	---	
4	0.16	---	---	0.06	---	---	0.10	---	---	
5	0.16	---	---	0.07	---	---	0.21	---	---	
6	0.22	---	---	0.07	---	---	0.17	---	---	
7	0.17	---	---	0.06	---	---	0.14	---	---	
8	0.17	---	---	0.05	---	---	0.14	---	---	
9	0.14	---	---	0.06	---	---	0.11	---	---	
10	0.14	---	---	0.07	---	---	0.10	---	---	
11	0.15	---	---	0.07	---	---	0.10	---	---	
12	0.17	---	---	0.08	---	---	0.10	---	---	
13	0.16	---	---	0.08	---	---	0.14	---	---	
14	0.14	---	---	0.07	---	---	0.14	---	---	
15	0.14	---	---	0.08	---	---	0.13	---	---	
16	0.14	---	---	0.10	---	---	0.12	---	---	
17	0.11	---	---	0.08	---	---	0.26	---	e0.03	
18	0.11	---	---	0.08	---	---	65	1,810	545	
19	0.15	---	---	0.08	---	---	5.2	315	6.3	
20	0.18	---	---	0.08	---	---	1.1	---	e0.40	
21	0.16	---	---	0.08	---	---	0.41	---	e0.07	
22	0.14	---	---	0.07	---	---	0.19	---	e0.02	
23	0.12	---	---	0.06	---	---	0.11	---	---	
24	0.10	---	---	0.05	---	---	0.08	---	---	
25	0.10	---	---	0.07	---	---	0.08	---	---	
26	0.11	---	---	0.06	---	---	0.10	---	---	
27	0.10	---	---	0.06	---	---	0.09	---	---	
28	0.08	---	---	0.06	---	---	0.08	---	---	
29	0.07	---	---	0.05	---	---	0.08	---	---	
30	0.06	---	---	0.05	---	---	0.10	---	---	
31	---	---	---	0.06	---	---	---	---	---	
TOTAL	4.16	---	0	2.17	---	0	74.86	---	551.82	

07126200 VAN BREMER ARROYO NEAR MODEL, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	JULY			AUGUST			SEPTEMBER		
		Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	
1	0.10	---	---	0.07	---	---	0.12	---	---	
2	0.09	---	---	0.07	---	---	0.10	---	---	
3	0.07	---	---	0.07	---	---	0.11	---	---	
4	0.07	---	---	0.08	---	---	0.11	---	---	
5	0.06	---	---	0.10	---	---	0.09	---	---	
6	0.06	---	---	0.10	---	---	0.08	---	---	
7	0.06	---	---	0.09	---	---	10	359	51	
8	0.06	---	---	0.09	---	---	4.1	250	3.8	
9	0.05	---	---	26	313	75	0.45	---	e0.23	
10	0.05	---	---	38	869	105	0.31	---	e0.12	
11	0.05	---	---	3.6	---	e2.9	0.22	---	e0.07	
12	0.05	---	---	0.70	111	0.23	0.20	---	e0.06	
13	0.05	---	---	0.23	---	e0.08	0.18	---	---	
14	0.05	---	---	0.12	---	e0.02	0.15	---	---	
15	0.06	---	---	0.07	---	---	0.14	---	---	
16	0.06	---	---	0.05	---	---	0.10	---	---	
17	0.05	---	---	0.05	---	---	0.10	---	---	
18	0.05	---	---	0.05	---	---	0.10	---	---	
19	0.05	---	---	19	300	44	0.10	---	---	
20	0.05	---	---	3.0	172	2.6	0.10	---	---	
21	0.05	---	---	0.29	---	e0.08	0.11	---	---	
22	0.06	---	---	0.15	---	e0.03	0.08	---	---	
23	0.06	---	---	0.11	---	e0.02	0.09	---	---	
24	0.06	---	---	0.07	---	---	0.09	---	---	
25	0.05	---	---	0.06	---	---	0.10	---	---	
26	0.05	---	---	0.05	---	---	0.10	---	---	
27	0.07	---	---	0.05	---	---	0.10	---	---	
28	0.07	---	---	0.06	---	---	0.09	---	---	
29	0.08	---	---	0.09	---	---	0.09	---	---	
30	0.07	---	---	0.25	---	---	0.10	---	---	
31	0.07	---	---	0.15	---	---	---	---	---	
TOTAL	1.88	---	0	92.87	---	229.96	17.81	---	55.28	
YEAR	223.87	837.06								

e Estimated.

07126200 VAN BREMER ARROYO NEAR MODEL, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--June 1993 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=07126200

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 2.67 inches, May 25, 1996.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.04 inches, Aug. 9.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	---	---	---	---	---	0.00	0.04	0.00	0.00	0.00
2	0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.01	0.00
3	e0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.13
4	---	---	---	---	---	---	---	0.00	0.08	0.00	0.01	0.00
5	---	---	---	---	---	---	---	0.00	0.66	0.00	0.13	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.20
7	---	---	---	---	---	---	---	0.00	0.01	0.00	0.00	1.03
8	---	---	---	---	---	---	---	0.00	0.00	0.00	0.17	0.00
9	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	1.04	0.19
10	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.21	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.09	0.00	0.00	0.02
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.20	0.21	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.87	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.04	0.00
19	---	---	---	---	---	---	0.31	0.00	0.00	0.04	0.46	0.00
20	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.20	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.01	0.00	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.14	0.00	0.00
28	---	---	---	---	---	---	0.00	0.00	0.00	0.22	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.13	0.00	0.22	0.00
30	---	---	---	---	---	---	0.00	0.13	0.00	0.00	0.47	0.00
31	---	---	---	---	---	---	---	0.05	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	0.60	2.09	0.41	2.55	1.57
MAX	---	---	---	---	---	---	---	0.21	0.87	0.22	1.04	1.03

e Estimated.

07126300 PURGATOIRE RIVER NEAR THATCHER, CO

LOCATION.--Lat 37°21'23", long 103°53'59", in NW¼SW¼ sec.10, T.31 S., R.58 W., Las Animas County, Hydrologic Unit 11020010, on right bank 250 ft downstream from county road bridge at gas line crossing, 1.2 mi downstream from Van Bremer Arroyo, and 18 mi southeast of Thatcher.

DRAINAGE AREA.--1,791 mi², of which 11.8 mi² is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1966 to current year. Statistical summary computed for 1976 to current year, subsequent to completion of Trinidad Reservoir. Daily records of specific conductance and water temperature available, December 1982 to April 1998. Daily records of suspended-sediment discharge available, May 1983 to November 1983, March 1984 to September 1992. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07126300

REVISED RECORDS.--WDR CO-01-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gages. Elevation of gage is 4,790 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 storage reservoirs, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Peak flows regulated to some extent by Trinidad Lake (station 07124400) 52 mi upstream since January 1975. 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 OUTSIDE PERIOD OF RECORD.--Floods of July 22, 1954 and May 19, 1955, reached stages of 26.7 and 25.2 ft, respectively, from floodmarks, discharges unknown. Flood of June 18, 1965, reached a stage of 23.5 ft, from floodmarks, discharge, 47,700 ft³/s.

**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	1.00	e1.5	4.7	e9.2	6.9	e11	32	18	61	20	2.2	19
2	0.83	e1.6	4.7	e9.3	5.9	e11	63	12	18	12	1.2	22
3	0.75	e1.7	5.4	9.5	5.8	e12	172	12	12	10	0.74	11
4	0.62	e1.9	6.7	9.7	5.4	12	141	9.6	23	4.6	1.6	9.9
5	0.55	2.3	7.0	10	5.2	12	76	8.1	64	2.3	20	39
6	0.46	2.4	13	11	5.7	11	53	7.1	196	1.2	3.3	143
7	0.41	2.2	8.9	11	5.8	11	41	6.9	90	0.63	21	240
8	0.39	2.3	6.8	9.5	5.6	10	35	6.6	71	0.33	35	166
9	0.34	2.5	6.7	10	6.7	9.5	30	6.1	70	0.05	187	44
10	0.32	2.9	6.8	9.8	7.1	9.3	24	5.8	64	0.00	140	19
11	0.28	3.2	6.9	9.0	8.4	8.7	20	5.2	70	0.00	11	13
12	0.25	3.2	6.9	8.3	9.4	8.5	19	4.5	68	0.00	3.9	7.7
13	0.24	2.9	6.8	7.8	11	8.4	39	3.9	31	0.00	1.7	8.0
14	0.22	2.8	6.3	7.9	12	8.0	47	3.5	16	0.00	0.78	27
15	0.23	3.2	e6.6	8.2	12	7.4	34	4.1	11	0.00	0.37	20
16	0.25	5.7	e6.6	8.1	12	17	35	4.7	7.7	0.00	0.12	14
17	0.27	5.5	e6.8	8.2	13	9.6	32	4.4	7.8	0.00	0.00	7.7
18	0.30	5.7	e6.8	7.2	12	7.5	21	4.2	142	0.00	0.00	5.0
19	0.29	5.5	e6.8	6.9	12	11	17	3.9	45	0.00	12	3.7
20	0.30	5.2	e6.7	6.9	12	19	20	2.9	36	0.00	6.2	2.4
21	0.30	5.4	e6.6	e7.4	13	22	38	2.4	35	0.00	0.98	1.6
22	0.30	5.2	e6.8	e7.8	12	32	111	2.0	27	0.00	0.31	2.3
23	0.36	4.7	e6.8	e8.0	11	38	313	1.8	28	0.00	0.29	3.1
24	0.40	4.6	e7.0	e8.6	10	93	297	3.6	14	24	0.13	4.9
25	0.39	4.7	e7.0	9.4	e10	192	127	44	15	10	0.00	5.0
26	0.38	4.4	7.0	9.5	e11	168	80	45	13	7.5	0.00	2.7
27	0.52	4.7	7.1	9.5	12	206	66	14	8.6	6.0	0.00	1.5
28	0.60	5.1	7.2	9.6	10	115	58	7.6	5.1	36	0.00	7.0
29	0.51	5.2	8.1	9.6	---	61	42	5.8	3.1	23	0.00	20
30	e1.0	4.9	9.1	9.3	---	41	27	4.3	3.6	13	0.14	11
31	e1.3	---	9.2	8.3	---	31	---	48	---	4.5	33	---
TOTAL	14.36	113.1	219.8	274.5	262.9	1,212.9	2,110	312.0	1,255.9	175.11	482.96	880.5
MEAN	0.46	3.77	7.09	8.85	9.39	39.1	70.3	10.1	41.9	5.65	15.6	29.4
MAX	1.3	5.7	13	11	13	206	313	48	196	36	187	240
MIN	0.22	1.5	4.7	6.9	5.2	7.4	17	1.8	3.1	0.00	0.00	1.5
AC-FT	28	224	436	544	521	2,410	4,190	619	2,490	347	958	1,750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	32.8	31.3	28.0	27.3	29.1	36.8	83.4	125	90.0	81.9	129	58.2																
MAX	84.0	66.4	44.3	43.2	53.3	143	467	592	764	547	910	302																
(WY)	(1986)	(1999)	(1987)	(1988)	(1987)	(1998)	(1983)	(1987)	(1983)	(1981)	(1981)	(1981)																
MIN	0.46	3.71	7.09	8.85	9.39	5.97	1.38	1.45	6.69	5.65	0.012	0.64																
(WY)	(2003)	(1979)	(2003)	(2003)	(2003)	(1977)	(1978)	(2002)	(1976)	(2003)	(2002)	(1978)																

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1976 - 2003

ANNUAL TOTAL	5,567.03		7,314.03		
ANNUAL MEAN	15.3		20.0		a63.0
HIGHEST ANNUAL MEAN					181
LOWEST ANNUAL MEAN					12.3
HIGHEST DAILY MEAN	1,140	Sep 10	313	Apr 23	10,000
LOWEST DAILY MEAN	0.00	Jun 20	0.00	Jul 10	b0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 5	0.00	Jul 10	0.00
MAXIMUM PEAK FLOW			807	Aug 10	c42,400
MAXIMUM PEAK STAGE			5.80	Aug 10	22.00
ANNUAL RUNOFF (AC-FT)	11,040		14,510		45,660
10 PERCENT EXCEEDS	19		45		103
50 PERCENT EXCEEDS	4.9		7.5		29
90 PERCENT EXCEEDS	0.00		0.30		5.3

e Estimated.

a Average discharge for 10 years (water years 1967-76), 37.9 ft³/s, 27,460 acre-ft/yr, prior to completion of Trinidad Dam.

b No flow at times during many years.

c From rating curve extended above 2,020 ft³/s on basis of slope-area measurements of peak flow at gage heights 12.25 ft and 23.50 ft.

07126300 PURGATOIRE RIVER NEAR THATCHER, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 1999 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=07126300

GAGE.--Tipping-bucket rain gage with satellite telemetry.

REMARKS.--Estimated daily precipitation records are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 2.79 inches, Aug. 21, 2000.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.74 inches, Aug. 8.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	---	---	---	---	---	0.00	0.02	0.00	0.00	0.00
2	0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.15	0.00
3	e0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.11
4	---	---	---	---	---	---	---	0.00	0.10	0.00	0.09	0.00
5	---	---	---	---	---	---	---	0.00	0.55	0.00	0.21	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.20
7	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.42
8	---	---	---	---	---	---	0.00	0.00	0.00	0.00	1.74	0.00
9	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.62	0.26
10	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.11	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.07	0.00	0.00	0.01
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.27	0.38	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.83	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.10	0.00
19	---	---	---	---	---	---	0.35	0.00	0.11	0.00	0.27	0.00
20	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.23	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.07	0.00	0.00
28	---	---	---	---	---	---	0.00	0.00	0.00	0.06	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.06	0.00	0.15	0.00
30	---	---	---	---	---	---	0.00	0.17	0.01	0.00	0.36	0.00
31	---	---	---	---	---	---	---	0.01	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	0.80	1.88	0.13	3.69	1.00
MAX	---	---	---	---	---	---	---	0.38	0.83	0.07	1.74	0.42

e Estimated.

07126325 TAYLOR ARROYO BELOW ROCK CROSSING NEAR THATCHER, CO

LOCATION.--Lat 37°25'27", long 103°55'11", in SE¹/₄SE¹/₄ sec.17, T.30 S., R.58 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site, on left bank 2.0 mi downstream from Rock Crossing, 5 mi upstream from mouth, and 13.5 mi southeast of Thatcher.

DRAINAGE AREA.--48.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1983 to September 1998, October 1998 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=07126325

GAGE.--Water-stage recorder with satellite telemetry, concrete control, and crest-stage gages. Elevation of gage is 4,982 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Natural flow of stream affected by erosion-control and livestock-watering reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,090 ft³/s, Sept. 30, 1998, gage height, 13.71 ft, from slope-area measurement of peak flow; no flow on many days during most years.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 2.1 ft³/s, June 17, gage height, 4.22 ft; no flow on most days.

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	0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
2	0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
3	e0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
4	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
5	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
7	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
8	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
10	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.11	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.03	0.00	0.00	0.00
19	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
20	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
30	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
31	---	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	0.00	0.14	0.00	0.00	0.00
MEAN	---	---	---	---	---	---	---	0.000	0.005	0.000	0.000	0.000
MAX	---	---	---	---	---	---	---	0.00	0.11	0.00	0.00	0.00
MIN	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	0.00	0.3	0.00	0.00	0.00

e Estimated.

07126325 TAYLOR ARROYO BELOW ROCK CROSSING NEAR THATCHER, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
	JANUARY			FEBRUARY			MARCH		
1	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---
		APRIL		MAY		JUNE			
1	---	---	---	0.00	---	---	0.00	---	---
2	---	---	---	0.00	---	---	0.00	---	---
3	---	---	---	0.00	---	---	0.00	---	---
4	---	---	---	0.00	---	---	0.00	---	---
5	---	---	---	0.00	---	---	0.00	---	---
6	---	---	---	0.00	---	---	0.00	---	---
7	---	---	---	0.00	---	---	0.00	---	---
8	e0.00	---	---	0.00	---	---	0.00	---	---
9	0.00	---	---	0.00	---	---	0.00	---	---
10	0.00	---	---	0.00	---	---	0.00	---	---
11	0.00	---	---	0.00	---	---	0.00	---	---
12	0.00	---	---	0.00	---	---	0.00	---	---
13	0.00	---	---	0.00	---	---	0.00	---	---
14	0.00	---	---	0.00	---	---	0.00	---	---
15	0.00	---	---	0.00	---	---	0.00	---	---
16	0.00	---	---	0.00	---	---	0.00	---	---
17	0.00	---	---	0.00	---	---	0.11	81	0.17
18	0.00	---	---	0.00	---	---	0.03	90	0.02
19	0.00	---	---	0.00	---	---	0.00	---	---
20	0.00	---	---	0.00	---	---	0.00	---	---
21	0.00	---	---	0.00	---	---	0.00	---	---
22	0.00	---	---	0.00	---	---	0.00	---	---
23	0.00	---	---	0.00	---	---	0.00	---	---
24	0.00	---	---	0.00	---	---	0.00	---	---
25	0.00	---	---	0.00	---	---	0.00	---	---
26	0.00	---	---	0.00	---	---	0.00	---	---
27	0.00	---	---	0.00	---	---	0.00	---	---
28	0.00	---	---	0.00	---	---	0.00	---	---
29	0.00	---	---	0.00	---	---	0.00	---	---
30	0.00	---	---	0.00	---	---	0.00	---	---
31	---	---	---	0.00	---	---	---	---	---
TOTAL	---	---	---	0.00	---	---	0.14	---	---

07126325 TAYLOR ARROYO BELOW ROCK CROSSING NEAR THATCHER, CO—Continued

 SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
		JULY			AUGUST			SEPTEMBER	
1	0.00	---	---	0.00	---	---	0.00	---	---
2	0.00	---	---	0.00	---	---	0.00	---	---
3	0.00	---	---	0.00	---	---	0.00	---	---
4	0.00	---	---	0.00	---	---	0.00	---	---
5	0.00	---	---	0.00	---	---	0.00	---	---
6	0.00	---	---	0.00	---	---	0.00	---	---
7	0.00	---	---	0.00	---	---	0.00	---	---
8	0.00	---	---	0.00	---	---	0.00	---	---
9	0.00	---	---	0.00	---	---	0.00	---	---
10	0.00	---	---	0.00	---	---	0.00	---	---
11	0.00	---	---	0.00	---	---	0.00	---	---
12	0.00	---	---	0.00	---	---	0.00	---	---
13	0.00	---	---	0.00	---	---	0.00	---	---
14	0.00	---	---	0.00	---	---	0.00	---	---
15	0.00	---	---	0.00	---	---	0.00	---	---
16	0.00	---	---	0.00	---	---	0.00	---	---
17	0.00	---	---	0.00	---	---	0.00	---	---
18	0.00	---	---	0.00	---	---	0.00	---	---
19	0.00	---	---	0.00	---	---	0.00	---	---
20	0.00	---	---	0.00	---	---	0.00	---	---
21	0.00	---	---	0.00	---	---	0.00	---	---
22	0.00	---	---	0.00	---	---	0.00	---	---
23	0.00	---	---	0.00	---	---	0.00	---	---
24	0.00	---	---	0.00	---	---	0.00	---	---
25	0.00	---	---	0.00	---	---	0.00	---	---
26	0.00	---	---	0.00	---	---	0.00	---	---
27	0.00	---	---	0.00	---	---	0.00	---	---
28	0.00	---	---	0.00	---	---	0.00	---	---
29	0.00	---	---	0.00	---	---	0.00	---	---
30	0.00	---	---	0.00	---	---	0.00	---	---
31	0.00	---	---	0.00	---	---	---	---	---
TOTAL	0.00	---	---	0.00	---	---	0.00	---	---

e Estimated.

07126325 TAYLOR ARROYO BELOW ROCK CROSSING NEAR THATCHER, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 1999 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=07126325

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 3.23 inches, Aug. 21, 2000.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.14 inches, June 17.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	---	---	---	---	---	0.00	0.02	0.00	0.00	0.00
2	0.00	---	---	---	---	---	---	0.01	0.03	0.00	0.00	0.00
3	e0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.12
4	---	---	---	---	---	---	---	0.00	0.20	0.00	0.23	0.00
5	---	---	---	---	---	---	---	0.00	0.50	0.00	0.07	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.39
7	---	---	---	---	---	---	---	0.00	0.02	0.00	0.00	0.00
8	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.53	0.00
9	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.15
10	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.01
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.05	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.04	0.00	0.00	0.09
14	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.24	0.25	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	1.14	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
19	---	---	---	---	---	---	0.29	0.01	0.04	0.37	0.00	0.00
20	---	---	---	---	---	---	0.00	0.02	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.09	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	0.00	0.00	0.00	0.14	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.12	0.00	0.27	0.00
30	---	---	---	---	---	---	0.00	0.16	0.00	0.00	0.25	0.00
31	---	---	---	---	---	---	---	0.02	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	0.57	2.16	0.51	1.35	0.76
MAX	---	---	---	---	---	---	---	0.25	1.14	0.37	0.53	0.39

e Estimated.

07126390 LOCKWOOD CANYON CREEK NEAR THATCHER, CO

LOCATION.--Lat 37°29'34", long 103°49'39", in SW¹/₄NE¹/₄ sec.30, T.29 S., R.57 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site, on left bank 0.8 mi downstream from Sharp Ranch, 5.3 mi upstream from mouth, and 16 mi southeast of Thatcher.

DRAINAGE AREA.--48.8 mi² (revised).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1983 to September 1992, October 1992 to May 1999 (annual maximum only), May 1999 to current year (seasonal records only). Records prior to May 14, 1999, may not be equivalent because of difference in drainage area. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07126390

REVISED RECORDS.--WDR CO-86-1: 1983-84. WDR CO-97-1: 1987(M).

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gages. Elevation of gage is 4,785 ft above NGVD of 1929, from topographic map. April 1983 to May 2, 1989, at site 0.4 mile upstream at different datum. May 3, 1989 to May 13, 1999, at site 0.2 mile upstream at different datum.

REMARKS.--Records good. Natural flow of stream affected by erosion-control and livestock-watering reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft³/s, May 22, 1987, from slope-area measurement of peak flow, gage height, 10.39 ft, site and datum then in use; no flow on most days.

EXTREMES FOR CURRENT YEAR (seasonal only).--No flow during current 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	0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
2	0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
3	e0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
4	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
5	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
7	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
8	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
10	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
19	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
20	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
30	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
31	---	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
MEAN	---	---	---	---	---	---	---	0.000	0.000	0.000	0.000	0.000
MAX	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
MIN	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00

e Estimated.

07126390 LOCKWOOD CANYON CREEK NEAR THATCHER, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1983 to September 1992, May 1999 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=07126390

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1983 to September 1992.

WATER TEMPERATURE: June 1983 to September 1992.

SUSPENDED SEDIMENT: May 1999 to current year (seasonal records only).

INSTRUMENTATION.--Pumping sediment sampler with satellite telemetry. June 1983 to September 1992, water-quality monitor at site 0.4 mi upstream.

REMARKS.--Daily suspended-sediment records are poor. Daily mean suspended-sediment concentrations published for days of partial flow might not reflect concentrations during the flow event including June 13.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATION (seasonal only): Maximum daily mean, 827 mg/L, June 13, 1999; minimum daily, 6 mg/L, Aug. 7, 1999.

SUSPENDED SEDIMENT DISCHARGE (seasonal only): Maximum daily, 66 tons, June 13, 1999; minimum daily, 0.0 ton, on many days during 1999, no flow on most days.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION (seasonal only): No flow during current year.

SUSPENDED-SEDIMENT DISCHARGE (seasonal only): No flow during current year.

*****NO FLOW DURING 2003 WATER YEAR*****

07126390 LOCKWOOD CANYON CREEK NEAR THATCHER, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 1999 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=07126390

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.71 inches, Aug. 10, 2001.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 0.84 inch, June 17.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	---	---	---	---	---	0.00	0.04	0.00	0.00	0.00
2	0.00	---	---	---	---	---	---	0.03	0.01	0.00	0.00	0.00
3	e0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.13
4	---	---	---	---	---	---	---	0.00	0.09	0.00	0.12	0.00
5	---	---	---	---	---	---	---	0.00	0.57	0.00	0.09	0.00
6	---	---	---	---	---	---	---	0.00	0.02	0.00	0.00	0.24
7	---	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.04
8	---	---	---	---	---	---	---	0.00	0.00	0.00	0.07	0.00
9	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.18
10	---	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.05	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.12	0.00	0.00	0.10
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.44	0.22	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.01	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.84	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.01	0.00	0.02	0.00
19	---	---	---	---	---	---	0.49	0.01	0.01	0.01	0.01	0.00
20	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.30	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.01	0.01	0.00	0.11	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.02	0.00	0.00
28	---	---	---	---	---	---	0.01	0.00	0.00	0.29	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.08	0.01	0.12	0.00
30	---	---	---	---	---	---	0.00	0.07	0.00	0.00	0.22	0.00
31	---	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	0.64	1.87	0.33	0.77	0.69
MAX	---	---	---	---	---	---	---	0.30	0.84	0.29	0.22	0.24

e Estimated.

07126415 RED ROCK CANYON CREEK AT MOUTH NEAR THATCHER, CO

LOCATION.--Lat 37°30'55", long 103°43'30", Las Animas County, Hydrologic Unit 11020010, on left bank 200 ft downstream from Welsh Canyon Creek, 0.3 mi upstream from mouth, and 21 mi east of Thatcher.

DRAINAGE AREA.--48.9 mi² (revised).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1983 to September 1990, October 1990 to April 2000 (annual maximum only), April 2000 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=07126415

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gages. Elevation of gage is 4,510 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by erosion-control and livestock-watering reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,430 ft³/s, June 13, 2002, from slope-area measurement of peak flow, gage height, 11.46 ft, from floodmarks; no flow on many days most years.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 555 ft³/s, May 30, (gage height 7.90 ft, from floodmarks) from rating curve extended above 292 ft³/s on basis of step-backwater analysis and slope-area measurements of peak flow at gage heights, 7.54 ft, 8.40 ft, and 11.46 ft; no flow on most days.

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	0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
2	e0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
3	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
4	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
5	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
7	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
8	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
10	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	2.9	0.00	0.00	0.00
14	---	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
15	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
19	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
20	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	0.00	0.00	3.4	0.00	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	e0.09	0.00	0.00	0.00
30	---	---	---	---	---	---	0.00	17	0.00	0.00	0.00	0.00
31	---	---	---	---	---	---	---	e0.26	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	17.26	6.40	0.00	0.00	0.00
MEAN	---	---	---	---	---	---	---	0.56	0.21	0.000	0.000	0.000
MAX	---	---	---	---	---	---	---	17	3.4	0.00	0.00	0.00
MIN	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	34	13	0.00	0.00	0.00

e Estimated.

07126415 RED ROCK CANYON CREEK AT MOUTH NEAR THATCHER, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---
		APRIL		MAY			JUNE		
1	---	---	---	0.00	---	---	0.00	---	---
2	---	---	---	0.00	---	---	0.00	---	---
3	---	---	---	0.00	---	---	0.00	---	---
4	---	---	---	0.00	---	---	0.00	---	---
5	---	---	---	0.00	---	---	0.00	---	---
6	---	---	---	0.00	---	---	0.00	---	---
7	---	---	---	0.00	---	---	0.00	---	---
8	---	---	---	0.00	---	---	0.00	---	---
9	e0.00	---	---	0.00	---	---	0.00	---	---
10	0.00	---	---	0.00	---	---	0.00	---	---
11	0.00	---	---	0.00	---	---	0.00	---	---
12	0.00	---	---	0.00	---	---	0.00	---	---
13	0.00	---	---	0.00	---	---	2.9	---	---
14	0.00	---	---	0.00	---	---	0.01	---	e7
15	0.00	---	---	0.00	---	---	0.00	---	e0.00
16	0.00	---	---	0.00	---	---	0.00	---	---
17	0.00	---	---	0.00	---	---	0.00	---	---
18	0.00	---	---	0.00	---	---	0.00	---	---
19	0.00	---	---	0.00	---	---	0.00	---	---
20	0.00	---	---	0.00	---	---	0.00	---	---
21	0.00	---	---	0.00	---	---	0.00	---	---
22	0.00	---	---	0.00	---	---	0.00	---	---
23	0.00	---	---	0.00	---	---	0.00	---	---
24	0.00	---	---	0.00	---	---	0.00	---	---
25	0.00	---	---	0.00	---	---	0.00	---	---
26	0.00	---	---	0.00	---	---	0.00	---	---
27	0.00	---	---	0.00	---	---	0.00	---	---
28	0.00	---	---	0.00	---	---	3.4	---	e9
29	0.00	---	---	0.00	---	---	e0.09	---	e0.03
30	0.00	---	---	17	202	107	0.00	---	---
31	---	---	---	e0.26	---	e0.18	---	---	---
TOTAL	---	---	---	17.26	---	---	6.40	---	---

07126415 RED ROCK CANYON CREEK AT MOUTH NEAR THATCHER, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
		JULY			AUGUST			SEPTEMBER	
1	0.00	---	---	0.00	---	---	0.00	---	---
2	0.00	---	---	0.00	---	---	0.00	---	---
3	0.00	---	---	0.00	---	---	0.00	---	---
4	0.00	---	---	0.00	---	---	0.00	---	---
5	0.00	---	---	0.00	---	---	0.00	---	---
6	0.00	---	---	0.00	---	---	0.00	---	---
7	0.00	---	---	0.00	---	---	0.00	---	---
8	0.00	---	---	0.00	---	---	0.00	---	---
9	0.00	---	---	0.00	---	---	0.00	---	---
10	0.00	---	---	0.00	---	---	0.00	---	---
11	0.00	---	---	0.00	---	---	0.00	---	---
12	0.00	---	---	0.00	---	---	0.00	---	---
13	0.00	---	---	0.00	---	---	0.00	---	---
14	0.00	---	---	0.00	---	---	0.00	---	---
15	0.00	---	---	0.00	---	---	0.00	---	---
16	0.00	---	---	0.00	---	---	0.00	---	---
17	0.00	---	---	0.00	---	---	0.00	---	---
18	0.00	---	---	0.00	---	---	0.00	---	---
19	0.00	---	---	0.00	---	---	0.00	---	---
20	0.00	---	---	0.00	---	---	0.00	---	---
21	0.00	---	---	0.00	---	---	0.00	---	---
22	0.00	---	---	0.00	---	---	0.00	---	---
23	0.00	---	---	0.00	---	---	0.00	---	---
24	0.00	---	---	0.00	---	---	0.00	---	---
25	0.00	---	---	0.00	---	---	0.00	---	---
26	0.00	---	---	0.00	---	---	0.00	---	---
27	0.00	---	---	0.00	---	---	0.00	---	---
28	0.00	---	---	0.00	---	---	0.00	---	---
29	0.00	---	---	0.00	---	---	0.00	---	---
30	0.00	---	---	0.00	---	---	0.00	---	---
31	0.00	---	---	0.00	---	---	---	---	---
TOTAL	0.00	---	---	0.00	---	---	0.00	---	---

e Estimated.

07126415 RED ROCK CANYON CREEK AT MOUTH NEAR THATCHER, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 2000 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=07126415

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 2.20 inches, Sept. 9, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 0.85 inch, June 13.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	---	---	---	---	---	0.00	0.05	0.00	0.00	0.00
2	e0.00	---	---	---	---	---	---	0.06	0.04	0.00	0.00	0.00
3	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.06
4	---	---	---	---	---	---	---	0.00	0.01	0.00	0.06	0.00
5	---	---	---	---	---	---	---	0.00	0.52	0.00	0.22	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.11	0.00	0.06
7	---	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.15
8	---	---	---	---	---	---	---	0.00	0.00	0.00	0.02	0.00
9	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.11	0.19
10	---	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.04	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.85	0.00	0.00	0.08
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.01
15	---	---	---	---	---	---	0.65	0.31	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.07	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.12	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.03	0.00	0.07	0.00
19	---	---	---	---	---	---	0.54	0.00	0.05	0.05	0.01	0.00
20	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.01	0.25	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.03	0.00	0.06	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	0.02	0.00	0.07	0.20	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
30	---	---	---	---	---	---	0.00	0.77	0.00	0.00	0.35	0.00
31	---	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	1.39	1.85	0.36	0.90	0.55
MAX	---	---	---	---	---	---	---	0.77	0.85	0.20	0.35	0.19

e Estimated.

07126480 BENT CANYON CREEK AT MOUTH NEAR TIMPAS, CO

LOCATION.--Lat 37°35'21", long 103°38'52", in SE¹/₄SE¹/₄ sec.23, T.28 S., R.65 W., Las Animas County, Hydrologic Unit 11020010, on Comanche National Grassland, on left bank 0.5 mi upstream from mouth, 0.6 mi southwest of Rourke Ranch house, 0.9 mi upstream from Iron Canyon, and 17 mi southeast of Timpas.

DRAINAGE AREA.--56.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1983 to September 1990, October 1990 to May 2000 (annual maximum only), June 2000 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=07126480

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gages. Elevation of gage is 4,402 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Natural flow of stream affected by erosion-control and livestock-watering reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,640 ft³/s, Aug. 21, 1984, from slope-area measurement of peak flow, gage height, 12.56 feet, from floodmark; no flow on many days during most years.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 138 ft³/s, July 15, gage height, 6.04 ft, from rating curve extended above 0.50 ft³/s on the basis of step-backwater analysis of flow and slope-area measurements of peak flow at gage heights 4.67 ft, 8.70 ft, 8.93 ft, 11.61 ft, and 12.56 ft; no flow on most days.

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	0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
2	e0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
3	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
4	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
5	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
7	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
8	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
10	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.00
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.00	0.00	0.00	8.8	0.00	0.00
16	---	---	---	---	---	---	0.00	0.00	0.00	3.0	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.00	e0.01	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
19	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
20	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	9.9	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	0.00	e0.05	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	0.00	0.00	1.4	0.00	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	e0.06	0.00	0.00	0.00
30	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
31	---	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	9.95	1.46	11.81	0.00	0.00
MEAN	---	---	---	---	---	---	---	0.32	0.049	0.38	0.000	0.000
MAX	---	---	---	---	---	---	---	9.9	1.4	8.8	0.00	0.00
MIN	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	20	2.9	23	0.00	0.00

e Estimated.

07126480 BENT CANYON CREEK AT MOUTH NEAR TIMPAS, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---
		APRIL			MAY			JUNE	
1	---	---	---	0.00	---	---	0.00	---	---
2	---	---	---	0.00	---	---	0.00	---	---
3	---	---	---	0.00	---	---	0.00	---	---
4	---	---	---	0.00	---	---	0.00	---	---
5	---	---	---	0.00	---	---	0.00	---	---
6	---	---	---	0.00	---	---	0.00	---	---
7	---	---	---	0.00	---	---	0.00	---	---
8	---	---	---	0.00	---	---	0.00	---	---
9	---	---	---	0.00	---	---	0.00	---	---
10	e0.00	---	---	0.00	---	---	0.00	---	---
11	0.00	---	---	0.00	---	---	0.00	---	---
12	0.00	---	---	0.00	---	---	0.00	---	---
13	0.00	---	---	0.00	---	---	0.00	---	---
14	0.00	---	---	0.00	---	---	0.00	---	---
15	0.00	---	---	0.00	---	---	0.00	---	---
16	0.00	---	---	0.00	---	---	0.00	---	---
17	0.00	---	---	0.00	---	---	0.00	---	---
18	0.00	---	---	0.00	---	---	0.00	---	---
19	0.00	---	---	0.00	---	---	0.00	---	---
20	0.00	---	---	0.00	---	---	0.00	---	---
21	0.00	---	---	0.00	---	---	0.00	---	---
22	0.00	---	---	0.00	---	---	0.00	---	---
23	0.00	---	---	0.00	---	---	0.00	---	---
24	0.00	---	---	0.00	---	---	0.00	---	---
25	0.00	---	---	9.9	2,350	114	0.00	---	---
26	0.00	---	---	e0.05	---	e0.01	0.00	---	---
27	0.00	---	---	0.00	---	---	0.00	---	---
28	0.00	---	---	0.00	---	---	1.4	368	9.1
29	0.00	---	---	0.00	---	---	e0.06	---	e0.04
30	0.00	---	---	0.00	---	---	0.00	---	---
31	---	---	---	0.00	---	---	---	---	---
TOTAL	---	---	---	9.95	---	---	1.46	---	---

07126480 BENT CANYON CREEK AT MOUTH NEAR TIMPAS, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	JULY			AUGUST			SEPTEMBER		
		Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	
1	0.00	---	---	0.00	---	---	0.00	---	---	
2	0.00	---	---	0.00	---	---	0.00	---	---	
3	0.00	---	---	0.00	---	---	0.00	---	---	
4	0.00	---	---	0.00	---	---	0.00	---	---	
5	0.00	---	---	0.00	---	---	0.00	---	---	
6	0.00	---	---	0.00	---	---	0.00	---	---	
7	0.00	---	---	0.00	---	---	0.00	---	---	
8	0.00	---	---	0.00	---	---	0.00	---	---	
9	0.00	---	---	0.00	---	---	0.00	---	---	
10	0.00	---	---	0.00	---	---	0.00	---	---	
11	0.00	---	---	0.00	---	---	0.00	---	---	
12	0.00	---	---	0.00	---	---	0.00	---	---	
13	0.00	---	---	0.00	---	---	0.00	---	---	
14	0.00	---	---	0.00	---	---	0.00	---	---	
15	8.8	473	67	0.00	---	---	0.00	---	---	
16	3.0	538	7.4	0.00	---	---	0.00	---	---	
17	e0.01	---	e0.00	0.00	---	---	0.00	---	---	
18	0.00	---	---	0.00	---	---	0.00	---	---	
19	0.00	---	---	0.00	---	---	0.00	---	---	
20	0.00	---	---	0.00	---	---	0.00	---	---	
21	0.00	---	---	0.00	---	---	0.00	---	---	
22	0.00	---	---	0.00	---	---	0.00	---	---	
23	0.00	---	---	0.00	---	---	0.00	---	---	
24	0.00	---	---	0.00	---	---	0.00	---	---	
25	0.00	---	---	0.00	---	---	0.00	---	---	
26	0.00	---	---	0.00	---	---	0.00	---	---	
27	0.00	---	---	0.00	---	---	0.00	---	---	
28	0.00	---	---	0.00	---	---	0.00	---	---	
29	0.00	---	---	0.00	---	---	0.00	---	---	
30	0.00	---	---	0.00	---	---	0.00	---	---	
31	0.00	---	---	0.00	---	---	---	---	---	
TOTAL	11.81	---	---	0.00	---	---	0.00	---	---	

e Estimated.

07126480 BENT CANYON CREEK AT MOUTH NEAR TIMPAS, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--June 2000 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=07126480

GAGE.--Tipping-bucket rain gage with satellite telemetry.

REMARKS.--Records during Apr. 10 to July 2 are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 2.28 inches, July 11, 2000.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 0.88 inch, June 5.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	---	---	---	---	---	0.00	0.02	0.00	0.00	0.00
2	e0.01	---	---	---	---	---	---	0.00	0.00	0.00	0.15	0.00
3	---	---	---	---	---	---	---	0.00	0.04	0.00	0.00	0.05
4	---	---	---	---	---	---	---	0.00	0.00	0.00	0.03	0.00
5	---	---	---	---	---	---	---	0.00	0.88	0.00	0.07	0.00
6	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
7	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.06
8	---	---	---	---	---	---	---	0.00	0.00	0.00	0.02	0.00
9	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.14
10	---	---	---	---	---	---	e0.00	0.00	0.00	0.00	0.00	0.01
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.56	0.00	0.00	0.09
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.81	0.41	0.00	0.73	0.00	0.00
16	---	---	---	---	---	---	0.11	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.25	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.06	0.00	0.01	0.00
19	---	---	---	---	---	---	0.77	0.00	0.00	0.09	0.01	0.00
20	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.04	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.13	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.01	0.00	0.00
28	---	---	---	---	---	---	0.08	0.00	0.13	0.18	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.03	0.01	0.03	0.00
30	---	---	---	---	---	---	0.00	0.02	0.00	0.00	0.24	0.00
31	---	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	0.60	1.97	1.02	0.56	0.35
MAX	---	---	---	---	---	---	---	0.41	0.88	0.73	0.24	0.14

e Estimated.

07126485 PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS, CO

LOCATION.--Lat 37°37'06", long 103°35'35" in NE¹/₄SE¹/₄ sec. 10, T.28 S., R.55 W., Las Animas County, Hydrologic Unit 11020010, on right bank at Rock Crossing, 2.1 mi upstream from Minnie Canyon, 2.4 mi downstream from Beaty Canyon, and 17 mi southeast of Timpas.

DRAINAGE AREA.--2,635 mi², of which 11.8 mi² is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 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=07126485

REVISED RECORD.--WDR CO-87-1: 1984-86 (M). WDR CO-01-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gages. Elevation of gage is 4,350 ft above NGVD of 1929, from topographic map. June 1, 1983 to July 17, 1985, at site 500 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Peak flows are regulated to some extent by Trinidad Lake (station 07124400) 92 mi upstream.

**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	4.2	0.92	4.6	e11	11	11	35	31	20	3.8	5.1	0.21
2	3.4	0.92	4.6	e12	10	12	32	23	58	2.6	2.5	0.15
3	2.9	0.85	5.0	13	9.2	12	74	18	26	5.8	1.4	7.5
4	2.3	0.82	5.6	12	8.1	12	198	14	15	7.0	0.84	14
5	2.0	0.80	5.5	12	7.1	13	133	13	16	6.4	0.54	7.1
6	1.6	0.77	5.6	11	7.1	13	73	12	138	3.9	0.27	19
7	1.5	0.76	6.0	11	6.5	13	55	10	124	2.4	0.09	192
8	1.3	0.74	11	11	6.4	12	43	8.8	81	1.7	0.00	241
9	1.2	0.98	9.2	11	6.7	12	37	8.0	71	1.2	465	133
10	1.1	1.4	7.4	11	6.9	11	32	7.4	67	0.83	253	44
11	0.91	1.4	6.7	11	7.1	11	28	7.0	63	0.56	61	23
12	0.85	1.5	6.8	11	7.6	10	24	6.5	68	0.38	20	14
13	0.78	1.9	6.6	10	8.6	9.9	20	6.0	66	0.20	9.3	11
14	0.74	2.0	7.1	9.7	10	9.4	33	5.5	40	0.08	4.9	7.2
15	0.68	2.4	6.9	9.1	12	9.3	46	5.8	21	0.01	2.9	8.8
16	0.67	3.1	6.8	8.9	13	9.1	44	6.0	14	5.3	1.8	19
17	0.66	3.2	6.5	9.3	12	10	32	5.4	52	1.2	1.3	14
18	0.66	2.8	e6.6	9.0	13	18	34	4.5	25	0.47	0.90	9.6
19	0.66	3.7	e6.6	9.7	14	19	28	4.8	122	0.23	0.66	6.4
20	0.67	4.3	e6.7	8.3	14	25	23	4.5	43	0.16	0.46	4.7
21	0.66	4.7	e6.6	8.1	13	24	19	4.2	30	0.02	0.31	3.5
22	0.66	4.6	e6.7	8.1	13	24	33	4.1	32	0.00	0.21	2.6
23	0.60	4.6	e6.8	9.3	e12	31	147	3.7	22	0.00	1.8	2.1
24	0.68	4.6	e6.8	11	e12	37	378	3.4	25	0.00	1.5	1.7
25	0.72	4.6	e6.8	10	e11	123	220	43	17	0.00	0.92	1.4
26	0.74	4.3	e7.3	11	e11	194	116	17	11	0.00	0.61	1.1
27	1.1	4.1	e7.6	11	e10	199	76	41	12	0.00	0.39	0.87
28	0.96	3.9	e8.3	11	9.9	208	66	22	9.9	0.00	0.25	0.70
29	0.82	3.9	8.5	11	---	96	57	12	11	0.00	0.20	0.61
30	0.80	3.8	8.4	11	---	60	43	7.7	5.8	0.00	0.26	1.1
31	0.83	---	8.5	11	---	45	---	41	---	6.0	0.25	---
TOTAL	37.35	78.36	214.1	323.5	282.2	1,292.7	2,179	400.3	1,305.7	50.24	838.66	791.34
MEAN	1.20	2.61	6.91	10.4	10.1	41.7	72.6	12.9	43.5	1.62	27.1	26.4
MAX	4.2	4.7	11	13	14	208	378	43	138	7.0	465	241
MIN	0.60	0.74	4.6	8.1	6.4	9.1	19	3.4	5.8	0.00	0.00	0.15
AC-FT	74	155	425	642	560	2,560	4,320	794	2,590	100	1,660	1,570

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)

	39.7	38.0	32.3	30.7	33.1	44.4	85.2	121	95.9	71.3	113	47.3
MEAN												
MAX	89.1	68.3	43.4	41.4	56.0	139	330	585	836	186	468	124
(WY)	(1999)	(1999)	(1998)	(1984)	(1988)	(1998)	(1993)	(1987)	(1983)	(1992)	(1999)	(2002)
MIN	1.20	2.61	6.91	10.4	10.1	15.7	8.23	1.34	7.23	1.62	24.4	12.5
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2001)	(2003)	(2001)	(1990)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1983 - 2003

ANNUAL TOTAL	9,001.93	7,793.45	
ANNUAL MEAN	24.7	21.4	59.5
HIGHEST ANNUAL MEAN			123 1987
LOWEST ANNUAL MEAN			21.4 2003
HIGHEST DAILY MEAN	1,220 Sep 10	465 Aug 9	4,190 May 2, 1999
LOWEST DAILY MEAN	0.00 Jun 1	0.00 Jul 22	a0.00 Jun 30, 1990
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 1	0.00 Jul 22	0.00 Jun 30, 1990
MAXIMUM PEAK FLOW		2,050 Aug 9	b11,400 Jul 9, 1992
MAXIMUM PEAK STAGE		11.55 Aug 9	c17.90 Jul 9, 1992
ANNUAL RUNOFF (AC-FT)	17,860	15,460	43,100
10 PERCENT EXCEEDS	23	45	105
50 PERCENT EXCEEDS	6.0	7.6	33
90 PERCENT EXCEEDS	0.00	0.66	9.4

e Estimated.

a Also occurred many days during water years 1990, 2002-2003.

b From slope-area measurement of peak flow.

c From floodmarks.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to September 1992, June 1997 to current year (seasonal peaks only). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07126485

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1983 to September 1992.

WATER TEMPERATURE: July 1983 to September 1992.

SUSPENDED SEDIMENT: August 1983 to September 1992, June 1997 to current year (seasonal peaks only).

INSTRUMENTATION.--Pumping sediment sampler with satellite telemetry.

REMARKS.--Daily suspended-sediment records are published for days when instantaneous discharge exceeds 100 ft³/s. Daily mean suspended-sediment concentrations published for days of partial flow might not reflect mean concentrations during the flow event, including Aug. 9. Daily maximum and minimum specific conductance and daily mean water-temperature data for July 1983 to September 1992 are available in files of the district office.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 54,900 mg/L, Aug. 16, 1986; minimum daily mean, 5 mg/L, Mar. 22, 1988, and Feb. 10, 1989.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily (occurred during period of seasonal record), 287,000 tons (estimated), May 2, 1999; minimum daily, 0.0 ton (estimated), several days during 1989 and 1990.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS (seasonal peaks only): Maximum daily mean, 6,120 mg/L, Sept. 8; minimum daily mean, 115 mg/L, May 31.

SUSPENDED-SEDIMENT DISCHARGE (seasonal peaks only): Maximum daily, 13,200 tons, Aug. 9; minimum daily, 21 tons, May 31.

MISCELLANEOUS FIELD AND SUSPENDED-SEDIMENT DISCHARGE DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unflab, uS/cm 25 degC (90095)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT						
02...	1110	3.4	1,280	14.5	--	--
NOV						
12...	1620	1.6	2,710	9.5	--	--
JAN						
07...	1550	12	2,880	5.0	--	--
MAR						
05...	1540	13	2,990	7.0	--	--
APR						
10...	1830	34	942	17.0	198	18
30...	0845	45	921	17.0	284	35
JUN						
03...	1650	23	970	25.5	--	--
JUL						
02...	1110	2.4	1,410	26.5	--	--
AUG						
15...	1200	2.8	1,000	24.0	97	0.72
SEP						
19...	1355	6.3	1,640	20.0	--	--

07126485 PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
	OCTOBER			NOVEMBER			DECEMBER		
1	4.2	---	---	0.92	---	---	4.6	---	---
2	3.4	---	---	0.92	---	---	4.6	---	---
3	2.9	---	---	0.85	---	---	5.0	---	---
4	2.3	---	---	0.82	---	---	5.6	---	---
5	2.0	---	---	0.80	---	---	5.5	---	---
6	1.6	---	---	0.77	---	---	5.6	---	---
7	1.5	---	---	0.76	---	---	6.0	---	---
8	1.3	---	---	0.74	---	---	11	---	---
9	1.2	---	---	0.98	---	---	9.2	---	---
10	1.1	---	---	1.4	---	---	7.4	---	---
11	0.91	---	---	1.4	---	---	6.7	---	---
12	0.85	---	---	1.5	---	---	6.8	---	---
13	0.78	---	---	1.9	---	---	6.6	---	---
14	0.74	---	---	2.0	---	---	7.1	---	---
15	0.68	---	---	2.4	---	---	6.9	---	---
16	0.67	---	---	3.1	---	---	6.8	---	---
17	0.66	---	---	3.2	---	---	6.5	---	---
18	0.66	---	---	2.8	---	---	e6.6	---	---
19	0.66	---	---	3.7	---	---	e6.6	---	---
20	0.67	---	---	4.3	---	---	e6.7	---	---
21	0.66	---	---	4.7	---	---	e6.6	---	---
22	0.66	---	---	4.6	---	---	e6.7	---	---
23	0.60	---	---	4.6	---	---	e6.8	---	---
24	0.68	---	---	4.6	---	---	e6.8	---	---
25	0.72	---	---	4.6	---	---	e6.8	---	---
26	0.74	---	---	4.3	---	---	e7.3	---	---
27	1.1	---	---	4.1	---	---	e7.6	---	---
28	0.96	---	---	3.9	---	---	e8.3	---	---
29	0.82	---	---	3.9	---	---	8.5	---	---
30	0.80	---	---	3.8	---	---	8.4	---	---
31	0.83	---	---	---	---	---	8.5	---	---
TOTAL	37.35	---	---	78.36	---	---	214.1	---	---
	JANUARY			FEBRUARY			MARCH		
1	e11	---	---	11	---	---	11	---	---
2	e12	---	---	10	---	---	12	---	---
3	13	---	---	9.2	---	---	12	---	---
4	12	---	---	8.1	---	---	12	---	---
5	12	---	---	7.1	---	---	13	---	---
6	11	---	---	7.1	---	---	13	---	---
7	11	---	---	6.5	---	---	13	---	---
8	11	---	---	6.4	---	---	12	---	---
9	11	---	---	6.7	---	---	12	---	---
10	11	---	---	6.9	---	---	11	---	---
11	11	---	---	7.1	---	---	11	---	---
12	11	---	---	7.6	---	---	10	---	---
13	10	---	---	8.6	---	---	9.9	---	---
14	9.7	---	---	10	---	---	9.4	---	---
15	9.1	---	---	12	---	---	9.3	---	---
16	8.9	---	---	13	---	---	9.1	---	---
17	9.3	---	---	12	---	---	10	---	---
18	9.0	---	---	13	---	---	18	---	---
19	9.7	---	---	14	---	---	19	---	---
20	8.3	---	---	14	---	---	25	---	---
21	8.1	---	---	13	---	---	24	---	---
22	8.1	---	---	13	---	---	24	---	---
23	9.3	---	---	e12	---	---	31	---	---
24	11	---	---	e12	---	---	37	---	---
25	10	---	---	e11	---	---	123	---	---
26	11	---	---	e11	---	---	194	---	---
27	11	---	---	e10	---	---	199	---	---
28	11	---	---	9.9	---	---	208	---	---
29	11	---	---	---	---	---	96	---	---
30	11	---	---	---	---	---	60	---	---
31	11	---	---	---	---	---	45	---	---
TOTAL	323.5	---	---	282.2	---	---	1,292.7	---	---

07126485 PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS, CO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	35	---	---	31	---	---	20	---	---
2	32	---	---	23	---	---	58	---	---
3	74	---	e70	18	---	---	26	---	---
4	198	---	e900	14	---	---	15	---	---
5	133	---	e300	13	---	---	16	---	---
6	73	---	---	12	---	---	138	275	212
7	55	---	---	10	---	---	124	---	e160
8	43	---	---	8.8	---	---	81	---	e80
9	37	---	---	8.0	---	---	71	---	---
10	32	---	---	7.4	---	---	67	---	---
11	28	---	---	7.0	---	---	63	---	---
12	24	---	---	6.5	---	---	68	---	---
13	20	---	---	6.0	---	---	66	---	---
14	33	---	---	5.5	---	---	40	---	---
15	46	---	---	5.8	---	---	21	---	---
16	44	---	---	6.0	---	---	14	---	---
17	32	---	---	5.4	---	---	52	1,070	1,190
18	34	---	---	4.5	---	---	25	874	129
19	28	---	---	4.8	---	---	122	2,470	1,100
20	23	---	---	4.5	---	---	43	---	---
21	19	---	---	4.2	---	---	30	---	---
22	33	---	---	4.1	---	---	32	---	---
23	147	481	251	3.7	---	---	22	---	---
24	378	2,720	2,740	3.4	---	---	25	---	---
25	220	4,190	2,490	43	---	e24	17	---	---
26	116	---	e200	17	---	---	11	---	---
27	76	---	---	41	---	---	12	---	---
28	66	---	---	22	---	---	9.9	---	---
29	57	---	---	12	---	---	11	---	---
30	43	---	---	7.7	---	---	5.8	---	---
31	---	---	---	41	115	21	---	---	---
TOTAL	2,179	---	---	400.3	---	---	1,305.7	---	---
		JULY		AUGUST		SEPTEMBER			
1	3.8	---	---	5.1	---	---	0.21	---	---
2	2.6	---	---	2.5	---	---	0.15	---	---
3	5.8	---	---	1.4	---	---	7.5	---	---
4	7.0	---	---	0.84	---	---	14	---	---
5	6.4	---	---	0.54	---	---	7.1	---	---
6	3.9	---	---	0.27	---	---	19	---	---
7	2.4	---	---	0.09	---	---	192	1,920	1,740
8	1.7	---	---	0.00	---	---	241	6,120	4,470
9	1.2	---	---	465	5,750	13,200	133	---	e670
10	0.83	---	---	253	4,560	3,350	44	---	---
11	0.56	---	---	61	2,790	492	23	---	---
12	0.38	---	---	20	---	---	14	---	---
13	0.20	---	---	9.3	---	---	11	---	---
14	0.08	---	---	4.9	---	---	7.2	---	---
15	0.01	---	---	2.9	---	---	8.8	---	---
16	5.3	---	---	1.8	---	---	19	---	---
17	1.2	---	---	1.3	---	---	14	---	---
18	0.47	---	---	0.90	---	---	9.6	---	---
19	0.23	---	---	0.66	---	---	6.4	---	---
20	0.16	---	---	0.46	---	---	4.7	---	---
21	0.02	---	---	0.31	---	---	3.5	---	---
22	0.00	---	---	0.21	---	---	2.6	---	---
23	0.00	---	---	1.8	---	---	2.1	---	---
24	0.00	---	---	1.5	---	---	1.7	---	---
25	0.00	---	---	0.92	---	---	1.4	---	---
26	0.00	---	---	0.61	---	---	1.1	---	---
27	0.00	---	---	0.39	---	---	0.87	---	---
28	0.00	---	---	0.25	---	---	0.70	---	---
29	0.00	---	---	0.20	---	---	0.61	---	---
30	0.00	---	---	0.26	---	---	1.1	---	---
31	6.0	---	---	0.25	---	---	---	---	---
TOTAL	50.24	---	---	838.66	---	---	791.34	---	---

e Estimated.

07126485 PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 1999 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=07126485

GAGE.--Tipping-bucket rain gage with satellite telemetry.

REMARKS.--Records during July 2 to Sept. 19 are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 2.11 inches, Oct. 4, 2000.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.00 inch, Apr. 19.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.04	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00
2	e0.00	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00
3	---	---	---	---	---	---	---	0.00	0.03	0.00	0.00	0.04
4	---	---	---	---	---	---	---	0.00	0.00	0.00	0.42	0.00
5	---	---	---	---	---	---	---	0.00	0.74	0.00	0.07	0.00
6	---	---	---	---	---	---	---	0.01	0.01	0.00	0.00	0.00
7	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.05
8	---	---	---	---	---	---	---	0.00	0.00	0.00	0.03	0.00
9	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.13
10	---	---	---	---	---	---	e0.00	0.00	0.05	0.00	0.00	0.01
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.67	0.00	0.00	0.11
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.89	0.56	0.00	0.37	0.00	0.00
16	---	---	---	---	---	---	0.18	0.01	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.14	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.15	0.00	0.02	0.00
19	---	---	---	---	---	---	1.00	0.00	0.00	0.20	0.00	0.00
20	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.04
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.00	0.03	0.00	0.01	0.00	0.00
24	---	---	---	---	---	---	0.00	0.35	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.09	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.02	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.03	0.00	0.00
28	---	---	---	---	---	---	0.04	0.00	0.01	0.30	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.23	0.00	0.00	0.00
30	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.26	0.00
31	---	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	0.97	2.04	0.93	0.89	0.38
MAX	---	---	---	---	---	---	---	0.56	0.74	0.37	0.42	0.13

e Estimated.

07128500 PURGATOIRE RIVER NEAR LAS ANIMAS, CO

LOCATION.--Lat 38°02'02", long 103°12'00", in NE¹/₄SW¹/₄ sec.23, T.23 S., R.52 W., Bent County, Hydrologic Unit 11020010, on left bank at downstream side of bridge on State Highway 101, 2.3 mi southeast of courthouse in Las Animas, and 4.5 mi upstream from mouth. Prior to July 17, 2002, at site on right bank.

DRAINAGE AREA.--3,318 mi², of which 11.8 mi² is noncontributing.

PERIOD OF RECORD.--May to September 1889, July to October 1909 (gage heights and discharge measurements only), January 1922 to September 1931, July 1948 to current year.

Monthly discharge only for some periods, published in WSP 1311. Published as Purgatoire Creek at Las Animas in 1889 and as Purgatory River near Las Animas in 1909.

Statistical summary computed for 1978 to current year, subsequent to completion of Trinidad Reservoir. Daily record for water temperature and specific conductance available, December 1985 to September 1996. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07128500

REVISED RECORDS.--WSP 1241: 1927(M); WDR CO-01-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 3,878.04 ft above NGVD of 1929. See WSP 1731 for history of changes prior to Oct. 1, 1955. Oct. 1, 1955 to July 11, 1966, at datum 6.00 ft higher. Supplementary water-stage recorder at site 1.6 mi downstream at different datum July 12 to Nov. 17, 1966. Nov. 18, 1966 to May 4, 1982, at datum 3.1 ft higher. May 5, 1982 to July 17, 2002, at site on right bank at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Flows regulated to some extent by Trinidad Lake (station 07124400) about 141 mi upstream since January 1975. 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 OUTSIDE PERIOD OF RECORD.--Flood of Oct. 1, 1904, is the greatest since at least 1860, discharge unknown.

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	6.1	1.7	1.3	3.2	3.6	9.4	49	49	7.4	35	1.0	0.20
2	5.7	1.6	1.3	e3.2	3.5	7.1	42	42	25	14	1.6	0.19
3	5.0	1.4	1.4	e3.2	3.8	6.5	35	35	13	8.6	1.7	0.16
4	4.2	1.3	2.0	4.2	3.5	5.7	45	29	21	4.6	0.35	0.17
5	3.3	1.3	2.2	4.8	3.4	4.7	135	24	16	2.7	47	0.16
6	2.9	1.2	2.1	8.3	3.3	4.5	104	19	14	2.1	e65	0.16
7	2.6	1.2	2.3	8.7	e3.2	4.0	78	17	34	1.9	e15	7.6
8	2.4	1.2	2.5	8.1	e3.0	5.4	69	15	107	1.4	e4.0	1.8
9	2.2	1.3	2.3	6.4	3.1	4.1	53	15	75	1.1	1.5	89
10	2.0	1.3	2.4	e6.2	3.2	5.0	44	11	65	0.90	147	101
11	1.8	1.2	3.0	e6.0	3.5	4.6	38	9.1	59	0.74	154	43
12	1.7	1.3	2.9	e5.6	3.6	4.7	33	8.5	43	0.61	60	26
13	1.5	1.2	2.4	5.4	3.8	4.6	28	9.4	42	0.66	21	14
14	1.4	1.3	2.3	4.8	4.0	3.9	24	7.0	53	1.1	10	8.1
15	1.4	1.3	2.4	4.1	4.1	4.1	21	7.2	42	1.4	5.3	4.6
16	1.3	1.3	2.2	3.5	3.9	13	41	10	23	1.4	1.7	3.6
17	1.3	1.3	2.1	4.2	4.0	4.9	54	9.6	17	0.44	0.62	e2.5
18	1.3	1.2	2.0	3.7	4.1	10	36	4.7	11	0.43	0.32	e2.0
19	1.3	1.2	1.8	3.8	4.7	6.9	36	3.6	166	0.44	0.29	e1.5
20	1.3	1.2	1.7	3.8	4.8	14	40	2.9	72	0.47	0.26	e1.0
21	1.3	1.2	1.8	3.5	4.1	18	36	2.6	50	0.51	0.24	e0.90
22	1.4	1.3	1.8	3.3	3.9	18	30	2.2	31	0.42	0.23	e0.80
23	1.4	1.3	2.1	3.1	4.2	18	24	2.1	29	0.38	0.20	e0.75
24	1.3	1.3	e2.1	3.4	e4.0	17	90	2.2	31	0.37	0.18	e0.60
25	1.3	1.3	e2.0	3.2	3.8	20	298	24	15	0.34	0.16	e0.55
26	1.7	1.3	e2.0	4.2	3.7	64	157	52	14	0.33	0.15	e0.47
27	1.8	1.3	e2.0	7.6	4.8	146	98	31	11	0.34	0.15	e0.54
28	1.4	1.3	3.2	6.9	7.0	162	77	17	7.7	0.35	0.14	e0.68
29	1.4	1.3	3.0	5.5	---	166	67	30	5.4	0.41	0.16	e0.68
30	1.5	1.3	2.8	4.4	---	106	59	18	503	0.35	0.19	e0.61
31	1.4	---	e3.0	4.0	---	75	---	11	---	0.34	0.20	---
TOTAL	66.6	38.9	68.4	150.3	109.6	937.1	1,941	520.1	1,602.5	84.13	539.64	313.32
MEAN	2.15	1.30	2.21	4.85	3.91	30.2	64.7	16.8	53.4	2.71	17.4	10.4
MAX	6.1	1.7	3.2	8.7	7.0	166	298	52	503	35	154	101
MIN	1.3	1.2	1.3	3.1	3.0	3.9	21	2.1	5.4	0.33	0.14	0.16
AC-FT	132	77	136	298	217	1,860	3,850	1,030	3,180	167	1,070	621

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2003, BY WATER YEAR (WY)

	36.4	36.9	29.3	31.4	31.5	42.3	80.1	128	97.8	69.4	123	48.0
MEAN	36.4	36.9	29.3	31.4	31.5	42.3	80.1	128	97.8	69.4	123	48.0
MAX	125	88.4	57.5	57.4	61.9	169	418	614	724	263	761	224
(WY)	(1999)	(1999)	(1998)	(1998)	(1998)	(1998)	(1983)	(1987)	(1983)	(1981)	(1981)	(1981)
MIN	1.58	1.30	2.21	4.72	3.91	5.26	3.53	2.15	8.76	2.71	3.76	3.14
(WY)	(1978)	(2003)	(2003)	(1979)	(2003)	(1978)	(1978)	(2002)	(1990)	(2003)	(1980)	(1978)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1978 - 2003

ANNUAL TOTAL	6,717.46		6,371.59			
ANNUAL MEAN	18.4		17.5		a63.1	
HIGHEST ANNUAL MEAN					166 1983	
LOWEST ANNUAL MEAN					17.5 2003	
HIGHEST DAILY MEAN	786	Sep 11	503	Jun 30	b3,890	May 3, 1999
LOWEST DAILY MEAN	0.32	Aug 17	0.14	Aug 28	c0.14	Aug 28, 2003
ANNUAL SEVEN-DAY MINIMUM	0.33	Aug 21	0.16	Aug 24	c0.16	Aug 24, 2003
MAXIMUM PEAK FLOW			1,830	Jun 30	d6,680	Jul 5, 1981
MAXIMUM PEAK STAGE			8.46	Jun 30	f10.09	Jul 5, 1981
ANNUAL RUNOFF (AC-FT)	13,320		12,640		45,700	
10 PERCENT EXCEEDS	27		49		117	
50 PERCENT EXCEEDS	2.7		3.6		29	
90 PERCENT EXCEEDS	0.51		0.49		4.0	

e Estimated.

a Average discharge for 37 years (water years 1923-31, 1949-76), 116 ft³/s; 84,040 acre-ft/yr, prior to completion of Trinidad Reservoir.

b Maximum daily discharge for period of record, 46,300 ft³/s, May 20, 1955.

c No flow at times in 1924-25, 1927, 1949, and 1974.

d From rating curve extended above 4,460 ft³/s; maximum discharge for period of record, 70,000 ft³/s, May 20, 1955, from rating curve extended above 38,000 ft³/s, gage height, 15.00 ft, datum then in use.

f Maximum gage height for statistical period, 12.00 ft, May 3, 1999; maximum gage height for period of record, 15.94 ft, Jun 18, 1965, datum then in use.

07128500 PURGATOIRE RIVER NEAR LAS ANIMAS, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--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=07128500

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 1.32 inches, June 19, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation, 1.32 inches, June 19.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.46	---	---	---	---	---	0.00	0.00	0.09	0.00	0.00	0.00
2	0.01	---	---	---	---	---	0.00	0.00	0.10	0.00	0.00	0.00
3	0.01	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.12
4	0.00	---	---	---	---	---	0.00	0.00	0.10	0.00	0.00	0.00
5	0.00	---	---	---	---	---	0.00	0.17	0.42	0.00	0.00	0.00
6	0.00	---	---	---	---	---	0.06	0.00	0.05	0.00	0.00	0.11
7	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.57
8	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.02	0.01
9	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.10
10	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.13
11	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	---	---	---	---	---	0.00	0.00	1.24	0.02	0.00	0.22
14	0.00	---	---	---	---	---	0.01	0.00	0.00	0.00	0.00	0.00
15	0.00	---	---	---	---	---	0.18	1.02	0.00	0.00	0.00	0.00
16	0.00	---	---	---	---	---	0.10	0.11	0.81	0.00	0.00	0.00
17	0.00	---	---	---	---	---	0.00	0.00	0.01	0.00	0.00	0.00
18	0.00	---	---	---	---	---	0.00	0.00	0.26	0.00	0.04	0.00
19	0.00	---	---	---	---	---	0.33	0.00	1.32	0.07	0.00	0.00
20	0.00	---	---	---	---	---	0.00	0.00	0.00	0.03	0.00	0.00
21	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.13	0.00
22	0.13	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	---	---	---	---	---	0.01	0.03	0.00	0.00	0.00	0.00
24	0.01	---	---	---	---	---	0.00	0.20	0.00	0.00	0.00	0.00
25	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
26	0.51	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	0.03	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
29	0.01	---	---	---	---	---	0.00	0.00	0.00	0.00	0.04	0.00
30	0.00	---	---	---	---	---	0.00	0.56	0.00	0.00	0.31	0.00
31	0.00	---	---	---	---	---	---	0.00	---	0.00	0.00	---
TOTAL	1.17	---	---	---	---	---	0.69	2.09	4.43	0.12	0.54	1.26
MAX	0.51	---	---	---	---	---	0.33	1.02	1.32	0.07	0.31	0.57

07130000 JOHN MARTIN RESERVOIR AT CADDOA, CO

LOCATION.--Lat 38°04'05", long 102°56'13", in NE¹/₄NW¹/₄ sec.8, T.23 S., R.49 W., Bent County, Hydrologic Unit 11020009, in north parapet of dam on Arkansas River at Caddoa, 3.2 mi southeast of Hasty, and 58 mi upstream from Colorado-Kansas State Line.

DRAINAGE AREA.--18,915 mi², of which 785 mi² is probably noncontributing.

PERIOD OF RECORD.--December 1942 to current year. Month-end contents only prior to November 1943, published in WSP 1311. Water-quality data available, June to October 1988 (profile and chemical data at transects along length of reservoir). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07130000

GAGE.--Water-stage recorder with satellite telemetry for elevations above 3,784 ft (48 acre-feet) and nonrecording gage read once daily for those below. Datum of gage is 3,760.00 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by concrete and earthfill dam. Construction started fall of 1939; storage began while dam was under construction in Jan. 1943; record of contents began Dec. 31, 1942; dam completed October 1948. All figures represent total contents from area-capacity table effective Nov. 1, 1999, and based on a 1999 resurvey by the U.S. Army Corp of Engineers. Total capacity at top of dam, 793,400 acre-ft at elevation 3,880.00 ft. Maximum flood control storage at top of spillway gates, 603,500 acre-ft at elevation 3,870.00 ft. Maximum recreation and conservation storage, 344,000 acre-ft at elevation 3,851.87 ft. Capacity at spillway crest, 222,400 acre-ft at elevation 3,840.00 ft. Elevation of no contents, 3,780.00 ft. No dead storage. Reservoir is used for flood control, storage for irrigation, recreation, and in the administration of terms of the Arkansas River Compact between the states of Colorado and Kansas.

COOPERATION.--Capacity tables provided by U.S. Army Corps of Engineers. Records prior to 1979 were furnished by the U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 451,000 acre-ft, May 10, 1999, elevation, 3,860.57 ft; no contents at times many years.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 45,400 acre-ft, Apr. 16, elevation, 3,809.78 ft; minimum contents, 20,300 acre-ft, Sept. 30, elevation, 3,801.10 ft.

Reservoir capacity table
(elevation, in feet, and contents, in acre-feet, effective Nov. 1, 1999)

Elevation	Contents	Elevation	Contents
3,785.0	235	3,820.0	86,400
3,790.0	2,410	3,830.0	144,000
3,795.0	8,300	3,840.0	222,000
3,800.0	17,800	3,850.0	323,000
3,810.0	46,200	3,860.0	448,000

RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22,200	21,500	23,800	29,000	34,600	39,000	43,700	40,800	29,600	28,300	24,500	22,000
2	22,200	21,600	23,900	29,300	34,600	39,200	43,800	40,600	29,000	28,000	24,400	22,000
3	22,200	21,600	24,100	29,500	34,900	39,400	43,900	40,600	28,400	27,900	24,400	22,100
4	22,200	21,700	24,300	29,700	35,100	39,500	43,900	40,200	27,800	27,900	24,300	22,000
5	22,200	21,700	24,600	29,900	35,200	39,700	44,100	39,900	28,000	27,600	24,100	21,900
6	22,100	21,700	24,700	30,200	35,400	39,900	44,300	39,100	28,300	27,500	24,100	21,900
7	22,100	21,800	24,900	30,300	35,500	39,900	44,500	38,600	28,800	27,300	23,900	22,100
8	22,100	21,900	25,100	30,500	35,600	39,900	44,600	38,100	28,800	27,200	23,800	22,000
9	22,000	21,900	25,200	30,700	35,800	40,200	44,800	37,300	28,600	27,000	23,700	22,200
10	22,000	21,900	25,400	30,800	e35,900	40,300	44,900	36,800	28,500	26,900	23,700	22,100
11	22,000	21,900	25,600	30,900	36,000	40,500	44,900	36,200	28,600	26,700	23,800	22,000
12	21,900	22,000	25,700	31,200	36,200	40,700	44,900	35,700	28,900	26,700	23,800	21,900
13	21,900	22,000	25,900	31,300	36,400	40,800	44,900	35,100	29,500	26,600	23,600	21,900
14	21,800	22,000	26,100	31,500	36,600	41,000	44,900	34,600	29,900	26,600	23,400	21,800
15	21,800	22,100	26,300	31,700	36,700	41,100	45,100	34,100	30,300	26,400	23,200	21,900
16	21,800	22,100	26,400	e31,900	36,900	41,200	44,000	33,600	30,300	26,200	23,100	21,800
17	21,700	22,300	26,600	32,000	37,100	41,400	43,700	33,500	29,900	26,100	23,100	21,900
18	21,700	22,200	26,800	32,200	37,300	41,500	43,400	33,500	29,300	26,000	22,800	21,700
19	21,700	22,300	26,900	32,300	37,500	41,800	43,300	33,400	29,000	25,900	22,800	21,600
20	21,700	22,400	27,100	32,400	37,700	41,800	43,000	33,100	28,600	25,900	22,800	21,700
21	e21,700	22,500	27,200	32,600	37,900	42,000	42,600	33,100	28,600	25,800	22,800	21,700
22	21,600	22,700	27,300	32,700	37,900	42,100	42,300	33,200	28,700	25,500	22,600	21,600
23	21,700	22,600	27,500	32,800	38,100	42,100	42,300	33,200	28,400	25,500	22,400	21,500
24	e21,700	22,900	27,600	32,900	38,100	42,200	41,700	33,100	28,200	25,300	22,300	21,400
25	21,700	23,000	27,600	33,100	38,200	42,300	41,800	33,800	27,900	25,200	22,300	21,200
26	21,700	23,100	27,700	e33,300	38,400	42,400	41,900	33,900	27,800	25,000	22,200	21,000
27	21,800	23,200	27,800	e33,500	38,500	42,600	41,800	33,500	28,000	24,900	22,200	20,900
28	21,700	23,400	27,900	e33,700	38,800	42,900	41,500	32,700	28,300	24,900	22,100	20,700
29	21,700	23,500	28,100	e33,900	---	43,200	41,300	31,800	28,200	24,800	22,000	20,500
30	21,500	23,700	28,300	34,100	---	43,400	41,100	30,800	28,500	24,700	22,100	20,400
31	21,400	---	28,600	34,400	---	e43,500	---	30,100	---	24,700	22,000	---
MAX	22,200	23,700	28,600	34,400	38,800	43,500	45,100	40,800	30,300	28,300	24,500	22,200
MIN	21,400	21,500	23,800	29,000	34,600	39,000	41,100	30,100	27,800	24,700	22,000	20,400

e Estimated.

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO

LOCATION.--Lat 38°03'59", long 102°55'55", in NW¼NE¼ sec.8, T.23 S., R.49 W., Bent County, Hydrologic Unit 11020009, on right bank 0.2 mi downstream from John Martin Dam, 2.6 mi upstream from Caddoa Creek, and 3.5 mi southeast of Hasty.

DRAINAGE AREA.--18,915 mi², of which 785 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to current year. Published as "at Caddoa" prior to October 1947. Statistical summary computed for 1949 to current year, subsequent to completion of John Martin Reservoir. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07130500

REVISED RECORDS.--WSP 1241: 1942(M). WSP 1341: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Datum of gage is 3,737.40 ft above NGVD of 1929. Prior to Feb. 22, 1940, at site 3 mi upstream at datum 22.83 ft higher. Feb. 22, 1940 to Feb. 4, 1943, at site 700 ft upstream at datum 3.64 ft higher. Feb. 5, 1943 to Apr. 8, 1975, at site 1.5 mi downstream at datum approximately 27.5 ft lower.

REMARKS.--No estimated daily discharges. Records good except for those below 3 ft³/s, which are fair. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Flow completely regulated by John Martin Reservoir (station 07130000) 0.2 mi upstream since Oct. 1948.

**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	30	2.2	1.5	1.3	1.4	1.2	1.3	184	541	862	199	25
2	25	2.1	1.5	1.3	1.4	1.2	1.2	144	656	650	77	25
3	25	2.1	1.5	1.3	1.4	1.2	1.2	111	815	383	77	25
4	20	2.1	1.5	1.3	1.4	1.1	1.3	110	815	319	77	26
5	16	2.0	1.4	1.3	1.3	1.2	1.2	242	787	282	76	25
6	14	1.9	1.4	1.3	1.2	1.2	1.3	354	790	252	86	24
7	14	1.7	1.4	1.3	1.3	1.2	1.2	311	792	236	94	24
8	24	1.7	1.4	1.4	1.3	1.2	1.3	271	791	210	68	31
9	27	1.7	1.4	1.2	1.3	1.1	1.3	285	549	173	44	38
10	19	1.6	1.4	1.2	1.3	1.1	1.3	295	454	118	44	69
11	18	1.6	1.4	1.2	1.3	1.2	18	295	459	79	58	102
12	18	1.6	1.4	1.2	1.3	1.2	31	294	461	69	99	65
13	17	1.6	1.4	1.2	1.4	1.1	31	293	462	69	124	32
14	15	1.6	1.4	1.2	1.4	1.5	54	293	464	68	102	34
15	14	1.6	1.4	1.2	1.4	1.4	193	296	467	67	62	27
16	13	1.6	1.4	1.2	1.4	1.3	243	292	618	66	42	21
17	16	1.6	1.4	1.2	1.4	1.3	181	96	780	57	41	20
18	21	1.6	1.4	1.2	1.3	1.3	167	24	860	43	38	21
19	20	1.5	1.3	1.2	1.2	1.4	177	31	910	37	33	21
20	17	1.5	1.4	1.2	1.2	1.3	176	45	634	38	33	22
21	16	1.5	1.4	1.2	1.2	1.3	176	45	460	43	32	21
22	15	1.6	1.3	1.2	1.2	1.3	175	35	462	49	32	50
23	10	1.5	1.3	1.2	1.1	1.3	175	25	516	49	31	80
24	14	1.4	1.4	1.2	1.1	1.3	172	31	575	50	31	82
25	22	1.5	1.3	1.2	1.1	1.3	173	31	574	50	26	83
26	30	1.5	1.2	1.2	1.2	1.3	174	32	503	50	18	87
27	30	1.5	1.2	1.2	1.2	1.2	173	294	446	50	19	91
28	62	1.5	1.3	1.3	1.2	1.1	174	494	447	60	22	91
29	84	1.5	1.3	1.4	---	1.2	174	527	446	72	25	87
30	84	1.5	1.4	1.4	---	1.2	180	543	652	74	25	49
31	45	---	1.4	1.4	---	1.2	---	541	---	74	25	---
TOTAL	795	49.9	42.8	38.8	35.9	38.4	3,029.6	6,864	18,186	4,699	1,760	1,398
MEAN	25.6	1.66	1.38	1.25	1.28	1.24	101	221	606	152	56.8	46.6
MAX	84	2.2	1.5	1.4	1.4	1.5	243	543	910	862	199	102
MIN	10	1.4	1.2	1.2	1.1	1.1	1.2	24	446	37	18	20
AC-FT	1,580	99	85	77	71	76	6,010	13,610	36,070	9,320	3,490	2,770

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

	197	25.6	16.6	19.4	22.9	53.0	419	476	596	695	557	320
MAX	565	217	317	725	477	498	1,174	2,576	2,665	2,895	2,127	1,007
(WY)	(1949)	(1966)	(1998)	(1998)	(1966)	(1998)	(1987)	(1987)	(1987)	(1995)	(1965)	(1984)
MIN	11.4	0.85	0.64	0.62	0.75	1.06	2.43	34.2	52.0	86.1	22.6	6.69
(WY)	(1975)	(1977)	(1977)	(1977)	(1977)	(1980)	(1973)	(1975)	(1954)	(1963)	(1960)	(1974)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1949 - 2003

ANNUAL TOTAL	39,543.6		36,937.4			
ANNUAL MEAN	108		101		a285	
HIGHEST ANNUAL MEAN					745 1987	
LOWEST ANNUAL MEAN					82.5 1964	
HIGHEST DAILY MEAN	911	Jun 18	910	Jun 19	3,830	Aug 25, 1965
LOWEST DAILY MEAN	1.1	Feb 9	1.1	Feb 23	b0.36	Dec 25, 1979
ANNUAL SEVEN-DAY MINIMUM	1.2	Jan 24	1.2	Feb 19	0.36	Dec 25, 1979
MAXIMUM PEAK FLOW			955	Jun 19	c4,100	Aug 25, 1965
MAXIMUM PEAK STAGE			3.42	Jun 19	d5.75	Aug 25, 1965
ANNUAL RUNOFF (AC-FT)	78,430		73,270		206,100	
10 PERCENT EXCEEDS	495		408		873	
50 PERCENT EXCEEDS	24		20		57	
90 PERCENT EXCEEDS	1.3		1.2		2.0	

a Average discharge for 5 years (water years 1939-43), 628 ft³/s; 455,000 acre-ft/yr, prior to start of storage in John Martin Reservoir.
 b Also occurred Dec 26, 1979 to Jan 3, 1980; no flow on many days during 1945-47. Minimum daily discharge prior to start of storage in John Martin Reservoir, 5 ft³/s, Jul 16, 1939.
 c Maximum discharge for period of record, 40,000 ft³/s, Apr 24, 1942, from rating curve extended above 12,000 ft³/s on basis of flow-over-dam and critical-depth measurement of peak flow, gage height, 10.46 ft, site and datum then in use.
 d Maximum gage height for period of record, 10.62 ft, Jun 18, 1965 (backwater from Caddoa Creek), site and datum then in use.

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1942 to August 1943, October 1945 to July 1949, January 1951 to September 1981, December 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07130500

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1981 (observer once-daily measurements), December 1985 to current year.

WATER TEMPERATURE: January 1951 to September 1981 (observer once-daily measurements), December 1985 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

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

EXTREMES FOR PERIOD OF RECORD (1985 to current year).--

SPECIFIC CONDUCTANCE: Maximum, 3,540 microsiemens/cm, Feb. 26, 1986; minimum, 1,060 microsiemens/cm, on many days in 1995.

WATER TEMPERATURE: Maximum, 28.1°C, June 11, 2001; minimum, 0.0°C, on many days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,880 microsiemens/cm, Apr. 14; minimum, 1,550 microsiemens/cm, July 10-11.

WATER TEMPERATURE: Maximum, 26.6°C, July 20, Aug. 10; minimum, 0.6°C, Feb. 25.

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

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2,540	2,390	2,500	2,730	2,700	2,720	2,560	2,520	2,550	2,600	2,550	2,570
2	2,500	2,480	2,490	2,740	2,720	2,720	2,570	2,540	2,550	2,580	2,550	2,570
3	2,500	2,470	2,490	2,740	2,710	2,720	2,560	2,510	2,540	2,600	2,550	2,570
4	2,500	2,480	2,490	2,730	2,710	2,720	2,530	2,490	2,510	2,590	2,550	2,570
5	2,520	2,490	2,500	2,740	2,700	2,710	2,610	2,500	2,540	2,580	2,510	2,550
6	2,540	2,500	2,510	2,760	2,710	2,730	2,600	2,550	2,570	2,580	2,510	2,550
7	2,560	2,520	2,540	2,720	2,690	2,710	2,610	2,560	2,570	2,560	2,500	2,540
8	2,600	2,550	2,570	2,700	2,660	2,680	2,620	2,590	2,600	2,580	2,500	2,540
9	2,600	2,570	2,590	2,680	2,640	2,660	2,620	2,590	2,600	2,590	2,530	2,560
10	2,610	2,580	2,600	2,680	2,640	2,660	2,620	2,570	2,600	2,590	2,540	2,570
11	2,610	2,580	2,600	2,710	2,620	2,640	2,620	2,580	2,600	2,600	2,560	2,580
12	2,600	2,560	2,590	2,650	2,620	2,630	2,610	2,590	2,600	2,600	2,550	2,580
13	2,630	2,590	2,610	2,650	2,620	2,630	2,620	2,570	2,600	2,610	2,560	2,580
14	2,640	2,610	2,620	2,640	2,610	2,620	2,610	2,560	2,600	2,580	2,550	2,570
15	2,640	2,620	2,630	2,620	2,600	2,610	2,620	2,580	2,600	2,590	2,550	2,570
16	2,660	2,620	2,640	2,630	2,590	2,610	2,620	2,570	2,600	2,580	2,550	2,570
17	2,660	2,640	2,650	2,620	2,590	2,610	2,610	2,590	2,600	2,580	2,530	2,570
18	2,670	2,640	2,650	2,620	2,590	2,610	2,610	2,580	2,600	2,580	2,550	2,560
19	2,670	2,640	2,660	2,630	2,590	2,610	2,610	2,580	2,590	2,590	2,550	2,570
20	2,680	2,640	2,660	2,620	2,580	2,600	2,610	2,560	2,580	2,590	2,560	2,570
21	2,670	2,650	2,660	2,620	2,580	2,600	2,620	2,570	2,590	2,570	2,540	2,560
22	2,680	2,660	2,670	2,630	2,580	2,600	2,630	2,580	2,600	2,590	2,560	2,580
23	2,710	2,670	2,690	2,600	2,570	2,590	2,610	2,550	2,590	2,600	2,570	2,590
24	2,730	2,700	2,720	2,600	2,580	2,590	2,590	2,560	2,570	2,600	2,560	2,580
25	2,750	2,720	2,730	2,600	2,560	2,580	2,630	2,590	2,610	2,580	2,530	2,560
26	2,750	2,670	2,740	2,620	2,540	2,560	2,670	2,600	2,630	2,560	2,520	2,530
27	2,750	2,690	2,740	2,580	2,530	2,560	2,670	2,580	2,640	2,590	2,520	2,550
28	2,760	2,730	2,750	2,580	2,540	2,560	2,630	2,570	2,600	2,560	2,480	2,530
29	2,750	2,680	2,710	2,590	2,550	2,570	2,610	2,560	2,570	2,570	2,480	2,530
30	2,760	2,670	2,700	2,580	2,550	2,560	2,590	2,540	2,560	2,570	2,540	2,550
31	2,760	2,700	2,720	---	---	---	2,590	2,530	2,560	2,570	2,540	2,560
MONTH	2,760	2,390	2,630	2,760	2,530	2,630	2,670	2,490	2,580	2,610	2,480	2,560

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO—Continued

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

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2,600	2,550	2,560	2,500	2,450	2,470	2,520	2,490	2,510	2,850	2,840	2,850
2	2,570	2,530	2,550	2,500	2,470	2,480	2,500	2,470	2,490	2,850	2,830	2,830
3	2,540	2,510	2,530	2,500	2,470	2,490	2,520	2,500	2,510	2,830	2,810	2,820
4	2,560	2,500	2,520	2,490	2,470	2,480	2,520	2,490	2,500	2,820	2,810	2,820
5	2,560	2,520	2,540	2,510	2,470	2,480	2,500	2,480	2,490	2,820	2,810	2,810
6	2,540	2,510	2,520	2,530	2,480	2,500	2,490	2,470	2,480	2,810	2,800	2,810
7	2,570	2,520	2,540	2,550	2,480	2,510	2,480	2,470	2,470	2,820	2,810	2,810
8	2,600	2,520	2,560	2,530	2,490	2,510	2,490	2,450	2,470	2,810	2,800	2,810
9	2,570	2,510	2,540	2,520	2,490	2,510	2,500	2,460	2,480	2,810	2,810	2,810
10	2,570	2,500	2,540	2,540	2,500	2,520	2,490	2,460	2,470	2,810	2,800	2,800
11	2,570	2,480	2,510	2,540	2,500	2,520	2,600	2,450	2,510	2,800	2,800	2,800
12	2,550	2,480	2,520	2,520	2,490	2,510	2,720	2,600	2,680	2,800	2,800	2,800
13	2,530	2,450	2,500	2,510	2,490	2,500	2,810	2,720	2,770	2,800	2,790	2,790
14	2,540	2,490	2,520	2,500	2,470	2,490	2,880	2,810	2,840	2,790	2,790	2,790
15	2,530	2,520	2,520	2,500	2,460	2,480	---	---	---	2,810	2,790	2,790
16	2,550	2,510	2,530	2,490	2,460	2,470	---	---	---	2,800	2,790	2,790
17	2,550	2,520	2,530	2,500	2,470	2,480	---	---	---	2,820	2,800	2,810
18	2,540	2,480	2,510	2,490	2,470	2,480	---	---	---	2,820	2,800	2,810
19	2,510	2,480	2,490	2,470	2,430	2,450	---	---	---	2,820	2,810	2,820
20	2,500	2,480	2,490	2,490	2,460	2,480	---	---	---	2,830	2,820	2,820
21	2,500	2,460	2,480	2,500	2,470	2,480	---	---	---	2,840	2,820	2,830
22	2,490	2,460	2,480	2,520	2,490	2,500	---	---	---	2,850	2,830	2,840
23	2,470	2,440	2,460	2,520	2,490	2,500	---	---	---	2,850	2,840	2,840
24	2,470	2,450	2,460	2,510	2,490	2,510	---	---	---	2,850	2,840	2,850
25	2,520	2,460	2,500	2,520	2,490	2,500	---	---	---	2,850	2,840	2,840
26	2,530	2,450	2,490	2,510	2,500	2,500	---	---	---	2,850	2,840	2,850
27	2,490	2,330	2,440	2,520	2,490	2,510	---	---	---	2,860	2,850	2,850
28	2,460	2,410	2,450	2,530	2,500	2,510	2,850	2,810	2,820	2,860	2,840	2,850
29	---	---	---	2,540	2,510	2,520	2,840	2,820	2,830	2,850	2,830	2,840
30	---	---	---	2,540	2,510	2,530	2,850	2,840	2,840	2,830	2,800	2,820
31	---	---	---	---	---	---	---	---	---	2,830	2,780	2,810
MONTH	2,600	2,330	2,510	---	---	---	---	---	---	2,860	2,780	2,820
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2,840	2,750	2,770	1,750	1,730	1,740	1,660	1,640	1,650	1,770	1,750	1,760
2	2,840	2,830	2,840	1,740	1,730	1,730	1,670	1,650	1,660	1,770	1,760	1,770
3	2,840	2,800	2,820	1,750	1,730	1,740	1,670	1,660	1,660	1,780	1,760	1,770
4	2,830	2,790	2,810	1,750	1,610	1,640	1,670	1,660	1,660	1,790	1,770	1,780
5	2,800	2,690	2,750	1,630	1,600	1,620	1,670	1,660	1,660	1,790	1,770	1,780
6	2,720	2,650	2,690	1,600	1,590	1,590	1,670	1,660	1,660	1,790	1,780	1,790
7	2,730	2,560	2,630	1,600	1,580	1,590	1,670	1,660	1,670	1,790	1,780	1,780
8	2,640	2,580	2,610	1,600	1,560	1,580	1,680	1,660	1,670	1,790	1,780	1,780
9	2,590	2,530	2,550	1,580	1,560	1,570	1,680	1,670	1,680	1,790	1,740	1,770
10	2,560	2,490	2,530	1,570	1,550	1,550	1,680	1,670	1,680	1,760	1,720	1,750
11	2,490	2,400	2,420	1,570	1,550	1,560	1,680	1,650	1,670	1,730	1,700	1,710
12	2,420	2,320	2,370	1,580	1,560	1,570	1,660	1,630	1,640	1,700	1,680	1,690
13	2,350	2,300	2,330	1,590	1,580	1,580	1,630	1,600	1,620	1,690	1,670	1,680
14	2,310	2,270	2,290	1,600	1,580	1,590	1,600	1,560	1,590	1,680	1,660	1,670
15	2,270	2,260	2,260	1,600	1,590	1,590	1,580	1,560	1,570	1,680	1,660	1,670
16	2,270	2,260	2,260	1,610	1,590	1,600	1,600	1,570	1,580	1,690	1,660	1,680
17	2,260	2,230	2,240	1,610	1,600	1,600	1,610	1,590	1,600	1,690	1,670	1,680
18	2,240	2,100	2,170	1,620	1,610	1,610	1,630	1,600	1,610	1,680	1,670	1,680
19	2,190	2,130	2,160	1,630	1,610	1,620	1,660	1,620	1,640	1,690	1,660	1,670
20	2,190	2,120	2,160	1,630	1,620	1,630	1,680	1,650	1,670	1,680	1,660	1,670
21	2,120	1,970	2,040	1,640	1,630	1,630	1,700	1,670	1,680	1,680	1,660	1,670
22	1,970	1,840	1,880	1,640	1,630	1,630	1,710	1,690	1,700	1,680	1,660	1,670
23	1,850	1,830	1,840	1,640	1,620	1,630	1,720	1,710	1,710	1,680	1,660	1,670
24	1,850	1,720	1,780	1,640	1,620	1,630	1,730	1,710	1,720	1,670	1,660	1,670
25	1,750	1,730	1,740	1,640	1,620	1,630	1,740	1,720	1,730	1,680	1,670	1,670
26	1,760	1,740	1,750	1,640	1,630	1,630	1,750	1,730	1,740	1,680	1,660	1,670
27	1,770	1,760	1,760	1,640	1,630	1,640	1,760	1,730	1,750	1,680	1,660	1,670
28	1,770	1,760	1,760	1,640	1,640	1,640	1,760	1,740	1,750	1,680	1,660	1,670
29	1,770	1,750	1,760	1,650	1,640	1,640	1,760	1,750	1,750	1,670	1,650	1,660
30	1,760	1,740	1,750	1,640	1,640	1,640	1,760	1,750	1,750	1,670	1,650	1,650
31	---	---	---	1,650	1,640	1,640	1,770	1,750	1,760	---	---	---
MONTH	2,840	1,720	2,260	1,750	1,550	1,620	1,770	1,560	1,670	1,790	1,650	1,710

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, 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
1	19.0	16.4	17.3	5.7	4.7	5.3	4.9	2.1	3.6	3.4	2.3	2.8
2	16.8	15.5	16.1	6.7	5.0	5.9	5.4	2.3	3.9	3.9	2.4	3.0
3	17.2	15.1	15.8	8.5	5.3	6.6	4.6	1.8	3.3	3.9	2.4	3.4
4	18.0	14.6	15.6	8.4	5.1	6.6	4.0	1.3	2.5	4.3	3.1	3.8
5	17.8	14.2	15.4	8.6	5.3	6.7	5.0	2.5	3.8	4.4	2.6	3.6
6	17.1	13.9	15.0	9.9	4.9	6.8	5.2	2.4	3.9	5.2	3.6	4.4
7	17.3	13.5	14.9	10.9	5.0	7.5	4.7	2.1	3.6	5.6	2.9	4.5
8	16.0	13.6	14.6	9.8	6.2	7.7	4.7	2.8	3.9	6.1	3.0	4.4
9	16.4	14.3	14.9	11.2	7.1	8.6	4.9	2.9	3.8	5.2	3.7	4.5
10	16.6	14.1	14.8	10.9	7.1	8.6	5.0	1.8	3.3	4.2	2.7	3.5
11	17.5	13.9	15.1	9.2	6.0	7.5	4.2	2.3	3.5	3.8	2.0	3.1
12	15.7	13.8	14.4	9.4	5.5	7.1	4.2	2.7	3.5	4.7	2.6	3.6
13	15.5	13.1	14.0	8.4	5.2	6.8	4.9	1.9	3.5	5.1	2.8	4.0
14	15.3	12.7	13.7	8.8	6.5	7.5	6.6	2.1	3.8	4.5	2.8	3.9
15	15.0	12.2	13.3	8.6	6.7	7.4	4.8	2.1	3.6	4.4	2.7	3.7
16	14.9	12.1	13.2	8.7	5.1	6.7	4.3	2.2	3.8	3.3	0.8	2.4
17	14.9	11.6	12.8	8.8	5.1	6.8	5.0	3.3	4.2	4.3	2.8	3.4
18	14.3	11.7	12.8	9.5	5.7	7.1	5.5	3.5	4.6	3.5	1.0	2.4
19	13.8	11.8	12.4	9.5	4.7	6.5	4.3	2.4	3.5	5.4	1.1	3.2
20	14.7	11.3	12.4	9.0	4.8	6.6	4.5	1.2	2.8	5.2	2.2	3.7
21	13.6	11.1	12.1	9.4	5.0	6.9	4.3	2.3	3.2	3.8	1.1	2.9
22	13.7	11.0	12.0	11.2	5.4	7.6	4.2	1.9	3.0	2.6	1.7	2.2
23	11.0	9.8	10.4	7.3	5.5	6.5	3.0	1.3	2.2	2.5	1.4	1.9
24	10.1	9.5	9.7	6.6	4.9	5.6	3.4	1.9	2.6	3.2	1.5	2.3
25	11.0	9.4	9.9	4.9	3.5	4.3	3.0	1.2	2.1	4.1	2.0	2.8
26	10.8	9.7	10.1	4.1	2.1	3.1	2.4	0.7	1.8	4.4	2.0	3.1
27	10.9	9.8	10.1	5.1	2.1	3.4	2.2	0.7	1.4	4.8	3.5	4.0
28	10.4	9.5	9.8	5.4	1.6	3.3	3.0	1.0	2.0	5.3	3.4	4.4
29	9.7	8.1	9.2	5.7	2.8	4.1	3.3	1.6	2.5	6.0	2.3	4.6
30	8.1	7.2	7.7	6.3	2.8	4.3	4.0	2.2	2.9	5.3	3.3	4.3
31	7.2	5.5	6.7	---	---	---	3.4	1.6	2.7	6.4	3.0	4.7
MONTH	19.0	5.5	12.8	11.2	1.6	6.3	6.6	0.7	3.2	6.4	0.8	3.5
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.9	4.4	5.8	7.6	3.4	5.2	19.5	10.0	14.0	14.7	13.0	13.8
2	7.4	4.9	5.8	7.8	4.5	5.9	16.2	11.5	13.6	14.8	13.4	14.0
3	6.0	3.6	4.6	7.6	3.7	5.9	15.9	10.3	12.9	15.0	13.7	14.2
4	5.6	2.7	4.0	6.8	2.9	4.6	18.4	11.0	13.7	15.3	13.7	14.5
5	5.1	3.5	4.3	6.1	1.1	3.4	12.8	10.5	11.6	15.3	14.1	14.7
6	4.7	2.2	3.4	7.6	2.8	5.0	12.0	8.8	10.3	15.3	14.4	14.7
7	4.1	1.7	2.7	11.1	4.1	7.1	11.0	9.3	10.2	15.6	14.3	14.9
8	3.8	1.5	2.7	13.1	5.3	7.7	16.2	8.4	11.7	16.2	14.9	15.4
9	4.1	2.2	2.9	8.4	5.6	7.0	18.3	9.2	13.1	16.0	15.0	15.4
10	4.8	2.2	3.4	9.7	5.5	7.5	17.1	10.5	13.8	15.8	15.1	15.4
11	4.8	2.0	3.5	13.8	6.0	9.4	14.9	10.9	12.7	15.9	14.9	15.3
12	5.8	2.2	4.1	12.2	7.0	9.4	12.5	10.1	11.2	15.6	14.5	14.9
13	5.6	3.6	4.7	13.7	7.6	10.6	12.8	10.0	11.2	15.3	14.3	14.8
14	6.2	3.7	5.0	15.1	8.4	11.1	12.0	10.1	11.0	16.1	14.5	15.2
15	5.4	4.4	4.9	16.1	8.5	11.8	13.5	10.0	11.4	16.1	14.8	15.3
16	6.6	3.6	5.0	14.6	9.8	12.0	13.5	12.2	12.6	16.3	15.3	15.7
17	8.8	4.4	6.4	13.2	9.6	11.3	13.8	12.3	12.9	18.8	15.5	16.8
18	6.7	5.5	6.0	12.4	10.2	11.4	14.0	12.3	13.0	18.5	16.1	17.2
19	8.1	5.0	6.1	11.2	8.3	9.6	12.7	12.1	12.4	18.0	16.1	16.8
20	9.5	4.8	6.8	10.4	7.4	8.8	13.1	11.8	12.4	18.2	16.1	16.9
21	8.0	4.2	6.2	9.7	8.7	9.1	13.8	12.3	12.9	18.9	15.7	17.2
22	10.3	5.3	7.2	15.0	7.7	10.6	13.6	12.5	12.9	20.1	16.2	17.7
23	6.3	3.8	4.9	16.0	9.0	11.9	13.7	12.6	13.1	19.6	16.6	18.0
24	3.8	1.4	2.4	14.8	10.2	12.4	12.8	12.0	12.3	20.0	17.2	18.2
25	2.8	0.6	1.8	17.5	11.2	13.8	13.3	11.9	12.4	18.8	17.2	17.7
26	4.3	2.0	3.1	16.3	11.0	13.0	13.2	11.7	12.3	19.3	17.0	17.9
27	6.4	2.9	4.3	11.8	9.0	10.8	13.9	11.7	12.8	18.7	17.3	18.0
28	4.5	3.4	3.9	9.8	7.0	8.6	13.6	12.4	12.8	19.1	18.0	18.5
29	---	---	---	11.8	6.7	9.1	14.4	12.4	13.3	20.4	18.2	19.1
30	---	---	---	13.8	7.3	10.4	14.3	13.0	13.5	20.7	18.8	19.5
31	---	---	---	15.9	8.8	10.9	---	---	---	21.1	20.4	20.6
MONTH	10.3	0.6	4.5	17.5	1.1	9.2	19.5	8.4	12.5	21.1	13.0	16.4

07133000 ARKANSAS RIVER AT LAMAR, CO

LOCATION.--Lat 38°06'21", long 102°37'05", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.30, T.22 S., R.46 W., Prowers County, Hydrologic Unit 11020009, on left bank at left downstream end of downstream bridge on U.S. Highways 50 and 287, and 1.3 mi north of courthouse in Lamar.

DRAINAGE AREA.--19,780 mi², of which 950 mi² is probably noncontributing.

PERIOD OF RECORD.--May 1913 to September 1955. April 1959 to current year. Monthly discharge only for some periods, published in WSP 1311. Statistical summary computed for 1949 to current year, subsequent to completion of John Martin Reservoir. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07133000

REVISED RECORDS.--WSP 1341: 1921(M), 1945-46(M), drainage area; WDR CO-86-1: 1985.

GAGE.--Water-stage recorder with satellite telemetry and crest stage gage. Datum of gage is 3,597.39 ft above NGVD of 1929. See WSP 1731 for history of changes prior to Apr. 4, 1959. Apr. 4, 1959 to Mar. 26, 1968, at site 525 ft upstream at datum 2.42 ft higher. Mar. 27, 1968 to Nov. 17, 1982, at site 375 ft downstream at datum 4.00 ft lower. March 18, 1987 to March 6, 2002, at site 75 ft upstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Flow regulated by John Martin Reservoir (station 07130000) 21 mi upstream since Oct. 1948. 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	4.2	5.6	3.6	3.7	3.8	5.5	4.0	79	21	33	28	17
2	3.9	6.0	3.4	3.6	3.9	5.3	4.2	83	19	61	29	14
3	3.6	6.5	3.2	3.6	4.3	5.3	4.1	54	28	18	34	12
4	3.4	7.1	3.2	3.5	3.9	5.4	4.0	43	77	30	33	12
5	3.3	6.9	3.7	3.5	4.0	5.5	3.9	41	49	14	33	11
6	3.3	5.5	3.7	3.4	3.9	5.2	4.0	14	32	14	32	10
7	3.5	5.3	3.7	3.4	e3.9	8.6	4.0	9.6	82	12	40	13
8	4.4	5.0	3.6	3.5	e3.8	11	3.9	8.0	44	13	46	14
9	4.1	4.9	3.3	3.5	4.1	8.6	3.9	6.3	25	25	35	14
10	3.8	4.7	3.0	3.5	4.1	6.2	4.0	6.0	19	37	23	17
11	3.8	4.7	3.4	3.4	3.8	4.2	4.0	5.5	10	39	19	21
12	3.8	4.6	3.1	3.4	4.1	3.8	4.1	5.2	9.6	51	20	38
13	3.6	4.6	3.2	3.4	4.2	3.8	4.3	4.9	9.1	38	49	32
14	4.0	4.5	3.5	3.4	4.2	4.1	13	4.9	9.1	32	66	22
15	4.3	4.4	3.1	3.5	4.7	4.3	33	6.6	7.4	33	47	18
16	4.3	4.2	3.3	3.5	4.9	4.4	64	12	9.0	31	28	15
17	4.5	4.2	3.4	3.5	4.8	4.4	82	18	93	26	17	10
18	4.5	4.2	3.1	3.6	5.0	4.5	54	52	149	26	13	10
19	4.6	4.1	3.1	3.6	4.9	5.0	94	39	171	23	15	10
20	4.6	4.0	3.1	3.7	5.0	4.4	102	31	120	19	13	14
21	4.6	3.7	3.2	3.9	5.1	4.3	99	33	40	22	11	11
22	4.8	3.3	3.1	3.7	4.7	4.2	86	34	89	29	11	8.6
23	4.8	3.3	2.9	3.5	5.0	4.2	90	33	21	31	9.6	16
24	4.5	3.3	3.5	3.9	e4.8	4.3	89	18	16	29	7.8	38
25	4.6	3.3	e3.4	3.9	e5.0	4.2	93	6.1	16	27	9.2	45
26	5.0	3.3	e3.5	3.8	5.9	4.2	92	5.4	49	26	7.9	47
27	6.3	3.2	e3.4	3.8	5.9	4.4	93	5.0	21	27	7.1	52
28	5.2	3.1	3.9	4.3	5.4	4.1	87	5.2	12	30	6.5	55
29	5.8	3.1	3.7	3.9	---	4.0	79	8.8	19	28	8.9	57
30	5.6	3.4	3.7	3.9	---	4.0	77	6.7	11	30	33	55
31	5.5	---	3.7	3.8	---	4.0	---	6.0	---	28	28	---
TOTAL	136.2	134.0	104.7	112.6	127.1	155.4	1,379.4	684.2	1,277.2	882	760.0	708.6
MEAN	4.39	4.47	3.38	3.63	4.54	5.01	46.0	22.1	42.6	28.5	24.5	23.6
MAX	6.3	7.1	3.9	4.3	5.9	11	102	83	171	61	66	57
MIN	3.3	3.1	2.9	3.4	3.8	3.8	3.9	4.9	7.4	12	6.5	8.6
AC-FT	270	266	208	223	252	308	2,740	1,360	2,530	1,750	1,510	1,410

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

	MEAN	21.3	29.5	39.7	40.8	41.1	161	198	280	309	217	89.3
MAX	233	117	350	796	507	516	1,089	2,143	2,087	2,457	1,547	689
(WY)	(1949)	(1998)	(1998)	(1998)	(1966)	(1998)	(1987)	(1987)	(1987)	(1995)	(1965)	(1965)
MIN	0.84	1.81	0.56	0.47	0.72	1.11	5.90	6.41	3.80	10.2	10.9	1.37
(WY)	(1978)	(1978)	(1978)	(1978)	(1965)	(1965)	(1995)	(1963)	(1954)	(1964)	(1974)	(1974)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1949 - 2003

ANNUAL TOTAL	15,406.7	6,461.4	
ANNUAL MEAN	42.2	17.7	a122
HIGHEST ANNUAL MEAN			537
LOWEST ANNUAL MEAN			17.7
HIGHEST DAILY MEAN	599	Aug 29	171
LOWEST DAILY MEAN	2.9	Dec 23	2.9
ANNUAL SEVEN-DAY MINIMUM	3.1	Dec 17	3.1
MAXIMUM PEAK FLOW			215
MAXIMUM PEAK STAGE			5.80
ANNUAL RUNOFF (AC-FT)	30,560	12,820	d73,800
10 PERCENT EXCEEDS	76	48	f16.48
50 PERCENT EXCEEDS	7.9	5.4	88,310
90 PERCENT EXCEEDS	3.6	3.4	410
			23
			4.2

e Estimated.

a Average discharge for 30 years (water years 1914-43), 298 ft³/s, 215,900 acre-ft/yr, prior to and during construction of John Martin Dam.

b Maximum daily discharge for period of record, 87,300 ft³/s, Jun 5, 1921.

c Also minimum daily discharge for period of record; also occurred at times in 1913-15.

d From current-meter and timed-drift measurement of peak flow, maximum discharge and gage height for period of record, 130,000 ft³/s, (determined by Colorado State Engineer)

e Jun 5, 1921, from rating curve extended above 10,000 ft³/s, gage height, 14.55 ft, site and datum then in use.

f From floodmarks, site and datum then in use.

07134100 BIG SANDY CREEK NEAR LAMAR, CO

LOCATION.--Lat 38°06'51", long 102°29'00", in SW¹/₄SW¹/₄ sec.21, T.22 S., R.45 W., Prowers County, Hydrologic Unit 11020011, on right bank 35 ft upstream from State Highway 196, 950 ft upstream from mouth, and 7.5 mi east of Lamar.

DRAINAGE AREA.--3,248 mi², of which about 585 mi² is probably noncontributing.

PERIOD OF RECORD.-- February 1968 to September 1982, 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=07134100

REVISED RECORDS.--WDR CO-01-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 3,545 ft above NGVD of 1929, from topographic map. Prior to June 30, 1977, at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage, erosion-control, and livestock-watering reservoirs, diversions for irrigation, ground-water withdrawals, and return flows from irrigated areas. Flow affected by backwater from the Arkansas River at times. 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 OUTSIDE PERIOD OF RECORD.--Flood of June 17, 1965, reached a discharge of 3,600 ft³/s, from slope-area measurement of peak flow 0.5 mi upstream from station. Flood of Aug. 21, 1965, reached a stage of 9.93 ft, from floodmarks, discharge unknown.

**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	1.2	3.4	1.4	2.5	2.9	2.3	2.3	1.7	2.2	2.0	1.3	1.6
2	1.3	3.4	1.4	2.5	3.2	2.4	2.2	1.8	5.9	2.8	1.1	1.6
3	1.3	3.4	1.4	2.5	3.1	2.4	2.3	1.8	3.8	4.8	1.1	1.5
4	1.2	3.7	1.4	2.5	2.9	2.2	2.2	1.9	13	3.9	1.1	1.4
5	1.2	3.8	1.6	2.6	2.9	2.1	2.2	2.0	12	3.4	1.0	1.4
6	1.2	3.8	1.7	2.8	2.9	2.2	2.2	2.1	12	3.5	1.0	1.4
7	1.7	3.9	1.7	2.9	2.7	2.0	2.1	1.9	23	3.7	0.98	1.6
8	2.3	4.0	1.7	3.0	2.8	2.1	2.1	4.5	19	4.0	0.76	1.6
9	3.2	4.0	1.8	2.9	2.8	2.0	2.2	2.8	16	4.3	0.81	1.7
10	2.1	4.0	2.1	2.7	2.5	2.0	2.0	2.5	13	4.1	0.51	1.8
11	1.7	3.9	1.9	2.6	2.5	2.0	2.1	2.8	12	3.0	0.66	1.6
12	0.95	3.9	2.0	2.5	2.3	1.9	2.0	2.7	12	2.6	1.5	1.6
13	0.95	3.9	2.1	2.5	2.5	1.7	2.0	3.0	12	1.9	1.5	1.6
14	0.97	4.1	2.1	2.4	2.6	1.7	1.9	1.8	12	1.9	1.5	1.7
15	1.1	3.9	2.3	2.6	2.2	1.8	1.8	1.7	11	1.7	1.5	1.7
16	1.2	3.6	2.4	2.6	2.0	1.7	2.0	2.1	11	1.7	1.5	1.7
17	1.1	4.0	2.7	2.6	2.0	1.6	1.7	3.5	9.9	1.6	1.5	1.4
18	1.3	3.9	2.4	2.6	2.1	1.8	2.2	3.1	7.8	0.50	1.4	1.4
19	1.2	3.9	2.4	2.6	2.2	2.6	3.2	2.2	7.9	0.72	1.5	1.4
20	1.2	4.2	2.4	2.6	2.3	3.1	2.5	2.0	9.4	0.93	1.5	1.4
21	1.2	4.8	2.5	2.6	2.3	2.8	2.2	1.8	8.9	0.87	1.4	1.4
22	1.3	5.0	2.5	2.6	2.3	2.4	2.0	1.8	10	0.99	1.4	1.4
23	1.8	5.1	2.6	2.5	2.2	2.4	2.2	1.8	5.8	1.0	1.3	1.4
24	1.8	5.0	2.7	2.4	2.1	2.4	2.2	1.9	7.6	1.2	1.0	1.4
25	2.5	4.9	2.7	2.4	2.1	2.4	2.3	2.1	8.4	1.0	1.2	1.4
26	2.2	4.3	2.7	2.4	2.1	2.4	2.1	2.2	8.8	0.94	1.4	e1.2
27	2.7	1.9	2.9	2.6	2.2	2.3	2.0	2.1	8.6	1.2	0.68	e1.2
28	3.0	1.5	3.0	2.7	2.2	2.3	1.9	3.4	3.0	1.4	0.71	e1.0
29	3.2	1.6	3.0	3.1	---	2.1	1.9	1.8	2.7	1.2	2.4	e1.0
30	3.1	1.3	2.6	3.0	---	2.1	1.9	1.8	2.1	0.80	1.6	e0.90
31	3.3	---	2.4	2.7	---	2.1	---	2.3	---	1.2	1.6	---
TOTAL	54.47	112.1	68.5	81.5	68.9	67.3	63.9	70.9	290.8	64.85	38.41	43.40
MEAN	1.76	3.74	2.21	2.63	2.46	2.17	2.13	2.29	9.69	2.09	1.24	1.45
MAX	3.3	5.1	3.0	3.1	3.2	3.1	3.2	4.5	23	4.8	2.4	1.8
MIN	0.95	1.3	1.4	2.4	2.0	1.6	1.7	1.7	2.1	0.50	0.51	0.90
AC-FT	108	222	136	162	137	133	127	141	577	129	76	86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)																																								
1968	8.29	28.4	(1997)	0.087	(1979)	15.2	58.9	(1998)	0.41	(1978)	20.4	63.0	(1998)	0.34	(1978)	21.9	75.5	(1998)	0.50	(1978)	21.5	55.6	(1998)	2.23	(1978)	21.5	59.0	(1998)	2.10	(1977)	20.6	70.6	(1999)	0.81	(1978)	21.8	166	(1999)	2.14	(1975)	11.0	42.9	(1999)	1.77	(1976)	10.3	41.6	(1998)	0.21	(1978)	14.5	85.3	(1997)	0.027	(1976)	9.68	41.8	(1976)	0.084	(1978)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1968 - 2003

ANNUAL TOTAL	2,713.45		1,025.03			
ANNUAL MEAN	7.43		2.81			
HIGHEST ANNUAL MEAN					16.6	
LOWEST ANNUAL MEAN					45.6	1999
HIGHEST DAILY MEAN	e200	Aug 29	23	Jun 7	2.23	1979
LOWEST DAILY MEAN	0.82	Sep 3	0.50	Jul 18	1,460	May 4, 1999
ANNUAL SEVEN-DAY MINIMUM	1.1	Oct 12	0.82	Aug 5	a0.00	Aug 13, 1976
MAXIMUM PEAK FLOW			71	Jun 4	0.00	Sep 1, 1976
MAXIMUM PEAK STAGE			2.46	Jun 4	b2,850	May 4, 1999
ANNUAL RUNOFF (AC-FT)	5,380		2,030		9.66	May 4, 1999
10 PERCENT EXCEEDS	18		4.1		12,050	
50 PERCENT EXCEEDS	3.6		2.2		42	
90 PERCENT EXCEEDS	1.3		1.2		9.0	
					0.95	

e Estimated.

a Also occurred on many days during 1976-79 water years.

b From rating curve extended above 1,470 ft³/s on the basis of flow through culvert analysis with flow over road measurement at gage height 9.48 ft.

07134100 BIG SANDY CREEK NEAR LAMAR, CO—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--April 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=07134100

GAGE.--Tipping-bucket rain gage with satellite telemetry.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum daily precipitation, 2.79 inches, Aug. 29, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum daily precipitation during period April to September, 2.79 inches, Aug. 29.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	0.00	0.05	1.35	0.00	0.00	0.01
2	---	---	---	---	---	---	0.00	0.06	0.42	0.00	0.00	0.00
3	---	---	---	---	---	---	0.00	0.00	0.03	0.00	0.00	0.02
4	---	---	---	---	---	---	0.00	0.02	1.07	0.00	0.00	0.00
5	---	---	---	---	---	---	0.00	0.00	0.52	0.02	0.00	0.00
6	---	---	---	---	---	---	0.00	0.03	0.52	0.00	0.00	0.00
7	---	---	---	---	---	---	0.00	0.00	0.36	0.00	0.00	0.68
8	---	---	---	---	---	---	0.00	0.01	0.00	0.00	0.00	0.00
9	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.19
10	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.02
11	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
13	---	---	---	---	---	---	0.00	0.00	0.12	0.00	0.00	0.00
14	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
15	---	---	---	---	---	---	0.12	0.52	0.00	0.00	0.00	0.00
16	---	---	---	---	---	---	0.12	0.00	0.00	0.00	0.00	0.00
17	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	0.00	0.00	0.78	0.00	0.23	0.00
19	---	---	---	---	---	---	0.13	0.00	0.16	0.10	0.00	0.00
20	---	---	---	---	---	---	0.00	0.00	0.09	0.00	0.00	0.00
21	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.01	0.00
22	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
23	---	---	---	---	---	---	0.05	0.00	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	0.00	0.22	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	0.00	0.00	0.02	0.00	0.00	0.00
29	---	---	---	---	---	---	0.00	0.00	0.00	0.00	2.79	0.00
30	---	---	---	---	---	---	0.00	0.88	0.00	0.00	0.04	0.00
31	---	---	---	---	---	---	---	0.03	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	0.42	1.82	5.44	0.12	3.07	0.92
MAX	---	---	---	---	---	---	0.13	0.88	1.35	0.10	2.79	0.68

07134180 ARKANSAS RIVER NEAR GRANADA, CO

LOCATION.--Lat 38°05'44", long 102°18'37", in SE¼NE¼ sec.36, T.22 S., R.44 W., Prowers County, Hydrologic Unit 11020009, on left bank at upstream side of end of bridge on U.S. Highway 385, 1.2 mi downstream from headgate of Buffalo Canal, and 2.3 mi north of Granada.

DRAINAGE AREA.--23,707 mi², of which 1,648 mi² is probably noncontributing.

PERIOD OF RECORD.--January 1899 to December 1901 (gage heights only), August to October 1903 (monthly discharge only for some periods, published in WSP 1311), December 1980 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07134180

REVISED RECORDS.--WDR CO-01-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 3,480 ft above NGVD of 1929, from topographic map. See WSP 1311 for history of changes prior to December 5, 1980.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Flow regulated by John Martin Reservoir (station 07130000) 38 mi upstream since October 1948. 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	7.3	4.0	27	36	40	49	3.9	8.1	3.5	11	3.3	3.1
2	6.6	3.9	28	36	40	48	3.7	10	3.5	17	3.2	3.1
3	6.6	3.7	27	36	41	49	3.7	10	9.2	40	3.2	3.0
4	6.4	3.8	30	36	41	49	3.6	4.1	25	13	3.2	3.0
5	6.6	3.6	29	36	40	49	3.6	3.7	65	7.7	3.3	3.0
6	4.8	3.4	30	36	40	48	3.5	3.6	77	4.5	3.2	3.0
7	4.9	3.5	30	36	40	47	3.3	3.6	93	4.1	3.3	3.2
8	4.9	3.6	30	37	40	50	3.4	3.4	96	4.1	3.2	3.3
9	5.0	3.6	31	36	42	53	3.5	3.4	82	4.0	3.2	3.4
10	5.1	3.5	31	35	43	54	3.6	3.2	95	4.0	3.2	3.4
11	5.5	3.4	32	36	43	52	3.7	3.2	88	4.1	3.2	3.2
12	5.2	3.4	32	37	44	49	3.7	3.3	83	3.9	3.1	3.3
13	5.2	3.4	32	37	44	47	3.8	3.2	81	3.7	3.0	3.2
14	5.2	3.3	32	37	46	46	3.7	3.2	80	3.7	3.1	3.4
15	5.1	3.3	32	37	44	46	4.1	3.6	78	3.4	3.2	3.6
16	5.1	3.2	32	37	44	47	3.8	3.4	42	3.2	3.1	3.6
17	5.1	14	34	37	45	26	3.8	3.3	11	3.1	3.1	3.5
18	5.2	23	33	38	44	6.7	4.0	3.4	64	3.0	3.1	3.2
19	5.1	24	31	39	44	30	4.0	3.3	123	3.0	3.1	3.2
20	5.0	25	32	39	44	50	5.2	3.3	142	2.9	3.1	3.3
21	4.9	25	32	38	45	49	8.0	3.5	111	3.0	3.6	3.4
22	4.9	25	32	37	46	48	8.8	3.5	84	3.1	3.4	4.3
23	4.5	25	32	34	46	32	7.5	3.6	63	3.1	3.2	3.1
24	4.4	24	33	38	45	7.7	7.0	3.7	27	3.2	3.1	3.0
25	4.7	24	33	39	43	6.8	7.3	3.9	26	3.2	3.1	3.1
26	4.6	25	33	37	46	6.3	8.6	3.7	23	3.1	3.0	3.2
27	4.4	25	34	39	48	5.5	8.6	3.6	27	3.1	3.0	3.1
28	4.3	26	36	39	49	4.8	9.3	3.6	21	3.2	3.0	3.1
29	4.5	27	37	39	---	4.5	9.2	3.5	19	3.5	3.5	3.3
30	4.1	26	36	39	---	4.5	8.7	4.0	13	3.4	3.2	3.1
31	4.0	---	35	40	---	6.9	---	3.8	---	3.4	3.1	---
TOTAL	159.2	394.6	988	1,153	1,217	1,071.7	158.6	126.7	1,755.2	178.7	98.6	97.7
MEAN	5.14	13.2	31.9	37.2	43.5	34.6	5.29	4.09	58.5	5.76	3.18	3.26
MAX	7.3	27	37	40	49	54	9.3	10	142	40	3.6	4.3
MIN	4.0	3.2	27	34	40	4.5	3.3	3.2	3.5	2.9	3.0	3.0
AC-FT	316	783	1,960	2,290	2,410	2,130	315	251	3,480	354	196	194

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2003, BY WATER YEAR (WY)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	85.0	99.3	125	138	130	122	188	307	403	449	266	111												
MAX	184	306	479	886	495	608	1,138	2,470	2,196	2,144	775	430												
(WY)	(1984)	(1998)	(1998)	(1998)	(1998)	(1998)	(1987)	(1999)	(1987)	(1995)	(1999)	(1984)												
MIN	4.15	9.68	31.9	37.2	43.5	22.7	5.29	4.09	9.39	5.76	3.18	3.26												
(WY)	(1993)	(1982)	(2003)	(2003)	(2003)	(1994)	(2003)	(2003)	(1981)	(2003)	(2003)	(2003)												

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1981 - 2003

ANNUAL TOTAL	17,660.0	7,399.0	
ANNUAL MEAN	48.4	20.3	208
HIGHEST ANNUAL MEAN			597
LOWEST ANNUAL MEAN			20.3
HIGHEST DAILY MEAN	1,240	Aug 29	4,070
LOWEST DAILY MEAN	2.9	Aug 13	a2.7
ANNUAL SEVEN-DAY MINIMUM	3.1	Aug 13	3.0
MAXIMUM PEAK FLOW			151
MAXIMUM PEAK STAGE			6.03
ANNUAL RUNOFF (AC-FT)	35,030	14,680	150,600
10 PERCENT EXCEEDS	91	46	513
50 PERCENT EXCEEDS	18	5.5	102
90 PERCENT EXCEEDS	3.6	3.2	6.6

a Also occurred Aug 18-19, 1990; minimum daily for period of record, 1 ft³/s, many days in 1903.

b From rating curve extended above 3,470 ft³/s.

c Maximum gage height, 12.38 ft, May 27, 1996.

07134990 WILD HORSE CREEK ABOVE HOLLY, CO

LOCATION.--Lat 38°03'24", long 102°08'16", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T.23 S., R.42 W., Prowers County, Hydrologic Unit 11020009, on left bank 1,000 ft downstream from County Road No. 34, 0.7 mi northwest of Holly, and 0.7 mi upstream from mouth.

DRAINAGE AREA.--270 mi², approximately, of which about 60 mi² is probably noncontributing.

PERIOD OF RECORD.--June 1995 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=07134990

REVISED RECORDS.--WDR CO-01-1: Drainage area

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,405 ft above NGVD of 1929, from topographic map. Prior to Apr. 29, 1997, at site 1,050 ft upstream at datum 3.00 ft higher.

REMARKS.--Records fair except for estimated daily discharges and those below 0.75 ft³/s, which are poor. Natural flow of stream affected by diversions for irrigation, ground-water withdrawals, and return flows from irrigated areas, the Buffalo Canal, and the Amity Canal. 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 RECORD (seasonal only).--Maximum discharge, 1,270 ft³/s, May 26, 1996, from slope-area measurement of peak flow, gage height, 6.90 ft, from floodmark, site and datum then in use; maximum gage height, 8.63 ft, Aug. 7, 1997, from floodmark; no flow, Aug. 20-21, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 104 ft³/s, June 9, gage height, 4.45 ft; minimum daily, 0.08 ft³/s, July 20.

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	1.4	27	---	---	---	---	1.1	2.9	11	0.55	0.98	1.2
2	1.4	27	---	---	---	---	e1.1	1.9	29	0.91	0.91	0.84
3	1.2	27	---	---	---	---	e1.1	1.6	35	1.0	0.75	0.62
4	0.82	26	---	---	---	---	e1.0	1.4	34	1.6	0.62	0.55
5	0.72	28	---	---	---	---	e1.0	1.4	82	0.94	0.71	0.56
6	0.67	26	---	---	---	---	e0.80	1.2	48	2.0	0.92	0.41
7	0.64	26	---	---	---	---	e0.50	1.1	65	3.5	1.7	0.71
8	0.76	25	---	---	---	---	e0.50	0.85	77	0.89	2.2	0.59
9	0.96	23	---	---	---	---	e0.40	0.84	71	0.42	1.1	6.9
10	0.82	16	---	---	---	---	e0.30	0.84	40	0.50	1.0	12
11	1.1	2.0	---	---	---	---	e0.30	0.88	6.2	0.58	1.0	0.61
12	1.3	1.9	---	---	---	---	e0.30	0.97	1.8	0.28	1.0	0.47
13	1.3	1.8	---	---	---	---	e0.30	1.0	1.0	0.50	0.98	0.75
14	1.0	1.5	---	---	---	---	e0.30	1.0	0.76	0.43	0.97	0.95
15	1.1	1.6	---	---	---	---	e0.30	1.2	0.56	0.34	1.1	1.1
16	0.70	1.8	---	---	---	---	3.4	1.4	4.5	0.20	0.90	0.71
17	0.73	1.6	---	---	---	---	0.79	1.0	13	0.11	0.81	0.52
18	1.0	1.0	---	---	---	---	3.0	0.98	2.1	0.26	0.81	0.49
19	1.1	0.90	---	---	---	---	1.4	3.0	2.2	0.11	0.75	0.49
20	0.87	0.79	---	---	---	---	6.5	0.90	1.8	0.08	0.71	0.44
21	1.1	0.75	---	---	---	---	5.0	0.78	1.7	0.39	0.67	0.46
22	1.4	0.75	---	---	---	---	3.0	0.69	1.7	0.68	0.71	0.52
23	1.4	0.74	---	---	---	---	3.4	0.54	1.5	0.63	0.48	0.51
24	1.3	0.50	---	---	---	---	3.9	0.81	1.5	0.59	0.54	0.44
25	1.3	0.50	---	---	---	---	4.0	1.1	1.4	0.48	0.74	0.63
26	1.2	0.50	---	---	---	---	3.8	1.7	1.2	0.48	0.68	0.64
27	1.3	0.50	---	---	---	---	2.0	1.2	1.2	0.61	0.59	0.81
28	8.4	0.50	---	---	---	---	1.5	13	1.9	0.81	0.12	0.89
29	17	0.50	---	---	---	---	0.94	23	1.4	0.92	9.6	0.78
30	24	0.50	---	---	---	---	2.8	24	0.75	0.97	12	0.75
31	20	---	---	---	---	---	---	15	---	0.93	1.2	---
TOTAL	97.99	271.63	---	---	---	---	54.73	108.18	540.17	22.69	47.25	37.34
MEAN	3.16	9.05	---	---	---	---	1.82	3.49	18.0	0.73	1.52	1.24
MAX	24	28	---	---	---	---	6.5	24	82	3.5	12	12
MIN	0.64	0.50	---	---	---	---	0.30	0.54	0.56	0.08	0.12	0.41
AC-FT	194	539	---	---	---	---	109	215	1,070	45	94	74

e Estimated.

ARKANSAS RIVER BASIN

07137000 FRONTIER DITCH NEAR COOLIDGE, KS

LOCATION.--Lat 38°02'18", long 102°02'19", in SW ¼ SE ¼ NE ¼ sec.21, T.23 S., R.43 W., Hamilton County, Hydrologic Unit 11030001, on left bank 0.3 mi east of Colorado-Kansas State line, 0.5 mi downstream from Holly drain diversion, 1.5 mi west of Coolidge, and 2.3 mi downstream from diversion of the Arkansas River.

PERIOD OF RECORD.--October 1950 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/ks/nwis/inventory/?site_no=07137000

REVISED RECORDS.--WSP 1731: 1951.

GAGE.--Water-stage recorders and Parshall flume. Datum of gage is 3,343.14 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. This ditch diverts water from the Arkansas River in Colorado for use in Kansas. These records and records for the Arkansas River near Coolidge represent total flow of the Arkansas River at the Colorado-Kansas State line. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 84 ft³/s Aug. 1, 1975; no flow many days 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19	27	18	15	14
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19	29	21	13	13
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19	31	25	13	13
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	30	25	13	13
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	31	24	14	12
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19	31	26	13	12
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	19	24	11	15
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	0.06	20	13	18
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17	0.00	19	12	17
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16	0.00	19	14	22
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16	0.00	19	14	16
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	0.00	18	13	14
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	0.00	17	12	14
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20	0.00	19	10	16
15	0.00	0.00	0.00	0.00	0.00	0.00	11	19	0.00	17	11	16
16	0.00	0.00	0.00	0.00	0.00	0.00	19	20	0.00	17	13	16
17	0.00	0.00	0.00	0.00	0.00	0.00	19	19	0.00	16	13	15
18	0.00	0.00	0.00	0.00	0.00	0.00	25	25	0.00	15	12	14
19	0.00	0.00	0.00	0.00	0.00	0.00	25	21	0.00	14	14	14
20	0.00	0.00	0.00	0.00	0.00	0.00	28	20	0.00	15	12	14
21	0.00	0.00	0.00	0.00	0.00	0.00	28	19	0.00	15	12	15
22	0.00	0.00	0.00	0.00	0.00	0.00	27	20	0.00	13	15	15
23	0.00	0.00	0.00	0.00	0.00	0.00	29	21	0.00	13	13	14
24	0.00	0.00	0.00	0.00	0.00	0.00	31	22	0.00	14	12	13
25	0.00	0.00	0.00	0.00	0.00	0.00	31	24	0.00	14	11	13
26	0.00	0.00	0.00	0.00	0.00	0.00	0.08	24	0.00	13	9.9	13
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21	0.00	14	9.6	13
28	0.00	0.00	0.00	0.00	0.00	0.00	12	20	0.00	16	9.2	14
29	0.00	0.00	0.00	0.00	---	0.00	19	25	9.5	19	11	16
30	0.00	0.00	0.00	0.00	---	0.00	19	25	19	20	e21	19
31	0.00	---	0.00	0.00	---	0.00	---	26	---	18	16	---
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	10.8	20.1	7.55	18.0	12.7	14.8
MAX	0.00	0.00	0.00	0.00	0.00	0.00	31	26	31	26	21	22
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16	0.00	13	9.2	12
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	641	1,240	449	1,100	783	879
CAL YR	2002	MEAN 10.0	MAX 37	MIN 0.00	AC-FT 7,260							
WTR YR	2003	MEAN 7.03	MAX 31	MIN 0.00	AC-FT 5,090							

e Estimated.

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS

LOCATION.--Lat 38°01'34", long 102°00'41", in NW ¼ NE ¼ NW ¼ sec.26, T.23 S., R.43 W., Hamilton County, Hydrologic Unit 11030001, on right bank at downstream side of county highway bridge, 1.0 mi south of Coolidge, 1.9 mi downstream from Colorado-Kansas State line, and at mile 1,099.3 .

DRAINAGE AREA.--25,410 mi², of which 1,708 mi² is probably noncontributing.

PERIOD OF RECORD.--May to October 1903, March to May 1921, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1311. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/ks/nwis/inventory/?site_no=07137500

REVISED RECORDS.--WSP 1341: 1903, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,330.84 ft above NGVD of 1929. May 5 to Oct. 31, 1903, nonrecording gage, and Mar. 1 to May 31, 1921, water-stage recorder at present site at different datum. Oct. 1, 1950, to Mar. 31, 1966, water-stage recorder at site 0.3 mi upstream at datum 3.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Combined flow of river and Frontier Ditch (station 07137000) represents entire flow that enters Kansas. Flow regulated since 1948 by John Martin Reservoir (station 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 500,000 acres, and return flow from irrigated areas. Satellite telemeter at station.

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	48	59	57	59	59	62	36	36	28	39	4.5	25
2	49	59	59	59	59	62	36	40	29	34	4.3	19
3	50	60	59	59	59	60	35	41	37	29	3.6	9.2
4	51	61	58	59	58	60	35	41	38	31	3.4	9.2
5	48	59	59	59	59	59	34	42	90	25	3.0	16
6	47	59	59	59	59	59	36	37	95	18	4.3	11
7	46	59	60	59	57	57	37	32	122	16	3.2	17
8	46	59	58	60	58	57	37	30	153	14	2.6	24
9	46	60	61	59	60	57	37	29	153	12	10	14
10	46	58	60	59	60	59	36	27	142	11	6.0	9.9
11	49	55	59	59	59	59	37	26	127	11	4.1	5.2
12	48	56	60	60	58	58	37	28	116	11	3.0	4.1
13	49	56	61	60	59	56	37	28	109	12	5.5	3.9
14	44	57	60	60	60	54	35	25	130	9.4	3.7	3.7
15	41	57	59	59	60	52	31	24	105	13	12	3.4
16	38	60	60	58	59	52	29	30	98	11	8.0	3.2
17	39	61	58	60	60	52	28	27	91	9.4	8.3	2.7
18	44	56	58	60	60	52	30	31	86	10	6.0	2.5
19	44	56	56	60	60	55	30	29	127	8.8	6.2	2.5
20	41	57	56	60	60	53	32	26	149	7.0	4.4	2.5
21	46	58	58	60	60	52	31	25	163	5.9	3.3	2.9
22	46	59	57	59	60	48	30	26	151	5.6	5.1	2.6
23	50	59	58	e50	61	48	31	28	125	6.0	3.4	3.2
24	50	56	57	e48	59	49	31	31	111	5.5	4.1	3.2
25	50	56	53	62	53	57	32	35	97	4.6	4.4	4.5
26	46	57	52	61	52	52	45	35	83	4.5	5.4	10
27	49	59	51	58	62	44	45	36	81	4.5	6.5	14
28	52	59	57	59	63	44	40	34	78	5.0	5.7	12
29	55	59	61	59	---	41	37	30	62	8.2	4.7	18
30	59	58	60	58	---	38	37	29	45	13	41	15
31	58	---	59	58	---	38	---	28	---	8.0	21	---
MEAN	47.6	58.1	58.1	58.7	59.0	53.1	34.8	31.2	101	13.0	6.80	9.11
MAX	59	61	61	62	63	62	45	42	163	39	41	25
MIN	38	55	51	48	52	38	28	24	28	4.5	2.6	2.5
AC-FT	2,930	3,460	3,570	3,610	3,280	3,260	2,070	1,920	5,990	798	418	542

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

MEAN	134	122	127	134	140	134	214	318	484	357	329	179
MAX	332	424	534	972	602	658	1,221	2,478	8,221	2,255	1,979	1,079
(WY)	(1998)	(1998)	(1998)	(1998)	(1966)	(1998)	(1987)	(1999)	(1965)	(1995)	(1965)	(1965)
MIN	1.97	1.53	3.94	3.14	5.52	5.63	9.43	6.61	4.20	3.59	1.94	0.90
(WY)	(1979)	(1979)	(1979)	(1979)	(1978)	(1978)	(1979)	(1963)	(1954)	(1974)	(1964)	(1960)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1951 - 2003
ANNUAL MEAN	83.4	44.0	223
HIGHEST ANNUAL MEAN			1,012
LOWEST ANNUAL MEAN			19.8
HIGHEST DAILY MEAN	985	Aug 30	101,000
LOWEST DAILY MEAN	12	Aug 11	0.00
ANNUAL SEVEN-DAY MINIMUM	14	Aug 16	0.00
MAXIMUM PEAK FLOW			187
MAXIMUM PEAK STAGE			3.32
ANNUAL RUNOFF (AC-FT)	60,340	31,840	161,700
10 PERCENT EXCEEDS	135	61	458
50 PERCENT EXCEEDS	59	48	126
90 PERCENT EXCEEDS	24	5.2	10

e Estimated.

08219500 SOUTH FORK RIO GRANDE AT SOUTH FORK, CO

LOCATION.--Lat 37°39'25", long 106°38'55", in SW¼NE¼ sec.3, T.39 N., R.3 E., Rio Grande County, Hydrologic Unit 13010001, on left bank near U.S. Highway 160, 0.1 mi downstream from Church Creek, 0.9 mi southwest of village of South Fork, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--216 mi².

PERIOD OF RECORD.--August 1910 to September 1922, May 1936 to September 1995, and October 1998 to current year. Monthly discharge only for some periods, published in WSP 1312. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08219500

REVISED RECORDS.--WSP 898: 1911(M). WSP 1312: 1912, 1944(M). WSP 1632: 1956-58(P).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,221.79 ft above NGVD of 1929. Aug. 9, 1910 to Mar. 28, 1915, nonrecording gage, and Mar. 29, 1915 to Sept. 30, 1922, water-stage recorder, at bridges 1 mi downstream at different datums.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, transmountain diversions from Colorado River Basin through Treasure Pass ditch (see elsewhere in this report), diversions for irrigation, and return flows from irrigated areas. Flow slightly regulated by Beaver Creek Reservoir on Beaver Creek, capacity, 4,760 acre-ft, and several other storage reservoirs.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, exceeds all other observed floods at this location since at least 1873. Flood of June 29, 1927, reached a stage about 1 ft lower than that of Oct. 5, 1911, from information by local residents.

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	61	40	e26	e21	e26	e27	58	278	739	73	47	56
2	74	34	e23	e19	e26	e27	73	270	648	72	63	48
3	120	29	e25	e21	e22	e28	65	277	598	66	46	42
4	88	32	e21	e23	e20	e30	60	278	545	61	39	43
5	78	27	e20	e23	e17	e29	58	233	496	58	34	50
6	71	27	e19	e22	e15	e29	55	204	427	56	28	62
7	68	30	e19	e19	e13	e32	52	183	386	56	30	61
8	64	33	e20	e19	e15	e33	e46	174	355	57	33	53
9	61	33	e19	e21	e17	e35	55	154	343	55	37	97
10	56	e26	e18	e22	e18	e36	71	143	317	51	37	325
11	52	e23	e19	e22	e21	e38	93	145	296	47	40	192
12	52	e22	e21	e18	e25	e38	106	203	271	47	40	139
13	54	e27	e21	e19	e29	e39	109	281	251	47	43	121
14	46	e28	e20	e21	e29	e39	143	317	220	44	36	106
15	42	e25	e23	e23	e27	e40	177	428	206	42	35	88
16	40	e21	e23	e21	e27	e39	144	443	215	44	34	67
17	38	e27	e23	e20	e30	e37	142	590	197	50	32	62
18	38	e29	e18	e19	e28	e35	133	703	194	48	35	55
19	36	e28	e16	e20	e26	e37	118	685	199	47	39	51
20	36	e30	e16	e20	e27	e37	97	669	196	52	36	48
21	35	e30	e18	e21	e29	37	101	686	174	50	33	47
22	34	e28	e16	e21	e28	38	107	759	158	47	37	45
23	37	e30	e18	e23	e28	43	102	779	145	55	50	43
24	39	e30	e16	e24	e30	51	96	759	123	56	54	42
25	36	e28	e15	e23	e30	55	114	706	107	49	e63	40
26	38	e23	e14	e21	e29	55	151	650	93	46	78	38
27	43	e23	e17	e23	e28	52	197	699	87	48	76	49
28	39	e24	e18	e22	e29	48	256	765	82	51	72	59
29	45	e27	e20	e21	---	e39	295	826	77	57	78	44
30	41	e26	e19	e23	---	45	315	819	74	56	71	44
31	48	---	e19	e24	---	47	---	819	---	49	68	---
TOTAL	1,610	840	600	659	689	1,195	3,589	14,925	8,219	1,637	1,444	2,217
MEAN	51.9	28.0	19.4	21.3	24.6	38.5	120	481	274	52.8	46.6	73.9
MAX	120	40	26	24	30	55	315	826	739	73	78	325
MIN	34	21	14	18	13	27	46	143	74	42	28	38
AC-FT	3,190	1,670	1,190	1,310	1,370	2,370	7,120	29,600	16,300	3,250	2,860	4,400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2003, BY WATER YEAR (WY)

	MEAN	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	90.4	57.4	43.4	37.3	40.2	63.0	215	687	817	252	111	86.2
MAX	569	152	106	88.6	78.3	131	479	1,282	1,746	794	264	358
(WY)	(1912)	(1987)	(1912)	(1986)	(1986)	(1989)	(1962)	(1984)	(1979)	(1957)	(1957)	(1970)
MIN	32.1	23.9	18.0	13.6	18.2	21.5	85.2	136	51.0	28.8	22.7	23.6
(WY)	(1956)	(1961)	(1977)	(1977)	(1955)	(1955)	(1955)	(2002)	(2002)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1910 - 2003

ANNUAL TOTAL	18,153	37,624	
ANNUAL MEAN	49.7	103	209
HIGHEST ANNUAL MEAN			359
LOWEST ANNUAL MEAN			48.9
HIGHEST DAILY MEAN	194	Apr 15	2,980
LOWEST DAILY MEAN	13	Aug 15	10
ANNUAL SEVEN-DAY MINIMUM	14	Aug 13	11
MAXIMUM PEAK FLOW		916	8,000
MAXIMUM PEAK STAGE		4.13	99.70
ANNUAL RUNOFF (AC-FT)	36,010	74,630	151,600
10 PERCENT EXCEEDS	126	273	605
50 PERCENT EXCEEDS	31	43	70
90 PERCENT EXCEEDS	19	20	32

e Estimated.

a Present site and datum, from rating curve extended above 1,500 ft³/s.

b From floodmarks.

08220000 RIO GRANDE NEAR DEL NORTE, CO

LOCATION.--Lat 37°41'22", long 106°27'38", in NW¹/₄NW¹/₄ (revised) sec.29, T.40 N., R.5 E., Rio Grande County, Hydrologic Unit 13010001, on right bank 20 ft downstream from county highway bridge, 5.0 mi upstream from Pinos Creek, and 6.0 mi west of Del Norte.

DRAINAGE AREA.--1,320 mi², approximately.

PERIOD OF RECORD.--June 1889 to current year. Monthly discharge only for some periods, published in WSP 1312. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08220000

REVISED RECORDS.--WSP 763: Drainage area. WSP 1312: 1889, 1901, 1913-14 (monthly discharge and runoff).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,980.25 ft above NGVD of 1929. Prior to May 16, 1908, nonrecording gage at site 4 mi downstream at different datum. May 16, 1908 to Nov. 8, 1910, nonrecording gages on bridge at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, transmountain diversions from Colorado River basin (see elsewhere in this report), diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants. Flow regulated by Beaver Creek Reservoir since 1910, Santa Maria Reservoir since 1912, Rio Grande Reservoir since 1912, and Continental Reservoir since 1925, combined capacity, 126,100 acre-ft, and by several smaller reservoirs.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage of Oct. 5, 1911, is the greatest since at least 1873, from information obtained from local residents in 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	216	166	e114	e110	e130	e110	178	799	3,080	368	289	345
2	263	176	e110	e100	e130	e120	221	748	2,920	345	257	295
3	321	159	e110	e110	e120	e130	233	742	2,790	313	224	258
4	314	149	e105	e110	e110	e140	210	755	2,590	287	204	267
5	293	145	101	e110	e100	e130	202	696	2,420	263	195	267
6	257	120	e95	e100	e100	e130	185	663	2,220	241	178	272
7	249	110	e90	e100	e90	134	169	630	2,020	222	175	279
8	249	128	e95	e100	e90	138	152	571	1,790	217	181	259
9	250	145	e95	e110	e100	146	166	516	1,720	211	193	274
10	229	145	e95	e110	e100	151	198	473	1,630	252	195	822
11	226	110	e100	e100	e110	159	259	435	1,260	286	199	849
12	222	88	e100	e100	e110	173	305	465	1,110	299	206	824
13	216	109	e100	e100	e130	184	330	686	1,030	302	223	741
14	198	146	e100	e110	e130	192	396	958	925	304	205	687
15	190	135	e100	e110	e120	199	531	1,270	855	271	190	617
16	192	90	e110	e110	e120	205	510	1,350	845	215	191	564
17	187	116	e110	e100	e130	185	502	1,840	795	205	202	517
18	189	131	e100	e100	e120	153	468	2,090	743	205	207	482
19	195	124	e100	e110	e110	143	388	2,360	735	185	207	470
20	192	124	e90	e110	e110	148	318	2,570	754	201	195	430
21	187	138	e100	e120	e120	201	308	2,550	762	218	172	392
22	185	129	e95	e120	e120	194	351	2,970	717	216	171	368
23	187	130	e100	e120	e110	187	358	3,430	638	211	185	340
24	195	129	e95	e130	e120	195	344	3,480	571	235	218	311
25	196	138	e90	e130	e130	190	384	3,250	518	220	228	294
26	199	117	e90	e120	e130	186	458	3,150	473	211	283	277
27	218	e92	e90	e130	e130	176	567	3,270	437	227	321	279
28	185	e92	e95	e130	e130	157	691	3,120	397	241	323	287
29	165	e108	e100	e120	---	132	897	3,260	376	251	401	251
30	154	e114	e100	e120	---	142	910	3,180	371	301	401	238
31	154	---	e100	e130	---	163	---	3,190	---	305	386	---
TOTAL	6,673	3,803	3,075	3,480	3,250	4,993	11,189	55,467	37,492	7,828	7,205	12,556
MEAN	215	127	99.2	112	116	161	373	1,789	1,250	253	232	419
MAX	321	176	114	130	130	205	910	3,480	3,080	368	401	849
MIN	154	88	90	100	90	110	152	435	371	185	171	238
AC-FT	13,240	7,540	6,100	6,900	6,450	9,900	22,190	110,000	74,370	15,530	14,290	24,900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1890 - 2003, BY WATER YEAR (WY)

MEAN	483	284	205	188	195	271	762	2,505	3,109	1,410	783	512
MAX	2,451	804	420	340	300	646	1,999	4,449	6,240	3,451	1,800	2,001
(WY)	(1912)	(1917)	(1926)	(1912)	(1928)	(1910)	(1895)	(1922)	(1921)	(1957)	(1999)	(1927)
MIN	134	114	99.2	89.8	111	153	317	505	222	142	117	135
(WY)	(1957)	(1957)	(2003)	(1977)	(1977)	(1965)	(1951)	(2002)	(2002)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1890 - 2003

ANNUAL TOTAL	77,719	157,011	
ANNUAL MEAN	213	430	897
HIGHEST ANNUAL MEAN			1,482
LOWEST ANNUAL MEAN			227
HIGHEST DAILY MEAN	671	May 20	3,480
LOWEST DAILY MEAN	88	Aug 16	88
ANNUAL SEVEN-DAY MINIMUM	92	Aug 14	94
MAXIMUM PEAK FLOW			3,780
MAXIMUM PEAK STAGE			3.77
ANNUAL RUNOFF (AC-FT)	154,200	311,400	650,000
10 PERCENT EXCEEDS	449	847	2,460
50 PERCENT EXCEEDS	160	198	359
90 PERCENT EXCEEDS	100	100	165

e Estimated.

a From rating curve extended above 12,900 ft³/s.

CLOSED BASIN IN SAN LUIS VALLEY, CO

08224500 KERBER CREEK ABOVE LITTLE KERBER CREEK NEAR VILLA GROVE, CO

LOCATION.--Lat 38°13'13", long 106°05'21", in SW¼SE¼ sec.21, T.46 N., R.8 E., Saguache County, Hydrologic Unit 13010003, on left bank 3.0 mi upstream from Little Kerber Creek, and 7 mi west of Villa Grove.

DRAINAGE AREA.--45.4 mi² (revised).

PERIOD OF RECORD.--November 1911 to June 1912 and June 1923 to September 1926 (published as Kerber Creek near Villa Grove). May 1936 to September 1982, October 1998 to current year. Published as "at Ashley Ranch" May 1936 to September 1982 and October 1998 to September 2001. Monthly discharge only for some periods, published in WSP 1312. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08224500

REVISED RECORDS.--WSP 1312: 1943. WSP 1512: 1943.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 8,640 ft above NGVD of 1929, from topographic map. Prior to June 1, 1923, nonrecording gage at site 2.5 mi downstream at different datum. June 1, 1923 to Sept. 16, 1926, and May 2, 1936 to June 24, 2002, at several sites 1.5 mi upstream, at different datums.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by several small diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1872, that of May 14, 1941, from information by local residents.

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	2.3	1.8	e1.5	e0.01	e1.5	e1.5	e6.0	16	53	8.0	4.4	3.5
2	2.4	2.0	e1.5	0.01	e1.6	e1.4	e5.8	15	e45	7.0	3.9	2.6
3	2.6	1.3	e1.6	0.01	e1.4	e1.5	e5.6	14	e38	6.7	3.1	3.1
4	2.3	1.7	e1.2	0.01	e1.3	e1.7	e5.4	14	e35	6.3	2.8	3.7
5	2.2	1.4	e1.1	e0.00	e1.3	e1.8	e5.4	14	32	6.1	2.4	3.7
6	2.0	1.4	e0.70	e0.00	e1.2	e1.8	e5.4	14	30	5.8	2.3	6.4
7	2.0	1.5	e0.60	e0.00	e1.0	e1.9	e5.0	13	26	5.7	2.3	6.4
8	2.0	1.8	e0.60	e0.00	e1.0	e2.0	5.1	13	24	5.1	2.7	5.7
9	2.0	2.3	e0.64	e0.00	e1.1	e2.1	e7.0	13	23	4.6	3.1	6.3
10	1.8	1.8	e0.54	e0.00	e1.1	e2.3	9.0	13	23	4.5	2.8	12
11	1.8	2.2	e0.58	e0.00	e1.2	e2.7	9.3	13	22	4.2	2.5	7.7
12	1.7	1.7	e0.60	e0.00	e1.2	e3.1	10	15	21	3.9	2.6	6.5
13	1.7	2.3	e0.64	e0.00	e1.8	e3.5	12	18	20	3.6	2.8	5.8
14	1.8	2.6	e0.64	e0.00	e1.7	e4.0	13	21	18	3.5	2.1	5.4
15	1.7	2.2	e0.62	e0.00	e1.5	e4.2	11	27	17	3.4	1.9	5.2
16	1.6	1.7	e0.62	e0.00	e1.4	e4.6	12	28	18	5.9	1.8	4.7
17	1.7	2.2	e0.58	e0.00	e1.5	e4.4	11	35	16	6.1	1.9	4.5
18	1.7	2.2	e0.54	e0.00	e1.7	e4.3	9.7	42	17	4.1	2.2	4.1
19	1.7	1.9	e0.54	e0.00	e1.4	4.0	8.3	43	18	3.2	2.6	4.1
20	1.8	2.1	e0.50	e0.05	e1.3	3.9	8.4	42	15	3.4	1.9	3.9
21	1.7	2.3	e0.39	e0.06	e1.4	3.7	8.8	37	13	3.8	1.6	3.5
22	1.7	e2.2	e0.39	e0.07	e1.6	3.3	9.6	38	12	3.1	1.9	3.4
23	2.2	e2.1	e0.39	e0.20	e1.3	3.9	8.3	42	11	3.4	1.8	3.3
24	2.3	2.3	e0.39	e0.40	e1.2	e4.2	7.8	44	11	3.8	2.2	3.1
25	2.1	e1.7	e0.39	e1.3	e1.5	4.6	11	46	10	2.7	3.8	3.0
26	2.0	1.5	0.39	e1.2	e1.5	e4.4	13	43	9.5	3.3	2.8	2.9
27	2.3	e1.3	0.24	e1.0	e1.5	e4.6	14	44	8.9	4.9	2.6	2.9
28	2.2	e1.4	0.10	e1.0	e1.7	4.5	15	45	8.3	4.5	4.3	2.9
29	2.0	e1.5	0.02	e1.0	---	4.5	16	46	8.2	6.1	8.0	2.8
30	1.7	e1.4	0.01	e1.2	---	4.4	16	53	7.8	6.8	5.3	2.8
31	2.0	---	0.01	e1.8	---	4.9	---	51	---	4.9	4.8	---
TOTAL	61.0	55.8	18.56	9.32	38.9	103.7	283.9	912	610.7	148.4	91.2	135.9
MEAN	1.97	1.86	0.60	0.30	1.39	3.35	9.46	29.4	20.4	4.79	2.94	4.53
MAX	2.6	2.6	1.6	1.8	1.8	4.9	16	53	53	8.0	8.0	12
MIN	1.6	1.3	0.01	0.00	1.0	1.4	5.0	13	7.8	2.7	1.6	2.6
AC-FT	121	111	37	18	77	206	563	1,810	1,210	294	181	270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2003, BY WATER YEAR (WY)

	4.83	4.19	2.96	2.65	3.03	5.00	14.7	45.4	38.2	11.9	7.81	5.04
MEAN	4.83	4.19	2.96	2.65	3.03	5.00	14.7	45.4	38.2	11.9	7.81	5.04
MAX	16.1	10.0	6.50	6.00	6.00	12.0	44.4	130	102	61.9	42.3	25.6
(WY)	(1939)	(1958)	(1966)	(1966)	(1958)	(1924)	(1924)	(1942)	(1941)	(1957)	(1957)	(1957)
MIN	1.97	1.82	0.60	0.000	0.86	1.50	5.79	5.28	2.63	0.73	0.40	1.08
(WY)	(2003)	(1956)	(2003)	(1977)	(1972)	(1964)	(2002)	(2002)	(2002)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

(a) WATER YEARS 1923 - 2003

ANNUAL TOTAL	817.82	2,469.38		
ANNUAL MEAN	2.24	6.77	12.1	
HIGHEST ANNUAL MEAN			25.4	1924
LOWEST ANNUAL MEAN			2.49	2002
HIGHEST DAILY MEAN	7.4	Apr 15	53	May 30
LOWEST DAILY MEAN	0.01	Aug 16	e0.00	Jan 5
ANNUAL SEVEN-DAY MINIMUM	0.02	Aug 14	e0.00	Jan 5
MAXIMUM PEAK FLOW			56	May 30
MAXIMUM PEAK STAGE			1.36	May 30
ANNUAL RUNOFF (AC-FT)	1,620	4,900	8,780	
10 PERCENT EXCEEDS	5.2	17	31	
50 PERCENT EXCEEDS	1.7	2.8	4.5	
90 PERCENT EXCEEDS	0.36	0.52	2.2	

e Estimated.

a Water years 1983, and 1994 to 1998 data were published by the Colorado Division of Water Resources. Station was not operated during water years 1984 to 1993.

b Also occurred Dec 31, 1976 to Jan 31, 1977, and Jan 5-19, 2003 (no flow estimated).

c Also occurred Jan 5-19, 2003 (no flow estimated).

d From rating curve extended above 140 ft³/s.

f Maximum gage-height, 5.04 ft, May 11, 1947, site and datum then in use, backwater from beaver dam.

CLOSED BASIN IN SAN LUIS VALLEY, CO

08227000 SAGUACHE CREEK NEAR SAGUACHE, CO

LOCATION.--Lat 38°09'48", long 106°17'24", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.10, T.45 N., R.6 E., Saguache County, Hydrologic Unit 13010004, on left bank 0.2 mi downstream from Middle Creek and 10 mi northwest of Saguache.

DRAINAGE AREA.--595 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1910 to September 1912, June 1914 to September 1982, October 1990 to current year. Monthly discharge only for some periods, published in WSP 1312. October 1982 to September 1990, in reports of State Engineer. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08227000

REVISED RECORDS.--WSP 1242: 1948-49. WSP 1312: 1912, 1934(M), 1942(M), 1948-49(M). WSP 1923: 1951.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is about 8,030 ft above NGVD of 1929, from topographic map. Prior to Apr. 9, 1934, at sites 0.8 mi downstream at different datums. Apr. 10, 1934 to Nov. 20, 1966, at present site at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions from Colorado River basin through Tarbell Ditch (see elsewhere in this report), diversions for irrigation, and return flows from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	27	e21	e16	e21	e19	26	55	123	28	26	42
2	23	27	e22	e15	e22	e19	23	49	118	29	26	36
3	26	23	e22	e16	e20	e19	21	45	104	28	26	31
4	33	20	e21	e16	e18	e20	19	45	95	26	30	33
5	27	22	e21	e16	e18	e22	19	46	86	24	27	33
6	27	19	e17	e15	e18	e24	20	42	81	26	25	37
7	27	20	e16	e14	e16	e22	24	40	74	26	25	36
8	25	21	e15	e14	e18	e23	24	39	68	26	24	38
9	24	33	e16	e14	e18	e24	25	39	65	23	25	37
10	24	26	e14	e15	e18	e25	31	36	65	21	24	62
11	24	19	e15	e14	e20	e26	43	37	67	20	28	59
12	23	19	e17	e14	e19	e27	50	39	65	19	29	45
13	23	22	e19	e13	e21	e26	51	48	64	19	27	39
14	22	28	e18	e14	e20	e25	53	55	63	19	22	40
15	22	29	e18	e14	e20	e26	60	66	55	20	20	40
16	22	21	e16	e16	e19	e27	50	80	54	22	19	36
17	22	27	e18	e18	e19	e26	40	77	55	27	21	34
18	22	28	e16	e16	e20	e26	46	84	53	23	26	33
19	22	31	e16	e18	e19	e27	42	93	56	21	32	32
20	23	33	e14	e18	e18	e25	39	92	62	23	24	31
21	23	27	e15	e19	e19	e27	36	86	58	26	21	30
22	23	21	e14	e19	e20	e26	43	82	47	25	21	30
23	23	22	e15	e21	e19	e29	43	105	41	24	23	29
24	25	24	e14	e22	e17	31	38	115	36	24	27	27
25	26	23	e13	e23	e19	32	37	113	35	24	34	27
26	25	22	e14	e22	e19	31	50	109	34	23	34	27
27	27	19	e14	e21	e19	31	62	111	34	29	42	27
28	28	e21	e14	e21	e20	23	63	129	31	31	42	26
29	27	e22	e15	e21	---	22	60	137	29	34	54	25
30	22	e21	e16	e21	---	22	60	143	30	29	58	24
31	23	---	e15	e22	---	28	---	128	---	28	52	---
TOTAL	758	717	511	538	534	780	1,198	2,365	1,848	767	914	1,046
MEAN	24.5	23.9	16.5	17.4	19.1	25.2	39.9	76.3	61.6	24.7	29.5	34.9
MAX	33	33	22	23	22	32	63	143	123	34	58	62
MIN	22	19	13	13	16	19	19	36	29	19	19	24
AC-FT	1,500	1,420	1,010	1,070	1,060	1,550	2,380	4,690	3,670	1,520	1,810	2,070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2003, BY WATER YEAR (WY)

	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	44.1	35.5	25.8	23.4	26.5	38.4	68.0	155	171	92.3	72.4	50.7																																																																																		
MAX	108	60.1	40.0	40.3	41.4	70.0	257	437	474	299	198	194																																																																																		
(WY)	(1912)	(1930)	(1928)	(1986)	(1986)	(1924)	(1924)	(1957)	(1957)	(1929)	(1929)	(1929)																																																																																		
MIN	20.6	16.4	13.9	12.2	13.4	21.5	34.2	27.8	15.3	12.7	13.3	15.0																																																																																		
(WY)	(1979)	(1978)	(1978)	(1978)	(1966)	(1964)	(1978)	(2002)	(2002)	(2002)	(2002)	(1956)																																																																																		

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

(a) WATER YEARS 1910 - 2003

ANNUAL TOTAL	8,241.7	11,976	66.9
ANNUAL MEAN	22.6	32.8	122
HIGHEST ANNUAL MEAN			24.7
LOWEST ANNUAL MEAN			2002
HIGHEST DAILY MEAN	56	Apr 4	143
LOWEST DAILY MEAN	8.1	Aug 17	May 30
ANNUAL SEVEN-DAY MINIMUM	9.3	Aug 13	e13
MAXIMUM PEAK FLOW			Dec 25
MAXIMUM PEAK STAGE			e14
ANNUAL RUNOFF (AC-FT)	16,350	23,750	Dec 22
10 PERCENT EXCEEDS	33	60	May 30
50 PERCENT EXCEEDS	22	25	May 30
90 PERCENT EXCEEDS	12	16	5.53
			Jul 25, 1999
			48,440
			145
			40
			21

e Estimated.

a Including water year 1983-1990 data published by State Engineer.

b From rating curve extended above 1,090 ft³/s.

c Maximum gage height, 2.40 ft, Mar 3, backwater from ice.

CLOSED BASIN IN SAN LUIS VALLEY, CO

08227000 SAGUACHE CREEK NEAR SAGUACHE, CO--Continued

(National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1967 to September 1968, April 1993 to August 1995, April 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=08227000

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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat fltr inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat fltr incrm. titr., field, mg/L (00453)	Carbonate, wat fltr incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 08...	1240	23	10.4	8.3	140	10.0	62	75	0.0	1.36	4.3	0.26	<0.04
NOV 14...	1310	47	10.4	7.3	141	0.5	62	76	0.0	1.27	6.3	0.64	<0.04
DEC 19...	1250	12	11.2	7.2	150	0.0	77	93	0.0	0.92	4.6	0.17	<0.04
JAN 27...	1310	23	11.3	7.4	127	0.0	61	74	0.0	0.77	4.6	0.21	<0.04
MAR 03...	1320	36	10.8	7.5	136	0.0	52	64	0.0	1.16	5.3	0.51	0.04
APR 25...	1140	39	9.1	8.1	142	10.5	56	68	0.0	1.80	6.5	0.36	<0.04
JUN 19...	1250	57	7.1	8.0	107	19.0	45	54	0.0	0.77	3.0	0.53	<0.04
AUG 19...	1210	33	7.7	8.0	121	18.0	62	76	0.0	1.03	3.3	0.36	<0.04

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)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT 08...	<0.06	<0.008	0.06	0.111	16	0.99
NOV 14...	<0.06	<0.008	0.05	0.19	82	10
DEC 19...	<0.06	<0.008	0.05	0.079	7	0.22
JAN 27...	E.06	<0.008	0.04	0.081	12	0.75
MAR 03...	E.06	<0.008	0.06	0.18	128	12
APR 25...	<0.06	<0.008	0.06	0.133	23	2.4
JUN 19...	<0.06	<0.008	0.07	0.141	23	3.5
AUG 19...	<0.06	<0.008	0.08	0.168	39	3.4

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

CLOSED BASIN IN SAN LUIS VALLEY

08231000 LA GARITA CREEK NEAR LA GARITA, CO

LOCATION.--Lat 37°48'48", long 106°19'05", in NW¼SE¼ sec.9, T.41 N., R.6 E., Saguache County, Hydrologic Unit 13010004, on right bank 4.5 mi downstream from Little La Garita Creek and 4.5 mi southwest of La Garita.

DRAINAGE AREA.--61 mi², approximately.

PERIOD OF RECORD.--April 1919 to September 1981. October 1998 to current year. No winter records prior to water year 1948 except water years 1926, 1941, and 1945-46. Monthly discharge only for some periods, published in WSP 1312. October 1981 to September 1998, in reports of State Engineer. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08231000

REVISED RECORDS.--WSP 1312: 1946(M).

GAGE.--Water-stage recorder with satellite telemetry and concrete weir. Elevation of gage is 8,030 ft above NGVD of 1929, from topographic map. Apr. 1, 1919 to June 23, 1927, nonrecording gages, and June 24, 1927 to Nov. 13, 1935, water-stage recorder, at sites within 0.2 mi downstream at different datums. Nov. 14, 1935 to Nov. 16, 1966, at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation and return flows from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	3.5	e2.8	e1.5	e1.9	e1.9	6.0	8.5	9.2	2.9	2.7	3.5
2	3.1	3.5	e2.9	e1.3	e2.0	e1.8	7.7	6.9	9.5	2.8	2.4	2.6
3	4.4	3.2	e2.9	e1.4	e1.6	e1.9	6.6	6.9	7.7	2.6	2.3	2.6
4	3.8	2.6	e2.4	e1.4	e1.4	e2.2	5.4	7.6	7.2	2.4	2.1	3.6
5	3.8	e2.7	e2.2	e1.4	e1.3	e2.5	5.0	6.9	7.1	2.2	2.0	3.8
6	3.5	e2.5	e1.9	e1.4	e1.2	e3.0	4.5	6.1	7.1	2.1	1.7	3.8
7	3.2	e2.7	e1.8	e1.2	e0.98	e2.8	4.4	5.9	6.8	2.2	1.7	3.6
8	3.0	3.3	e1.7	e1.2	e1.1	e3.0	e3.6	6.0	6.5	2.2	1.8	3.2
9	2.8	4.0	e1.8	e1.2	e1.3	e3.3	4.8	5.6	6.1	1.9	2.5	3.5
10	2.7	3.3	e1.6	e1.4	e1.3	e3.6	7.9	5.4	6.2	1.5	2.0	10
11	2.6	e2.6	e1.7	e1.4	e1.6	e4.0	8.0	5.1	6.2	1.4	2.1	7.8
12	2.6	e3.0	e1.8	e1.4	e1.6	e4.6	6.7	5.9	5.3	1.5	2.6	5.1
13	2.6	e3.3	e1.9	e1.2	e1.9	e4.4	7.7	7.6	5.3	1.5	2.1	4.1
14	2.6	e3.5	e1.8	e1.3	e1.8	e4.4	16	7.7	5.4	1.5	1.8	3.5
15	2.7	e3.3	e1.7	e1.3	e1.7	e4.7	23	10	4.7	1.5	1.4	3.2
16	2.6	e3.0	e1.6	e1.4	e1.6	e5.4	8.6	11	4.6	1.7	1.6	2.9
17	2.6	e3.0	e1.7	e1.5	e1.7	e5.2	15	11	5.0	1.7	3.0	2.8
18	2.6	e3.1	e1.4	e1.3	e1.9	e5.2	12	13	5.3	1.5	3.9	2.7
19	2.7	e3.0	e1.4	e1.5	e1.7	e5.4	7.9	13	7.5	1.3	2.9	2.8
20	2.7	e3.1	e1.1	e1.5	e1.5	e5.0	5.3	11	7.3	1.9	2.1	2.8
21	2.7	e3.2	e1.2	e1.5	e1.7	e5.4	6.8	12	5.1	2.4	1.7	2.8
22	2.7	e3.0	e1.1	e1.5	e1.9	e5.0	7.3	11	4.0	2.3	1.8	2.8
23	2.8	e2.9	e1.3	e1.7	e1.7	e5.4	7.4	12	3.5	1.9	2.3	2.6
24	3.5	e2.9	e1.2	e1.8	e1.6	5.9	4.8	11	3.2	2.4	2.9	2.6
25	3.1	e3.0	e1.0	e2.2	e1.8	5.8	12	10	3.0	1.7	3.6	2.6
26	3.1	e2.7	e1.1	e2.1	e1.8	5.4	18	9.6	3.1	2.3	4.0	2.5
27	3.1	e2.4	e1.2	e1.9	e1.8	4.9	18	9.1	3.0	2.7	4.1	2.4
28	3.3	e2.6	e1.2	e1.9	e2.0	4.1	16	8.9	2.9	3.2	5.0	2.3
29	3.1	e2.8	e1.3	e1.9	---	e3.4	15	8.8	2.8	2.9	7.3	2.5
30	2.5	e2.6	e1.4	e1.9	---	e3.6	13	8.5	2.9	3.1	4.7	2.4
31	2.9	---	e1.3	e2.1	---	4.3	---	8.5	---	2.4	4.4	---
TOTAL	92.2	90.3	51.4	47.7	45.38	127.5	284.4	270.5	163.5	65.6	86.5	103.4
MEAN	2.97	3.01	1.66	1.54	1.62	4.11	9.48	8.73	5.45	2.12	2.79	3.45
MAX	4.4	4.0	2.9	2.2	2.0	5.9	23	13	9.5	3.2	7.3	10
MIN	2.5	2.4	1.0	1.2	0.98	1.8	3.6	5.1	2.8	1.3	1.4	2.3
AC-FT	183	179	102	95	90	253	564	537	324	130	172	205

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2003, BY WATER YEAR (WY)

	6.93	5.19	3.88	3.32	4.00	5.75	16.9	46.0	30.4	14.5	15.3	8.60
MEAN	6.93	5.19	3.88	3.32	4.00	5.75	16.9	46.0	30.4	14.5	15.3	8.60
MAX	42.6	18.5	8.72	6.60	8.00	9.94	126	211	126	65.3	70.2	52.4
(WY)	(1924)	(1970)	(1970)	(1966)	(1962)	(1972)	(1924)	(1924)	(1921)	(1921)	(1929)	(1923)
MIN	1.46	1.80	0.70	0.50	0.50	1.50	6.08	4.26	2.17	1.81	1.65	0.85
(WY)	(1957)	(1941)	(1964)	(1964)	(1964)	(1964)	(1978)	(2002)	(2002)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

(a) WATER YEARS 1919 - 2003

ANNUAL TOTAL	1,168.81	1,428.38	
ANNUAL MEAN	3.20	3.91	
HIGHEST ANNUAL MEAN			12.3
LOWEST ANNUAL MEAN			30.8
HIGHEST DAILY MEAN	17	Apr 2	3.73
LOWEST DAILY MEAN	0.63	Aug 16	398
ANNUAL SEVEN-DAY MINIMUM	0.77	Aug 13	May 16, 1941
MAXIMUM PEAK FLOW			b0.20
MAXIMUM PEAK STAGE			0.43
ANNUAL RUNOFF (AC-FT)	2,320	2,830	c530
10 PERCENT EXCEEDS	5.0	7.7	d4.00
50 PERCENT EXCEEDS	2.9	2.8	8,930
90 PERCENT EXCEEDS	1.4	1.4	26
			5.5
			2.5

e Estimated.
a Water years 1919-1981 and 1999 to current year.
b Also occurred Sep 29, 1956.
c From rating curve extended above 140 ft³/s.
d Present datum; maximum gage height, 5.11 ft, May 16, 1941, datum then in use.

CLOSED BASIN IN SAN LUIS VALLEY, CO

372833105455800 CLOSED BASIN PROJECT CANAL NEAR ALAMOSA, CO

LOCATION.--Lat 37°28'33", long 105°45'58", in SW¼SW¼ sec.3, T.37 N., R.11 E., Alamosa County, Hydrologic Unit 13010002, on right bank of Closed Basin Project Canal, 400 ft north of State Highway 160, and 5.5 mi east of Alamosa.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 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=372833105455800

GAGE.--Water-stage recorders with satellite telemetry and 12 ft Parshall flume. Elevation of gage is 7531.15 ft (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good except for estimated daily discharges, which are fair. The Closed Basin Project Canal delivers water from the Closed Basin in the San Luis Valley to the Rio Grande just downstream from Alamosa. Shallow (unconfined) aquifer water is pumped into the canal by a system of pumps.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	26	13	12	21	30	34	30	24	26	24	21	30
2	25	11	13	26	30	34	29	21	25	22	20	22
3	22	11	14	32	31	34	30	19	27	21	20	10
4	23	10	14	30	30	33	32	19	28	20	20	6.8
5	20	9.9	14	26	30	34	31	20	27	20	20	5.7
6	19	10	14	22	e30	33	31	20	28	20	19	8.3
7	14	10	12	21	30	32	32	19	28	20	20	9.1
8	12	10	13	24	30	32	31	19	29	19	19	8.7
9	11	10	16	25	e30	32	31	17	28	19	20	8.3
10	10	9.8	14	26	e30	32	31	18	28	16	20	7.2
11	11	9.0	11	26	31	32	32	18	27	15	20	6.4
12	11	7.8	8.3	26	31	33	32	17	27	16	20	5.4
13	12	7.3	5.1	27	31	33	29	16	27	17	19	5.0
14	12	7.9	6.1	28	32	34	28	15	27	18	21	5.0
15	12	9.1	6.4	29	33	34	28	15	27	19	28	5.1
16	12	12	6.4	e30	33	33	29	17	26	20	29	5.5
17	13	12	6.4	30	33	34	28	17	26	21	31	5.6
18	13	12	6.8	29	33	35	29	17	25	21	31	6.4
19	13	12	6.9	29	34	36	31	20	25	20	31	13
20	14	12	8.0	28	34	35	30	21	25	21	31	15
21	13	12	8.7	26	34	35	28	23	24	21	32	18
22	13	13	9.9	26	33	35	30	27	24	21	32	16
23	12	12	9.5	26	33	33	30	28	23	20	30	15
24	12	13	9.1	27	32	32	31	27	23	20	25	14
25	16	14	7.9	27	32	32	30	27	25	20	22	15
26	15	14	7.8	27	33	31	27	27	26	20	23	16
27	15	14	9.5	28	33	32	27	27	26	20	26	18
28	14	14	13	29	33	32	26	28	25	20	28	18
29	13	14	13	31	---	31	26	26	24	20	28	19
30	16	12	13	30	---	31	26	26	25	21	28	20
31	14	---	14	30	---	31	---	25	---	20	29	---
TOTAL	458	337.8	322.8	842	889	1,024	885	660	781	612	763	357.5
MEAN	14.8	11.3	10.4	27.2	31.8	33.0	29.5	21.3	26.0	19.7	24.6	11.9
MAX	26	14	16	32	34	36	32	28	29	24	32	30
MIN	10	7.3	5.1	21	30	31	26	15	23	15	19	5.0
AC-FT	908	670	640	1,670	1,760	2,030	1,760	1,310	1,550	1,210	1,510	709

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

	2000	2003	2003	2003	2002	2002	2001	2003	2002	2002	2000	2003
MEAN	22.6	22.5	26.1	32.8	32.9	30.6	29.2	26.3	25.2	22.6	20.9	20.9
MAX	35.0	31.6	35.7	42.4	38.1	33.0	34.7	34.3	32.9	35.1	28.1	33.0
(WY)	(2000)	(1999)	(1999)	(1999)	(1999)	(2003)	(1999)	(1999)	(1999)	(1999)	(1999)	(1999)
MIN	11.2	11.3	10.4	27.2	27.7	27.6	24.3	21.3	17.7	15.5	13.0	11.9
(WY)	(2001)	(2003)	(2003)	(2003)	(2002)	(2002)	(2001)	(2003)	(2002)	(2002)	(2000)	(2003)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1999 - 2003

ANNUAL TOTAL	7,421.6	7,932.1	
ANNUAL MEAN	20.3	21.7	26.0
HIGHEST ANNUAL MEAN			33.8
LOWEST ANNUAL MEAN			21.7
HIGHEST DAILY MEAN	32	Sep 27	e63
LOWEST DAILY MEAN	5.1	Dec 13	5.0
ANNUAL SEVEN-DAY MINIMUM	6.3	Dec 13	5.4
MAXIMUM PEAK FLOW			101
MAXIMUM PEAK STAGE			b1.70
ANNUAL RUNOFF (AC-FT)	14,720	15,730	18,840
10 PERCENT EXCEEDS	29	32	35
50 PERCENT EXCEEDS	20	22	27
90 PERCENT EXCEEDS	12	9.9	14

e Estimated.

a Maximum gage height, 1.09 ft, Jan 16, backwater from ice.

b Maximum gage height, 1.92 ft, Jan 29, 2002, backwater from ice.

08242500 UTE CREEK NEAR FORT GARLAND, CO

LOCATION.--Lat 37°26'50", long 105°25'33" (revised), Costilla County, Hydrologic Unit 13010002, in Sangre de Cristo Grant, on left bank 2,300 ft upstream from Newton ditch, 1.4 mi north of Fort Garland, and 5.7 mi upstream from mouth.

DRAINAGE AREA.--32 mi², approximately.

PERIOD OF RECORD.--March to October 1916, May 1923 to September 1981, October 1998 to current year. Monthly discharge only for some periods, published in WSP 1312. October 1981 to September 1998, in reports of State Engineer. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08242500

GAGE.--Water-stage recorder with satellite telemetry. Concrete control since Sept. 1973. Elevation of gage is 8,045 ft above NGVD of 1929, from topographic map. Mar. 18 to Oct. 9, 1916, nonrecording gage and Cipolletti weir at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation and return flows from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Outstanding floods occurred in 1886 and in October 1911. The flood in 1886 probably exceeded the flood in October 1911 which has probably not yet been exceeded, from information by local residents.

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	6.4	2.3	e3.5	e2.3	e2.1	e2.7	6.8	31	135	35	20	10
2	8.1	2.5	e3.2	e2.2	e2.1	e2.7	8.7	29	109	34	18	9.8
3	6.5	2.2	e3.1	e2.3	e1.8	e3.0	9.1	26	107	31	17	10
4	4.3	2.2	e2.9	e2.5	e1.8	e3.0	7.7	25	93	29	14	10
5	3.7	e2.3	e2.8	e2.4	e1.6	e2.9	7.3	23	84	26	13	11
6	4.8	e2.5	e2.6	e2.3	e1.5	e2.9	6.9	22	67	24	12	20
7	4.3	e3.0	e2.5	e2.1	e1.5	e3.2	6.4	21	60	21	11	21
8	3.8	4.3	e2.7	e2.1	e1.6	e3.4	5.4	21	56	18	12	20
9	3.4	4.5	e2.5	e2.2	e1.8	e3.4	6.4	20	58	17	13	25
10	3.1	e3.5	e2.5	e2.3	e2.0	e3.5	8.8	20	59	16	23	108
11	3.0	e3.2	e2.6	e2.2	e2.2	e3.5	12	20	56	14	16	50
12	2.6	e2.9	e2.7	e2.1	e2.3	e3.5	11	22	53	14	18	37
13	2.5	e3.2	e2.8	e2.2	e2.4	e3.8	11	27	46	13	14	32
14	2.4	e3.4	e2.8	e2.3	e2.4	e4.4	15	24	44	12	12	28
15	2.3	e3.1	e3.0	e2.3	e2.2	e4.7	18	36	46	13	11	24
16	2.2	e3.2	e3.2	e2.1	e2.2	e4.7	16	38	47	13	9.7	21
17	2.1	e3.4	e3.0	e2.1	e2.4	e4.6	18	57	43	14	9.5	19
18	2.1	e3.4	e2.7	e2.2	e2.3	e4.5	19	64	56	14	8.9	17
19	2.0	e3.4	e2.4	e2.3	e2.1	4.4	18	60	98	14	8.8	17
20	2.0	e3.4	e2.5	e2.1	e2.1	5.1	16	67	124	18	7.6	15
21	1.9	e3.4	e2.6	e2.2	e2.4	5.3	16	61	84	14	7.2	14
22	1.9	e3.4	e2.4	e2.2	e2.4	4.7	17	60	64	12	7.4	14
23	2.0	e3.5	e2.4	e2.3	e2.4	5.7	17	76	58	11	7.9	11
24	2.1	3.4	e2.3	e2.2	e2.7	6.7	15	80	52	12	7.2	7.5
25	2.2	3.2	e2.2	e2.1	e2.7	5.4	17	99	48	10	7.0	7.3
26	2.1	e2.9	e2.2	e2.1	e2.7	5.0	22	128	44	12	7.6	7.2
27	2.5	e2.7	e2.2	e2.2	e2.7	5.2	28	113	41	12	8.3	7.3
28	2.3	e2.8	e2.2	e2.2	e2.7	e3.8	28	114	39	30	9.5	7.1
29	2.4	e3.0	e2.6	e1.9	---	e3.5	30	134	38	37	11	7.0
30	2.0	e3.2	e2.3	e2.1	---	3.7	31	179	39	34	9.8	6.8
31	2.2	---	e2.3	e2.1	---	5.1	---	171	---	25	12	---
TOTAL	95.2	93.4	81.7	68.2	61.1	128.0	448.5	1,868	1,948	599	363.4	594.0
MEAN	3.07	3.11	2.64	2.20	2.18	4.13	14.9	60.3	64.9	19.3	11.7	19.8
MAX	8.1	4.5	3.5	2.5	2.7	6.7	31	179	135	37	23	108
MIN	1.9	2.2	2.2	1.9	1.5	2.7	5.4	20	38	10	7.0	6.8
AC-FT	189	185	162	135	121	254	890	3,710	3,860	1,190	721	1,180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2003, BY WATER YEAR (WY)

MEAN	9.85	7.62	5.09	4.55	4.96	7.22	21.5	53.7	55.3	29.0	20.0	12.7
MAX	34.8	25.3	10.5	9.50	10.0	12.6	66.9	220	150	97.0	65.5	45.7
(WY)	(1924)	(1924)	(1971)	(1962)	(1962)	(1960)	(1932)	(1941)	(1941)	(1941)	(1936)	(1929)
MIN	0.91	0.78	0.50	1.60	2.00	3.16	4.69	4.80	1.29	0.30	0.000	0.070
(WY)	(1957)	(1952)	(1957)	(1957)	(1956)	(1957)	(1955)	(2002)	(2002)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

(a) WATER YEARS 1923 - 2003

ANNUAL TOTAL	1,207.44	6,348.5	
ANNUAL MEAN	3.31	17.4	19.3
HIGHEST ANNUAL MEAN			50.2 1941
LOWEST ANNUAL MEAN			3.88 2002
HIGHEST DAILY MEAN	8.6 Sep 29	179 May 30	630 May 15, 1941
LOWEST DAILY MEAN	0.00 Jun 21	e1.5 Feb 6	b0.00 Jul 28, 1956
ANNUAL SEVEN-DAY MINIMUM	0.00 Jul 17	e1.7 Feb 3	0.00 Sep 6, 1956
MAXIMUM PEAK FLOW		212 May 30	c630 May 15, 1941
MAXIMUM PEAK STAGE		3.11 May 30	
ANNUAL RUNOFF (AC-FT)	2,390	12,590	14,000
10 PERCENT EXCEEDS	6.7	49	52
50 PERCENT EXCEEDS	3.4	6.5	8.1
90 PERCENT EXCEEDS	0.00	2.2	3.6

e Estimated.

a Water years 1923-81 and 1999 to current year.

b Also occurred Jul 29-31 and Sep 5-29, 1956, and many days in 2002.

c Maximum daily discharge.

08245000 CONEJOS RIVER BELOW PLATORO RESERVOIR, CO

LOCATION.--Lat 37°21'18", long 106°32'37", Conejos County, Hydrologic Unit 13010005, Rio Grande National Forest, on left bank 1,100 ft downstream from valvehouse for Platoro Reservoir and 0.7 mi northwest of Platoro.

DRAINAGE AREA.--40 mi², approximately.

PERIOD OF RECORD.--May 1952 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08245000

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Datum of gage is 9,866.60 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow completely regulated by Platoro Reservoir (station 08244500) 0.2 mi upstream since Nov. 7, 1951.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information obtained from local residents in 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	17	e7.2	e7.2	e7.2	e6.8	e6.4	31	95	593	138	59	23
2	17	e7.2	e7.2	e7.2	e6.7	e6.3	31	92	501	138	63	17
3	26	e7.2	e7.2	e7.2	e6.7	e6.3	27	99	426	150	53	26
4	31	e7.2	e7.2	e7.2	e6.7	e6.3	26	98	475	141	55	42
5	31	e7.2	e7.2	e7.1	e6.7	e6.3	25	87	449	131	64	44
6	20	e7.2	e7.2	e7.1	e6.7	e6.3	17	64	295	130	54	42
7	15	e7.2	e7.2	e7.1	e6.7	e6.3	13	42	241	127	52	42
8	15	e7.2	e7.2	e7.1	e6.7	e6.3	13	42	251	124	56	42
9	17	e7.2	e7.2	e7.1	e6.6	e6.2	15	50	277	122	56	36
10	19	e7.2	e7.2	e7.1	e6.6	e6.2	24	39	291	108	53	120
11	15	e7.2	e7.2	e7.1	e6.6	e6.2	25	33	291	112	55	336
12	13	e7.2	e7.2	e7.0	e6.6	e6.2	29	45	264	121	55	323
13	13	e7.2	e7.2	e7.0	e6.6	e6.2	37	85	221	98	62	201
14	13	e7.2	e7.2	e7.0	e6.6	e6.2	40	132	164	87	62	164
15	13	e7.2	e7.2	e7.0	e6.6	e6.2	55	149	144	110	48	164
16	8.6	e7.2	e7.2	e7.0	e6.5	e6.1	67	187	200	113	38	112
17	6.0	e7.2	e7.2	e7.0	e6.5	e6.1	63	208	249	104	21	52
18	6.1	e7.2	e7.2	e7.0	e6.5	e6.1	46	311	208	93	14	78
19	7.0	e7.2	e7.2	e6.9	e6.5	e6.1	25	330	179	61	14	106
20	7.4	e7.2	e7.2	e6.9	e6.5	e6.1	18	281	186	38	14	67
21	7.4	e7.2	e7.2	e6.9	e6.5	e6.1	26	314	191	38	14	29
22	7.7	e7.2	e7.2	e6.9	e6.5	e6.1	37	385	132	58	15	22
23	8.4	e7.2	e7.2	e6.9	e6.4	e6.0	49	500	83	87	19	36
24	e16	e7.2	e7.2	e6.9	e6.4	e6.0	44	548	111	91	21	35
25	e11	e7.2	e7.2	e6.9	e6.4	e6.0	28	482	151	72	21	25
26	e5.4	e7.2	e7.2	e6.8	e6.4	e14	27	433	136	53	19	18
27	e5.4	e7.2	e7.2	e6.8	e6.4	25	61	426	97	48	17	18
28	e5.4	e7.2	e7.2	e6.8	e6.4	24	123	506	111	53	15	37
29	e5.4	e7.2	e7.2	e6.8	---	23	135	582	129	83	23	47
30	e6.4	e7.2	e7.2	e6.8	---	23	110	526	136	119	29	39
31	e7.2	---	e7.2	e6.8	---	24	---	509	---	78	28	---
TOTAL	395.8	216.0	223.2	216.6	183.8	287.6	1,267	7,680	7,182	3,026	1,169	2,343
MEAN	12.8	7.20	7.20	6.99	6.56	9.28	42.2	248	239	97.6	37.7	78.1
MAX	31	7.2	7.2	7.2	6.8	25	135	582	593	150	64	336
MIN	5.4	7.2	7.2	6.8	6.4	6.0	13	33	83	38	14	17
AC-FT	785	428	443	430	365	570	2,510	15,230	14,250	6,000	2,320	4,650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003, BY WATER YEAR (WY)

MEAN	40.5	58.4	10.6	10.9	11.6	10.3	52.5	238	329	211	89.7	46.7
MAX	158	406	50.0	50.0	102	27.5	252	492	609	610	429	164
(WY)	(1958)	(1966)	(1986)	(1986)	(1983)	(1986)	(1995)	(1974)	(1982)	(1952)	(1952)	(1982)
MIN	1.92	2.00	2.00	3.20	3.00	3.00	3.00	16.9	87.0	18.6	3.90	3.34
(WY)	(1957)	(1957)	(1957)	(1991)	(1957)	(1957)	(1957)	(1958)	(1977)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1952 - 2003

ANNUAL TOTAL	11,821.00	24,190.0	
ANNUAL MEAN	32.4	66.3	91.6
HIGHEST ANNUAL MEAN			137
LOWEST ANNUAL MEAN			34.8
HIGHEST DAILY MEAN	231	593	1,150
LOWEST DAILY MEAN	0.60	5.4	a0.00
ANNUAL SEVEN-DAY MINIMUM	0.97	6.1	0.16
MAXIMUM PEAK FLOW		626	1,160
MAXIMUM PEAK STAGE		3.11	b4.02
ANNUAL RUNOFF (AC-FT)	23,450	47,980	66,350
10 PERCENT EXCEEDS	125	186	301
50 PERCENT EXCEEDS	7.6	17	17
90 PERCENT EXCEEDS	4.0	6.4	6.2

e Estimated.

a Also occurred Oct 17-20, 1955.

b Maximum gage height, 4.29 ft, Jun 15, 1958.

08246500 CONEJOS RIVER NEAR MOGOTE, CO

LOCATION.--Lat 37°03'14", long 106°11'13", in SE¹/₄SE¹/₄ sec.34, T.33 N., R.7 E., Conejos County, Hydrologic Unit 13010005, on left bank 75 ft downstream from bridge on State Highway 174, 0.4 mi downstream from Fox Creek, 5.3 mi west of Mogote, and 10 mi west of Antonito.

DRAINAGE AREA.--282 mi².

PERIOD OF RECORD.--April 1903 to October 1905, October 1911 to current year. Monthly discharge only for some periods, published in WSP 1312. Records for March 1900 at site 5.5 mi upstream and May 1905 to September 1911 (some missing periods most years) at site 3.2 mi upstream not equivalent to present site due to inflow. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08246500

REVISED RECORDS.--WSP 898: 1911(M). WSP 1312: 1903-5 (monthly discharge and runoff).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,269.39 ft (revised) above NGVD of 1929, Colorado State Highway datum.

Apr. 17, 1903 to Oct. 31, 1905, nonrecording gage 400 ft downstream at different datum. Oct. 5, 1911 to early 1915, nonrecording gage, and from early 1915 to Oct. 1, 1988, water-stage recorder at site 100 ft upstream at datum 2.15 ft higher (revised).

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation and return flows from irrigated areas. Some regulation by Platoro Reservoir (station 08244500) about 59 mi upstream since Nov. 7, 1951.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage of Oct. 5, 1911, is the greatest since at least 1854, from information obtained from local residents in 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	50	38	e29	e29	e33	e29	91	308	1,250	237	145	88
2	59	40	e27	e30	e31	e28	104	299	1,310	230	138	71
3	67	38	e28	e32	e30	e29	90	305	1,160	224	134	69
4	72	38	e27	e33	e29	e34	80	301	1,120	230	108	95
5	74	35	e23	e34	e28	e33	76	273	1,090	210	106	114
6	70	32	e23	e34	e25	e32	72	244	898	206	108	158
7	61	35	e22	e33	e24	e38	63	224	677	201	99	151
8	53	37	e23	e32	e25	e40	52	199	643	189	112	138
9	52	46	e23	e34	e26	e43	62	191	658	184	115	142
10	51	48	e23	e33	e26	e43	76	198	685	174	116	828
11	51	41	e23	e32	e28	53	95	185	663	157	102	704
12	48	36	e23	e32	e32	59	113	206	609	171	108	663
13	44	37	e23	e32	e36	73	120	275	537	169	101	488
14	43	42	e24	e34	e39	87	153	353	465	136	101	362
15	43	42	e24	e33	e40	84	184	477	396	132	92	323
16	42	30	e24	e32	e37	78	173	469	393	164	84	294
17	41	36	e25	e33	e39	63	184	604	453	151	72	220
18	37	36	e24	e32	e41	56	174	752	447	143	58	161
19	36	36	e24	e33	e36	51	151	890	440	129	48	199
20	35	40	e23	e34	e34	46	116	847	469	109	44	202
21	35	42	e24	e35	e34	51	116	862	407	98	44	143
22	34	42	e24	e34	e32	45	140	1,020	364	88	46	110
23	37	41	e26	e34	e31	54	154	1,230	293	108	59	96
24	41	39	e25	e35	e33	61	149	1,340	252	140	70	104
25	44	40	e25	e34	e33	68	161	1,280	278	128	71	97
26	49	33	e25	e31	e31	68	183	1,090	284	108	67	85
27	44	28	e27	e33	e30	75	225	1,210	246	105	63	76
28	45	e30	e28	e33	e30	66	297	1,340	221	150	70	72
29	45	e32	e29	e31	---	58	370	1,500	232	193	105	86
30	39	e30	e30	e32	---	64	352	1,380	236	222	96	93
31	39	---	e30	e33	---	77	---	1,360	---	205	108	---
TOTAL	1,481	1,120	778	1,016	893	1,686	4,376	21,212	17,176	5,091	2,790	6,432
MEAN	47.8	37.3	25.1	32.8	31.9	54.4	146	684	573	164	90.0	214
MAX	74	48	30	35	41	87	370	1,500	1,310	237	145	828
MIN	34	28	22	29	24	28	52	185	221	88	44	69
AC-FT	2,940	2,220	1,540	2,020	1,770	3,340	8,680	42,070	34,070	10,100	5,530	12,760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2003, BY WATER YEAR (WY)

MEAN	116	93.3	51.1	47.5	51.3	79.4	312	1,086	1,265	469	205	131
MAX	515	467	116	116	159	153	800	2,053	3,163	1,502	626	484
(WY)	(1905)	(1966)	(1987)	(1986)	(1983)	(1989)	(1936)	(1937)	(1920)	(1957)	(1952)	(1927)
MIN	34.7	29.9	25.1	22.7	30.0	41.0	138	282	118	37.1	17.1	26.8
(WY)	(1957)	(1931)	(2003)	(1918)	(1904)	(1904)	(1970)	(2002)	(1934)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1903 - 2003

ANNUAL TOTAL	27,891	64,051	
ANNUAL MEAN	76.4	175	324
HIGHEST ANNUAL MEAN			592
LOWEST ANNUAL MEAN			80.6
HIGHEST DAILY MEAN	409	May 16	4,490
LOWEST DAILY MEAN	10	Aug 19	a10
ANNUAL SEVEN-DAY MINIMUM	12	Aug 14	12
MAXIMUM PEAK FLOW		1,640	b9,000
MAXIMUM PEAK STAGE		4.80	c8.50
ANNUAL RUNOFF (AC-FT)	55,320	127,000	234,700
10 PERCENT EXCEEDS	220	458	1,010
50 PERCENT EXCEEDS	38	68	95
90 PERCENT EXCEEDS	23	29	41

e Estimated.

a Also occurred Aug 19, 2002.

b Present site and datum, from rating curve extended above 3,100 ft³/s.

c From floodmarks.

08247500 SAN ANTONIO RIVER AT ORTIZ, CO

LOCATION.--Lat 36°59'35", long 106°02'17", in NE¼SE¼ sec.24, T.32 N., R.8 E., Rio Arriba County, New Mexico, Hydrologic Unit 13010005, on left bank 800 ft upstream (south) from Colorado-New Mexico State line, 0.4 mi southeast of Ortiz, and 0.4 mi upstream from Los Pinos River.

DRAINAGE AREA.--110 mi², approximately.

PERIOD OF RECORD.--October 1919 to October 1920, October 1924 to September 1940 (seasonal records only), October 1940 to current year. Monthly discharge only for some periods, published in WSP 1312. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08247500

REVISED RECORDS.--WSP 1732: 1951. WSP 1923: 1927 (monthly discharge and runoff).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,970 ft above NGVD of 1929, from topographic map. Prior to Apr. 7, 1926, nonrecording gage at various locations near present site, at different datums. Apr. 7, 1926 to June 24, 1954, water-stage recorder on right bank at site 200 ft downstream at present datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation and return flows from irrigated areas. Statistical summary computed for 1940 to current year, subsequent to conversion of station to year-round records.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information obtained from local residents in 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	3.2	3.9	e2.8	e1.2	e4.0	e3.8	24	141	10	0.00	0.00	3.3
2	2.8	3.5	e2.6	e1.2	e3.8	e3.8	46	129	12	0.00	0.00	2.3
3	3.4	3.5	e2.6	e1.7	e3.4	e4.0	39	133	8.6	0.00	0.00	1.8
4	4.1	3.6	e2.2	e2.2	e3.2	e8.0	27	107	6.6	0.00	0.00	1.7
5	3.2	3.6	e1.4	e2.2	e2.9	e8.0	22	89	5.6	0.00	0.00	2.2
6	3.1	3.2	e1.2	e2.2	e2.8	e10	19	74	4.3	0.00	0.00	2.2
7	2.7	3.1	e0.90	e2.0	e2.8	e14	16	73	3.9	0.00	0.00	5.3
8	2.3	3.2	e1.1	e2.0	e3.0	e16	9.3	68	3.6	0.00	0.00	7.5
9	2.1	3.4	e1.1	e2.2	e3.2	e17	16	57	2.9	0.00	0.00	4.1
10	2.1	8.6	e1.1	e2.2	e3.3	e18	29	59	2.6	0.00	0.00	59
11	2.0	6.9	e1.1	e2.0	e3.7	21	55	53	2.1	0.00	0.00	22
12	1.9	5.4	e1.0	e1.8	e4.7	32	67	56	2.1	0.00	0.00	12
13	1.7	3.9	e1.1	e2.0	e8.0	76	63	57	2.0	0.00	0.00	7.6
14	1.8	5.1	e1.2	e2.2	e30	84	85	55	1.6	0.00	0.00	5.5
15	2.0	5.6	e1.3	e2.2	e20	81	114	53	1.4	0.00	0.00	4.3
16	1.9	3.6	e1.3	e1.8	e12	56	62	52	1.4	0.00	0.00	3.4
17	1.9	3.2	e1.2	e1.8	e14	31	66	44	1.6	0.00	0.00	2.8
18	1.8	2.6	e0.90	e1.8	e13	19	77	41	2.3	0.00	0.00	2.4
19	1.8	3.0	e0.80	e2.3	e9.6	15	64	38	2.0	0.00	0.00	2.1
20	2.0	3.0	e0.90	e2.5	e8.0	10	47	34	3.0	0.00	0.00	1.9
21	2.1	3.3	e0.90	e2.7	e7.8	16	61	31	3.7	0.00	0.00	1.8
22	2.1	3.2	e0.90	e2.7	e5.4	10	100	27	2.3	0.00	0.00	1.7
23	2.2	3.7	e0.90	e3.0	e4.3	14	99	24	1.4	0.00	0.00	1.6
24	2.4	4.2	e0.80	e3.0	e4.8	22	67	23	1.0	0.00	0.00	1.5
25	3.3	3.7	e0.80	e2.7	e4.9	30	85	22	0.72	0.00	0.00	1.5
26	3.4	3.3	e0.80	e2.7	e4.6	30	134	29	0.55	0.00	5.0	1.4
27	3.7	e3.2	e0.90	e3.2	e4.2	39	186	20	0.40	0.00	15	1.3
28	4.8	e2.8	e1.1	e3.2	e4.1	19	215	16	0.32	0.00	7.4	1.3
29	4.8	e3.1	e1.3	e3.0	---	15	223	14	0.16	0.00	7.3	1.2
30	4.2	e3.0	e1.2	e3.2	---	11	204	13	0.07	0.00	7.8	1.2
31	3.6	---	e1.3	e3.7	---	14	---	11	---	0.00	4.3	---
TOTAL	84.4	115.4	38.70	72.6	195.5	747.6	2,321.3	1,643	90.22	0.00	46.80	167.9
MEAN	2.72	3.85	1.25	2.34	6.98	24.1	77.4	53.0	3.01	0.000	1.51	5.60
MAX	4.8	8.6	2.8	3.7	30	84	223	141	12	0.00	15	59
MIN	1.7	2.6	0.80	1.2	2.8	3.8	9.3	11	0.07	0.00	0.00	1.2
AC-FT	167	229	77	144	388	1,480	4,600	3,260	179	0.00	93	333

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

	2.97	3.92	2.69	2.31	3.73	17.5	99.3	143	16.4	1.94	2.83	1.33
MEAN	2.97	3.92	2.69	2.31	3.73	17.5	99.3	143	16.4	1.94	2.83	1.33
MAX	12.0	13.8	8.12	6.00	13.0	70.6	302	508	108	12.0	17.7	5.60
(WY)	(1987)	(1987)	(1967)	(1965)	(1962)	(1997)	(1962)	(1941)	(1957)	(1957)	(1957)	(2003)
MIN	0.000	1.04	0.48	0.000	0.25	2.50	8.15	0.91	0.000	0.000	0.000	0.000
(WY)	(1952)	(1956)	(1977)	(1977)	(1990)	(1948)	(2002)	(2002)	(2002)	(1940)	(1951)	(1951)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1940 - 2003

ANNUAL TOTAL	895.46		5,523.42			
ANNUAL MEAN	2.45		15.1			
HIGHEST ANNUAL MEAN					25.1	
LOWEST ANNUAL MEAN					61.8	1952
HIGHEST DAILY MEAN	18	Apr 1	223		2.36	2002
LOWEST DAILY MEAN	0.00	May 30	0.00		1,050	May 13, 1941
ANNUAL SEVEN-DAY MINIMUM	0.00	May 30	0.00		a0.00	Jun 24, 1940
MAXIMUM PEAK FLOW			305		b0.00	Jun 24, 1940
MAXIMUM PEAK STAGE			3.27		c1,380	May 13, 1941
ANNUAL RUNOFF (AC-FT)	1,780		10,960		e4.75	May 13, 1941
10 PERCENT EXCEEDS	5.8		55		18,160	
50 PERCENT EXCEEDS	2.0		3.1		62	
90 PERCENT EXCEEDS	0.00		0.00		3.0	

e Estimated.

a Also occurred Jun 25 to Aug 7, and Aug 19-23, 1940, and on many days during many years.

b Also occurred for periods during many years.

c From rating curve extended above 1,100 ft³/s. Maximum discharge and gage height for period of record, 1,750 ft³/s, Apr 15, 1937, gage height, 5.38 ft, from rating curve extended above 1,100 ft³/s.

08248000 LOS PINOS RIVER NEAR ORTIZ, CO

LOCATION.--Lat 36°58'56", long 106°04'23", on line between sec.26, and sec.27, T.32 N., R.8 E., Rio Arriba County, New Mexico, Hydrologic Unit 13010005, on left bank 0.9 mi upstream (south) from Colorado-New Mexico State line, 2.1 mi southwest of Ortiz, and 2.9 mi upstream from mouth.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--January 1915 to December 1920, October 1924 to current year. Monthly discharge only for some periods, published in WSP 1312. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08248000

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,040 ft above NGVD of 1929, from topographic map. Prior to Apr. 15, 1955, at site 350 ft upstream at datum 2.52 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation and return flows from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information obtained from local residents in 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	14	15	e14	e9.0	e14	e13	38	349	328	24	17	13
2	15	14	e12	e8.6	e13	e14	54	348	317	22	18	11
3	18	14	e12	e10	e12	e19	53	343	296	20	16	11
4	16	14	e12	e11	e11	e19	46	300	265	19	14	13
5	15	12	e8.0	e11	e10	e20	41	250	236	18	12	16
6	15	11	e8.0	e11	e9.4	e19	39	252	206	18	11	24
7	13	12	e7.0	e11	e9.2	e18	34	256	177	17	12	35
8	13	13	e8.0	e11	e9.0	e17	31	233	155	15	13	23
9	12	18	e8.0	e11	e9.8	e16	37	210	141	14	12	23
10	11	17	e8.0	e11	e9.8	e16	62	250	131	13	12	293
11	10	15	e8.0	e10	e12	e18	79	252	120	14	11	133
12	10	16	e8.0	e9.5	e22	e23	96	321	109	13	12	74
13	9.9	24	e8.0	e10	e33	e27	113	377	99	14	11	52
14	9.4	22	e8.4	e11	e60	e31	147	419	91	13	9.7	41
15	8.8	18	e9.0	e11	e30	e34	187	482	85	12	8.5	36
16	8.8	e16	e9.0	e9.0	e16	e36	130	430	79	13	8.1	32
17	8.6	e18	e9.0	e9.5	e17	e33	146	506	78	13	7.3	28
18	8.5	e18	e8.0	e9.5	e16	e29	149	531	73	10	7.1	26
19	8.8	e17	e7.0	e11	e14	e27	132	483	86	9.2	7.1	23
20	9.0	e18	e7.0	e11	e13	e24	110	449	104	11	6.7	22
21	8.7	18	e7.4	e11	e13	e26	131	434	73	16	7.3	21
22	8.7	17	e7.0	e11	e11	e25	167	459	59	14	8.7	20
23	9.1	16	e7.8	e12	e10	e28	168	467	50	13	11	20
24	9.5	17	e7.2	e12	e14	e31	135	437	45	13	13	19
25	10	e16	e7.2	e11	e16	e33	174	441	40	12	18	19
26	11	e13	e7.0	e11	e14	e38	253	428	37	12	18	17
27	13	e11	e7.8	e13	e14	e42	330	439	34	13	15	18
28	13	e13	e8.8	e13	e13	e35	391	440	32	18	14	17
29	14	e14	e10	e12	---	e29	414	438	29	25	25	17
30	13	e14	e9.0	e12	---	e28	400	384	26	21	18	17
31	16	---	e9.4	e13	---	e29	---	392	---	17	15	---
TOTAL	359.8	471	267.0	337.1	445.2	797	4,287	11,800	3,601	476.2	388.5	1,114
MEAN	11.6	15.7	8.61	10.9	15.9	25.7	143	381	120	15.4	12.5	37.1
MAX	18	24	14	13	60	42	414	531	328	25	25	293
MIN	8.5	11	7.0	8.6	9.0	13	31	210	26	9.2	6.7	11
AC-FT	714	934	530	669	883	1,580	8,500	23,410	7,140	945	771	2,210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2003, BY WATER YEAR (WY)

	27.0	21.8	16.1	14.5	17.0	34.2	221	603	323	71.5	34.8	24.6
MEAN	27.0	21.8	16.1	14.5	17.0	34.2	221	603	323	71.5	34.8	24.6
MAX	109	70.1	34.4	26.0	30.0	84.7	610	1,341	1,022	258	112	101
(WY)	(1987)	(1987)	(1987)	(1987)	(1962)	(1971)	(1936)	(1952)	(1957)	(1957)	(1929)	(1927)
MIN	10.1	11.1	5.00	5.00	7.50	13.9	65.9	33.8	8.22	5.17	3.75	7.53
(WY)	(1957)	(1957)	(1918)	(1918)	(1964)	(1977)	(1968)	(2002)	(2002)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1915 - 2003

ANNUAL TOTAL	6,561.1	24,343.8	
ANNUAL MEAN	18.0	66.7	118
HIGHEST ANNUAL MEAN			230
LOWEST ANNUAL MEAN			18.0
HIGHEST DAILY MEAN	130	531	2,410
LOWEST DAILY MEAN	1.7	6.7	1.7
ANNUAL SEVEN-DAY MINIMUM	2.3	7.2	2.3
MAXIMUM PEAK FLOW		655	a3,160
MAXIMUM PEAK STAGE		4.56	b5.77
ANNUAL RUNOFF (AC-FT)	13,010	48,290	85,310
10 PERCENT EXCEEDS	48	252	373
50 PERCENT EXCEEDS	11	16	25
90 PERCENT EXCEEDS	3.9	8.8	12

e Estimated.

a Site and datum then in use, from rating curve extended above 1,600 ft³/s.

b Maximum gage height, 6.19 ft, May 22, 1993, present site and datum.

08249000 CONEJOS RIVER NEAR LASAUSES, CO

LOCATION.--Lat 37°18'01", long 105°44'47", in SW¹/₄SW¹/₄ sec.2, and SE¹/₄NE¹/₄ sec.10 (two channels), T.35 N., R.11 E., Conejos County, Hydrologic Unit 13010005, on left bank of main channel 125 ft downstream from bridge on State Highway 158 and on left bank of secondary channel 230 ft upstream from bridge on State Highway 158, 1.0 mi upstream from mouth, 2.1 mi north of Lasauses, and 13 mi southeast of Alamosa.

DRAINAGE AREA.--887 mi².

PERIOD OF RECORD.--March 1921 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1, 1966, published as "at mouth, near La Sauses" or "near La Sauses." For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08249000

REVISED RECORDS.--WSP 1312: 1932 (monthly discharge and runoff), 1934(M).

GAGE.--Two water-stage recorders with satellite telemetry. Datum of gage on main (north) channel is 7,495.02 ft above NGVD of 1929, and on secondary (south) channel is 7,496.89 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation). Main channel: April 11 to September 30, 1937, at datum 1.00 ft higher. See WSP 1312 and 1732 for history of changes prior to Apr. 11, 1937. South channel: May 4, 1936, to Oct. 13, 1965, at site 280 ft downstream at datum 1.00 ft lower. See WSP 1312 and 1732 for history of changes prior to May 4, 1936.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation, ground-water withdrawals, and return flows from irrigated areas. Flows regulated to some extent by Platoro Reservoir (station 08244500) about 83 mi upstream since Nov. 7, 1951.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information obtained from local residents in 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	0.00	0.00	14	e18	e31	10	9.5	3.9	9.2	0.48	0.00	0.00
2	0.00	0.00	e13	e16	e37	9.5	18	4.6	8.9	0.47	0.00	0.00
3	0.00	0.00	15	e19	e37	9.5	18	4.4	7.9	0.41	0.00	0.00
4	0.00	0.00	15	e20	e32	8.6	16	3.9	7.0	0.37	0.00	0.00
5	0.00	0.00	19	e20	e32	8.6	9.7	3.9	17	0.33	0.00	0.00
6	0.00	0.00	12	e21	32	9.2	9.6	3.8	23	0.30	0.00	0.00
7	0.00	0.00	12	e21	e30	8.9	8.7	3.5	6.8	0.30	0.00	0.00
8	0.00	0.00	e12	e22	e30	7.8	1.2	3.0	6.8	0.30	0.00	0.00
9	0.00	0.00	e13	e23	e27	5.8	0.56	2.7	6.5	0.30	0.00	0.00
10	0.00	0.00	e13	e26	e26	2.5	0.52	2.8	6.3	0.24	0.00	0.00
11	0.00	0.00	e14	e26	23	0.80	0.53	2.8	6.3	0.02	0.00	0.09
12	0.00	0.00	e14	e27	20	1.4	0.52	3.0	7.1	0.00	0.00	e38
13	0.00	0.00	e14	e26	19	2.5	0.52	3.4	6.4	0.00	0.00	e1.0
14	0.00	0.00	e16	e27	e17	5.8	0.39	3.8	6.6	0.00	0.00	e0.05
15	0.00	0.00	e16	e29	18	9.2	0.46	4.6	6.5	0.00	0.00	0.00
16	0.00	0.00	e16	e27	26	10	1.1	15	3.3	0.00	0.00	0.00
17	0.00	0.00	e17	e28	e26	11	1.2	8.0	2.9	0.00	0.00	0.00
18	0.00	0.00	e16	e27	24	15	1.7	4.8	2.5	0.00	0.00	0.00
19	0.00	0.00	e16	e27	22	15	2.3	3.8	2.4	0.00	0.00	0.00
20	0.00	0.00	e16	e27	14	13	2.5	3.3	2.2	0.00	0.00	0.00
21	0.00	0.00	e16	e27	9.7	10	2.5	3.3	1.8	0.00	0.00	0.00
22	0.00	0.00	e16	e28	9.5	9.7	2.1	9.1	1.4	0.00	0.00	0.00
23	0.00	0.00	e16	e28	10	8.9	1.9	83	1.2	0.00	0.00	0.00
24	0.00	2.7	e16	e28	11	8.7	2.3	59	1.1	0.00	0.00	0.00
25	0.00	e8.8	e17	e29	11	5.7	2.5	26	0.96	0.00	0.00	0.00
26	0.00	e11	e17	e29	12	5.0	2.0	8.6	0.96	0.00	0.00	0.00
27	0.00	e12	e17	e30	12	3.5	2.1	6.3	0.93	0.00	0.00	0.00
28	0.00	e13	e17	e31	12	3.1	3.5	5.8	0.86	0.00	0.00	0.00
29	0.00	e13	e17	e34	---	5.8	4.7	31	0.72	0.00	0.00	0.00
30	0.00	13	e18	e30	---	6.9	4.5	82	0.63	0.00	0.00	0.00
31	0.00	---	e18	e29	---	6.1	---	9.0	---	0.00	0.00	---
TOTAL	0.00	73.50	478	800	610.2	237.50	131.10	412.1	156.16	3.52	0.00	39.14
MEAN	0.000	2.45	15.4	25.8	21.8	7.66	4.37	13.3	5.21	0.11	0.000	1.30
MAX	0.00	13	19	34	37	15	18	83	23	0.48	0.00	38
MIN	0.00	0.00	12	16	9.5	0.80	0.39	2.7	0.63	0.00	0.00	0.00
AC-FT	0.00	146	948	1,590	1,210	471	260	817	310	7.0	0.00	78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)																												
	46.5	307	(1942)	0.000	(2003)	80.1	424	(1976)	2.45	(2003)	58.0	140	(1986)	15.4	(2003)	60.9	146	(1986)	24.0	(1964)	77.4	186	(1983)	21.8	(2003)	102	261	(1989)	239	1,177	(1924)	692	2,642	(1924)	545	1,850	(1935)	140	1,132	(1957)	49.1	413	(1952)	37.8	425	(1927)	0.000	(1976)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1921 - 2003

ANNUAL TOTAL	4,286.56		2,941.22			
ANNUAL MEAN	11.7		8.06			
HIGHEST ANNUAL MEAN					177	
LOWEST ANNUAL MEAN					451	
HIGHEST DAILY MEAN	78	Mar 8	83	May 23	3,820	May 15, 1941
LOWEST DAILY MEAN	0.00	May 29	0.00	Oct 1	a0.00	Jun 27, 1934
ANNUAL SEVEN-DAY MINIMUM	0.00	May 29	0.00	Oct 1	b0.00	Jul 21, 1934
MAXIMUM PEAK FLOW			Not determined		c3,890	
ANNUAL RUNOFF (AC-FT)	8,500		5,830		128,300	
10 PERCENT EXCEEDS	41		26		495	
50 PERCENT EXCEEDS	0.11		2.7		55	
90 PERCENT EXCEEDS	0.00		0.00		1.0	

e Estimated.
a Also occurred Jun 28 to Jul 1, Jul 3, and Jul 21 to Sep 8, and many days during many years.
b Also occurred during many years.
c Gage height not determined.

08250000 CULEBRA CREEK AT SAN LUIS, CO

LOCATION.--Lat 37°11'01", long 105°25'31", Costilla County, Hydrologic Unit 13010002, on left bank at bridge 1 mi south of San Luis, and 1 mi upstream from the Rito Seco.

DRAINAGE AREA.--220 mi².

PERIOD OF RECORD.--April 1927 to September 1982. October 1998 to current year. Monthly discharge only for some periods, published in WSP 1312. Records for January 1910 to December 1911, published as Culebra River at San Luis in WSP 288 and 308, have been found to be unreliable and should not be used. October 1982 to September 1998, in reports of State Engineer. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08250000

REVISED RECORDS.--WSP 1312: 1940. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Non-standard Parshall flume since May 23, 1931. Elevation of gage is 8,000 ft above NGVD of 1929, from topographic map. Prior to May 23, 1931, at different datum.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by storage reservoir, diversions for irrigation, ground-water withdrawals, and return flows from irrigated areas. Flow regulated to large extent by Sanchez Reservoir on Ventero Creek, capacity 103,000 acre-ft.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

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	12	12	11	9.6	12	12	11	9.3	116	74	25	28
2	16	12	11	9.3	11	12	12	22	97	73	20	36
3	12	12	11	9.8	11	12	11	43	77	72	20	57
4	12	13	11	9.9	9.8	12	11	41	67	73	27	57
5	11	13	12	10	10	11	10	38	81	72	47	54
6	11	13	11	11	10	11	10	34	105	71	47	53
7	11	13	10	11	10	12	11	34	101	69	47	55
8	11	12	11	11	12	12	10	34	64	67	52	46
9	11	13	10	11	8.9	12	10	36	63	67	57	41
10	11	14	10	12	9.8	12	10	43	62	77	17	64
11	11	13	10	11	10	12	11	42	61	97	23	34
12	11	13	9.9	12	11	12	11	42	61	96	39	35
13	11	13	10	11	13	11	9.8	46	61	99	43	39
14	11	16	10	12	13	11	11	46	61	110	52	35
15	11	16	9.7	11	12	11	12	48	66	110	52	30
16	11	12	10	12	11	11	11	51	71	110	53	27
17	11	12	10	11	11	11	11	53	73	110	52	25
18	11	12	10	10	12	12	11	55	68	98	53	23
19	12	11	8.7	11	12	12	14	64	54	75	56	26
20	11	11	8.7	11	11	13	19	71	57	78	53	25
21	11	12	8.8	11	11	14	16	75	51	68	52	25
22	11	12	8.7	12	11	14	14	72	46	88	60	26
23	13	11	9.2	12	13	14	14	75	41	59	68	28
24	12	12	9.3	12	12	12	12	79	40	83	30	28
25	12	11	9.0	12	11	12	10	89	41	78	38	29
26	12	11	8.8	12	12	11	9.8	72	35	81	62	23
27	15	11	8.7	12	11	12	10	57	37	86	71	21
28	13	11	8.8	12	12	12	11	59	47	56	64	21
29	12	11	9.2	12	---	12	11	64	50	47	52	21
30	12	11	9.3	11	---	11	9.8	76	53	38	52	21
31	13	---	9.3	12	---	11	---	97	---	31	35	---
TOTAL	365	369	304.1	346.6	313.5	369	344.4	1,667.3	1,907	2,413	1,419	1,033
MEAN	11.8	12.3	9.81	11.2	11.2	11.9	11.5	53.8	63.6	77.8	45.8	34.4
MAX	16	16	12	12	13	14	19	97	116	110	71	64
MIN	11	11	8.7	9.3	8.9	11	9.8	9.3	35	31	17	21
AC-FT	724	732	603	687	622	732	683	3,310	3,780	4,790	2,810	2,050

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2003, BY WATER YEAR (WY)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
MEAN	22.2	21.4	18.5	18.1	18.6	19.4	18.6	53.6	133	108	80.5	32.5
MAX	36.7	51.4	39.1	32.2	32.6	36.2	48.3	137	303	231	184	69.2
(WY)	(1942)	(1958)	(1958)	(1942)	(1942)	(1942)	(1942)	(1930)	(1942)	(1942)	(1949)	(1945)
MIN	6.00	6.63	6.64	7.03	6.70	7.42	7.79	11.7	40.1	30.4	27.3	9.49
(WY)	(1951)	(1951)	(1952)	(1951)	(1951)	(1951)	(1951)	(1955)	(1963)	(1977)	(1976)	(1972)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

(a) WATER YEARS 1927 - 2003

ANNUAL TOTAL	12,978.1	10,850.9	
ANNUAL MEAN	35.6	29.7	
HIGHEST ANNUAL MEAN			45.4
LOWEST ANNUAL MEAN			92.7 1942
HIGHEST DAILY MEAN	138 Jun 14	116 Jun 1	18.2 1951
LOWEST DAILY MEAN	8.7 Dec 19	8.7 Dec 19	4.6 Oct 31, 1950
ANNUAL SEVEN-DAY MINIMUM	8.9 Dec 19	8.9 Dec 19	5.0 Oct 22, 1950
MAXIMUM PEAK FLOW		244 Jul 22	b654 Jul 1, 1947
MAXIMUM PEAK STAGE		2.47 Jul 22	5.09 Jul 1, 1947
ANNUAL RUNOFF (AC-FT)	25,740	21,520	32,880
10 PERCENT EXCEEDS	81	71	115
50 PERCENT EXCEEDS	20	12	25
90 PERCENT EXCEEDS	11	10	11

a Water years 1927-1982 and 1999 to current year.

b From rating curve extended above 300 ft³/s.

08251500 RIO GRANDE NEAR LOBATOS, CO

LOCATION.--Lat 37°04'43", long 105°45'23", in NE¼NW¼ sec.27, T.33 N., R.11 E., Conejos County, Hydrologic Unit 13010002, on right bank at highway bridge, 5.7 mi north of Colorado-New Mexico State line, 8 mi downstream from Culebra Creek, 11 mi east of Lobatos, and 14 mi east of Antonito.

DRAINAGE AREA.--7,700 mi², approximately, includes 2,940 mi² in closed basin in northern part of San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1899 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "at Cenicerito" 1899-1901, and as "near Cenicerito" 1902-4. Statistical summary computed for 1931 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08251500

REVISED RECORDS.-- WSP 210: Drainage area. WSP 1312: 1919 (monthly discharge and runoff). WDR CO-78-1: 1976.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,427.63 ft above NGVD of 1929. Prior to Nov. 8, 1910, nonrecording gages at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, transmountain diversions, diversions for irrigation and municipal use, ground-water withdrawals, return flows from irrigated areas, and flows from sewage-treatment plants.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage of June 18, 1903, is greatest since at least 1828.

**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	23	e135	e105	e220	195	85	71	224	93	14	13
2	24	24	e140	e115	e210	187	85	79	244	90	12	12
3	20	30	e135	e125	e210	181	86	93	182	79	12	29
4	15	71	e155	e135	e190	181	85	76	151	80	16	31
5	13	130	e155	e145	e175	185	71	56	135	82	15	20
6	18	142	e155	e140	e140	206	64	58	139	72	15	16
7	19	137	e150	e140	e120	177	58	60	151	64	14	14
8	19	103	e120	e140	e180	183	52	66	157	58	15	14
9	19	91	e105	e145	e175	182	44	60	223	57	15	16
10	14	62	e110	e150	e175	183	44	59	279	53	15	28
11	15	47	e100	e160	e190	183	44	58	265	47	15	22
12	15	41	e110	e160	e205	185	39	61	218	42	15	21
13	15	42	e115	e165	e215	193	36	67	196	37	15	21
14	16	42	e120	e160	e240	187	35	73	184	38	14	25
15	16	37	e130	e160	e240	205	36	83	209	47	10	19
16	16	30	e140	e160	205	218	41	122	232	40	14	16
17	17	38	e115	e155	213	227	42	112	206	36	17	15
18	18	53	e130	e160	213	230	66	146	181	33	25	13
19	18	49	e115	e160	218	205	65	160	173	30	15	12
20	18	48	e110	e160	207	165	51	164	154	28	8.4	11
21	20	47	e105	e160	201	142	47	172	160	27	6.4	10
22	21	48	e140	e165	e185	117	46	158	160	28	5.8	10
23	23	43	e125	e170	e180	107	48	134	146	27	15	9.8
24	25	48	e100	e175	e180	109	52	210	128	27	9.3	11
25	24	122	e115	e175	e185	96	65	210	113	27	7.9	12
26	23	e125	e105	e185	e204	70	71	195	102	24	7.7	10
27	26	e135	e105	e185	209	71	69	146	103	21	8.4	10
28	26	e145	e100	e195	195	60	78	121	108	20	11	11
29	26	e125	e100	e200	---	80	83	143	97	20	14	11
30	28	e135	e100	e190	---	80	81	218	94	46	14	11
31	27	---	e105	e205	---	80	---	186	---	21	14	---
TOTAL	617	2,213	3,745	4,945	5,480	4,870	1,769	3,617	5,114	1,394	404.9	473.8
MEAN	19.9	73.8	121	160	196	157	59.0	117	170	45.0	13.1	15.8
MAX	28	145	155	205	240	230	86	218	279	93	25	31
MIN	13	23	100	105	120	60	35	56	94	20	5.8	9.8
AC-FT	1,220	4,390	7,430	9,810	10,870	9,660	3,510	7,170	10,140	2,760	803	940

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

	184	309	282	263	314	413	505	1,082	1,199	427	167	133
MEAN	184	309	282	263	314	413	505	1,082	1,199	427	167	133
MAX	1,401	1,199	763	521	595	884	2,326	4,958	4,470	2,754	1,281	938
(WY)	(1942)	(1942)	(1942)	(1986)	(1986)	(1987)	(1985)	(1987)	(1941)	(1995)	(1999)	(1999)
MIN	12.9	59.6	61.7	75.7	102	66.0	32.3	31.2	19.8	1.28	3.21	1.91
(WY)	(1957)	(1955)	(1964)	(1957)	(1957)	(1957)	(1935)	(2002)	(1977)	(1951)	(1956)	(1956)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	35,800.9		34,642.7			
ANNUAL MEAN	98.1		94.9		a440	
HIGHEST ANNUAL MEAN					1,264 1987	
LOWEST ANNUAL MEAN					70.9 1964	
HIGHEST DAILY MEAN	391	Mar 14	279	Jun 10	b9,110 Jun 22, 1949	
LOWEST DAILY MEAN	4.3	Aug 1	5.8	Aug 22	c0.00 Jul 16, 1950	
ANNUAL SEVEN-DAY MINIMUM	4.9	Jul 28	8.6	Aug 20	d0.00 Jul 16, 1950	
MAXIMUM PEAK FLOW			302	Jun 10	e11,600 May 8, 1952	
MAXIMUM PEAK STAGE			f1.56	Jun 10	g8.76 May 8, 1952	
ANNUAL RUNOFF (AC-FT)	71,010		68,710		318,700	
10 PERCENT EXCEEDS	275		195		951	
50 PERCENT EXCEEDS	37		81		240	
90 PERCENT EXCEEDS	8.4		14		38	

- e Estimated.
- a Average discharge for 31 years (water years 1900-30), 846 ft³/s; 612,900 acre-ft/yr, includes period of extensive development for irrigation.
- b Maximum daily discharge for period of record, 13,100 ft³/s, Jun 8, 1905.
- c No flow at times in 1950-51, 1956.
- d Maximum discharge for period of record, 13,200 ft³/s, Jun 8, 1905, gage height, 9.1 ft, from rating curve extended above 8,000 ft³/s.
- f Maximum gage height, 2.19 ft, Feb 1, backwater from ice.
- g Maximum gage height for period of record, 10.0 ft, Jun 18, 1903.

08251500 RIO GRANDE NEAR LOBATOS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1969 to current year. September 1969 to September 1993 under the National Stream-Quality Accounting Network (NASQAN). April 1993 to September 1996 under the Rio Grande National Water-Quality Assessment Program. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=08251500

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to September 1981.

WATER TEMPERATURE: October 1975 to September 1981.

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

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd std units (00400)	Specific conductance, wat unfltrd 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, water, fltrd, mg/L (00930)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
OCT 08...	1115	20	9.3	8.8	476	12.0	87	22.9	7.26	8.24	68.5	18.1	0.84
MAR 26...	1030	67	9.1	7.9	319	8.0	90	27.6	5.23	4.08	30.9	8.57	0.45
MAY 27...	1215	142	8.7	8.4	247	19.0	74	22.1	4.49	4.54	21.6	4.87	0.4
JUN 11...	1030	266	7.7	8.2	182	16.0	58	17.2	3.55	3.34	16.0	3.55	0.3
JUL 17...	1030	36	8.0	8.7	299	19.5	94	27.5	6.12	4.85	29.6	7.30	0.5
AUG 20...	0930	8.1	8.0	9.0	411	16.0	68	16.8	6.26	6.19	59.6	17.1	0.8

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

Date	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	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)	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)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)
OCT 08...	21.3	54.8	308	0.34	0.52	<0.04	<0.06	<0.008	<0.02	0.010	0.047	2	E.17
MAR 26...	27.8	34.1	214	0.18	0.37	<0.04	<0.06	<0.008	0.02	0.025	0.067	--	--
MAY 27...	23.1	20.5	152	0.40	0.70	<0.04	<0.06	<0.008	0.03	0.047	0.151	2	<0.30
JUN 11...	19.3	15.2	124	0.30	0.73	<0.04	<0.06	<0.008	0.03	0.039	0.174	2	<0.30
JUL 17...	20.7	23.4	196	E.25	E.54	<0.04	<0.06	<0.008	E.01	E.018	E.081	E1	<0.30
AUG 20...	5.55	52.6	245	0.34	0.51	<0.04	<0.06	<0.008	<0.02	0.010	0.045	--	--

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

Date	Arsenic, water, fltrd, ug/L (01000)	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)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
OCT 08...	6	51	<0.06	E.03	<0.8	0.46	1.2	E8	E.05	14.7	6.9	1.22	<3
MAR 26...	--	--	--	--	--	--	--	18	--	102	--	--	--
MAY 27...	3	34	<0.06	<0.04	<0.8	0.25	1.0	54	0.29	69.5	3.0	1.51	<3
JUN 11...	E2	25	<0.06	E.02	<0.8	0.17	1.0	37	0.18	23.9	1.6	0.82	<3
JUL 17...	4	34	<0.06	<0.04	<0.8	0.26	0.8	9	<0.08	34.7	4.5	1.23	<3
AUG 20...	--	--	--	--	--	--	--	9	--	12.1	--	--	--

08251500 RIO GRANDE NEAR LOBATOS, CO—Continued

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

Date	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
OCT 08...	<0.20	2	2.78
MAR 26...	--	--	--
MAY 27...	<0.20	2	0.89
JUN 11...	<0.20	1	0.40
JUL 17...	<0.20	M	1.19
AUG 20...	--	--	--

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

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

Following is a list of Transmountain Diversions no longer being published in this report. Diversions, in acre-feet, for these sites are available from the State of Colorado, Division of Water Resources.

TO PLATTE RIVER BASIN

09010000 Grand River Ditch
 09012000 Eureka Ditch
 09013000 Alva B. Adams Tunnel
 09021500 Berthoud Pass Ditch
 09022500 Moffat Water Tunnel
 09046000 Boreas Pass Ditch
 09047300 Vidler Tunnel
 09050590 Harold D. Roberts Tunnel

TO ARKANSAS RIVER BASIN

09042000 Hoosier Pass Tunnel
 09061500 Columbine Ditch
 09062500 Wurtz Ditch
 09063700 Homestake Tunnel
 09073000 Twin Lakes Tunnel
 09077160 Charles H. Boustead Tunnel
 09077500 Busk-Ivanhoe Tunnel
 09115000 Larkspur Ditch

TO RIO GRANDE RIVER BASIN

09118200 Tarbell Ditch
 09121000 Tabor Ditch
 09341000 Treasure Pass Ditch
 09347000 Don LaFont Ditches 1 & 2
 09348000 Williams Creek Squaw Pass Ditch
 09351000 Pine River-Weminuche Pass Ditch
 09351500 Weminuche Pass

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at low-flow partial-record sites and at miscellaneous sites and for special studies are given in separate tables.

CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device that will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
PLATTE RIVER BASIN								
Lee Gulch at Littleton, CO (06709740)	Lat 39°35'47", long 105°00'57", in SW ¹ / ₄ SW ¹ / ₄ sec.21, T.5 S., R.68 W., Arapahoe County, on right bank 30 ft upstream from culvert under Prince St. and 0.6 mi upstream from mouth in Littleton. Drainage area not determined.	1980-2003	7-26-03	11.56	142	a1983	16.00	444
Dutch Creek at Platte Canyon Drive, near Littleton, CO (06709910)	Lat 39°36'01", long 105°02'28", in NW ¹ / ₄ SE ¹ / ₄ sec.19, T.5 S., R.69 W., Arapahoe County, on left bank 150 ft downstream from bridge on Platte Canyon Road. Drainage area not determined.	1985-2003	4-23-03	11.05	190	6-01-91	11.51	1,090
Weaver Creek near Lakewood, CO (06711305)	Lat 39°38'13", long 105°07'47", in NE ¹ / ₄ NE ¹ / ₄ sec.8, T.5 S., R.69 W., Jefferson County, 500 ft upstream from Simms St., and 700 ft south of West Quincy Ave. Drainage area not determined. Discontinued September 2003.	1982-2003	7-26-03	10.71	35.6	a1985	13.93	1,010
Little Dry Creek near Arapahoe Road, CO (06711515)	Lat 39°35'38", long 104°54'23", in NE ¹ / ₄ NE ¹ / ₄ sec.29, T.5 S., R.67 W., Arapahoe County, on right bank, 80 (formerly published as Inflow to 0 ft downstream from Quebec St. Holly Reservoir, 1985-86). Drainage area not determined.	1985-2003	8-30-03	8.98	277	a1985	10.52	800
Willow Creek at Dry Creek Road, near Englewood, CO (06711535)	Lat 39°34'49", long 104°54'42", in NW ¹ / ₄ NE ¹ / ₄ sec.32, T.5 S., R.67 W., Arapahoe County, on left bank, upstream wingwall of bridge on Dry Creek Road over Willow Creek. Drainage area not determined.	1985-2003	8-30-03	10.24	334	a1985	14.28	3,470
Little Dry Creek above Englewood, CO (06711555)	Lat 39°38'57", long 104°58'42", in SE ¹ / ₄ NE ¹ / ₄ sec.3, T.5 S., R.68 W., Arapahoe County, on right bank 250 ft downstream from bridge on Clarkson St., and 800 ft south of Hampton Ave., in Cherry Hills Village. Drainage area not determined. Prior to April 2, 1992, gage was located at a site 300 ft upstream from the present location.	1982-2003	7-18-03	7.19	415	a1983	15.64	1,060

MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
PLATTE RIVER BASIN--Continued								
Harvard Gulch at Colorado Blvd., at Denver, CO (06711570)	Lat 39°40'08", long 104°56'32", in SE ¹ / ₄ SE ¹ / ₄ sec.25, T.4 S., R.67 W., Denver County, on left bank, 100 ft upstream from S. Jackson St., and 400 ft north of E. Yale Ave. Drainage area not determined.	1979-2003	6-18-03	13.16	578	7-8-01	13.98	1,100
Harvard Gulch below University Blvd. at Denver, CO (06711572)	Lat 39°40'10", long 104°57'33", in SE ¹ / ₄ SE ¹ / ₄ sec.26, T.4 S., R.68 W., Denver County, 200 ft, downstream from University Blvd., and 600 ft north of East Yale Ave., in Denver. REVISED RECORDS.--WDR-CO-92-1: 1989-91. Drainage area not determined.Discontinued Sept.2003.	1979-2003	6-18-03	14.03	713	7-8-01	15.50	1,600
Harvard Gulch at Harvard Park at Denver, CO (06711575)	Lat 39°40'21", long 104°58'35", in NW ¹ / ₄ SW ¹ / ₄ sec.26, T.4 S., R.68 W., Denver County, on left bank, 200 ft north of E. Harvard Ave. and 300 ft west of S. Ogden St., directly north of Porter Hospital. Drainage area not determined.	1979-2003	6-18-03	15.42	750	7-12-96	16.25	1,100
Weir Gulch upstream from 1st Avenue, at Denver, CO (06711618)	Lat 39°43'03", long 105°02'30", in NW ¹ / ₄ SE ¹ / ₄ sec.7, T.4 S., R.68 W., Denver County, 250 ft upstream from 1st Ave., in Denver. Drainage area not determined.	1985-2003	6-6-03	10.34	156	8-01-91	11.91	523
Dry Gulch at Denver, CO (06711770)	Lat 39°44'03", long 105°02'20", in SW ¹ / ₄ NE ¹ / ₄ sec.6, T.4 S., R.68 W., Denver County, 800 ft upstream from confluence with Lakewood Gulch, north of West 10th Ave., at Perry St., in Denver. Drainage area not determined.	1980-2003	8-30-03	11.54	120	a1981	16.00	445
Lakewood Gulch at Denver, CO (06711780)	Lat 39°44'06", long 105°01'54", in SW ¹ / ₄ NW ¹ / ₄ sec.5, T.4 S., R.68 W., Denver County, 2,000 ft downstream from confluence with Dry Gulch, near intersection of Knox Ct., and West 12th Ave., in Denver. REVISED RECORDS.--WDR CO-02-1: 2001(M). Drainage area not determined.	1980-2003	8-30-03	13.86	453	8-19-98	14.80	1,180
Sloans Lake, south Tributary at Denver, CO (06711820)	Lat 39°44'44", long 105°03'28", in NW ¹ / ₄ SE ¹ / ₄ sec.36, T.3 S., R.69 W., Jefferson County, 50 ft south of 18th Ave., at Depew St. REVISED RECORDS.--WDR CO-90-1: 1985-89. Drainage area not determined. Discontinued September 2003.	1985-2003	8-30-03	4.55	49	6-01-91	14.00	451
Westerly Creek at Aurora, CO (06714260)	Lat 39°44'43", long 104°52'48", in NW ¹ / ₄ SW ¹ / ₄ sec.34, T.3 S., R.67 W., Adams County, 50 ft upstream from footbridge. 800 ft upstream from Montview Blvd., and 100 ft east of Boston St., in Aurora. REVISED RECORDS.--WDR CO-90-1: 1983-85, 1987-88. Drainage area not determined.	1982-2003	8-30-03	11.80	307	a1983	14.45	1,530

MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Station name and number	Location and drainage area	Period of record	Date	Water year 2003 maximum		Period of record maximum		
				Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)
PLATTE RIVER BASIN								
Lena Gulch at Lakewood, CO (06719560)	Lat 39°44'27", long 105°08'49", in SE ¹ / ₄ SE ¹ / ₄ sec.31, T.3 S., R.69 W., Jefferson County, on right bank 200 ft north of West 15th Drive at Arbutus. Prior to July 6, 1988, at site approx. 500 ft downstream (formerly published as Lena Gulch at Alkire at Golden, CO, 1986-87). Drainage area is approximately 9.0 mi ² .	1974-79 1986-2003	8-30-03	11.90	183	7-20-75	14.41	641
Little Dry Creek at Westminster, CO (06719840)	Lat 39°49'34", long 105°02'25", in NW ¹ / ₄ NE ¹ / ₄ sec.6, T.3 S., R.68 W., Adams County, 400 ft downstream from 72nd Ave. in Westminster. REVISED RECORDS.--WDR CO-89-1: 1986. Drainage area not determined.	1982-2003	4-19-03 7-6-02	10.66 2002 Revised 10.55	207 191	6-01-91	13.09	1,280
ARKANSAS RIVER BASIN								
Cottonwood Creek at Cowpoke Road at Colorado Springs (07103977)	Lat 38°57'04", long 104°42'47", in SE ¹ / ₄ NW ¹ / ₄ sec. 6, T.13 S., R.65 W., El Paso County, Hydrologic Unit 11020003, on left bank on downstream side of bridge on Cowpoke Road at Colorado Springs, 1.0 mi upstream from Woodmen Road, and 5.3 mi east of Interstate 25. Drainage area is 5.93 mi ² .	1998-2003b	7-28-03	unknown	e50	6-23-99	6.25	230
Cottonwood Creek Tributary above Rangewood Drive at Colorado Springs, CO (07103985)	Lat 38°55'45", long 104°44'48", in SE ¹ / ₄ SW ¹ / ₄ sec. 11, T.13 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank 400 ft upstream from Dublin Road at Colorado Springs, 0.2 mi upstream from Rangewood Drive, 0.5 mi upstream from mouth, and 3.2 mi east of Interstate 25. Drainage area is 2.81 mi ² .	1998-2003b	6-17-03	7.94	1,040	7-13-01	8.76	2,960
North Rockrimmon Creek above Delmonico Dr. at Colorado Springs, CO (07104050)	Lat 38°54'56", long 104°49'35", in SW ¹ / ₄ NE ¹ / ₄ sec.18, T.13 S., R.66 W., El Paso County, on both banks, 300 ft upstream from Delmonico Drive at Colorado Springs, 0.2 mi west of Interstate 25, 0.3 mi upstream from mouth, and 2.0 mi downstream from Woodmen Road. Drainage area 1.82 mi ² .	1998-2003	8-30-03	5.52	529	7-24-01	6.46	745
Big Arroyo near Thatcher, CO (07120620)	Lat 37°33'17", long 104°01'16", in NW ¹ / ₄ NW ¹ / ₄ sec.4, T.29 S., R.59 W., Las Animas County, on Pinon Canyon Maneuver site, on left bank 30 ft upstream from bridge on Pipeline Road, 5.3 mi upstream from mouth, and 4.8 mi east of Thatcher. REVISED RECORDS.--WDR CO-97-1:1987 (M). Drainage area is 15.5 mi ² .	1983-90b 1991-2003	6-17-03	3.29	46	8-11-97	5.78	1,780
Big Sandy Creek above Amity Canal Diversion, near Kornman, CO (07134000)	Lat 38°12'52", long 102°28'47", in NE ¹ / ₄ NW ¹ / ₄ sec.21, T.21 S., R.45 W., Prowers County, on left bank 106 ft upstream from Amity Canal Diversion 7.0 mi upstream from mouth, and 9.0 mi northeast of Kornman. Drainage area is 3,136 mi ² , of which about 585 mi ² is probably noncontributing.	1941-46b 1996-2003		no peaks during year		5-04-99	14.00	3,580
Two Butte Creek near Holly, CO (07135000)	Lat 38°01'40", long 102°08'19", in SE ¹ / ₄ SE ¹ / ₄ sec.21, T.23 S., R.42 W., Prowers County, on left bank 200 ft downstream from road DD, approximately 1 mi upstream from mouth, and 2.9 mi southwest of Holly. Drainage area is 817 mi ² .	1942-46bc 1995-99b 2000-2003		no peaks during year		5-02-44	4.77c	1,800

a-Month or day of occurrence is unknown or not exact.
b-Previously operated as a continuous-record gaging station.
c-At different datum.
e-Estimated.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

SPECIAL STUDY AND MISCELLANEOUS SITES

Discharge measurements in the following table were made at a miscellaneous site. 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. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=07079195

DISCHARGE MEASUREMENTS MADE AT SPECIAL STUDY AND MISCELLANEOUS SITES DURING WATER YEAR 2003

ARKANSAS RIVER BASIN

Station no	Station name	Location and drainage area	Date	Discharge (ft ³ /s)
07079195	East Fork Arkansas River at Highway 91 near Leadville, CO	Lat 39°17'09", long 106°16'45", in NW ¹ / ₄ NE ¹ / ₄ , sec.12, T.9 S., R.80 W. Lake County, Hydrologic Unit 11020001, on right bank, 20 ft. upstream of State Highway 91, 1.6 mi north of Leadville. Drainage area is 35.0 mi ² .	10-02-02	9.6
			11-06-02	8.1
			12-04-02	8.7
			1-08-03	4.0
			2-05-03	5.1
			3-05-03	4.2
			4-02-03	5.7
			5-07-03	9.8
			5-29-03	250
			6-04-03	214
			7-02-03	74
			8-06-03	24
			9-03-03	21

PRECIPITATION DATA AT SITES ON FORT CARSON MILITARY RESERVATION

A network of meteorological stations is operated on the Fort Carson Military Reservation to provide precipitation data for land-condition trend analysis, long-term climatic analysis, storm-runoff modeling, and operations management during military training exercises. Other meteorological data are available upon request.

382731104473701 MPRC METEOROLOGICAL STATION AT FORT CARSON, CO

LOCATION.--Lat 38°27'31", long 104°47'37", in NE¹/₄NE¹/₄ sec.29, T.18 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, 0.1 mi northeast of Military Route 1, 2.1 mi northeast of Teller Reservoir, and 16 mi southwest of Fountain.

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=382731104473701

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,800 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during October through February may be less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 1.17 inches, July 17, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 0.96 inch, Apr. 19.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.07	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
2	0.07	0.06	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00
3	0.07	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.46
4	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.02	0.00
5	0.00	0.00	0.00	0.01	0.00	0.04	0.00	0.00	0.33	0.00	0.00	0.00
6	0.00	0.00	0.01	0.00	0.01	0.00	0.03	0.00	0.00	0.00	0.00	0.11
7	0.00	0.00	0.00	0.00	0.27	0.00	0.05	0.00	0.03	0.00	0.00	0.06
8	0.01	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.35	0.02
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00
11	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.13
14	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.09	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.06	0.00	0.15	0.46	0.00	0.55	0.00	0.01
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.01	0.85	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.61	0.00	0.03	0.00
19	0.00	0.00	0.01	0.00	0.26	0.02	0.96	0.00	0.14	0.21	0.00	0.00
20	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.12	0.15	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.05	0.00	0.09	0.00	0.01	0.19	0.01	0.09	0.00	0.00	0.00	0.00
25	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.10	0.00	0.00	0.02	0.00
26	0.09	0.05	0.00	0.00	0.08	0.00	0.00	0.01	0.00	0.14	0.58	0.00
27	0.05	0.00	0.00	0.00	0.03	0.00	0.00	0.26	0.00	0.01	0.00	0.00
28	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.34	0.32	0.16	0.00
29	0.01	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.01	0.00
30	0.01	0.00	0.00	0.00	---	0.00	0.00	0.08	0.00	0.00	0.45	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.02	---	0.00	0.01	---
TOTAL	0.44	0.12	0.25	0.07	1.06	2.17	1.34	1.03	2.53	1.38	1.64	0.80
MAX	0.09	0.06	0.14	0.06	0.27	0.85	0.96	0.46	0.61	0.55	0.58	0.46
WTR YR	2003	TOTAL	12.83	MAX	0.96							

PRECIPITATION DATA AT SITES ON FORT CARSON MILITARY RESERVATION—Continued

384339104461201 RANGE ONE METEOROLOGICAL STATION AT FORT CARSON, CO

LOCATION.--Lat 38°43'39", long 104°46'12", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.22, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on Fort Carson Military Reservation, 0.1 mi southeast of intersection of Military Route 5 and Specker Ave., 1.5 mi southwest of Interstate 25, and 7.9 mi south of Colorado Springs.

PRECIPITATION RECORDS

PERIOD OF RECORD.--March 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=384339104461201

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,770 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during Nov. 1 to Jan. 13 and estimated daily precipitation may be less accurate than the rest of the published records. Daily precipitation estimated using method based on NOAA Technical Memo NWS HYDRO 14, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 1.51 inches, May 30, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 0.70 inch (estimated), Mar. 17.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.17	0.01	0.00	0.00	e0.00	e0.01	e0.00	0.00	0.16	0.00	0.00	0.00
2	0.01	0.05	0.00	0.00	e0.00	e0.30	e0.00	0.09	0.00	0.00	0.00	0.03
3	0.02	0.01	0.00	0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.05	0.19
4	0.00	0.00	0.01	0.00	e0.00	e0.00	e0.00	0.00	0.56	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	e0.02	e0.01	e0.07	0.00	0.29	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.14	0.03	0.15	0.00	0.00	0.41
7	0.00	0.00	0.00	0.00	e0.10	e0.00	e0.01	0.00	0.07	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.01	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	0.15	0.07	0.00	0.00	0.00
11	0.00	0.00	0.00	0.01	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.38	0.00
12	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	0.00	0.02	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.09
14	0.00	0.00	0.00	e0.00	e0.15	0.00	e0.00	0.00	0.31	0.00	0.00	0.00
15	0.00	0.00	0.00	e0.00	e0.00	0.00	e0.31	0.36	0.00	0.06	0.00	0.00
16	0.00	0.00	0.00	e0.00	e0.00	0.00	e0.00	0.00	0.01	0.00	0.00	0.00
17	0.00	0.00	0.00	e0.00	e0.00	e0.70	e0.00	0.00	0.40	0.00	0.00	0.00
18	0.00	0.00	0.00	e0.00	e0.00	e0.31	e0.00	0.00	0.02	0.00	0.13	0.00
19	0.00	0.00	0.01	e0.00	e0.38	e0.02	e0.29	0.10	0.40	0.28	0.00	0.00
20	0.00	0.00	0.00	e0.00	e0.00	e0.00	e0.01	0.01	0.04	0.04	0.00	0.00
21	0.00	0.00	0.00	e0.00	e0.00	e0.10	e0.00	0.00	0.00	0.00	0.00	0.00
22	0.05	0.00	0.00	e0.00	e0.00	e0.00	0.10	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.03	e0.00	e0.00	e0.00	0.12	0.25	0.00	0.00	0.00	0.00
24	0.04	0.00	0.00	e0.00	e0.00	e0.52	0.08	0.22	0.00	0.00	0.00	0.00
25	0.00	0.02	0.01	e0.00	e0.00	e0.00	0.00	0.24	0.13	0.00	0.05	0.00
26	0.40	0.00	0.00	e0.00	e0.01	e0.00	0.00	0.30	0.01	0.15	0.08	0.00
27	0.43	0.00	0.00	e0.00	e0.02	e0.00	0.00	0.00	0.00	0.02	0.00	0.00
28	0.00	0.00	0.00	e0.00	e0.11	e0.00	0.00	0.00	0.13	0.30	0.07	0.00
29	0.01	0.00	0.00	e0.00	---	e0.00	0.00	0.00	0.00	0.25	0.00	0.00
30	0.00	0.00	0.00	e0.00	---	e0.00	0.00	0.07	0.00	0.00	0.61	0.00
31	0.00	---	0.00	e0.00	---	e0.00	---	0.02	---	0.00	0.23	---
TOTAL	1.13	0.09	0.06	0.01	0.79	1.97	1.14	1.84	2.77	1.10	1.60	0.72
MAX	0.43	0.05	0.03	0.01	0.38	0.70	0.31	0.36	0.56	0.30	0.61	0.41
WTR YR	2003	TOTAL	13.22	MAX	0.70							

e Estimated.

PRECIPITATION DATA AT SITES ON FORT CARSON MILITARY RESERVATION—Continued

384053104492001 ROD AND GUN METEOROLOGICAL STATION AT FORT CARSON, CO

LOCATION.--Lat 38°40'53", long 104°49'20", in SE¹/₄SW¹/₄ sec.6, T.16 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on Fort Carson Military Reservation, 0.4 mi north of Military Route 4, 1.2 mi east of State Highway 115, and 9.1 mi south of Colorado Springs.

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=384053104492001

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 6,120 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February may be less accurate than the rest of the published records. Daily precipitation estimated using method based on NOAA Technical Memo NWS HYDRO 14, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 2.97 inches, Aug. 4, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 1.59 inches, May 24.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.16	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.14	0.00	0.00	0.00
2	0.03	0.06	0.00	0.00	0.00	0.35	0.00	0.03	0.00	0.00	0.05	0.06
3	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.12
4	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.02	0.01	0.08	0.00	0.19	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.06	0.01	0.00	0.03	0.31
7	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.09	0.00	0.00	0.02
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.30	0.00	0.00	0.00
11	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00
12	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.10
14	0.00	0.00	0.00	e0.00	0.15	0.00	0.00	0.00	0.57	0.00	0.00	0.00
15	0.00	0.00	0.00	e0.00	0.00	0.00	0.35	0.29	0.00	0.22	0.00	0.00
16	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	e0.00	0.00	0.66	0.00	0.00	0.15	0.00	0.00	0.00
18	0.00	0.00	0.00	e0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.16	0.00
19	0.00	0.00	0.00	e0.00	0.41	0.01	0.22	0.11	0.28	0.12	0.00	0.00
20	0.00	0.00	0.00	e0.00	0.00	0.00	0.01	0.08	0.04	0.06	0.00	0.00
21	0.00	0.02	0.00	e0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00
22	0.03	0.00	0.00	e0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	e0.00	0.00	0.00	0.05	0.58	0.00	0.00	0.03	0.00
24	0.09	0.00	0.03	e0.00	0.00	0.58	0.14	1.59	0.00	0.00	0.00	0.00
25	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.10	0.00	0.00	0.00
26	0.39	0.01	0.00	0.00	0.00	0.00	0.00	0.10	0.01	0.30	0.11	0.00
27	0.53	0.01	0.00	0.00	0.02	0.00	0.00	0.04	0.00	0.02	0.00	0.00
28	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.06	0.09	0.09	0.00
29	0.01	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.51	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.15	0.00	0.00	0.81	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.05	---	0.00	0.72	---
TOTAL	1.28	0.14	0.04	0.02	0.80	1.96	1.08	3.89	2.79	1.32	2.40	0.61
MAX	0.53	0.06	0.03	0.01	0.41	0.66	0.35	1.59	0.67	0.51	0.81	0.31

WTR YR 2003 TOTAL 16.33 MAX 1.59

e Estimated.

PRECIPITATION DATA AT SITES ON FORT CARSON MILITARY RESERVATION—Continued

383159104540701 SULLIVAN PARK METEOROLOGICAL STATION AT FORT CARSON, CO

LOCATION.--Lat 38°31'59", long 104°54'07", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.33, T.17 S., R.67 W., El Paso County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, 0.4 mi east of Military Route 11, 1.0 mi north of Military Route 8, 1.1 mi northeast of Camp Red Devil, and 9 mi northeast of Penrose.

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=383159104540701.

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 6,010 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February and Aug. 7 through Sept. 8 may be less accurate than the rest of the published records. Daily precipitation estimated using method based on NOAA Technical Memo NWS HYDRO 14, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 2.92 inches, Aug. 4, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 1.85 inches, Aug. 8.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.11	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.00	0.00	0.01
2	e0.07	0.01	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.25	0.00
3	e0.05	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.28
4	e0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.03	0.00
5	e0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.43	0.00	0.00	0.02
6	e0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.21
7	e0.00	0.00	0.00	0.00	0.12	0.00	0.04	0.00	0.05	0.00	0.00	0.04
8	e0.07	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	1.85	0.00
9	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
11	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
12	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.25
14	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.05	0.00	0.00	0.01
15	0.00	0.00	0.00	0.00	0.01	0.00	0.04	0.62	0.00	1.05	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.06	0.00	0.12	0.00
19	0.00	0.00	0.00	0.00	0.40	0.16	0.26	0.05	0.62	0.12	0.00	0.00
20	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.02	0.11	0.21	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.10	0.02	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.01	0.00
24	0.03	0.00	0.03	0.00	0.00	0.27	0.01	0.68	0.00	0.01	0.00	0.00
25	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.41	0.00	0.00	0.00	0.00
26	0.29	0.01	0.00	0.00	0.04	0.00	0.00	0.04	0.00	0.60	0.00	0.00
27	0.54	0.00	0.00	0.00	0.06	0.00	0.00	0.04	0.00	0.02	0.00	0.00
28	0.00	0.00	0.00	0.00	0.08	0.03	0.00	0.00	0.09	0.00	0.01	0.00
29	0.15	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.02	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.18	0.00	0.00	0.03	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.02	---	0.00	0.00	---
TOTAL	1.32	0.03	0.09	0.03	1.11	2.15	0.58	2.14	2.13	2.03	2.35	0.83
MAX	0.54	0.01	0.05	0.02	0.40	0.86	0.26	0.68	0.62	1.05	1.85	0.28

WTR YR 2003 TOTAL 14.79 MAX 1.85

e Estimated.

PRECIPITATION DATA AT SITES ON FORT CARSON MILITARY RESERVATION—Continued

383109104431301 YOUNG HOLLOW METEOROLOGICAL STATION AT FORT CARSON, CO

LOCATION.--Lat 38°31'09", long 104°43'13", in NE¹/₄NE¹/₄ sec.1, T.18 S., R.66 W., Pueblo County, Hydrologic Unit 11020003, on Fort Carson Military Reservation, 1.1 mi east of Military Route 1, 4.8 mi west of Interstate 25, and 5.5 mi south of Fountain.

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=383109104431301

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,350 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February may be less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 1.25 inches, July 19, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 1.25 inches, July 19.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00
2	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34
4	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.03
6	0.00	0.00	0.01	0.00	0.01	0.00	0.04	0.00	0.01	0.00	0.00	0.06
7	0.00	0.00	0.00	0.00	0.20	0.00	0.07	0.00	0.03	0.00	0.00	0.04
8	0.27	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.03	0.01
9	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.01	0.00
11	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.16
14	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.15	0.00	0.00	0.01
15	0.00	0.00	0.00	0.00	0.01	0.00	0.19	0.52	0.00	0.88	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.15	0.00	0.05	0.00
19	0.00	0.00	0.00	0.00	0.02	0.01	0.71	0.00	0.06	1.25	0.00	0.00
20	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.12	0.49	0.01	0.00
21	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
22	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00
24	0.00	0.00	0.04	0.00	0.00	0.19	0.06	0.05	0.00	0.00	0.00	0.00
25	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.01	0.00
26	0.10	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.80	0.04	0.00
27	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.51	0.11	0.00
29	0.06	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.03	0.00	0.00
30	0.01	0.00	0.00	0.00	---	0.00	0.00	0.03	0.00	0.00	0.50	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.02	---
TOTAL	1.03	0.05	0.18	0.02	0.45	1.67	1.08	1.20	2.20	3.98	0.79	0.65
MAX	0.38	0.04	0.12	0.02	0.20	0.88	0.71	0.53	0.62	1.25	0.50	0.34

WTR YR 2003 TOTAL 13.30 MAX 1.25

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE

A network of meteorological stations is operated on the Pinon Canyon Maneuver Site to provide precipitation data for land-condition trend analysis, long-term climatic analysis, storm-runoff modeling, and operations management during military training exercises. Other meteorological data are available upon request.

373232103555201 BEAR SPRINGS METEOROLOGICAL STATION NEAR HOUGHTON, CO

LOCATION.--Lat 37°32'32", long 103°55'55", in SW¹/₄SW¹/₄ sec.5, T.29 S., R.58 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site approximately 100 ft north of Military Supply Road 1, 5.8 mi east of Pipeline Road, 6.7 mi southeast of Houghton, and 37 mi southwest of La Junta.

PRECIPITATION RECORDS

PERIOD OF RECORD.--August 1983 to October 1998, March 1999 to current year. Site was part of a hydrologic study 1983-92, data published elsewhere. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=373232103555201

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,200 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 2.82 inches, May 3, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 0.89 inch, June 13.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.07	0.00	0.02	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
2	0.01	0.01	0.00	0.08	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
3	0.01	0.01	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.03	0.17
4	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00
5	0.00	0.00	0.07	0.00	0.00	0.00	0.01	0.00	0.71	0.00	0.06	0.00
6	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.74
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.28
8	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.00	0.00	0.00	0.16	0.00
9	0.00	0.12	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.07
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.00	0.00	0.11
14	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.21	0.00	0.00
16	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.00
19	0.00	0.00	0.00	0.00	0.00	0.03	0.44	0.53	0.06	0.09	0.01	0.00
20	0.00	0.00	0.00	0.00	0.00	0.03	0.21	0.00	0.01	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
22	0.05	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
23	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.02	0.00	0.06	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00
25	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
26	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
28	0.01	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.53	0.00	0.00
29	0.01	0.00	0.00	0.00	---	0.00	0.00	0.00	0.57	0.00	0.15	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.52	0.00
31	0.01	---	0.00	0.00	---	0.00	---	0.03	---	0.00	0.00	---
TOTAL	0.53	0.29	0.37	0.11	0.08	0.85	0.62	0.61	3.17	0.85	1.09	1.37
MAX	0.35	0.12	0.17	0.08	0.03	0.44	0.53	0.34	0.89	0.53	0.52	0.74
WTR YR	2003	TOTAL	9.94	MAX	0.89							

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE—Continued

372319104073301 BROWN SHEEP CAMP METEOROLOGICAL STATION NEAR TYRONE, CO

LOCATION.--Lat 37°23'19", long 104°07'33", in SW¹/₄NE¹/₄ sec.33, T.30 S., R.60 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site approximately 50 ft west of Military Supply Road, 0.9 mi southwest of Brown Sheep Camp, 6.4 mi southeast of Tyrone, and 23 mi northeast of Trinidad.

PRECIPITATION RECORDS

PERIOD OF RECORD.--June 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=372319104073301

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,390 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 2.88 inches, June 17, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 2.88 inches, June 17.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.01	0.00	0.06	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
2	0.01	0.00	0.00	0.07	0.00	0.08	0.00	0.02	0.05	0.00	0.00	0.00
3	0.00	0.00	0.01	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.31
4	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.30	0.00
5	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.05	0.00
6	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.66
7	0.00	0.00	0.02	0.00	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.29
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11	0.00
9	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.09
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.06
14	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.01	0.00	0.00	0.01	0.00	0.16	0.13	0.00	0.02	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.88	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.04	0.16	0.00	0.00	0.01	0.00	0.00	0.00
19	0.00	0.00	0.01	0.00	0.13	0.26	0.23	0.02	0.00	0.07	0.04	0.00
20	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.04	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00
22	0.02	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
23	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
24	0.00	0.00	0.09	0.00	0.00	0.01	0.00	0.11	0.00	0.00	0.00	0.00
25	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
28	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03	0.01	0.00
29	0.06	0.00	0.00	0.00	---	0.00	0.00	0.00	0.18	0.00	0.34	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.02	0.00	0.00	0.68	0.00
31	0.01	---	0.00	0.00	---	0.00	---	0.11	---	0.00	0.00	---
TOTAL	0.71	0.11	0.45	0.15	0.27	0.69	0.41	0.48	4.02	0.34	2.75	1.41
MAX	0.38	0.09	0.19	0.07	0.13	0.26	0.23	0.13	2.88	0.22	1.11	0.66
WTR YR	2003	TOTAL	11.79	MAX	2.88							

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE—Continued

373004104032001 BURSON WELL METEOROLOGICAL STATION NEAR THATCHER, CO

LOCATION.--Lat 37°30'04", long 104°03'20", in SW¹/₄SW¹/₄ sec.19, T.29 S., R.59 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site 0.3 mi south of Military Supply Road 1, 4.2 mi southeast of Thatcher, and 33 mi northeast of Trinidad.

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=373004104032001

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,630 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February, June 2 to July 1, and estimated daily precipitation are less accurate than the rest of the published records. Daily precipitation estimated using method based on NOAA Technical Memo NWS HYDRO 14, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 2.31 inches, Aug. 8, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 2.31 inches, Aug. 8.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	0.04	0.00	0.06	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
2	0.01	0.03	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00
3	0.01	0.00	0.00	0.00	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.26
4	0.00	e0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.57	0.00
5	0.00	e0.00	0.10	0.00	0.00	0.00	0.01	0.00	0.62	0.00	0.09	0.00
6	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
7	0.00	e0.00	0.00	0.00	0.05	0.00	0.01	0.00	0.03	0.00	0.00	0.03
8	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	2.31	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01
11	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.09
14	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.01
15	0.00	0.03	0.00	0.00	0.00	0.00	0.26	0.04	0.00	0.06	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.17	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.01	0.00	0.01	0.00
19	0.00	0.00	0.10	0.00	0.07	0.17	0.35	0.00	0.00	0.00	0.02	0.00
20	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.03	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00
22	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.02	0.00	0.10	0.00	0.00	0.05	0.00	0.13	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.02	0.00	0.00
26	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.06	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.28	0.00	0.00
28	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.64	0.00	0.00
29	0.01	0.00	0.00	0.00	---	0.00	0.00	0.00	0.88	0.00	0.20	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.99	0.00
31	0.01	---	0.00	0.00	---	0.00	---	0.28	---	0.00	0.00	---
TOTAL	0.46	0.10	0.46	0.08	0.29	1.10	0.64	0.49	2.02	1.00	4.19	0.89
MAX	0.29	0.04	0.16	0.06	0.08	0.50	0.35	0.28	0.88	0.64	2.31	0.42

WTR YR 2003 TOTAL 11.72 MAX 2.31

e Estimated.

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE—Continued

372959104092201 CANTONMENT METEOROLOGICAL STATION NEAR CEMETERY AT SIMPSON, CO

LOCATION.--Lat 37°29'59", long 104°09'35", in SW¼SE¼ sec.19, T.29 S., R.60 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site approximately 200 ft north of Military Supply Road 1, 250 ft west of Simpson Cemetery, 0.4 mi east of Highway 350, and 32 mi northeast of Trinidad.

PRECIPITATION RECORDS

PERIOD OF RECORD.--July 1993 to October 1998, May 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=372959104092201

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,630 ft above NGVD of 1929, from topographic map. Prior to Mar. 25, 1999, at site 780 ft east.

REMARKS.--Records during November through February are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 1.44 inches, Apr. 26, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 1.14 inches, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	0.00	0.05	0.00	0.15	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	
2	0.00	0.01	0.00	0.03	0.00	0.12	0.00	0.00	0.05	0.00	0.00	0.01	
3	0.01	0.00	0.02	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.25	
4	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.66	0.01	
5	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.62	0.00	0.05	0.00	
6	0.00	0.00	0.12	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.26	
7	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.02	0.12	0.00	0.01	
8	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.27	0.00	
9	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.07	
10	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	
11	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.04	
14	0.00	0.01	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	0.00	0.03	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.17	0.00	0.00	
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.56	0.00	0.00	0.00	
18	0.00	0.00	0.00	0.00	0.06	0.10	0.00	0.00	0.02	0.00	0.00	0.00	
19	0.00	0.00	0.11	0.00	0.10	0.53	0.51	0.00	0.00	0.15	0.01	0.00	
20	0.00	0.00	0.00	0.00	0.00	0.14	0.01	0.02	0.00	0.00	0.00	0.00	
21	0.00	0.00	0.00	0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	
22	0.01	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	
23	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	
24	0.01	0.00	0.11	0.00	0.00	0.09	0.00	0.45	0.00	0.00	0.00	0.00	
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	
26	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
27	0.15	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.25	0.00	0.00	
28	0.01	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.51	0.02	0.00	
29	0.01	0.00	0.00	0.00	---	0.00	0.00	0.00	1.06	0.00	0.03	0.00	
30	0.01	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	1.14	0.00	
31	0.01	---	0.00	0.00	---	0.00	---	0.31	---	0.00	0.00	---	
TOTAL	0.47	0.24	0.54	0.28	0.53	1.32	0.71	0.78	2.55	1.20	2.37	0.65	
MAX	0.24	0.13	0.15	0.15	0.12	0.53	0.51	0.45	1.06	0.51	1.14	0.26	
WTR YR	2003	TOTAL	11.64	MAX	1.14								

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE—Continued

372532104093001 CANTONMENT WINDMILL METEOROLOGICAL STATION NEAR TYRONE, CO

LOCATION.--Lat 37°25'32", long 104°09'30", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.18, T.30 S., R.60 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site 0.2 mi south of Military Supply Road 2, 3.5 mi southeast of Tyrone, and 25 mi northeast of Trinidad.

PRECIPITATION RECORDS

PERIOD OF RECORD.--March 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=372532104093001

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,460 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 1.35 inches, July 17, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 0.85 inch, Aug. 30.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01	0.08	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.26
4	0.00	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.14	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.08	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
7	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.19
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.00
9	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.08
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
11	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.07
14	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.01	0.00	0.00	0.00	0.00	0.16	0.04	0.00	0.17	0.00	0.00
16	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.60	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.05	0.22	0.00	0.00	0.01	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.10	0.04	0.18	0.01	0.00	0.21	0.02	0.00
20	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00
22	0.01	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.01	0.00	0.02	0.00	0.00	0.10	0.00	0.12	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
27	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
28	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.53	0.01	0.00
29	0.02	0.00	0.00	0.00	---	0.00	0.00	0.00	0.38	0.00	0.20	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.85	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.07	---	0.00	0.00	---
TOTAL	0.58	0.13	0.19	0.05	0.22	0.60	0.39	0.26	1.72	1.07	2.32	0.82
MAX	0.35	0.10	0.17	0.03	0.10	0.22	0.18	0.12	0.60	0.53	0.85	0.26
WTR YR	2003	TOTAL	8.35	MAX	0.85							

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE—Continued

372721103595601 CIG PIPELINE SOUTH METEOROLOGICAL STATION NEAR SIMPSON, CO

LOCATION.--Lat 37°27'21", long 103°59'56", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.30 S., R.59 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site approximately 100 ft south of gas pipeline, 0.8 mi southwest of Taylor Arroyo, 3.4 mi northwest of Rock Crossing, 10 mi southeast of Simpson, and 36 mi northeast of Trinidad.

PRECIPITATION RECORDS

PERIOD OF RECORD.--July 1983 to September 1998, published as Taylor Arroyo Rain Gage at Pipeline near Simpson. October 1998, May 1999 to current year. Site was part of a hydrologic study 1983-92, data published elsewhere. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=372721103595601

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,220 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February and estimated daily precipitation are less accurate than the rest of the published records. Daily precipitation estimated using method based on NOAA Technical Memo NWS HYDRO 14, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 4.59 inches, July 27, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 1.12 inches, Aug. 8.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	0.02	0.00	0.11	e0.00	e0.00	e0.00	0.00	0.02	0.00	0.00	0.00
2	e0.01	0.00	0.00	0.00	e0.00	e0.07	e0.00	0.01	0.07	0.00	0.00	0.00
3	e0.01	0.00	0.02	0.00	e0.05	e0.02	e0.00	0.00	0.00	0.00	0.00	0.21
4	e0.00	0.01	0.25	0.00	e0.00	e0.00	e0.00	0.00	0.13	0.00	0.29	0.00
5	e0.00	0.00	0.00	0.00	e0.00	0.00	e0.09	0.00	0.62	0.00	0.11	0.00
6	e0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.42
7	e0.00	0.00	0.00	0.00	e0.03	0.04	e0.00	0.00	0.02	0.00	0.00	0.01
8	e0.00	0.00	0.00	e0.00	e0.01	0.00	e0.00	0.00	0.00	0.00	1.12	0.00
9	e0.00	0.14	0.00	e0.00	e0.00	0.00	e0.01	0.00	0.00	0.00	0.00	0.09
10	e0.00	0.00	0.00	e0.00	e0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00
11	e0.00	0.00	0.00	e0.00	e0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00
12	e0.00	0.00	0.00	e0.00	e0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00
13	e0.00	0.02	0.00	e0.00	e0.00	0.00	e0.00	0.00	0.22	0.00	0.00	0.08
14	e0.00	0.02	0.00	e0.00	e0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	e0.00	0.02	0.00	e0.00	e0.00	0.00	e0.20	0.53	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	e0.00	e0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	e0.00	e0.00	0.00	e0.00	0.00	0.37	0.00	0.00	0.00
18	0.00	0.00	0.00	e0.00	e0.03	0.03	e0.00	0.00	0.02	0.00	0.00	0.00
19	0.00	0.00	0.04	e0.00	e0.12	0.24	0.35	0.01	0.00	0.13	0.01	0.00
20	0.00	0.00	0.00	e0.00	e0.00	e0.20	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	e0.00	e0.00	e0.14	0.00	0.00	0.00	0.00	0.00	0.00
22	0.01	0.00	0.00	e0.00	e0.00	e0.01	0.00	0.00	0.00	0.00	0.00	0.00
23	0.01	0.00	0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.01	0.00	0.08	e0.00	e0.00	e0.02	0.00	0.06	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	e0.00	e0.00	e0.01	0.00	0.00	0.00	0.01	0.01	0.00
26	0.42	0.00	0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.18	0.00	0.00	e0.00	e0.00	e0.02	0.00	0.00	0.00	0.07	0.00	0.00
28	0.01	0.00	0.00	e0.00	e0.03	e0.00	0.00	0.00	0.00	0.13	0.00	0.00
29	0.05	0.00	0.00	e0.00	---	e0.00	0.00	0.00	0.12	0.00	0.18	0.00
30	0.00	0.00	0.00	e0.00	---	e0.00	0.00	0.00	0.00	0.00	0.29	0.00
31	0.01	---	0.00	e0.00	---	e0.00	---	0.09	---	0.00	0.00	---
TOTAL	0.72	0.23	0.39	0.11	0.30	0.80	0.65	0.70	1.59	0.34	2.01	0.81
MAX	0.42	0.14	0.25	0.11	0.12	0.24	0.35	0.53	0.62	0.13	1.12	0.42
WTR YR	2003	TOTAL	8.65	MAX	1.12							

e Estimated.

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE—Continued

372249103573302 GUTIERREZ WINDMILL METEOROLOGICAL STATION NEAR MODEL, CO

LOCATION.--Lat 37°22'49", long 103°57'33", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.30 S., R.59 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site 0.9 mi south of Military Supply Road 2, 16 mi east of Model, and 33 mi northeast of Trinidad.

PRECIPITATION RECORDS

PERIOD OF RECORD.--March 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=372249103573302

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,130 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 1.43 inches, Aug. 21, 2000 and July 22, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 1.24 inches, June 17.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.02	0.00	0.25	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.01	0.00	0.01	0.00
3	0.01	0.00	0.10	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.16
4	0.00	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.28	0.01
5	0.00	0.01	0.03	0.00	0.00	0.00	0.20	0.00	0.36	0.00	0.11	0.00
6	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
7	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.28
8	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	1.18	0.00
9	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.17
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.03
14	0.00	0.03	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.04	0.00	0.00	0.00	0.00	0.27	0.08	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	1.24	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.01	0.07	0.00	0.00	0.00	0.00	0.02	0.00
19	0.00	0.00	0.08	0.00	0.18	0.33	0.31	0.01	0.00	0.16	0.53	0.00
20	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00
22	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
26	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.13	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.03	0.00	0.00
28	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.12	0.00	0.00
29	0.04	0.00	0.00	0.00	---	0.00	0.00	0.00	0.14	0.00	0.38	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.01	0.00	0.00	0.28	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.02	---	0.00	0.00	---
TOTAL	0.62	0.23	0.64	0.25	0.31	0.67	0.79	0.27	2.45	0.31	3.21	0.90
MAX	0.39	0.12	0.28	0.25	0.18	0.33	0.31	0.15	1.24	0.16	1.18	0.28
WTR YR	2003	TOTAL	10.65	MAX	1.24							

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE—Continued

372701103514501 MINCIC METEOROLOGICAL STATION NEAR HOUGHTON, CO

LOCATION.--Lat 37°27'01", long 103°51'45", in NE¹/₄NE¹/₄ sec.11, T.30 S., R.58 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site approximately 0.1 mi west of Military Supply Road 4A, 0.7 mi south of Military Supply Road 4, 14 mi southeast of Houghton, and 40 mi northeast of Trinidad.

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=372701103514501

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,078 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 1.08 inches, Aug. 3, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 0.65 inch, Mar. 19.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
2	0.00	0.00	0.00	0.08	0.00	0.01	0.00	0.03	0.02	0.00	0.00	0.00
3	0.00	0.00	0.08	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.12
4	0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.14	0.00
5	0.00	0.00	0.02	0.00	0.00	0.00	0.18	0.00	0.62	0.00	0.30	0.00
6	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.24
7	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.02	0.00	0.00	0.47
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
9	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.20
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.09
14	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01
15	0.00	0.07	0.00	0.00	0.00	0.00	0.38	0.17	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.47	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.03	0.09	0.00	0.00	0.02	0.00	0.02	0.00
19	0.00	0.00	0.06	0.00	0.05	0.65	0.39	0.01	0.01	0.13	0.02	0.00
20	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00
22	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
23	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.01	0.00	0.08	0.00	0.00	0.07	0.00	0.10	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.07	0.00
26	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.10	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.01	0.00	0.00
28	0.01	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.22	0.00	0.00
29	0.03	0.00	0.00	0.00	---	0.00	0.00	0.00	0.01	0.00	0.10	0.00
30	0.01	0.00	0.00	0.00	---	0.00	0.00	0.54	0.00	0.00	0.18	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.57	0.31	0.51	0.16	0.20	1.23	0.96	0.86	1.61	0.36	0.96	1.13
MAX	0.36	0.13	0.16	0.08	0.05	0.65	0.39	0.54	0.62	0.22	0.30	0.47
WTR YR	2003	TOTAL	8.86	MAX	0.65							

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE—Continued

373706103410701 ROURKE METEOROLOGICAL STATION NEAR HIGBEE, CO

LOCATION.--Lat 37°37'06", long 103°41'07", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.9, T.28 S., R.56 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site 0.8 mi south of Military Supply Road 1A, 3.1 mi northwest of Rourke Ranch, 16 mi southwest of Higbee, and 26 mi south of La Junta.

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=373706103410701

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 4,700 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February and estimated daily precipitation are less accurate than the rest of the published records. Daily precipitation estimated using method based on NOAA Technical Memo NWS HYDRO 14, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 2.05 inches, July 11, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 1.15 inches, July 15.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	0.07	0.00	0.23	0.00	e0.00	0.00	0.00	0.03	0.00	0.00	0.00
2	0.01	0.00	0.00	0.20	0.00	e0.01	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.01	0.00	0.04	e0.00	0.00	0.00	0.00	0.00	0.00	0.09
4	0.00	0.02	0.11	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.08	0.00
5	0.00	0.00	0.12	0.00	0.00	0.00	0.28	0.00	0.75	0.00	0.07	0.00
6	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.03	0.00	0.00	0.00	0.08
7	0.00	0.00	0.00	0.00	e0.06	0.00	0.14	0.00	0.01	0.00	0.00	0.07
8	0.00	0.00	0.00	0.00	e0.01	0.00	0.01	0.00	0.00	0.00	0.02	0.00
9	0.00	0.04	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
10	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.01
11	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.01	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.13
14	0.00	0.00	0.00	0.00	e0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.18	0.00	0.00	e0.00	0.00	0.82	0.16	0.00	1.15	0.00	0.00
16	0.00	0.00	0.00	0.00	e0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	e0.00	0.19	0.00	0.00	0.11	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	e0.00	0.10	0.00	0.00	0.12	0.00	0.03	0.00
19	0.00	0.00	0.10	0.00	e0.06	0.81	0.87	0.00	0.00	0.18	0.04	0.00
20	0.00	0.00	0.00	0.00	e0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	e0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00
22	0.03	0.00	0.00	0.00	e0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
23	0.02	0.00	0.00	0.00	e0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
24	0.01	0.00	0.19	0.00	e0.00	0.15	0.00	0.99	0.00	0.00	0.00	0.00
25	0.01	0.00	0.02	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
26	0.35	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.10	0.00	0.00	0.00	e0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	e0.04	0.00	0.17	0.00	0.31	0.41	0.00	0.00
29	0.04	0.00	0.00	0.00	---	0.00	0.00	0.00	0.13	0.00	0.07	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.01	0.00	0.00	0.29	0.00
31	0.02	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.60	0.31	0.56	0.44	0.25	1.49	2.38	1.22	2.29	1.74	0.68	0.48
MAX	0.35	0.18	0.19	0.23	0.06	0.81	0.87	0.99	0.77	1.15	0.29	0.13

WTR YR 2003 TOTAL 12.44 MAX 1.15

e Estimated.

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE—Continued

372329104020501 ROUTE TWO WINDMILL METEOROLOGICAL STATION NEAR TYRONE, CO

LOCATION.--Lat 37°23'29", long 104°02'05", in NW¹/₄NE¹/₄ sec.32, T.30 S., R.59 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site 0.3 mi south of Military Supply Road 2, 4.6 mi east of Brown Sheep Camp, 10 mi southeast of Tyrone, and 30 mi northeast of Trinidad.

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 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=372329104020501

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 5,255 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 1.76 inches, July 22, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 1.49 inches, June 17.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.01	0.00	0.19	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
2	0.00	0.00	0.00	0.02	0.00	0.06	0.00	0.00	0.01	0.00	0.00	0.00
3	0.01	0.00	0.03	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.19
4	0.00	0.01	0.20	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.12	0.00
5	0.00	0.00	0.05	0.00	0.00	0.00	0.17	0.00	0.49	0.00	0.18	0.00
6	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.49
7	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.04	0.00	0.00	0.12
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00
9	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.10
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.03
14	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.04	0.00	0.00	0.01	0.00	0.19	0.31	0.00	0.01	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.08	0.00	0.19	0.23	0.28	0.02	0.00	0.05	0.06	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00
22	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
23	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.01	0.00	0.12	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
25	0.00	0.00	0.03	0.00	0.00	0.01	0.00	0.08	0.00	0.35	0.00	0.00
26	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.17	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.60	0.00	0.00
28	0.01	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.19	0.00	0.00
29	0.06	0.00	0.00	0.00	---	0.00	0.00	0.00	0.08	0.00	0.20	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.06	0.00	0.00	0.24	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.06	---	0.00	0.00	---
TOTAL	0.78	0.15	0.64	0.21	0.38	0.58	0.65	0.76	2.36	1.20	1.78	0.93
MAX	0.48	0.09	0.20	0.19	0.19	0.23	0.28	0.31	1.49	0.60	0.72	0.49
WTR YR	2003	TOTAL	10.42	MAX	1.49							

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE—Continued

373823103465601 UPPER BENT CANYON METEOROLOGICAL STATION NEAR DELHI, CO

LOCATION.--Lat 37°38'20", long 103°46'55", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.3, T.28 S., R.57 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site approximately 80 ft north of Military Supply Road 1A, 1.2 mi above Stage Canyon, 6.7 mi west of Rourke Road, 12.9 mi east of Delhi, and 27 mi south of La Junta.

PRECIPITATION RECORDS

PERIOD OF RECORD.--July 1983 to September 1998, published as Bent Canyon Rain Gage above Stage Canyon near Delhi. October 1998, May 1999 to current year. Site was part of a hydrologic study 1983-92, data published elsewhere. For a complete listing of data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=373823103465601

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 4,860 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 2.81 inches, May 24, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 2.81 inches, May 24.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.10	0.00	0.15	0.00	0.01	0.00	0.00	0.03	0.00	0.00	0.00
2	0.00	0.01	0.00	0.10	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
3	0.01	0.00	0.00	0.07	0.10	0.00	0.00	0.00	0.16	0.00	0.00	0.12
4	0.00	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
5	0.00	0.00	0.07	0.00	0.00	0.00	0.34	0.00	1.35	0.00	0.06	0.00
6	0.00	0.00	0.00	0.00	0.01	0.00	0.14	0.05	0.01	0.00	0.21	0.34
7	0.00	0.00	0.00	0.00	0.03	0.00	0.20	0.00	0.00	0.00	0.00	0.01
8	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.04	0.00
9	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.18
14	0.00	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01
15	0.00	0.19	0.00	0.00	0.00	0.00	1.09	0.44	0.00	0.61	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.01	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	1.27	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.06	0.00	0.07	0.00
19	0.00	0.00	0.07	0.00	0.07	0.86	1.28	0.00	0.10	0.03	0.07	0.00
20	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00
22	0.06	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
23	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.07	0.00	0.00	0.00	0.00
24	0.02	0.00	0.01	0.00	0.00	0.22	0.05	2.81	0.00	0.00	0.00	0.00
25	0.01	0.00	0.03	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.00
26	0.21	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.02	0.00	0.06	0.00	0.00	0.11	0.00	0.00	0.00	0.02	0.00	0.00
28	0.00	0.00	0.00	0.00	0.05	0.00	0.07	0.00	0.01	0.37	0.00	0.00
29	0.02	0.00	0.00	0.00	---	0.00	0.00	0.00	0.59	0.00	0.03	0.00
30	0.01	0.00	0.00	0.00	---	0.00	0.00	0.03	0.00	0.00	0.27	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.37	0.44	0.39	0.32	0.31	2.11	3.24	3.40	4.39	1.04	0.79	0.74
MAX	0.21	0.19	0.12	0.15	0.10	0.86	1.28	2.81	1.35	0.61	0.27	0.34
WTR YR	2003	TOTAL	17.54	MAX	2.81							

PRECIPITATION DATA AT SITES ON PINON CANYON MANEUVER SITE—Continued

373315103493101 UPPER RED ROCK CANYON METEOROLOGICAL STATION NEAR HOUGHTON, CO

LOCATION.--Lat 37°33'12", long 103°49'30", in NE¹/₄ NE¹/₄ sec.6, T.29 S., R.57 W., Las Animas County, Hydrologic Unit 11020010, on Pinon Canyon Maneuver Site approximately 100 ft west of unnumbered Military Supply Road, 0.4 mi south of Military Supply Road 1, 12.2 mi southeast of Houghton, and 33 mi southwest of La Junta.

PRECIPITATION RECORDS

PERIOD OF RECORD.--August 1983 to September 1998, published as Red Rock Canyon Rain Gage at Red Rock Road. October 1998, September 1999 to current year. Site was part of a hydrologic study 1983-92, data published elsewhere. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=373315103493101

GAGE.--Tipping-bucket rain gage with radio telemetry and electronic data logger. Elevation of gage is 4,860 ft above NGVD of 1929, from topographic map.

REMARKS.--Records during November through February are less accurate than the rest of the published records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily precipitation, 2.75 inches, July 19, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily precipitation, 1.19 inches, June 17.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.07	0.00	0.17	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
2	0.00	0.01	0.00	0.09	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00
3	0.03	0.00	0.02	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.13
4	0.00	0.03	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.01
5	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.70	0.00	0.07	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.64
7	0.00	0.00	0.00	0.01	0.05	0.00	0.04	0.00	0.01	0.00	0.00	0.23
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
9	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.01
11	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.13
14	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.01
15	0.00	0.13	0.00	0.00	0.00	0.00	0.84	0.26	0.00	0.09	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	1.19	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.01	0.00	0.04	0.00
19	0.00	0.00	0.05	0.00	0.05	0.84	0.58	0.01	0.00	0.02	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.01	0.00	0.00	0.00	0.05
21	0.00	0.00	0.00	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00
22	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
23	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.01	0.00	0.14	0.00	0.00	0.03	0.00	0.28	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.02	0.01	0.00
26	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.05	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
28	0.01	0.00	0.00	0.00	0.03	0.00	0.16	0.00	0.00	0.27	0.00	0.00
29	0.02	0.00	0.00	0.00	---	0.00	0.00	0.00	0.19	0.00	0.05	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.15	0.00	0.00	0.36	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.02	---	0.00	0.00	---
TOTAL	0.42	0.35	0.42	0.29	0.21	1.63	2.03	0.73	2.56	0.40	0.74	1.34
MAX	0.24	0.13	0.21	0.17	0.06	0.84	0.84	0.28	1.19	0.27	0.36	0.64
WTR YR	2003	TOTAL	11.12	MAX	1.19							

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

06614800 MICHIGAN RIVER NEAR CAMERON PASS, CO (LAT 40 29 46N LONG 105 51 52W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1531	0.66	66	7.5	APR 10...	1020	0.36	58	1.0
17...	1555	0.57	67	4.0	MAY 14...	0905	0.45	58	1.0
NOV 19...	1232	0.49	62	1.5	JUL 15...	1809	7.0	44	8.5
JAN 14...	0920	0.27	63	1.0	SEP 09...	1153	1.2	58	8.5
MAR 05...	1010	0.44	57	0.5					

06693800 MOSQUITO CREEK NEAR ALMA, CO (LAT 39 16 12N LONG 106 03 02W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
FEB 26...	0925	3.4	320	0.0	MAR 26...	1040	7.0	318	0.0

06696980 TARRYALL CREEK AT UPPER STATION, NEAR COMO, CO (LAT 39 20 22N LONG 105 54 37W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
MAR 26...	1245	3.5	205	0.0	JUL 10...	1030	26	148	8.5

06700000 SOUTH PLATTE RIVER ABOVE CHEESMAN LAKE, CO (LAT 39 09 46N LONG 105 18 38W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 28...	0000	66	419	6.5	APR 10...	1415	97	386	9.0
DEC 03...	1215	367	471	1.5					

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

06701900 SOUTH PLATTE RIVER BELOW BRUSH CREEK NEAR TRUMBULL, CO (LAT 39 15 36N LONG 105 13 17W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 13...	1435	84	458	6.5	FEB 20...	1300	108	454	4.0
DEC 17...	1040	127	478	2.5					

06701970 SPRING CREEK ABOVE MOUTH NEAR SOUTH PLATTE, CO (LAT 39 23 37N LONG 105 11 01W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 17...	1350	0.63	219	13.0

06706400 NORTH FORK SOUTH PLATTE RIVER ABOVE ELK CREEK AT PINE, CO (LAT 39 24 27N LONG 105 19 07W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUL 01...	1215	242	84	14.5

06706800 BUFFALO CREEK AT MOUTH AT BUFFALO CREEK, CO (LAT 39 23 27N LONG 105 16 15W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 14...	1045	15	74	3.0	JUL 01...	1410	7.7	94	18.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

06709000 PLUM CREEK NEAR SEDALIA, CO (LAT 39 26 18N LONG 104 58 57W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 21...	1345	4.7	607	14.5	SEP 10...	1315	7.7	612	20.0

06709530 PLUM CREEK AT TITAN RD NEAR LOUVIERS, CO (LAT 39 30 27N LONG 105 01 23W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 16...	1510	9.5	611	2.0

06710247 SOUTH PLATTE RIVER BELOW UNION AVE, AT ENGLEWOOD, CO (LAT 39 37 58N LONG 105 00 54W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 15...	1235	10	1,040	7.5	JUN 04...	1315	251	760	15.0
DEC 12...	1100	5.2	822	3.0	JUL 02...	1000	265	672	20.0
MAR 13...	1100	10	1,090	12.5	AUG 11...	1015	136	857	18.0
MAR 27...	1150	355	658	8.0					
MAY 19...	1000	246	868	11.5					

06710385 BEAR CREEK ABOVE EVERGREEN, CO (LAT 39 37 58N LONG 105 19 59W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 23...	1425	7.8	76	1.0	APR 09...	1512	53	153	6.0
FEB 24...	1449	5.0	94	0.0	SEP 15...	1050	32	49	6.5

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

06710605 BEAR CREEK ABOVE BEAR CREEK LAKE NEAR MORRISON, CO (LAT 39 39 08N LONG 105 10 23W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
FEB 24...	1240	0.21	1,070	0.0	APR 11...	1420	20	350	8.5
MAR 24...	1414	0.88	1,490	6.5	SEP 15...	1255	14	164	11.0

06710992 TURKEY CREEK NEAR INDIAN HILLS, CO (LAT 39 37 03N LONG 105 13 24W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1100	3.5	664	6.5	SEP 05...	1155	0.66	650	14.0
FEB 26...	1220	0.43	1,640	0.0					

06712000 CHERRY CREEK NEAR FRANKTOWN, CO (LAT 39 21 21N LONG 104 45 46W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1420	1.9	201	15.0	SEP 17...	1320	1.5	203	18.0
JUL 28...	1215	1.7	248	22.0					

393109104464500 CHERRY CREEK NEAR PARKER, CO (LAT 39 31 09N LONG 104 46 45W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1135	1.9	571	14.2

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

06713000 CHERRY CREEK BELOW CHERRY CREEK LAKE, CO (LAT 39 39 12N LONG 104 51 41W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1350	21	945	15.5	SEP 18...	1525	23	863	17.7
APR 01...	1115	84	954	--					

06713300 CHERRY CREEK AT GLENDALE, CO (LAT 39 42 22N LONG 104 56 13W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 21...	1420	1.9	1,350	13.0	JUL 30...	1425	15	1,800	25.5
APR 02...	1420	93	1,010	13.0	SEP 18...	1345	31	934	18.0

06713500 CHERRY CREEK AT DENVER, CO (LAT 39 44 58N LONG 105 00 08W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 04...	0845	23	1,010	10.5	SEP 18...	1118	36	980	14.5

06714215 SOUTH PLATTE RIVER AT 64TH AVE. COMMERCE CITY, CO (LAT 39 48 44N LONG 104 57 28W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 09...	1300	8.4	1,480	17.5	APR 22...	1155	161	672	12.0
DEC 30...	1150	6,360	2,150	8.5	MAY 09...	1208	15	1,620	12.5
JAN 27...	1030	70	1,390	8.5	JUN 12...	1155	46	755	21.5
FEB 21...	1050	11	1,950	9.0	JUL 25...	1820	26	863	23.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

394839104570300 SAND CREEK AT MOUTH NEAR COMMERCE CITY, CO (LAT 39 48 39N LONG 104 57 03W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1445	31	1,090	18.0	MAY 09...	1430	18	1,770	11.5
NOV 12...	1205	12	1,780	12.0	JUN 12...	1350	12	1,570	26.0
DEC 30...	1415	11	1,630	11.0	JUL 25...	1610	11	1,380	25.0
JAN 27...	1208	12	1,660	13.0	AUG 26...	1215	11	1,680	26.0
FEB 21...	1230	11	1,720	13.5					
APR 22...	1520	24	1,520	21.5					

06714800 LEAVENWORTH CREEK AT MOUTH NEAR GEORGETOWN, CO (LAT 39 41 14N LONG 105 41 59W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1150	3.5	127	7.0

394308105413800 CLEAR CREEK ABOVE GEORGETOWN LAKE NEAR GEORGETOWN, CO (LAT 39 43 08N LONG 105 41 38W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1040	A22	162	7.0	AUG 26...	1051	67	140	10.5
MAR 28...	1215	21	336	0.5	SEP 22...	1335	58	141	8.5
APR 30...	1108	35	385	4.0					

A -- Value is an average.

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

394359105411900 CLEAR CREEK BELOW GEORGETOWN LAKE NEAR GEORGETOWN, CO (LAT 39 43 59N LONG 105 41 19W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1105	30	156	8.0

06715000 CLEAR CREEK ABOVE WEST FORK CLEAR CREEK NEAR EMPIRE, CO (LAT 39 45 07N LONG 105 39 41W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	0840	28	162	8.0	JUL 18...	1040	164	98	12.5
MAR 28...	1040	9.0	276	2.0	AUG 26...	0950	78	140	12.5
APR 30...	0952	38	406	8.5	SEP 22...	1035	58	155	8.5

06716100 WEST FORK CLEAR CREEK ABOVE MOUTH NEAR EMPIRE, CO (LAT 39 45 32N LONG 105 39 34W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1235	30	255	8.0	JUL 23...	1035	104	174	11.0
FEB 19...	1425	8.5	341	0.5	AUG 27...	1141	49	189	12.0

06716500 CLEAR CREEK NEAR LAWSON, CO (LAT 39 45 57N LONG 105 37 32W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 09...	1040	41	219	8.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

06717400 CHICAGO CREEK BELOW DEVILS CANYON NEAR IDAHO SPRINGS, CO (LAT 39 42 58N LONG 105 34 15W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 09...	1125	5.8	55	6.0	SEP 15...	1700	17	66	9.0
JUL 14...	1444	21	51	13.0					

06718300 CLEAR CREEK ABOVE JOHNSON GULCH NEAR IDAHO SPRINGS, CO (LAT 39 44 47N LONG 105 26 08W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1320	67	240	10.0	JUL 25...	1000	336	147	15.0

06718550 NORTH CLEAR CREEK ABOVE MOUTH NEAR BLACKHAWK, CO (LAT 39 44 56N LONG 105 23 57W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1315	5.5	596	14.0	MAR 06...	1315	2.5	1,220	4.5
NOV 22...	1410	2.3	739	2.5	SEP 08...	1747	5.5	405	16.5
JAN 15...	1410	1.5	834	1.0					

06719505 CLEAR CREEK AT GOLDEN, CO (LAT 39 45 11N LONG 105 14 05W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	0840	54	265	9.0	AUG 29...	1125	133	417	15.5
APR 14...	1240	166	382	8.5					

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

06720820 BIG DRY CREEK AT WESTMINSTER, CO (LAT 39 54 20N LONG 105 02 04W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 16...	0915	1.2	280	0.5	MAY 08...	1200	4.0	1,860	14.0
MAR 13...	0925	1.4	2,760	10.0	AUG 08...	0800	8.6	827	19.5
APR 07...	1040	12	1,770	6.0	SEP 19...	0930	3.9	1,830	12.0

06720990 BIG DRY CREEK AT MOUTH NEAR FORT LUPTON, CO (LAT 40 04 09N LONG 104 49 52W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 16...	1135	32	1,320	4.0	MAY 14...	0720	68	1,330	13.0
JAN 02...	1320	22	1,570	2.5	JUN 11...	0840	17	855	16.5
03...	0945	22	1,540	1.5	JUL 02...	0915	37	1,650	23.0
MAR 03...	1330	23	1,410	8.5	SEP 02...	0810	9.5	1,030	23.0
APR 04...	1140	56	1,430	11.0					

06721000 SOUTH PLATTE RIVER AT FORT LUPTON, CO (LAT 40 06 58N LONG 104 49 05W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUN 10...	1340	781	600	20.0	SEP 02...	1325	369	871	23.0
JUL 03...	0905	658	599	20.0					

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

06725450 ST. VRAIN CREEK BELOW LONGMONT, CO (LAT 40 09 29N LONG 105 00 53W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 18...	1045	44	1,740	10.0	MAY 13...	1345	79	1,100	19.0
DEC 20...	1020	29	1,260	1.5	JUN 10...	1100	113	1,020	17.5
JAN 02...	1115	27	1,230	3.0	JUL 01...	1045	156	696	19.0
MAR 03...	1015	28	1,240	6.5	01...	1100	156	696	19.0
APR 04...	1005	52	1,140	9.5	SEP 02...	1145	106	903	18.5

06730200 BOULDER CREEK AT NORTH 75TH STREET NEAR BOULDER, CO (LAT 40 03 06N LONG 105 10 42W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	0955	137	503	17.0

06730400 COAL CREEK NEAR LOUISVILLE, CO (LAT 39 58 34N LONG 105 07 00W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1100	2.7	385	12.0	AUG 18...	1053	0.38	962	20.5
MAR 13...	1250	0.26	1,260	15.5					

06730500 BOULDER CREEK AT MOUTH, NEAR LONGMONT, CO (LAT 40 09 08N LONG 105 00 52W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 18...	0915	4.2	1,310	8.5	APR 04...	0950	129	633	8.5
DEC 20...	0900	22	966	0.0	MAY 13...	1145	83	739	16.0
JAN 02...	1105	24	912	0.5	JUN 10...	0940	136	425	15.0
MAR 03...	0950	30	972	4.0	JUL 01...	0915	109	386	18.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

06746095 JOE WRIGHT CREEK ABOVE JOE WRIGHT RESERVOIR, CO (LAT 40 32 24N LONG 105 52 56W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1422	0.63	77	8.5	MAY 14...	1400	1.4	86	1.0
17...	1433	0.74	75	4.0	JUL 15...	1615	28	48	11.0
MAR 05...	1555	0.60	83	0.0	SEP 09...	1600	5.7	61	10.5
APR 10...	1435	0.78	86	0.0					

06746110 JOE WRIGHT CREEK BELOW JOE WRIGHT RESERVOIR, CO (LAT 40 33 43N LONG 105 52 09W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1322	1.5	46	6.5	MAY 13...	1425	1.5	70	2.0
17...	1306	1.4	48	3.0	JUL 15...	1345	42	40	6.0
NOV 19...	1613	1.3	49	0.5	SEP 09...	1345	2.1	41	8.0
MAR 04...	1500	1.3	56	0.5					
APR 09...	1300	1.4	59	2.0					

06751150 NORTH FORK CACHE LA POUDE RIVER BELOW HALLIGAN RESERVOIR NEAR VIRGINIA DALE, CO (LAT 40 52 42N LONG 105 20 15W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1500	7.0	190	11.5	APR 01...	1135	1.5	158	9.0
NOV 20...	1423	4.2	177	3.0					

06751490 NORTH FORK CACHE LA POUDE R. AT LIVERMORE, CO (LAT 40 47 15N LONG 105 15 06W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 28...	1019	4.5	345	5.5	APR 01...	1335	100	171	7.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

06759500 SOUTH PLATTE RIVER AT FORT MORGAN, CO (LAT 40 16 08N LONG 103 48 02W)

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)
NOV 20...	1635	184	1,660	10.0

06821360 ARIDAREE RIVER ABV SPRING CANYON NR IDALIA, CO (LAT 39 45 07N LONG 102 24 42W)

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 08...	1500	0.15	511	16.5	MAY 12...	1235	5.2	496	8.0
FEB 24...	1330	3.1	460	2.5					

07079195 EAST FORK ARKANSAS RIVER AT HIGHWAY 91 NEAR LEADVILLE, CO (LAT 39 17 09N LONG 106 16 45W)

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)	Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)
OCT 02...	1100	9.6	213	MAY 07...	1135	9.8	210
NOV 06...	1245	8.1	224	MAY 29...	1145	250	87
DEC 04...	1140	8.7	230	JUN 04...	1200	214	97
JAN 08...	1545	4.0	216	JUL 02...	0940	74	118
FEB 05...	1250	5.1	224	AUG 06...	1045	24	169
MAR 05...	1010	4.2	221	SEP 03...	1420	21	181
APR 02...	1430	5.7	216				

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

07079300 EAST FORK ARKANSAS RIVER AT US HWY 24 NEAR LEADVILLE, CO (LAT 39 16 21N LONG 106 18 21W)

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)	Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)
OCT 02...	1125	14	339	MAY 07...	1235	14	342
NOV 06...	1430	13	327	NOV 29...	1300	375	110
DEC 04...	1245	13	388	JUN 04...	1745	238	116
JAN 08...	1425	8.5	372	JUL 02...	1025	89	144
FEB 05...	1345	9.5	380	AUG 06...	1130	27	210
MAR 05...	1105	6.1	390	SEP 03...	1515	26	236
APR 02...	1535	9.0	369				

07081200 ARKANSAS RIVER NEAR LEADVILLE, CO (LAT 39 15 26N LONG 106 20 35W)

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 02...	1230	23	237	--	MAY 07...	1345	37	186	7.0
NOV 06...	1500	21	305	--	NOV 29...	1445	590	78	12.0
DEC 04...	1415	16	296	--	JUN 30...	1500	144	113	13.5
FEB 05...	1445	13	274	--	JUL 24...	1400	48	161	17.5
MAR 06...	1305	12	292	--	AUG 07...	1115	36	190	--
APR 03...	1045	18	217	--	SEP 04...	1200	32	204	--

07083000 HALFMOON CREEK NEAR MALTA, CO (LAT 39 10 20N LONG 106 23 19W)

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)	Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)
OCT 02...	1500	9.5	101	JUN 04...	1515	121	57
NOV 05...	1545	7.5	103	NOV 30...	1200	82	61
DEC 10...	1245	3.4	107	JUL 24...	1200	32	76
APR 03...	1310	3.5	93	AUG 06...	1530	23	84
APR 28...	1500	9.3	83	SEP 04...	1040	18	102
MAY 29...	0930	184	43	SEP 17...	1300	27	103

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

07087050 ARKANSAS RIVER BELOW GRANITE, CO (LAT 38 59 42N LONG 106 13 11W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)
OCT 03...	1130	138	170	JUL 14...	1745	694	91
APR 04...	1015	169	119	AUG 20...	1515	204	157
MAY 08...	1100	239	122	SEP 04...	1520	202	145
MAY 29...	1110	2,060	92				

07099215 TURKEY CREEK NEAR FOUNTAIN, CO (LAT 38 36 42N LONG 104 53 39W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf lab, uS/cm 25 degC (90095)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
MAR 27...	1230	1.2	--	370	7.5
JUL 01...	1700	0.25	309	--	16.0

07099990 FOUNTAIN CREEK AT GREEN MOUNTAIN FALLS, CO (LAT 38 56 20N LONG 105 00 55W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 09...	1530	0.60	678	2.5	JUL 09...	1700	0.38	--	17.0
JAN 08...	1448	0.64	677	4.5	SEP 05...	1315	0.37	--	16.0
MAY 06...	1448	1.5	434	9.5					

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

07103740 NORTH MONUMENT CREEK AT SPRING STREET AT PALMER LAKE, CO (LAT 39 06 56N LONG 104 54 43W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unflab, uS/cm 25 degC (90095)	Specific conductance, wat unflab, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
MAR					
24...	1245	0.37	--	179	--
31...	1700	1.1	--	160	--
APR					
02...	1745	2.8	--	112	2.5
09...	1250	4.5	--	95	--
14...	1355	11	--	90	4.5
29...	1145	21	--	81	6.0
MAY					
14...	1230	4.6	--	85	--
JUN					
12...	1430	1.6	102	--	--
JUL					
03...	1510	0.43	118	--	--

07103785 DEADMANS CREEK ABOVE DEADMANS LAKE AT U.S. AIR FORCE ACADEMY, CO (LAT 39 01 27N LONG 104 54 03W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unflab, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unflab, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC					MAR				
03...	0910	0.02	148	2.0	06...	0905	0.04	97	0.5
JAN					31...	1135	0.09	112	7.0
02...	1300	0.01	102	2.0	MAY				
FEB					14...	1435	0.18	108	10.0
04...	1500	0.02	96	2.0	JUN				
					09...	1600	0.06	122	11.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**07103790 MONUMENT CREEK BELOW SEWAGE TREATMENT PLANT AT U.S. AIR FORCE ACADEMY, CO
(LAT 38 58 53N LONG 104 49 50W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 04...	1500	5.2	--	470	5.0
DEC 02...	1435	4.2	--	447	4.0
MAR 24...	1610	10	--	451	5.0
MAR 31...	0845	7.6	--	504	4.0
MAY 14...	1545	17	--	291	19.5
JUN 09...	1330	8.9	373	--	21.0
JUL 29...	1150	3.1	453	--	--
AUG 07...	1545	1.6	435	--	--
SEP 05...	1450	6.1	446	--	--

07103797 WEST MONUMENT CREEK BELOW RAMPART RESERVOIR, CO (LAT 38 58 30N LONG 104 57 18W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 14...	1445	3.4	--	65	5.5
JAN 08...	1255	3.2	--	63	3.5
MAR 26...	1542	3.7	--	72	4.0
MAY 06...	1241	3.8	--	74	6.0
SEP 16...	1255	4.0	78	--	8.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

07103800 WEST MONUMENT CREEK AT U.S. AIR FORCE ACADEMY, CO (LAT 38 58 14N LONG 104 54 08W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductivity, wat unf lab, uS/cm 25 degC (90095)	Specific conductivity, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 08...	1215	0.27	--	104	3.5
DEC 03...	1015	0.35	--	103	1.5
DEC 13...	1145	0.37	--	103	0.0
JAN 02...	1350	0.27	--	99	0.5
FEB 04...	1150	0.39	--	100	0.0
MAR 06...	1015	0.34	--	100	0.5
MAR 31...	1245	0.59	--	99	4.0
JUN 05...	1025	3.1	88	--	10.5
JUL 08...	1230	3.0	91	--	--
AUG 11...	1430	2.8	98	--	--
SEP 05...	1205	4.1	98	--	--

07103930 WEST MONUMENT CREEK AT MOUTH AT U.S. AIR FORCE ACADEMY, CO (LAT 38 57 32N LONG 104 50 08W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductivity, wat unf lab, uS/cm 25 degC (90095)	Specific conductivity, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 07...	1410	0.95	--	285	13.5
NOV 04...	1635	0.76	--	216	5.5
DEC 03...	1100	0.63	--	196	3.0
JAN 02...	1445	0.12	--	207	3.5
FEB 04...	1050	0.06	--	216	3.5
MAR 06...	1050	0.10	--	226	5.0
MAR 31...	1345	0.26	--	259	10.5
MAY 14...	1705	0.79	--	229	14.0
JUN 09...	1225	0.38	241	--	15.0
JUL 29...	1350	0.08	238	--	--
AUG 15...	1345	1.1	196	--	--
SEP 05...	1055	2.6	185	--	--

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

07103940 MONUMENT CREEK AT SOUTH BOUNDARY AT U.S. AIR FORCE ACADEMY, CO (LAT 38 57 15N LONG 104 50 00W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf lab, uS/cm 25 degC (90095)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV					
05...	1715	6.1	--	427	5.5
DEC					
02...	1600	5.5	--	406	3.5
30...	1550	6.3	--	430	0.5
FEB					
04...	1705	7.1	--	440	1.5
MAR					
06...	1140	5.1	--	436	3.5
24...	1715	12	--	451	6.0
31...	1520	8.6	--	479	14.0
MAY					
16...	1130	19	--	287	15.5
JUN					
09...	1140	8.5	376	--	18.0
JUL					
29...	1300	3.8	431	--	--
AUG					
11...	1655	3.4	417	--	--
SEP					
05...	0930	9.0	372	--	--

07104000 MONUMENT CREEK AT PIKEVIEW, CO (LAT 38 55 04N LONG 104 49 05W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf lab, uS/cm 25 degC (90095)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV					
13...	1030	14	--	549	5.6
DEC					
13...	1650	16	--	560	0.5
APR					
08...	1445	21	--	552	16.5
24...	1420	115	--	278	13.0
MAY					
12...	1330	28	--	377	17.5
28...	1330	16	--	455	26.0
JUN					
25...	1315	16	508	--	--
AUG					
19...	1130	13	556	--	--
29...	1600	123	233	--	--
SEP					
10...	0915	18	533	--	--

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

07105490 CHEYENNE CREEK AT EVANS AVENUE AT COLORADO SPRINGS, CO (LAT 38 47 26N LONG 104 51 49W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 09...	1425	0.46	200	13.5	MAY 06...	1635	7.1	90	8.0
NOV 19...	1445	0.52	232	8.5	JUN 03...	1440	8.7	92	11.0
DEC 17...	1255	0.49	220	6.0	JUL 09...	1440	0.72	111	18.0
FEB 12...	1505	0.41	305	5.5	AUG 06...	1525	1.2	122	16.0
MAR 26...	1310	3.4	211	5.5	18...	1715	0.85	128	16.0
APR 28...	1415	5.9	93	11.0	SEP 16...	1620	0.82	131	14.5

07105945 ROCK CREEK ABOVE FORT CARSON RESERVATION, CO (LAT 38 42 27N LONG 104 50 46W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUL 02...	1445	0.60	202	15.5

07108900 ST. CHARLES RIVER AT VINELAND, CO (LAT 38 14 44N LONG 104 29 09W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f lab, uS/cm 25 degC (90095)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 04...	1250	5.0	--	2,470	13.5
NOV 06...	1345	4.6	--	2,840	9.0
DEC 06...	1205	3.6	--	2,790	4.0
JAN 06...	1200	6.7	--	2,390	6.5
FEB 13...	1115	4.5	--	2,750	5.5
MAR 12...	1400	4.0	--	2,870	15.5
APR 04...	1045	42	--	2,740	11.0
MAY 19...	1130	49	--	896	17.0
JUN 10...	0925	52	--	1,010	--
20...	1000	98	852	--	--
JUL 02...	1015	6.8	2,330	--	--

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

07116500 HUERFANO RIVER NEAR BOONE, CO (LAT 38 13 30N LONG 104 15 37W)

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)
JUN 06...	1035	21	899	19.0

07119500 APISHAPA RIVER NEAR FOWLER, CO (LAT 38 05 28N LONG 103 58 52W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1400	3.0	--	2,720	13.5
NOV 07...	1530	3.5	--	2,680	10.0
DEC 05...	1530	2.9	--	2,990	8.0
JAN 13...	1150	2.3	--	3,090	6.0
FEB 11...	1100	2.3	--	3,100	4.5
MAR 11...	1445	2.1	--	3,130	15.0
APR 10...	1300	2.6	--	2,680	17.0
MAY 07...	1330	2.7	--	2,820	20.5
JUN 03...	1345	14	983	--	--
JUN 20...	1200	27	993	--	--
JUL 07...	1100	2.6	2,570	--	--
JUL 29...	1145	2,920	1,340	--	--
AUG 08...	1100	2.8	2,790	--	--
SEP 10...	1345	2.5	2,820	--	--

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

07121500 TIMPAS CREEK AT MOUTH NEAR SWINK, CO (LAT 38 00 11N LONG 103 39 20W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unflab, uS/cm 25 degC (90095)	Specific conductance, wat unflab, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT					
03...	1015	7.5	--	2,810	12.0
NOV					
07...	1220	13	--	2,370	10.0
DEC					
05...	1315	31	--	2,040	6.0
30...	1235	9.0	--	2,800	8.5
FEB					
12...	1230	7.2	--	2,870	9.0
MAR					
11...	1200	6.8	--	2,890	13.5
26...	1315	30	--	1,620	15.0
MAY					
07...	1130	35	--	1,630	17.5
JUN					
03...	1020	107	--	961	--
JUL					
01...	1135	126	--	984	--
AUG					
19...	1430	27	1,760	--	26.0
SEP					
10...	1620	32	1,500	--	--

07124200 PURGATOIRE RIVER AT MADRID, CO (LAT 37 07 46N LONG 104 38 22W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unflab, uS/cm 25 degC (90095)	Specific conductance, wat unflab, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT					
04...	1555	21	--	373	17.0
NOV					
14...	1450	16	--	581	5.5
JAN					
08...	1300	18	--	690	0.5
MAR					
06...	1320	15	--	760	9.5
APR					
16...	0910	22	--	608	9.5
JUN					
05...	1130	249	331	--	13.0
05...	1455	287	371	--	12.5
JUL					
09...	1120	47	412	--	21.5
AUG					
11...	1240	30	438	--	26.0
SEP					
15...	1340	138	277	--	16.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

07124410 PURGATOIRE RIVER BELOW TRINIDAD LAKE, CO (LAT 37 08 38N LONG 104 32 50W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf lab, uS/cm 25 degC (90095)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 04...	1405	0.01	--	618	13.0
NOV 14...	1620	0.03	--	615	6.5
JAN 08...	1030	0.16	--	760	3.5
MAR 06...	1540	0.75	--	649	3.0
APR 16...	1355	7.9	--	623	9.5
JUN 05...	1320	198	626	--	15.0
JUL 09...	1405	53	489	--	18.0
AUG 11...	1440	54	485	--	21.0
SEP 15...	1635	112	409	--	15.5

07126300 PURGATOIRE RIVER NEAR THATCHER, CO. (LAT 37 21 23N LONG 103 53 59W)

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 03...	1425	0.71	--	15.0	APR 07...	1710	42	--	9.0
NOV 13...	1320	2.8	--	5.5	JUN 04...	1740	30	--	23.0
DEC 09...	1330	7.1	--	1.5	06...	1105	192	--	15.0
JAN 08...	1620	15	--	0.5	30...	1325	3.2	--	25.5
MAR 04...	1250	13	--	5.5	AUG 12...	1625	3.2	--	28.5
					SEP 16...	1335	13	--	20.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

07128500 PURGATOIRE RIVER NEAR LAS ANIMAS, CO (LAT 38 02 02N LONG 103 12 00W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)
OCT 01...	1355	5.5	2,980	JUN 04...	1120	20	1,660
NOV 05...	1550	1.2	3,650	JUN 24...	1215	32	1,280
DEC 05...	1105	2.4	3,610	JUL 08...	1400	1.4	2,970
JAN 07...	1130	8.7	3,840	JUL 29...	1105	0.57	3,710
MAR 11...	1350	4.6	4,150	AUG 08...	1015	4.2	825
APR 08...	1045	76	1,760	AUG 26...	1215	0.16	3,300
APR 29...	0815	68	738	SEP 08...	1715	1.2	910
MAY 20...	1235	2.8	3,250	SEP 09...	1540	105	1,660

07133000 ARKANSAS RIVER AT LAMAR, CO (LAT 38 06 21N LONG 102 37 05W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)
NOV 06...	1605	5.1	3,840	MAY 06...	1350	17	3,580
DEC 11...	1125	3.4	3,850	MAY 23...	1335	35	3,370
FEB 11...	1040	3.9	3,910	JUN 06...	1425	32	3,210
MAR 07...	0725	5.4	3,930	JUN 18...	1650	137	2,330
APR 14...	1705	16	4,060	JUL 15...	1330	33	2,880
APR 28...	1430	82	3,040	AUG 11...	1445	18	3,020
				SEP 08...	1455	15	3,100

07134100 BIG SANDY CREEK NEAR LAMAR, CO (LAT 38 06 51N LONG 102 29 00W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 07...	1220	4.1	4,390	--	MAY 22...	1535	1.9	5,010	--
DEC 11...	1600	2.0	4,910	8.1	JUN 06...	1030	12	4,170	--
FEB 11...	1150	2.5	4,700	--	JUL 15...	1030	1.8	4,940	--
MAR 06...	1200	2.2	5,000	--	AUG 11...	1125	1.2	5,370	--
APR 15...	0705	1.7	4,860	--	SEP 08...	1120	1.7	4,760	--

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

07134180 ARKANSAS RIVER NEAR GRANADA, CO (LAT 38 05 44N LONG 102 18 37W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)
NOV 07...	1030	3.8	4,590	MAY 22...	1635	3.4	4,680
DEC 11...	1435	33	4,220	JUN 06...	1140	78	3,250
FEB 11...	1250	44	4,170	JUL 15...	1115	3.6	4,560
MAR 06...	1645	48	4,230	AUG 11...	1215	3.4	4,540
APR 15...	0835	3.8	4,820	SEP 08...	1220	3.3	4,540

07134990 WILD HORSE CREEK ABOVE HOLLY, CO (LAT 38 03 24N LONG 102 08 16W)

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)
NOV 07...	0845	26	4,280	JUN 06...	1245	51	3,210
DEC 11...	1310	0.53	3,910	JUN 19...	1120	2.4	2,960
APR 15...	1040	0.29	3,920	JUL 15...	1215	0.13	3,770
APR 28...	1630	1.0	3,720	AUG 11...	1305	0.84	3,910
MAY 23...	0755	0.57	3,940	SEP 08...	1315	0.33	3,700

SOUTH PLATTE RIVER BASIN NATIONAL WATER-QUALITY ASSESSMENT PROGRAM STUDY

The South Platte River Basin study, conducted as part of the U.S. Geological Survey's National Water-Quality Assessment (NAWQA) Program, combines information on water chemistry, physical characteristics, stream habitat, and aquatic life to provide science-based insights for current and emerging water issues in surface and ground waters of the South Platte River Basin. The results can contribute to informed decisions that result in practical and effective water-resource management strategies that protect and restore water quality.

As part of this study, the following sites were sampled in water year 2003:

06713500 Cherry Creek at Denver
06753990 Lonetree Creek nr Greeley
06754000 South Platte River nr Kersey
393557105033101 Dutch Creek at Weaver Park nr Columbine Valley
393613104511401 Cottonwood Creek ab Newark St nr Greenwood Village
393948105053501 Bear Creek bl Estes Rd at Lakewood
394107105021001 Sanderson Gulch ab Lowell Av at Denver
394409105020501 Lakewood Gulch ab Knox Ct at Denver
394553105075101 Lena Gulch at Lewis Meadows Park at Wheat Ridge
394629105063101 Clear Creek bl Kipling at Wheat Ridge
394919105074601 Ralston Cr ab Simms at Arvada
394921105015701 Little Dry Creek bl Lowell nr Westminster
395324105035001 Big Dry Cr bl Hyland Cr at Westminster City Park
395554105085601 Rock Creek ab Rock Cr Pkwy at Superior
395707105100401 Coal Creek ab McCaslin Rd at Superior
395958105113501 Dry Cr ab Baseline Rd nr Boulder
400000105125400 S Boulder Cr ab Baseline Rd at Boulder
400023105142301 Bear Creek ab Wellman Feeder Canal at Boulder
400217105123701 Boulder Creek at 61st St nr Boulder
400607105094401 Dry Creek bl Niwot Rd at Niwot
400810105071301 Left Hand Creek ab Pike Rd at Longmont
400855105090501 Dry Creek bl Airport Rd at Longmont
400925105023201 Spring Gulch at Sandstone Ranch Park nr Longmont
402114105350101 Big Thompson River blw Moraine Park nr Estes Park
402549105043101 Dry Creek at US 287 at Loveland
403035105035301 Mail Creek nr mouth at Fort Collins
403048105042701 Fossil Creek at College Ave at Fort Collins
403308105001601 Boxelder Creek at mouth nr Fort Collins
403356105024001 Spring Creek at Edora Park at Fort Collins
404200105145600 Cache la Poudre River abv North Fork nr Ft Collins

Water-quality data from these samples are available on-line at:

<http://waterdata.usgs.gov/co/nwis/qw>

Selected biological data from these samples are available on-line at:

<http://infotrek.er.usgs.gov/pls/nawqa/nawqa.home>

More information on the South Platte River Basin NAWQA study is available on-line at:

<http://co.water.usgs.gov/nawqa/splt/index.html>

BIG THOMPSON PROJECT

The primary objective of this sampling program is to establish a baseline water quality network. The sites in this program make up a large portion of the Colorado/Big Thompson Water Diversion project and constitute a cooperative effort between the USGS, the Big Thompson Watershed Forum, North Front Range Water Quality Planning Association, US Bureau of Reclamation, State Engineer, water managers, and Colorado State University.

09013000 ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°19'40", long 105°34'39", in SW¹/₄NW¹/₄ sec.9, T.4 N., R.73 W., Larimer County, Hydrologic Unit 10190006, on right bank at upstream end of Aspen Creek siphon, 700 ft downstream from east portal, and 4.5 mi southwest of Estes Park.

PERIOD OF RECORD.--September 1970 to current year. Water-discharge records published from October 1946 to September 1998 (monthly discharge only for August and September 1947). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09013000

REMARKS.--Field data collected prior to 1974 water year are available in district office.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unflab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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)
NOV 19...	0855	471	<1.0	8.2	7.4	51	4.5	21	6.31	1.18	0.62	0.2	1.92
DEC 10...	0850	514	1.4	8.6	7.7	54	3.5	22	6.79	1.29	0.70	0.2	2.02
JAN 14...	0855	413	<1.0	8.7	7.8	63	2.5	27	8.28	1.51	0.76	0.2	2.40
FEB 11...	0900	477	<1.0	8.3	7.8	63	2.5	26	7.94	1.48	0.80	0.2	2.35
MAR 25...	0930	0.40	2.6	9.9	7.2	65	5.0	27	8.42	1.50	0.77	0.2	2.68
APR 15...	0915	0.60	4.7	9.7	8.9	130	8.5	34	10.3	1.99	1.25	1	15.4
MAY 06...	0915	23	<1.0	10.2	7.9	55	5.0	21	6.53	1.20	0.65	0.2	2.45
MAY 20...	0910	20	3.3	9.1	8.0	44	5.0	17	4.99	1.05	0.65	0.3	2.46
JUN 03...	0945	408	1.5	8.4	7.5	37	6.0	16	4.91	0.900	0.59	0.2	1.57
JUN 17...	0925	8.6	3.5	9.1	7.3	24	7.5	8	2.22	0.662	0.38	0.3	2.13
JUL 08...	0910	195	<1.0	8.0	7.4	17	13.0	7	2.14	0.374	0.23	0.2	0.98
JUL 22...	0930	242	1.6	7.3	7.1	17	17.0	7	2.13	0.355	0.20	0.1	0.80
AUG 12...	0920	487	1.2	7.0	7.6	36	18.5	15	4.37	0.899	0.39	0.2	1.37
SEP 09...	0905	400	2.6	8.0	8.0	52	14.5	21	6.35	1.29	0.55	0.2	1.78

GRAND LAKE OUTLET
BIG THOMPSON PROJECT—Continued

09013000 ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK, CO—Continued

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
NOV 19...	24	0.47	2.8	28	0.05	50.0	39	0.16	<0.015	0.057	<0.007	E.003	E.002
DEC 10...	E25	1.05	2.7	--	--	--	41	0.20	<0.015	0.042	<0.007	E.003	0.008
JAN 14...	29	0.29	3.0	34	0.06	48.3	43	0.18	<0.015	0.033	<0.007	E.004	0.007
FEB 11...	30	0.35	3.0	34	0.06	55.2	43	0.15	<0.015	0.047	<0.007	<0.004	0.010
MAR 25...	31	0.55	3.0	36	0.06	0.04	41	0.18	<0.015	0.044	<0.007	E.004	0.015
APR 15...	59	1.47	5.6	71	0.11	0.13	79	0.33	<0.015	E.015	<0.007	E.004	0.026
MAY 06...	25	0.55	3.1	30	0.07	3.19	50	0.12	<0.015	0.059	<0.007	<0.004	0.009
MAY 20...	19	0.49	3.1	25	0.06	2.24	42	0.18	<0.015	0.047	<0.007	0.005	0.017
JUN 03...	16	0.35	2.1	21	0.05	43.9	40	0.18	<0.015	0.079	<0.007	E.004	0.012
JUN 17...	11	0.30	2.1	14	0.05	0.78	34	0.15	<0.015	E.011	<0.007	0.005	0.012
JUL 08...	8	E.19	1.4	--	--	--	16	0.18	<0.015	E.011	<0.007	E.003	0.007
JUL 22...	8	0.31	1.3	10	0.03	12.3	19	0.14	<0.015	<0.022	<0.007	E.004	0.006
AUG 12...	15	0.21	2.6	19	0.04	42.6	32	0.21	<0.015	<0.022	<0.007	0.007	0.012
SEP 09...	23	0.78	3.4	28	0.05	43.0	40	0.31	<0.015	<0.022	<0.007	E.003	0.014

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
NOV 19...	E.2	0.5	E6	<0.08	0.5	<0.02	0.36	<0.20
DEC 10...	E.3	0.5	E6	<0.08	2.6	<0.02	0.46	<0.20
JAN 14...	E.2	0.5	13	0.15	49.6	<0.02	0.48	<0.20
FEB 11...	E.2	0.5	17	<0.08	22.9	<0.02	0.44	<0.20
MAR 25...	0.3	0.7	34	E.06	8.7	<0.02	0.25	<0.20
APR 15...	0.8	1.1	22	<0.08	59.8	<0.02	0.51	<0.20
MAY 06...	E.2	0.7	24	<0.08	1.6	<0.02	0.36	<0.20
MAY 20...	E.2	0.8	53	E.04	2.9	<0.02	0.16	<0.20
JUN 03...	E.1	0.7	31	<0.08	2.3	<0.02	0.26	<0.20
JUN 17...	<0.3	0.6	44	<0.08	1.8	<0.02	0.19	<0.20
JUL 08...	<0.3	0.7	25	<0.08	1.9	<0.02	0.55	<0.20
JUL 22...	<0.3	0.5	18	<0.08	0.8	<0.02	0.13	<0.20
AUG 12...	E.2	0.6	63	<0.08	0.7	<0.02	0.31	<0.20
SEP 09...	E.2	0.6	41	<0.08	0.5	<0.02	0.14	<0.20

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

BIG THOMPSON PROJECT—Continued

09013000 ALVA B. ADAMS TUNNEL AT EAST PORTAL, NEAR ESTES PARK, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
NOV 19...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC 10...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN 14...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB 11...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR 25...	<0.4	<0.4	<0.4	<0.4	<0.4
APR 15...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY 06...	<0.4	<0.4	<0.4	<0.4	<0.4
20...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN 03...	<0.4	<0.4	<0.4	<0.4	<0.4
17...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL 08...	M	M	2	1	3
22...	M	<0.4	<0.4	<0.4	3
AUG 15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP 09...	<0.4	<0.4	<0.4	<0.4	<0.4

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

M -- Presence of material verified but not quantified.

BIG THOMPSON PROJECT—Continued

06733000 BIG THOMPSON RIVER AT ESTES PARK, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°22'42", long 105°30'48", in NW¹/₄NW¹/₄ sec.30, T.5 N., R.72 W., Larimer County, Hydrologic Unit 10190006, on right bank in Estes Park, 600 ft downstream from bridge on State Hwy 7, 0.3 mi northwest of Estes Power Plant, in Estes Park.

DRAINAGE AREA.--137 mi².

PERIOD OF RECORD.--August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06733000

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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...	0905	28	7.1	9.4	7.5	32	5.5	11	3.11	0.880	0.41	0.3	1.98
NOV													
18...	0905	12	<1.0	10.8	7.7	47	0.5	16	4.28	1.20	0.41	0.3	2.90
DEC													
09...	0905	11	<1.0	11.6	7.7	52	0.0	17	4.64	1.38	0.47	0.3	3.13
JAN													
13...	0930	10	<1.0	11.3	7.8	54	0.5	19	5.03	1.49	0.48	0.4	3.59
FEB													
10...	0915	7.1	<1.0	11.3	8.0	60	0.5	21	5.49	1.68	0.52	0.4	3.95
MAR													
17...	0925	21	7.7	10.8	7.8	61	1.5	17	4.52	1.35	0.79	0.5	5.08
APR													
14...	0915	76	11	10.5	7.8	64	3.5	20	5.49	1.64	0.83	0.4	3.85
MAY													
05...	0920	68	2.5	10.1	7.1	51	4.0	16	4.30	1.22	0.44	0.3	3.04
19...	0900	325	5.1	10.4	7.8	28	3.5	10	2.76	0.755	0.51	0.2	1.73
JUN													
02...	0915	1,060	5.6	9.9	7.0	17	4.5	7	1.93	0.504	0.47	0.2	1.01
16...	0935	619	2.0	9.4	7.1	17	7.0	6	1.78	0.453	0.29	0.2	0.92
JUL													
07...	0920	311	1.5	10.2	7.7	15	9.5	6	1.71	0.421	0.19	0.2	1.01
21...	0905	242	2.4	8.5	7.0	16	11.0	6	1.76	0.414	0.22	0.2	0.91
AUG													
11...	0945	109	1.6	7.9	7.3	21	13.5	8	2.12	0.570	0.33	0.2	1.40
SEP													
08...	0915	96	1.7	8.5	7.5	24	10.0	9	2.52	0.633	0.34	0.2	1.41

BIG THOMPSON PROJECT—Continued

06733000 BIG THOMPSON RIVER AT ESTES PARK, CO—Continued

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

Date	Alka- linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor- ide, water, fltrd, mg/L (00940)	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)	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)	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 07...	E13	1.36	2.3	--	--	--	21	E.10	<0.015	0.120	<0.007	E.004	0.007
NOV 18...	17	2.63	2.9	25	0.05	1.21	39	0.23	<0.015	0.205	<0.007	E.003	<0.004
DEC 09...	E19	2.46	2.8	--	--	--	35	E.08	<0.015	0.207	<0.007	E.004	0.005
JAN 13...	20	2.05	2.7	28	0.06	1.13	42	E.08	<0.015	0.196	<0.007	E.003	0.005
FEB 10...	23	3.61	3.1	33	0.06	0.90	47	E.08	<0.015	0.180	<0.007	E.003	E.002
MAR 17...	18	5.59	3.2	32	0.06	2.52	45	0.19	<0.015	0.199	E.004	0.011	0.026
APR 14...	13	6.37	5.6	33	0.08	12.8	62	0.38	<0.015	0.253	<0.007	0.006	0.028
MAY 05...	13	4.58	4.2	26	0.06	8.66	47	0.19	<0.015	0.065	<0.007	E.003	0.009
MAY 19...	8	1.70	2.7	16	0.05	32.7	37	0.40	<0.015	0.133	<0.007	0.006	0.026
JUN 02...	6	0.60	1.7	11	0.04	77.1	27	0.78	<0.015	0.181	<0.007	0.007	0.031
JUN 16...	6	0.54	1.4	10	0.04	44.2	26	0.11	<0.015	0.158	<0.007	E.003	0.013
JUL 07...	7	0.57	1.3	10	0.02	9.51	11	0.15	<0.015	0.138	<0.007	E.003	0.009
JUL 21...	7	0.53	1.2	10	0.02	11.3	17	0.18	<0.015	0.128	<0.007	E.004	0.010
AUG 11...	9	0.86	1.2	12	0.03	6.79	23	E.10	<0.015	0.102	<0.007	E.004	0.008
SEP 08...	--	1.06	1.8	--	--	--	29	E.10	<0.015	0.179	<0.007	E.004	0.010

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 07...	<0.3	0.6	131	E.04	5.2	<0.02	0.22	<0.20
NOV 18...	<0.3	0.5	120	0.10	10.1	<0.02	0.26	<0.20
DEC 09...	<0.3	0.8	104	E.04	8.3	<0.02	0.35	<0.20
JAN 13...	<0.3	0.6	77	<0.08	7.0	<0.02	0.31	<0.20
FEB 10...	<0.3	0.5	84	<0.08	6.8	<0.02	0.29	<0.20
MAR 17...	E.2	1.0	203	0.13	11.9	<0.02	0.30	<0.20
APR 14...	<0.3	1.4	201	E.06	11.6	<0.02	0.51	<0.20
MAY 05...	E.1	1.4	151	E.07	8.5	<0.02	0.40	<0.20
MAY 19...	<0.3	1.5	127	0.08	6.6	<0.02	0.29	<0.20
JUN 02...	<0.3	1.3	90	E.04	5.1	<0.02	0.32	<0.20
JUN 16...	<0.3	1.0	71	<0.08	3.6	<0.02	0.27	<0.20
JUL 07...	<0.3	0.8	60	E.04	3.9	<0.02	0.18	<0.20
JUL 21...	<0.3	0.6	78	<0.08	3.4	<0.02	0.15	<0.20
AUG 11...	<0.3	0.6	101	<0.08	3.8	<0.02	0.19	<0.20
SEP 08...	<0.3	0.7	114	E.04	5.0	<0.02	0.13	<0.20

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

PLATTE RIVER BASIN

BIG THOMPSON PROJECT—Continued

06733000 BIG THOMPSON RIVER AT ESTES PARK, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT 07...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV 18...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC 09...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN 13...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB 10...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR 17...	<0.4	<0.4	<0.4	<0.4	<0.4
APR 14...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY 05...	<0.4	<0.4	<0.4	<0.4	<0.4
19...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN 02...	<0.4	<0.4	<0.4	<0.4	<0.4
16...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL 07...	<0.4	<0.4	<0.4	<0.4	<0.4
21...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG 15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP 08...	<0.4	<0.4	<0.4	<0.4	<0.4

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

BIG THOMPSON PROJECT—Continued

402245105302300 BIG THOMPSON RIVER BELOW SANITATION OUTFLOW ABOVE LAKE ESTES, CO

WATER-QUALITY RECORDS

LOCATION.—Lat 40°22'45", long 105°30'23", in NW¹/₄NW¹/₄ sec.30, T.5 N., R.72 W., Larimer County, Hydrologic Unit 10190006, on right bank, 225 ft upstream from pedestrian bridge on Lake Estes Trail, downstream from Estes Park Sanitation District Outflow, adjacent to Lake Estes, in Estes Park.

DRAINAGE AREA.—138 mi².

PERIOD OF RECORD.—August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=402245105302300

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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...	1045	29	9.9	9.9	7.8	46	6.5	12	3.39	0.941	0.69	0.4	3.41
NOV 18...	1045	13	1.1	9.2	8.0	62	1.5	17	4.71	1.29	0.85	0.5	4.77
DEC 09...	1035	12	<1.0	11.7	8.3	54	1.0	18	4.82	1.43	0.51	0.3	3.29
JAN 13...	1045	11	<1.0	12.0	8.0	76	1.0	21	5.59	1.74	1.14	0.6	5.86
FEB 10...	1100	8.0	1.4	11.7	8.5	84	0.0	23	5.98	1.84	1.17	0.6	6.72
MAR 17...	1120	22	14	10.4	8.2	76	2.0	18	4.76	1.37	1.08	0.8	7.46
APR 14...	1020	76	3.7	10.7	8.3	68	4.5	22	5.93	1.82	0.86	0.4	4.52
MAY 05...	1035	78	4.3	10.1	7.0	57	5.0	16	4.50	1.26	0.58	0.4	3.48
MAY 19...	1030	325	5.0	10.3	7.7	29	3.5	10	2.81	0.766	0.44	0.3	1.86
JUN 02...	1035	1,060	5.5	10.1	7.6	17	5.5	7	1.97	0.513	0.41	0.2	1.07
JUN 16...	1040	619	1.9	9.5	7.5	17	7.5	6	1.80	0.458	0.31	0.2	0.99
JUL 07...	1040	313	1.6	8.6	7.8	17	10.5	6	1.79	0.442	0.26	0.2	1.22
JUL 21...	1020	242	2.0	8.4	7.4	19	12.0	6	1.85	0.443	0.29	0.2	1.11
AUG 11...	1050	109	1.3	8.5	8.0	26	15.0	8	2.24	0.608	0.41	0.3	1.80
SEP 08...	1025	96	1.8	8.7	7.8	29	10.5	10	2.63	0.725	0.40	0.2	1.71

PLATTE RIVER BASIN
BIG THOMPSON PROJECT—Continued

402245105302300 BIG THOMPSON RIVER BELOW SANITATION OUTFLOW ABOVE LAKE ESTES, CO—Continued

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

Date	Alka- linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor- ide, water, fltrd, mg/L (00940)	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)	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)	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 07...	E13	2.76	3.0	--	--	--	34	0.56	0.370	0.115	0.033	0.042	0.059
NOV 18...	20	4.37	3.7	34	0.06	1.47	42	0.80	0.429	0.276	--	--	--
DEC 09...	E19	4.27	2.9	--	--	--	42	0.11	0.021	0.212	E.004	0.009	0.011
JAN 13...	25	4.59	3.9	41	0.06	1.30	44	0.77	0.569	0.225	0.398	0.40	0.43
FEB 10...	26	6.43	4.5	45	0.08	1.28	59	0.52	0.251	0.446	0.160	0.177	0.24
MAR 17...	19	8.22	3.7	40	0.07	2.94	49	0.37	0.042	0.329	0.012	0.021	0.076
APR 14...	13	6.94	6.1	36	0.08	12.1	59	0.48	E.014	0.267	E.006	0.017	0.043
MAY 05...	13	5.24	4.5	28	0.06	9.98	47	0.23	<0.015	0.113	<0.007	0.006	0.017
19...	8	1.80	2.7	16	0.06	36.4	41	0.39	0.027	0.133	E.004	0.010	0.035
JUN 02...	6	0.71	1.7	11	0.03	73.4	26	0.27	<0.015	0.185	<0.007	0.006	0.031
16...	6	0.65	1.5	10	0.03	40.1	24	0.14	E.008	0.158	<0.007	0.004	0.018
JUL 07...	7	0.75	1.4	11	0.02	14.2	17	0.15	<0.015	0.147	<0.007	0.005	0.017
21...	7	0.76	1.3	11	0.02	10.1	15	0.25	0.073	0.127	0.012	0.015	0.025
AUG 11...	10	1.49	1.4	14	0.03	7.30	25	0.33	0.144	0.100	0.018	0.027	0.036
SEP 08...	11	1.61	2.5	17	0.03	6.48	25	0.31	0.172	0.181	0.016	0.022	0.033

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 07...	<0.3	0.8	128	0.10	5.5	<0.02	0.27	<0.2
NOV 18...	<0.3	0.8	121	E.06	8.6	<0.02	0.32	<0.2
DEC 09...	<0.3	0.5	111	<0.08	7.0	<0.02	0.34	<0.2
JAN 13...	<0.3	0.8	84	E.05	7.1	<0.02	0.40	<0.2
FEB 10...	<0.3	1.0	75	<0.08	6.9	<0.02	0.40	<0.2
MAR 17...	<0.3	1.2	181	0.18	11.5	<0.02	0.36	<0.2
APR 14...	<0.3	1.4	182	E.07	10.1	<0.02	0.50	<0.2
MAY 05...	E.1	1.4	151	E.05	8.0	<0.02	0.42	<0.2
19...	<0.3	1.5	133	0.10	6.9	<0.02	0.31	<0.2
JUN 02...	<0.3	1.3	87	<0.08	5.3	<0.02	0.31	<0.2
16...	<0.3	0.9	68	<0.08	3.7	<0.02	0.28	<0.2
JUL 07...	<0.3	0.7	67	<0.08	4.3	<0.02	0.17	<0.2
21...	<0.3	0.7	81	<0.08	3.9	<0.02	0.16	<0.2
AUG 11...	<0.3	0.7	102	<0.08	3.5	<0.02	0.21	<0.2
SEP 08...	<0.3	0.9	99	E.05	4.9	<0.02	0.12	<0.2

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

BIG THOMPSON PROJECT—Continued

402245105302300 BIG THOMPSON RIVER BELOW SANITATION OUTFLOW ABOVE LAKE ESTES, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT 07...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV 18...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC 09...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN 13...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB 10...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR 17...	<0.4	<0.4	<0.4	<0.4	<0.4
APR 14...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY 05...	<0.4	<0.4	<0.4	<0.4	<0.4
19...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN 02...	<0.4	<0.4	<0.4	<0.4	<0.4
16...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL 07...	<0.4	<0.4	<0.4	<0.4	<0.4
21...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG 15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP 08...	<0.4	<0.4	<0.4	<0.4	<0.4

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

06735500 BIG THOMPSON RIVER NEAR ESTES PARK, CO

WATER-QUALITY RECORDS

LOCATION.—Lat 40°22'35", long 105°29'06", in NW¹/₄NE¹/₄ sec.29, T.5 N., R.72 W., Larimer County, Hydrologic Unit 10190006, on right bank, 100 ft upstream from Dry Gulch, 600 ft downstream from Olympus Dam in Estes Park.

DRAINAGE AREA.—155 mi²

PERIOD OF RECORD.—August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06735500

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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...	1140	36	2.5	9.2	8.0	52	10.0	20	5.91	1.24	0.64	0.3	2.65
NOV													
18...	1150	26	1.1	10.2	7.9	51	3.5	20	6.15	1.22	0.62	0.2	1.98
DEC													
09...	1135	25	1.2	10.6	8.3	56	3.5	22	6.66	1.30	0.68	0.2	2.10
JAN													
13...	1145	24	1.9	12.0	8.2	62	2.0	25	7.78	1.45	0.69	0.2	2.40
FEB													
10...	1225	22	<1.0	10.5	8.4	67	1.5	26	8.00	1.56	0.80	0.2	2.74
MAR													
17...	1230	28	1.9	10.2	8.4	65	4.0	26	7.86	1.52	0.87	0.2	2.59
APR													
14...	1130	25	3.1	9.9	9.1	107	8.0	35	9.70	2.57	1.30	0.4	5.91
MAY													
05...	1230	86	2.3	9.8	7.8	89	9.5	28	7.75	2.05	0.83	0.4	4.94
19...	1125	100	6.2	9.2	7.9	53	8.5	18	4.87	1.30	0.70	0.3	3.03
JUN													
02...	1150	737	6.5	11.2	7.6	20	7.5	8	2.21	0.580	0.55	0.2	1.18
16...	1135	123	2.4	9.7	7.3	19	10.0	7	2.10	0.520	0.34	0.2	1.08
JUL													
07...	1220	124	1.6	7.7	7.5	20	15.0	7	2.17	0.486	0.31	0.2	1.24
21...	1120	130	3.2	7.7	--	18	16.0	7	2.00	0.469	0.31	0.2	1.13
AUG													
11...	1210	123	2.2	7.1	7.7	32	19.0	12	3.65	0.769	0.35	0.2	1.38
SEP													
08...	1130	74	2.3	8.0	8.2	51	16.0	20	5.94	1.26	0.52	0.2	1.82

BIG THOMPSON PROJECT—Continued

06735500 BIG THOMPSON RIVER NEAR ESTES PARK, CO—Continued

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT 07...	E22	1.28	2.8	--	--	--	35	0.29	0.017	0.066	<0.007	0.008	0.021
NOV 18...	23	0.64	2.8	28	0.05	2.40	35	0.20	E.009	0.060	<0.007	<0.004	0.004
DEC 09...	E25	0.61	2.7	--	--	--	44	0.19	0.016	0.058	<0.007	E.003	0.011
JAN 13...	29	0.39	2.9	33	0.06	2.85	44	0.21	E.010	0.042	<0.007	0.005	0.014
FEB 10...	30	1.37	3.2	36	0.07	2.93	49	0.16	<0.015	0.085	0.013	0.018	0.026
MAR 17...	29	1.46	3.0	35	0.06	3.04	41	0.17	<0.015	0.053	<0.007	0.006	0.016
APR 14...	27	10.8	6.6	54	0.10	4.69	70	0.40	E.008	0.187	<0.007	0.009	0.034
MAY 05...	19	9.47	6.4	45	0.10	16.8	73	0.33	E.011	0.293	<0.007	0.006	0.026
MAY 19...	13	4.59	4.0	27	0.06	12.8	48	0.38	0.018	0.166	<0.007	0.007	0.027
JUN 02...	6	0.91	1.9	12	0.04	57.4	29	0.25	E.008	0.190	<0.007	0.007	0.024
JUN 16...	7	0.75	1.6	12	0.04	9.27	28	0.22	E.012	0.147	<0.007	0.005	0.013
JUL 07...	8	0.80	1.5	12	0.03	6.63	20	0.20	E.013	0.094	<0.007	E.004	0.012
JUL 21...	8	0.58	1.4	11	0.03	7.00	20	0.17	0.031	0.071	<0.007	0.006	0.012
AUG 11...	13	0.77	2.2	17	0.04	8.85	27	0.21	0.041	0.024	<0.007	0.005	0.016
SEP 08...	23	1.03	3.3	27	0.05	7.39	37	0.48	0.016	E.014	<0.007	0.005	0.020

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 07...	0.3	0.6	106	E.04	3.3	<0.02	0.30	<0.20
NOV 18...	E.2	0.6	24	<0.08	4.7	<0.02	0.38	<0.20
DEC 09...	E.2	0.5	20	<0.08	4.7	<0.02	0.51	<0.20
JAN 13...	E.2	0.5	17	0.28	31.2	<0.02	0.40	<0.20
FEB 10...	E.2	0.5	29	<0.08	20.6	<0.02	0.42	<0.20
MAR 17...	E.2	0.6	39	<0.08	15.1	<0.02	0.33	<0.20
APR 14...	E.1	0.9	155	<0.08	4.5	<0.02	0.55	<0.20
MAY 05...	E.2	1.3	138	0.17	8.3	<0.02	0.54	<0.20
MAY 19...	E.2	1.6	120	E.08	8.3	<0.02	0.31	<0.20
JUN 02...	<0.3	1.4	101	E.05	8.6	<0.02	0.33	<0.20
JUN 16...	<0.3	1.0	82	E.05	9.1	<0.02	0.26	<0.20
JUL 07...	<0.3	0.8	66	E.07	6.1	<0.02	0.21	<0.20
JUL 21...	E.1	0.7	75	<0.08	7.0	<0.02	0.15	<0.20
AUG 11...	E.2	0.9	65	0.11	2.4	<0.02	0.29	<0.20
SEP 08...	E.2	0.6	39	E.04	1.6	<0.02	0.13	<0.20

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

PLATTE RIVER BASIN

BIG THOMPSON PROJECT—Continued

06735500 BIG THOMPSON RIVER NEAR ESTES PARK, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT 07...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV 18...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC 09...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN 13...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB 10...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR 17...	<0.4	<0.4	<0.4	<0.4	<0.4
APR 14...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY 05...	<0.4	<0.4	<0.4	<0.4	<0.4
19...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN 02...	<0.4	<0.4	<0.4	<0.4	<0.4
16...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL 07...	<0.4	<0.4	M	<0.4	M
21...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG 15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP 08...	<0.4	<0.4	<0.4	<0.4	<0.4

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

BIG THOMPSON PROJECT—Continued

06734900 OLYMPUS TUNNEL AT LAKE ESTES, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°22'30", long 105°29'13", in SE¹/₄NW¹/₄ sec.29, T.5 N., R.72 W., Larimer County, Hydrologic Unit 10190006, at tunnel entrance at south end of Olympus Dam on Lake Estes, 1.9 mi east of Estes Park.

PERIOD OF RECORD.--September 1970 to present. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06734900

REMARKS.--Field data collected prior to 1974 water year available in district office. Records of discharge are estimated values.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd 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)
NOV 18...	1310	472	1.2	9.5	7.8	50	3.0	20	6.14	1.17	0.58	0.2	1.99
DEC 09...	1250	435	1.2	9.3	8.0	55	10.3	22	6.78	1.31	0.66	0.2	2.13
JAN 13...	1300	427	<1.0	10.0	8.1	62	2.0	26	8.09	1.52	0.76	0.2	2.48
FEB 10...	1320	436	<1.0	9.8	8.4	65	2.0	26	7.99	1.52	0.80	0.2	2.60
MAR 17...	1340	250	3.2	10.2	8.2	64	2.5	25	7.70	1.48	0.85	0.2	2.52
APR 14...	1315	26	3.0	10.2	8.8	107	7.0	35	9.92	2.60	1.19	0.5	6.22
MAY 05...	1325	26	3.7	8.8	7.7	90	8.0	28	7.90	2.10	0.85	0.4	4.91
MAY 19...	1250	345	3.7	8.8	7.9	54	8.5	18	4.99	1.33	0.78	0.3	3.10
JUN 02...	1240	494	6.3	9.4	7.4	21	7.5	8	2.26	0.593	0.53	0.2	1.20
JUN 16...	1255	548	2.3	9.4	7.4	20	9.0	8	2.23	0.546	0.38	0.2	1.13
JUL 07...	1330	403	1.1	7.9	7.3	20	13.5	7	2.18	0.494	0.27	0.2	1.22
JUL 21...	1240	456	2.9	7.6	--	18	15.5	7	2.01	0.470	0.24	0.2	1.09
AUG 11...	1310	550	2.3	6.4	7.6	32	18.5	12	3.61	0.778	0.37	0.2	1.35
SEP 08...	1250	496	2.4	7.8	8.0	52	16.0	21	6.13	1.26	0.52	0.2	1.82

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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 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)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
NOV 18...	23	1.48	2.8	28	0.05	48.9	38	0.20	E.010	0.062	<0.007	E.004	E.003
DEC 09...	E25	0.63	2.7	--	--	--	36	0.18	0.018	0.057	<0.007	E.004	0.009
JAN 13...	29	0.42	2.9	34	0.06	49.2	43	0.21	0.015	0.040	<0.007	0.006	0.013
FEB 10...	29	1.24	3.1	35	0.06	51.0	43	0.17	<0.015	0.068	0.007	0.012	0.018
MAR 17...	29	1.33	3.0	35	0.06	29.3	43	0.15	<0.015	0.062	<0.007	0.006	0.013
APR 14...	27	10.4	6.7	54	0.09	4.78	68	0.45	E.009	0.197	<0.007	0.009	0.037
MAY 05...	20	9.51	6.2	45	0.10	4.92	70	0.33	E.011	0.288	<0.007	0.008	0.025
MAY 19...	13	4.75	4.1	28	0.06	43.5	47	0.38	0.018	0.166	<0.007	0.007	0.022
JUN 02...	7	0.92	1.8	12	0.05	45.1	34	0.25	<0.015	0.190	<0.007	0.009	0.023
JUN 16...	7	0.75	1.6	12	0.04	40.5	27	0.17	<0.015	0.149	<0.007	E.003	0.012
JUL 07...	8	0.80	1.5	12	0.02	19.7	18	0.18	0.023	0.098	<0.007	0.004	0.013
JUL 21...	8	0.60	1.4	11	0.02	21.5	17	0.16	0.042	0.069	<0.007	0.006	0.013
AUG 11...	13	0.53	2.2	17	0.04	39.9	27	0.24	0.038	0.024	<0.007	0.006	0.016
SEP 08...	22	0.97	3.3	27	0.05	52.8	39	0.29	E.009	E.011	<0.007	E.004	0.019

PLATTE RIVER BASIN
BIG THOMPSON PROJECT—Continued

06734900 OLYMPUS TUNNEL AT LAKE ESTES, CO—Continued

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
NOV 18...	E.2	0.5	15	<0.08	2.4	<0.02	0.33	<0.20
DEC 09...	E.2	0.5	14	<0.08	1.1	<0.02	0.46	<0.20
JAN 13...	E.2	0.5	11	<0.08	28.6	<0.02	0.47	<0.20
FEB 10...	E.1	0.6	18	<0.08	14.3	<0.02	0.43	<0.20
MAR 17...	E.2	0.6	31	0.78	9.1	<0.02	0.31	<0.20
APR 14...	E.1	1.0	149	E.05	1.5	<0.02	0.54	<0.20
MAY 05...	E.2	1.3	142	E.06	5.9	<0.02	0.55	<0.20
19...	E.3	1.5	120	E.07	7.0	<0.02	0.33	<0.20
JUN 02...	<0.3	1.6	100	E.06	8.9	<0.02	0.36	<0.20
16...	<0.3	1.0	78	<0.08	7.0	<0.02	0.28	<0.20
JUL 07...	<0.3	0.8	80	<0.08	9.6	<0.02	0.20	<0.20
21...	E.1	0.7	80	<0.08	8.1	<0.02	0.16	<0.20
AUG 11...	E.2	0.6	70	<0.08	2.4	<0.02	0.28	<0.20
SEP 08...	E.2	0.7	39	E.05	1.0	<0.02	0.14	<0.20

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

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
NOV 18...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC 09...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN 13...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB 10...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR 17...	<0.4	<0.4	<0.4	<0.4	<0.4
APR 14...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY 05...	<0.4	<0.4	<0.4	<0.4	<0.4
19...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN 02...	<0.4	<0.4	<0.4	<0.4	<0.4
16...	<0.4	<0.4	M	<0.4	<0.4
JUL 07...	<0.4	<0.4	M	<0.4	M
21...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG 15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP 08...	<0.4	<0.4	<0.4	<0.4	<0.4

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

BIG THOMPSON PROJECT—Continued

402249105282000 BIG THOMPSON RIVER AT WHISPERING PINES NEAR ESTES PARK, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°22'49", long 105°28'00", in SW¹/₄SW¹/₄ sec.21, T.5 N., R.72 W., Larimer County, Hydrologic Unit 10190006, on right bank, immediately downstream of staff gage connected to the Hwy 34 bridge supports, at Whispering Pines.

DRAINAGE AREA.--164 mi².

PERIOD OF RECORD.--August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=402249105282000

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unflab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfl uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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...	0930	35	8.5	--	7.8	62	8.5	20	5.94	1.28	0.84	0.4	4.01
NOV 19...	1020	22	1.6	10.8	8.0	59	2.0	20	6.10	1.21	0.84	0.3	3.26
DEC 10...	1020	23	1.4	10.7	8.4	65	1.0	23	6.83	1.38	0.86	0.3	3.47
JAN 14...	1010	21	E1.0	11.0	8.2	75	1.0	27	8.09	1.58	0.97	0.4	4.17
FEB 11...	1045	30	1.1	11.1	8.3	86	0.5	27	8.20	1.65	1.26	0.4	5.04
MAR 25...	1120	32	5.5	11.2	9.4	105	5.5	31	9.17	1.93	1.46	0.6	7.04
APR 15...	1035	50	4.2	9.9	9.4	123	9.0	39	10.8	2.87	1.29	0.5	7.64
MAY 06...	1100	100	2.9	9.2	8.5	97	9.5	30	8.38	2.20	0.98	0.5	5.80
MAY 20...	1040	130	3.6	9.0	8.2	58	8.0	19	5.32	1.41	0.77	0.3	3.49
JUN 03...	1105	571	4.4	10.1	7.4	27	8.0	11	3.10	0.717	0.48	0.2	1.54
JUN 17...	1105	123	1.8	8.6	7.8	25	11.5	9	2.48	0.614	0.43	0.2	1.55
JUL 08...	1045	143	1.7	7.7	7.7	26	15.0	8	2.39	0.562	0.45	0.3	1.93
JUL 22...	1055	129	3.0	7.3	7.4	26	17.0	7	2.14	0.515	0.48	0.3	1.72
AUG 12...	1045	122	2.6	6.9	7.9	40	19.5	14	4.22	0.947	0.68	0.3	2.31
SEP 09...	1025	72	1.9	7.9	8.1	58	15.0	21	6.18	1.36	0.70	0.2	2.60

PLATTE RIVER BASIN
BIG THOMPSON PROJECT—Continued

402249105282000 BIG THOMPSON RIVER AT WHISPERING PINES NEAR ESTES PARK, CO—Continued

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

Date	Alka- linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor- ide, water, fltrd, mg/L (00940)	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)	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)	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 08...	E22	2.68	3.6	--	--	--	36	0.29	E.009	0.443	0.100	0.114	0.131
NOV 19...	22	1.78	3.6	32	0.06	2.46	42	0.24	<0.015	0.436	--	--	--
DEC 10...	E24	1.73	3.5	--	--	--	43	0.26	E.008	0.498	0.075	0.086	0.105
JAN 14...	30	1.75	3.9	40	0.06	2.61	47	0.46	0.153	0.409	0.056	0.064	0.082
FEB 11...	32	2.25	4.8	46	0.08	4.56	56	0.57	0.278	0.580	0.094	0.109	0.129
MAR 25...	28	9.16	5.8	55	0.09	5.52	64	0.60	0.117	0.766	0.107	0.123	0.173
APR 15...	27	12.7	7.9	62	0.11	10.8	80	0.54	E.010	0.455	0.038	0.055	0.105
MAY 06...	20	10.4	6.8	49	0.10	20.1	75	0.39	0.015	0.383	0.021	0.030	0.064
20...	14	5.16	4.4	30	0.07	17.2	49	0.37	0.016	0.236	0.008	0.018	0.040
JUN 03...	10	1.19	2.0	16	0.04	46.8	30	0.21	<0.015	0.181	<0.007	0.011	0.027
17...	8	1.46	1.9	15	0.04	10.5	32	0.17	E.010	0.261	0.019	0.029	0.037
JUL 08...	9	1.53	1.8	15	0.03	9.20	24	0.25	0.016	0.242	0.041	0.054	0.062
22...	8	1.45	1.8	15	0.03	7.60	22	0.24	0.061	0.319	0.055	0.069	0.073
AUG 12...	14	1.35	2.7	22	0.04	10.8	33	0.34	0.021	0.245	0.058	0.071	0.086
SEP 09...	22	1.92	3.6	32	0.06	8.34	43	0.32	0.022	0.367	0.055	0.067	0.089

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 08...	0.3	0.8	102	E.06	4.8	<0.02	0.39	<0.20
NOV 19...	E.2	0.7	20	<0.08	5.7	<0.02	0.39	<0.20
DEC 10...	E.2	0.8	20	<0.08	6.8	<0.02	0.49	<0.20
JAN 14...	E.2	0.8	13	0.27	19.9	<0.02	0.45	<0.20
FEB 11...	E.2	1.1	20	<0.08	18.8	<0.02	0.50	<0.20
MAR 25...	0.3	1.1	70	<0.08	14.2	<0.02	0.35	<0.20
APR 15...	E.2	1.1	137	E.06	6.3	<0.02	0.59	<0.20
MAY 06...	E.2	1.4	130	0.08	7.8	<0.02	0.57	<0.20
20...	E.2	1.6	118	E.06	8.0	<0.02	0.33	<0.20
JUN 03...	<0.3	1.3	82	0.08	8.4	<0.02	0.35	<0.20
17...	<0.3	1.4	73	<0.08	6.8	<0.02	0.30	<0.20
JUL 08...	<0.3	0.8	71	<0.08	5.7	<0.02	0.22	<0.20
22...	<0.3	0.8	69	E.04	4.3	<0.02	0.18	<0.20
AUG 12...	E.2	0.7	65	<0.08	3.2	<0.02	0.35	<0.20
SEP 09...	E.2	0.7	72	E.06	2.9	<0.02	0.18	<0.20

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

BIG THOMPSON PROJECT—Continued

402249105282000 BIG THOMPSON RIVER AT WHISPERING PINES NEAR ESTES PARK, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT 08...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV 19...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC 10...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN 14...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB 11...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR 25...	<0.4	<0.4	<0.4	<0.4	<0.4
APR 15...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY 06...	<0.4	<0.4	<0.4	<0.4	<0.4
20...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN 03...	<0.4	<0.4	<0.4	<0.4	<0.4
17...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL 08...	<0.4	<0.4	<0.4	<0.4	<0.4
22...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG 15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP 09...	<0.4	<0.4	<0.4	<0.4	<0.4

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

PLATTE RIVER BASIN
BIG THOMPSON PROJECT—Continued

402554105202100 BIG THOMPSON RIVER ABOVE NORTH FORK BIG THOMPSON RIVER AT DRAKE, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°25'54", long 105°20'21", (unsurveyed), Larimer County, Hydrologic Unit 10190006, approximately 100 ft upstream of unnamed bridge on dead end road off Hwy 34, 400 ft upstream of inflow of North Fork Big Thompson River, in Drake.

DRAINAGE AREA.--191 mi².

PERIOD OF RECORD.--August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=402554105202100

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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...	1100	36	12	--	8.2	73	8.5	25	7.34	1.58	0.99	0.4	4.41
NOV 19...	1140	18	<1.0	12.7	8.4	68	0.5	24	7.09	1.41	1.01	0.4	4.16
DEC 10...	1155	19	<1.0	12.2	8.0	77	0.5	25	7.58	1.57	1.07	0.4	4.44
JAN 14...	1155	24	E1.0	11.9	8.3	77	0.5	26	7.84	1.55	0.92	0.4	4.33
FEB 11...	1245	24	<1.0	11.8	8.8	89	0.5	30	8.93	1.80	1.20	0.4	5.39
MAR 25...	1315	47	2.5	10.5	8.6	166	5.5	44	12.9	2.81	2.36	0.8	12.7
APR 15...	1225	59	5.7	9.6	8.4	127	9.0	40	11.4	2.86	1.21	0.6	8.42
MAY 06...	1240	103	4.3	8.9	8.7	97	9.0	30	8.36	2.14	0.96	0.5	6.02
MAY 20...	1230	159	5.5	9.4	8.2	64	8.0	21	5.87	1.50	0.27	0.4	4.36
JUN 03...	1245	695	5.7	8.8	7.6	29	11.0	11	3.12	0.727	0.58	0.2	1.73
JUN 17...	1230	134	2.0	8.3	7.6	31	14.5	10	2.90	0.687	0.49	0.3	2.10
JUL 08...	1215	145	1.5	7.6	7.6	28	16.5	9	2.64	0.593	0.49	0.3	2.15
JUL 22...	1220	134	2.9	7.7	7.1	28	18.0	9	2.71	0.568	0.49	0.3	2.00
AUG 12...	1250	108	2.7	7.1	7.8	41	20.0	14	4.26	0.935	0.62	0.3	2.33
SEP 09...	1205	69	1.9	8.1	8.0	61	15.0	22	6.46	1.43	0.74	0.3	2.87

BIG THOMPSON PROJECT—Continued

402554105202100 BIG THOMPSON RIVER ABOVE NORTH FORK BIG THOMPSON RIVER AT DRAKE, CO—Continued

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT 08... E27	2.90	3.7	--	--	--	39	0.23	<0.015	0.424	0.044	0.053	0.064	
NOV 19... 26	2.68	3.8	37	0.06	2.09	42	0.24	<0.015	0.339	0.037	0.049	0.050	
DEC 10... E26	3.01	4.0	--	--	--	49	0.23	<0.015	0.724	0.073	0.084	0.094	
JAN 14... 30	2.25	3.8	41	0.07	3.42	53	0.35	0.108	0.511	0.079	0.084	0.108	
FEB 11... 32	2.99	4.7	47	0.08	3.81	58	0.41	0.128	0.566	0.056	0.065	0.084	
MAR 25... 29	22.2	8.2	83	0.15	14.1	112	0.54	0.055	0.938	0.030	0.046	0.078	
APR 15... 28	13.3	8.8	65	0.11	13.4	84	0.56	E.011	0.425	0.011	0.024	0.117	
MAY 06... 21	10.3	7.2	49	0.10	20.2	73	0.48	<0.015	0.235	0.014	0.023	0.074	
MAY 20... 15	5.89	5.1	33	0.09	27.4	64	0.51	E.011	0.226	0.013	0.026	0.077	
JUN 03... 10	1.61	2.2	17	0.05	67.7	36	0.60	<0.015	0.186	E.005	0.013	0.036	
JUN 17... 9	2.15	2.2	17	0.04	11.6	32	0.21	<0.015	0.288	0.021	0.029	0.042	
JUL 08... 9	1.85	2.0	17	0.03	8.95	23	0.27	0.016	0.277	0.046	0.059	0.075	
JUL 22... 9	1.68	1.9	16	0.03	8.75	24	0.25	0.023	0.353	0.053	0.067	0.073	
AUG 12... 15	1.72	2.7	23	0.04	8.61	30	0.23	<0.015	0.205	0.051	0.062	0.082	
SEP 09... 22	2.29	3.8	33	0.06	7.76	42	0.31	E.011	0.369	0.048	0.058	0.084	

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 08... E.2	0.8	56	E.06	2.0	<0.02	0.42	<0.20	
NOV 19... E.2	0.9	19	E.05	2.3	<0.02	0.43	<0.20	
DEC 10... E.2	1.3	17	<0.08	2.1	<0.02	0.58	<0.20	
JAN 14... E.2	0.8	13	0.18	2.8	<0.02	0.46	<0.20	
FEB 11... E.2	1.0	17	<0.08	1.4	<0.02	0.48	<0.20	
MAR 25... 0.3	2.0	83	0.10	15.8	<0.02	0.55	<0.20	
APR 15... E.2	1.7	83	0.12	17.5	<0.02	0.73	<0.20	
MAY 06... E.2	1.5	108	E.06	7.4	<0.02	0.59	<0.20	
MAY 20... E.2	1.8	112	E.07	6.8	<0.02	0.38	<0.20	
JUN 03... E.2	1.3	82	<0.08	5.3	<0.02	0.34	<0.20	
JUN 17... <0.3	1.2	59	<0.08	2.2	<0.02	0.32	<0.20	
JUL 08... <0.3	0.9	63	E.04	2.3	<0.02	0.23	<0.20	
JUL 22... <0.3	0.9	63	E.04	1.7	<0.02	0.18	<0.20	
AUG 12... E.1	0.7	52	<0.08	2.3	<0.02	0.34	<0.20	
SEP 09... E.2	0.7	36	E.04	2.4	<0.02	0.21	<0.20	

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

PLATTE RIVER BASIN

BIG THOMPSON PROJECT—Continued

402554105202100 BIG THOMPSON RIVER ABOVE NORTH FORK BIG THOMPSON RIVER AT DRAKE, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT 08...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV 19...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC 10...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN 14...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB 11...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR 25...	<0.4	<0.4	<0.4	<0.4	<0.4
APR 15...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY 06...	<0.4	<0.4	<0.4	<0.4	<0.4
20...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN 03...	<0.4	<0.4	<0.4	<0.4	<0.4
17...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL 11...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG 15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP 09...	<0.4	<0.4	<0.4	<0.4	<0.4

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

BIG THOMPSON PROJECT—Continued

06736000 NORTH FORK BIG THOMPSON RIVER AT DRAKE, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°26'00" (revised), long 105°20'18", (unsurveyed), Larimer County, Hydrologic Unit 10190006, on right bank 400 ft upstream from mouth and 300 ft upstream from Hwy 34 bridge at Drake.

DRAINAGE AREA.--85.1 mi²

PERIOD OF RECORD.--August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06736000

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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...	1220	7.1	2.1	--	7.7	34	10.0	11	3.30	0.773	0.53	0.3	2.45
NOV 19...	1315	4.8	<1.0	11.1	8.0	38	3.0	13	3.65	0.862	0.48	0.3	2.77
DEC 10...	1320	5.2	1.1	11.6	8.0	43	0.5	15	4.18	1.01	0.51	0.4	3.13
JAN 14...	1330	4.7	<1.0	11.7	8.0	42	0.5	14	3.89	0.945	0.41	0.4	3.08
FEB 12...	0910	3.0	<1.0	12.1	7.6	48	0.5	15	4.40	1.08	0.51	0.4	3.57
MAR 25...	1420	17	3.5	9.3	7.8	112	8.5	34	9.81	2.42	0.95	0.4	6.04
APR 15...	1345	22	3.2	8.7	8.0	61	9.5	20	5.44	1.44	0.89	0.4	4.46
MAY 06...	1350	31	5.1	8.7	7.9	58	9.5	18	4.98	1.25	0.80	0.4	4.09
20...	1330	66	3.4	9.5	8.0	49	7.5	16	4.53	1.17	0.80	0.4	3.40
JUN 03...	1345	123	2.3	9.2	7.4	26	9.5	9	2.64	0.609	0.56	0.3	1.93
17...	1335	85	1.6	8.6	7.5	24	12.5	9	2.55	0.575	0.44	0.3	1.82
JUL 08...	1310	54	1.8	8.0	7.5	23	16.0	8	2.46	0.526	0.39	0.3	1.86
22...	1310	38	2.5	7.5	7.5	24	17.5	8	2.50	0.523	0.37	0.3	1.71
AUG 12...	1350	24	1.2	7.3	7.6	30	19.5	10	3.06	0.691	0.46	0.3	2.39
SEP 09...	1320	19	1.1	8.0	7.7	30	15.0	10	2.97	0.680	0.42	0.3	1.93

PLATTE RIVER BASIN
BIG THOMPSON PROJECT—Continued

06736000 NORTH FORK BIG THOMPSON RIVER AT DRAKE, CO—Continued

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT 08...	E15	0.79	1.9	--	--	--	26	0.12	<0.015	0.035	<0.007	0.006	0.011
NOV 19...	16	2.28	2.5	23	0.04	0.40	31	E.06	<0.015	0.091	<0.007	0.005	0.005
DEC 10...	E18	1.87	2.7	--	--	--	29	E.07	<0.015	0.125	<0.007	0.005	0.007
JAN 14...	17	0.99	2.6	23	0.05	0.47	37	E.09	<0.015	0.144	<0.007	E.004	0.008
FEB 12...	19	2.23	3.1	27	0.06	0.34	42	E.07	<0.015	0.154	<0.007	E.003	0.005
MAR 25...	21	11.0	9.1	55	0.10	3.50	77	0.29	<0.015	0.739	E.004	0.009	0.019
APR 15...	16	3.91	6.4	32	0.08	3.47	59	0.28	<0.015	E.015	<0.007	0.007	0.021
MAY 06...	16	3.43	6.0	30	0.07	4.47	53	0.23	<0.015	<0.022	<0.007	0.005	0.018
MAY 20...	14	2.46	5.0	26	0.08	9.96	56	0.38	<0.015	0.069	<0.007	0.011	0.024
JUN 03...	9	1.09	2.3	15	0.04	10.6	32	0.25	<0.015	0.110	<0.007	0.006	0.027
JUN 17...	10	0.70	2.1	14	0.04	7.39	32	0.19	<0.015	0.096	<0.007	0.005	0.015
JUL 08...	10	0.64	1.7	14	0.04	4.76	33	0.22	<0.015	0.082	<0.007	0.006	0.019
JUL 22...	11	0.62	1.5	14	0.04	2.72	26	0.20	<0.015	0.084	<0.007	0.007	0.012
AUG 12...	13	0.94	1.5	17	0.04	2.03	31	0.17	<0.015	0.050	<0.007	0.007	0.013
SEP 09...	13	0.91	1.6	17	0.04	1.53	30	0.13	<0.015	0.129	<0.007	0.007	0.013

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 08...	E.1	0.4	85	<0.08	5.0	<0.02	0.17	<0.2
NOV 19...	<0.3	0.7	94	0.11	5.8	<0.02	0.24	<0.2
DEC 10...	E.1	0.4	92	<0.08	6.7	<0.02	0.30	<0.2
JAN 14...	<0.3	0.4	48	0.31	3.7	<0.02	0.21	<0.2
FEB 12...	<0.3	0.4	51	<0.08	4.2	<0.02	0.23	<0.2
MAR 25...	E.2	1.0	55	<0.08	3.5	<0.02	0.35	<0.2
APR 15...	<0.3	1.5	106	E.06	2.8	<0.02	0.48	<0.2
MAY 06...	E.2	1.3	75	E.04	3.2	<0.02	0.43	<0.2
MAY 20...	0.3	1.5	121	E.08	2.7	<0.02	0.37	<0.2
JUN 03...	E.2	0.8	69	<0.08	2.4	<0.02	0.28	<0.2
JUN 17...	<0.3	0.7	44	<0.08	1.9	<0.02	0.24	<0.2
JUL 08...	<0.3	0.5	41	<0.08	2.3	<0.02	0.18	<0.2
JUL 22...	<0.3	0.6	49	<0.08	2.7	<0.02	0.18	<0.2
AUG 12...	<0.3	0.5	73	<0.08	3.5	<0.02	0.26	<0.2
SEP 09...	<0.3	0.5	75	E.05	3.5	<0.02	0.12	<0.2

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

BIG THOMPSON PROJECT—Continued

06736000 NORTH FORK BIG THOMPSON RIVER AT DRAKE, CO—Continued
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT 08...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV 19...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC 10...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN 14...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB 12...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR 25...	<0.4	<0.4	<0.4	<0.4	<0.4
APR 15...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY 06...	<0.4	<0.4	<0.4	<0.4	<0.4
20...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN 03...	<0.4	<0.4	<0.4	<0.4	<0.4
17...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL 08...	<0.4	<0.4	<0.4	<0.4	<0.4
22...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG 15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP 09...	<0.4	<0.4	<0.4	<0.4	<0.4

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

06736700 BIG THOMPSON RIVER ABOVE DILLIE TUNNEL NEAR DRAKE, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°24'54", long 105°15'00", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.8, T.5 N., R.70 W., Larimer County, Hydrologic Unit 10190006, approximately 250 ft upstream of Hwy 34 bridge, approximately 1 mi downstream of inflow of Cedar Creek, 1 mi east of Cedar Cove.

DRAINAGE AREA.--305 mi².

PERIOD OF RECORD.--August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06736700

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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													
09...	0855	44	6.8	--	7.7	56	8.5	18	5.31	1.13	0.70	0.4	3.83
NOV													
20...	0905	27	1.1	11.7	7.6	61	0.5	20	5.79	1.26	0.69	0.4	3.59
DEC													
11...	0900	29	1.3	12.0	7.8	76	0.0	25	7.61	1.54	1.01	0.4	4.40
JAN													
15...	0900	25	<1.0	11.9	7.8	73	0.5	26	7.65	1.56	1.13	0.4	4.21
FEB													
12...	1020	29	<1.0	12.1	8.2	82	0.5	27	8.16	1.69	1.05	0.4	5.14
MAR													
26...	0930	77	2.7	11.2	7.3	151	5.0	46	13.1	3.17	1.46	0.6	9.27
APR													
16...	0900	93	4.4	9.8	7.4	116	6.5	37	10.3	2.67	1.32	0.5	7.49
MAY													
07...	0925	130	5.2	10.3	7.6	92	7.0	29	8.13	2.09	0.89	0.4	5.33
21...	0940	237	3.5	10.2	7.8	67	7.5	22	6.12	1.56	0.87	0.4	4.19
JUN													
04...	0920	803	5.7	9.3	7.3	29	9.5	11	3.12	0.723	0.60	0.2	1.79
18...	0935	260	4.6	8.8	7.4	38	11.5	13	3.68	0.871	0.62	0.3	2.38
JUL													
09...	0900	191	1.5	8.0	7.4	29	14.0	10	2.79	0.630	0.47	0.3	2.08
23...	0915	182	2.6	8.0	7.3	27	16.5	10	2.85	0.617	0.46	0.3	1.94
AUG													
13...	0915	162	2.9	8.0	7.6	40	17.5	14	4.14	0.933	0.55	0.3	2.25
SEP													
10...	0925	101	1.2	8.1	7.4	55	13.5	19	5.52	1.29	0.66	0.3	2.62

BIG THOMPSON PROJECT—Continued

06736700 BIG THOMPSON RIVER ABOVE DILLIE TUNNEL NEAR DRAKE, CO—Continued

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT 09...	E21	2.68	3.3	--	--	--	36	0.26	<0.015	0.036	0.034	0.044	0.057
NOV 20...	23	2.77	3.5	33	0.05	2.80	39	0.19	<0.015	0.311	0.012	0.019	0.032
DEC 11...	E27	3.00	4.0	--	--	--	51	0.22	<0.015	0.567	0.029	0.037	0.048
JAN 15...	28	2.31	3.7	40	0.07	3.28	48	0.27	0.088	0.500	0.042	0.047	0.059
FEB 12...	29	4.41	4.5	45	0.07	3.96	51	0.24	0.056	0.534	0.034	0.042	0.053
MAR 26...	27	13.8	12.0	77	0.14	21.0	101	0.44	E.009	1.77	0.023	0.034	0.050
APR 16...	27	10.1	9.5	59	0.11	21.2	84	0.49	E.009	0.386	0.009	0.021	0.067
MAY 07...	21	8.91	7.2	46	0.09	22.1	63	0.40	E.008	0.186	E.004	0.013	0.043
MAY 21...	17	4.64	5.7	35	0.08	39.6	62	0.41	E.008	0.240	0.011	0.018	0.050
JUN 04...	10	1.20	2.3	16	0.04	70.4	32	0.36	<0.015	0.177	E.006	0.012	0.038
JUN 18...	12	2.05	2.8	21	0.06	28.6	41	0.24	E.011	0.298	0.015	0.022	0.043
JUL 09...	10	1.57	2.0	17	0.04	14.4	28	0.26	0.016	0.266	0.035	0.043	0.061
JUL 23...	10	1.40	1.8	16	0.04	13.3	27	0.20	E.010	0.285	0.044	0.054	0.061
AUG 13...	15	1.39	2.5	21	0.04	13.2	30	0.25	<0.015	0.156	0.034	0.042	0.059
SEP 10...	21	2.10	3.3	29	0.06	12.9	47	0.25	<0.015	0.264	0.027	0.039	0.061

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 09...	0.3	0.9	72	0.16	3.5	<0.02	0.38	<0.20
NOV 20...	E.1	0.7	32	E.06	3.3	<0.02	0.38	<0.20
DEC 11...	E.2	0.9	37	E.07	3.8	<0.02	0.60	<0.20
JAN 15...	<0.3	0.8	20	0.17	3.4	<0.02	0.47	<0.20
FEB 12...	<0.3	0.9	23	<0.08	2.2	<0.02	0.43	<0.20
MAR 26...	E.3	1.6	68	E.06	7.0	<0.02	0.50	<0.20
APR 16...	E.2	1.7	76	E.07	9.4	<0.02	0.71	<0.20
MAY 07...	E.2	1.4	94	0.09	10.4	<0.02	0.59	<0.20
MAY 21...	E.3	1.7	89	0.09	6.1	<0.02	0.39	<0.20
JUN 04...	<0.3	1.2	75	<0.08	4.1	<0.02	0.34	<0.20
JUN 18...	<0.3	1.0	57	E.05	3.1	<0.02	0.31	<0.20
JUL 09...	<0.3	0.9	52	E.04	2.9	<0.02	0.24	<0.20
JUL 23...	<0.3	0.8	61	<0.08	2.3	<0.02	0.20	<0.20
AUG 13...	E.2	0.7	51	<0.08	2.9	<0.02	0.33	<0.20
SEP 10...	E.2	0.7	46	0.09	3.2	<0.02	0.17	<0.20

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

PLATTE RIVER BASIN

BIG THOMPSON PROJECT—Continued

06736700 BIG THOMPSON RIVER ABOVE DILLIE TUNNEL NEAR DRAKE, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT					
09...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV					
20...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC					
11...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB					
12...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR					
26...	<0.4	<0.4	<0.4	<0.4	<0.4
APR					
16...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY					
07...	<0.4	<0.4	<0.4	<0.4	<0.4
21...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN					
04...	<0.4	<0.4	<0.4	<0.4	<0.4
18...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL					
09...	<0.4	<0.4	<0.4	<0.4	<0.4
23...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP					
10...	<0.4	<0.4	<0.4	<0.4	<0.4

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

BIG THOMPSON PROJECT—Continued

402227105134700 HANSEN CANAL BELOW FLATIRON RESERVOIR NEAR LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°22'27", long 105°13'47", in NW¹/₄NW¹/₄ sec.27, T.5 N., R.70 W., Larimer County, Hydrologic Unit 10190006, at siphon entrance at north end of Flatiron Reservoir, 10 mi southwest of Loveland.

PERIOD OF RECORD.--August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=402227105134700

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unflab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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													
10...	1300	14	3.2	--	8.5	61	15.5	26	7.88	1.43	0.67	0.2	2.34
NOV													
21...	1235	77	1.4	--	7.7	50	4.0	20	6.07	1.22	0.64	0.2	2.01
DEC													
12...	1240	66	1.5	10.7	8.1	54	2.5	22	6.64	1.29	0.65	0.2	2.11
JAN													
16...	1235	112	1.1	10.9	8.1	63	2.5	26	8.03	1.51	0.77	0.2	2.46
FEB													
13...	1300	62	1.3	11.0	8.4	65	2.5	25	7.73	1.47	0.78	0.2	2.54
MAR													
28...	0915	58	6.5	12.7	8.0	75	5.0	30	8.96	1.88	0.75	0.3	3.21
APR													
17...	1245	48	2.2	9.7	8.6	85	9.5	32	9.45	2.01	1.01	0.3	4.04
MAY													
09...	0855	50	4.8	9.1	7.7	101	10.5	32	9.18	2.31	1.02	0.4	5.61
23...	0925	255	3.1	9.9	7.7	63	10.5	21	5.98	1.55	0.77	0.3	3.57
JUN													
05...	1245	415	5.5	10.3	7.5	26	10.0	10	2.98	0.691	0.56	0.2	1.39
19...	1230	542	3.2	9.4	7.6	23	11.0	8	2.41	0.589	0.33	0.2	1.22
JUL													
09...	1300	368	3.6	8.3	7.4	23	16.0	9	2.53	0.548	0.27	0.2	1.27
24...	1130	341	4.2	8.0	7.2	20	18.0	8	2.39	0.479	0.25	0.2	1.05
AUG													
14...	1200	438	2.9	7.8	7.6	33	19.5	14	4.06	0.865	0.41	0.2	1.50
SEP													
11...	1130	494	3.4	8.3	7.6	51	15.5	20	5.89	1.25	0.51	0.2	1.83

PLATTE RIVER BASIN
BIG THOMPSON PROJECT—Continued

402227105134700 HANSEN CANAL BELOW FLATIRON RESERVOIR NEAR LOVELAND, CO—Continued

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT 10...	E28	0.77	2.8	--	--	--	35	0.31	<0.015	<0.022	<0.007	0.005	0.026
NOV 21...	23	0.74	2.8	28	0.05	7.31	35	0.16	E.009	0.062	<0.007	E.003	0.005
DEC 12...	E24	1.33	2.6	--	--	--	32	0.20	E.011	0.056	<0.007	E.003	0.010
JAN 16...	29	0.44	3.0	34	0.05	12.0	40	0.22	<0.015	0.042	<0.007	E.004	0.012
FEB 13...	30	1.29	3.2	35	0.06	7.31	44	0.17	<0.015	0.043	<0.007	0.005	0.014
MAR 28...	31	2.51	4.3	41	0.07	8.59	55	0.27	<0.015	0.144	<0.007	E.004	0.019
APR 17...	31	4.34	4.5	44	0.07	6.77	53	0.47	<0.015	E.013	<0.007	0.005	0.017
MAY 09...	26	9.59	6.8	50	0.09	8.68	65	0.38	E.011	0.118	<0.007	0.004	0.024
MAY 23...	17	5.45	4.6	33	0.06	32.8	48	0.38	0.018	0.140	<0.007	0.005	0.019
JUN 05...	9	1.26	2.0	15	0.04	30.3	27	0.26	E.009	0.164	<0.007	0.005	0.022
JUN 19...	8	1.06	1.7	13	0.03	37.4	26	0.18	0.016	0.152	<0.007	0.005	0.015
JUL 09...	9	0.86	1.6	13	0.03	18.7	19	0.18	E.012	0.088	<0.007	0.006	0.014
JUL 24...	9	0.67	1.4	12	0.03	17.2	19	0.22	E.009	0.066	<0.007	0.005	0.016
AUG 14...	14	0.56	2.2	18	0.04	33.4	28	0.25	E.012	0.028	<0.007	0.004	0.020
SEP 11...	22	1.03	3.1	27	0.04	41.9	31	0.27	0.023	0.034	<0.007	E.004	0.023

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 10...	0.5	2.1	16	E.04	1.7	<0.02	0.34	<0.20
NOV 21...	E.2	2.4	17	E.05	2.2	<0.02	0.35	<0.20
DEC 12...	E.2	0.6	E8	<0.08	0.7	<0.02	0.46	<0.20
JAN 16...	E.2	0.7	E10	0.17	13.1	<0.02	0.49	<0.20
FEB 13...	E.2	0.8	E10	<0.08	3.2	<0.02	0.44	<0.20
MAR 28...	E.2	1.6	20	<0.08	0.4	<0.02	0.29	<0.20
APR 17...	<0.3	7.3	42	<0.08	0.9	<0.02	0.53	<0.20
MAY 09...	E.2	4.3	59	E.05	0.8	<0.02	0.64	<0.20
MAY 23...	0.3	7.1	86	0.13	4.5	<0.02	0.31	<0.20
JUN 05...	E.2	1.7	84	E.06	11.1	<0.02	0.35	<0.20
JUN 19...	E.2	16.0	70	0.12	9.4	<0.02	0.29	<0.20
JUL 09...	<0.3	1.3	57	<0.08	5.3	<0.02	0.21	<0.20
JUL 24...	<0.3	1.6	53	<0.08	3.3	<0.02	0.20	<0.20
AUG 14...	E.2	1.0	47	<0.08	1.0	<0.02	0.31	<0.20
SEP 11...	E.2	6.7	52	E.05	1.6	<0.02	0.28	<0.20

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

BIG THOMPSON PROJECT—Continued

402227105134700 HANSEN CANAL BELOW FLATIRON RESERVOIR NEAR LOVELAND, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT					
10...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV					
21...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC					
12...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN					
16...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB					
13...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR					
28...	<0.4	<0.4	<0.4	<0.4	<0.4
APR					
17...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY					
09...	<0.4	<0.4	<0.4	<0.4	<0.4
23...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN					
05...	<0.4	<0.4	<0.4	<0.4	<0.4
19...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL					
10...	<0.4	<0.4	<0.4	<0.4	<0.4
24...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP					
11...	<0.4	<0.4	<0.4	<0.4	<0.4

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

BIG THOMPSON PROJECT—Continued

402524105133300 HANSEN CANAL BELOW TRIFURCATION NEAR LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°25'24", long 105°13'33", in SW¹/₄SW¹/₄ sec.3, T.5 N., R.70 W., Larimer County, Hydrologic Unit 10190006, at gate 1.1 mi from Hwy 34, 8.6 mi west of Loveland.

PERIOD OF RECORD.--August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=402524105133300

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd 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)
NOV 21...	1350	71	1.2	10.4	7.9	50	5.5	20	6.12	1.17	0.63	0.2	2.05
DEC 13...	0845	70	1.8	11.1	7.8	55	2.0	22	6.60	1.28	0.70	0.2	2.07
JAN 16...	1355	104	<1.0	11.5	8.2	59	3.0	26	8.04	1.51	0.76	0.2	2.46
FEB 14...	0850	69	1.0	11.1	8.0	65	2.5	26	7.95	1.50	0.81	0.2	2.59
MAR 28...	1035	51	4.7	10.5	8.4	79	4.5	32	9.74	1.97	0.83	0.3	3.55
APR 17...	1410	2.8	1.8	9.5	8.4	81	12.0	31	9.31	1.95	0.99	0.3	3.79
MAY 09...	1030	48	3.2	9.0	8.7	101	10.5	33	9.28	2.32	1.02	0.4	5.57
23...	1040	76	3.8	10.6	7.8	61	10.5	21	5.88	1.51	0.77	0.4	3.72
JUN 06...	0850	46	4.7	9.8	7.2	28	9.0	11	3.34	0.752	0.52	0.2	1.49
20...	0900	94	2.7	9.4	7.2	21	11.0	8	2.33	0.571	0.34	0.2	1.18
JUL 11...	0850	191	2.8	8.5	7.2	23	15.0	8	2.47	0.543	0.33	0.2	1.51
24...	1240	213	2.5	8.0	7.4	21	18.5	8	2.39	0.480	0.30	0.2	1.11
AUG 14...	1320	376	2.4	8.1	7.5	35	19.5	14	4.01	0.862	0.46	0.2	1.64
SEP 11...	1250	336	3.1	8.3	7.8	51	15.0	20	5.99	1.28	0.60	0.2	1.97

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
NOV 21...	23	0.74	2.8	28	0.05	6.94	36	0.16	<0.015	0.060	<0.007	<0.004	0.007
DEC 13...	E25	1.40	2.8	--	--	--	40	0.20	E.009	0.055	<0.007	E.003	0.010
JAN 16...	29	0.42	2.9	33	0.06	11.5	41	0.20	<0.015	0.039	<0.007	E.003	0.013
FEB 14...	30	0.55	3.1	34	0.05	7.15	38	0.17	<0.015	0.038	<0.007	0.004	0.015
MAR 28...	31	2.65	4.4	43	0.07	7.14	52	0.29	<0.015	0.147	<0.007	E.003	0.020
APR 17...	31	3.75	4.2	42	0.07	0.39	53	0.32	E.012	E.018	<0.007	0.008	0.016
MAY 09...	26	9.53	6.8	50	0.09	8.60	67	0.37	E.011	0.103	<0.007	E.003	0.022
23...	16	4.88	4.9	32	0.07	10.8	53	0.36	E.013	0.159	E.004	0.015	0.033
JUN 06...	10	0.95	2.1	16	0.04	3.75	30	0.24	<0.015	0.148	<0.007	0.005	0.019
20...	8	1.00	1.7	13	0.04	6.77	27	0.20	E.011	0.151	<0.007	E.004	0.016
JUL 11...	9	1.00	1.6	14	0.03	10.9	21	0.18	E.014	0.150	0.010	0.015	0.026
24...	9	0.69	1.4	12	0.03	13.0	23	0.21	E.012	0.085	E.004	0.010	0.020
AUG 14...	14	0.77	2.3	19	0.04	28.3	28	0.25	E.013	0.063	0.008	0.014	0.029
SEP 11...	21	1.16	3.3	27	0.06	37.8	42	0.29	0.024	0.054	<0.007	0.007	0.026

BIG THOMPSON PROJECT—Continued

402524105133300 HANSEN CANAL BELOW TRIFURCATION NEAR LOVELAND, CO—Continued

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
NOV 21...	E.2	2.5	16	E.05	2.3	<0.02	0.38	<0.20
DEC 13...	E.2	0.9	12	0.08	0.6	<0.02	0.45	<0.20
JAN 16...	E.1	0.9	E7	E.06	13.4	<0.02	0.47	<0.20
FEB 14...	E.2	4.9	11	<0.08	3.6	<0.02	0.43	<0.20
MAR 28...	0.3	2.0	20	<0.08	0.6	<0.02	0.35	<0.20
APR 17...	E.2	12.6	34	<0.08	1.3	<0.02	0.53	<0.20
MAY 09...	E.2	4.6	60	E.05	0.7	<0.02	0.63	<0.20
23...	E.2	5.0	86	0.08	5.0	<0.02	0.34	<0.20
JUN 06...	<0.3	1.6	72	<0.08	9.4	<0.02	0.32	<0.20
20...	<0.3	11.6	69	E.05	8.0	<0.02	0.28	<0.20
JUL 11...	<0.3	1.2	55	E.08	2.3	<0.02	0.20	<0.20
24...	<0.3	1.7	50	E.06	3.2	<0.02	0.19	<0.20
AUG 14...	E.2	1.0	49	<0.08	2.1	<0.02	0.31	<0.20
SEP 11...	E.2	6.3	63	E.05	1.9	<0.02	0.28	<0.20

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

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

Date	Benzene water unfltrd ug/L (34030)	Ethylbenzene water unfltrd ug/L (34371)	meta- + para-Xylene, water, unfltrd ug/L (85795)	o-Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
NOV 21...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC 13...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN 16...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB 14...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR 28...	<0.4	<0.4	<0.4	<0.4	<0.4
APR 17...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY 09...	<0.4	<0.4	<0.4	<0.4	<0.4
23...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN 06...	<0.4	<0.4	<0.4	<0.4	<0.4
20...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL 11...	<0.4	<0.4	<0.4	<0.4	<0.4
24...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG 15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP 11...	<0.4	<0.4	<0.4	<0.4	<0.4

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

BIG THOMPSON PROJECT—Continued

403020105114700 HANSEN CANAL ABOVE TUNNEL NO 5 NEAR LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.—Lat 40°30'20", long 105°11'47", in NW¹/₄NE¹/₄ sec.11, T.6 N., R.70 W., Larimer County, Hydrologic Unit 10190006, at 2.25 mi west of Horsetooth Reservoir (south inlet), 4.8 mi west of Ft. Collins.

PERIOD OF RECORD.—August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=403020105114700

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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)
NOV 22...	0840	73	1.5	11.7	7.6	51	3.5	21	6.54	1.23	0.61	0.2	2.15
DEC 13...	0955	77	1.2	11.3	8.1	55	2.0	22	6.68	1.29	0.66	0.2	2.11
JAN 17...	0905	119	1.1	11.2	8.0	62	2.0	26	7.90	1.48	0.71	0.2	2.42
FEB 14...	1035	74	1.5	11.3	8.2	65	2.5	24	7.18	1.38	0.78	0.2	2.39
MAR 28...	1210	51	4.1	10.6	8.5	84	4.5	31	9.22	1.92	0.81	0.3	3.41
MAY 09...	1210	51	2.6	9.5	9.0	100	10.0	32	9.09	2.28	0.99	0.4	5.51
23...	1145	80	3.6	11.4	7.8	63	12.0	21	5.89	1.51	0.77	0.4	3.76
JUN 06...	1010	55	4.0	9.5	7.6	27	10.0	11	3.20	0.739	0.50	0.2	1.42
20...	1020	98	3.2	9.3	7.4	24	11.5	10	2.76	0.649	0.35	0.2	1.33
JUL 11...	1005	206	2.2	8.3	7.5	23	16.0	8	2.47	0.536	0.32	0.2	1.46
25...	0855	247	3.0	8.1	7.5	21	18.0	8	2.41	0.475	0.27	0.2	1.15
AUG 15...	0900	403	2.6	8.1	7.5	36	18.5	14	4.01	0.857	0.43	0.2	1.69
SEP 11...	1355	315	3.3	8.7	7.7	51	15.0	21	6.22	1.21	0.64	0.2	2.16

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO ₃ (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
NOV 22...	23	1.82	2.8	29	0.05	7.27	37	0.34	<0.015	0.058	<0.007	E.004	0.005
DEC 13...	E25	0.61	2.7	--	--	--	38	0.19	<0.015	0.054	<0.007	E.003	0.010
JAN 17...	29	0.42	2.9	33	0.06	13.7	42	0.20	<0.015	0.039	<0.007	E.004	0.012
FEB 14...	30	0.59	3.1	33	0.06	8.74	44	0.19	<0.015	0.030	<0.007	E.004	0.015
MAR 28...	31	2.50	4.5	42	0.08	7.97	58	0.27	<0.015	0.150	<0.007	E.004	0.020
MAY 09...	26	9.50	6.7	50	0.10	10.1	74	0.41	E.011	0.091	<0.007	E.003	0.021
23...	17	4.99	5.0	33	0.08	12.0	56	0.41	E.012	0.162	E.005	0.011	0.031
JUN 06...	10	0.90	2.1	16	0.04	4.30	29	0.22	E.011	0.157	<0.007	0.006	0.018
20...	9	0.83	2.0	14	0.04	8.06	30	0.23	E.010	0.160	<0.007	0.016	0.020
JUL 11...	9	1.00	1.6	14	0.03	10.2	18	0.21	0.017	0.153	0.009	0.015	0.026
25...	9	0.76	1.4	12	0.03	14.1	21	0.21	0.017	0.082	E.005	0.010	0.020
AUG 15...	14	0.79	2.4	19	0.03	26.4	24	0.19	E.011	0.062	E.004	0.009	0.027
SEP 11...	--	1.11	3.4				33	0.24	0.020	0.053	<0.007	0.007	0.026

BIG THOMPSON PROJECT—Continued

403020105114700 HANSEN CANAL ABOVE TUNNEL NO 5 NEAR LOVELAND, CO—Continued

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
NOV 22...	E.2	1.8	16	<0.08	1.6	<0.02	0.34	<0.2
DEC 13...	E.2	1.3	E9	E.05	0.7	<0.02	0.46	<0.2
JAN 17...	E.2	1.4	<10	0.25	11.8	<0.02	0.41	<0.2
FEB 14...	E.2	3.0	10	<0.08	2.5	<0.02	0.43	<0.2
MAR 28...	E.2	2.7	15	<0.08	1.2	<0.02	0.32	<0.2
MAY 09...	E.2	5.2	58	E.05	0.8	<0.02	0.64	<0.2
23...	E.2	5.2	90	E.07	4.7	<0.02	0.33	<0.2
JUN 06...	<0.3	2.2	77	<0.08	8.8	<0.02	0.33	<0.2
20...	<0.3	11.0	68	<0.08	6.7	<0.02	0.29	<0.2
JUL 11...	<0.3	1.3	56	E.05	2.4	<0.02	0.20	<0.2
25...	<0.3	1.8	46	0.11	1.7	<0.02	0.17	<0.2
AUG 15...	E.2	1.2	44	E.04	0.7	<0.02	0.30	<0.2
SEP 11...	E.3	6.6	54	<0.08	1.9	<0.02	0.19	<0.2

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

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
NOV 22...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC 13...	<0.4	<0.4	M	<0.4	<0.4
JAN 17...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB 14...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR 28...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY 09...	<0.4	<0.4	M	<0.4	<0.4
23...	<0.4	<0.4	M	<0.4	<0.4
JUN 06...	<0.4	<0.4	M	<0.4	<0.4
20...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL 11...	<0.4	<0.4	<0.4	<0.4	<0.4
25...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG 15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP 11...	<0.4	<0.4	<0.4	<0.4	<0.4

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

PLATTE RIVER BASIN
BIG THOMPSON PROJECT—Continued

403814105111800 HANSEN CANAL ABV GREELEY FILTRATION PLANT NR LAPORTE, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°38'14", long 105°11'18", in SW¹/₄NE¹/₄ sec.23, T.8 N., R.70 W., Larimer County, Hydrologic Unit 10190006, 9.4 mi north of Fort Collins.

PERIOD OF RECORD.--August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=403814105111800

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd 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)
JUL													
11...	1155	76	8.1	9.2	7.8	79	14.0	33	10.3	1.86	0.88	0.2	3.12
25...	1045	35	8.1	9.7	7.8	77	15.5	33	10.2	1.74	0.82	0.2	2.91
AUG													
15...	1050	239	5.2	9.5	7.8	56	19.0	24	7.38	1.31	0.67	0.2	2.14
SEP													
12...	0905	92	2.2	8.3	7.6	51	18.0	20	6.10	1.20	0.47	0.2	1.71

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
JUL													
11...	34	1.67	4.2	43	0.07	10.8	53	0.18	<0.015	0.166	<0.007	0.005	0.020
25...	32	2.02	4.2	42	0.07	4.88	51	0.33	<0.015	0.152	<0.007	0.005	0.018
AUG													
15...	23	1.53	2.7	30	0.06	26.3	41	0.20	<0.015	0.127	<0.007	0.005	0.017
SEP													
12...	21	1.31	3.0	27	0.05	9.54	38	0.18	<0.015	0.075	<0.007	E.004	0.014

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

Date	Arsenic, water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
JUL								
11...	0.3	2.6	E6	<0.08	0.7	<0.02	0.48	<0.20
25...	0.4	2.8	9	<0.08	0.8	<0.02	0.54	<0.20
AUG								
15...	0.3	3.3	22	<0.08	2.0	<0.02	0.51	<0.20
SEP								
12...	0.3	3.5	17	<0.08	0.7	<0.02	0.20	<0.20

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

BIG THOMPSON PROJECT—Continued

403814105111800 HANSEN CANAL ABV GREELEY FILTRATION PLANT NR LAPORTE, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
JUL					
11...	<0.4	<0.4	<0.4	<0.4	<0.4
25...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP					
12...	<0.4	<0.4	<0.4	<0.4	<0.4

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

PLATTE RIVER BASIN
BIG THOMPSON PROJECT—Continued

402518105131300 BIG THOMPSON RIVER BELOW BIG THOMPSON POWER PLANT NEAR LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°25'18", long 105°13'13", in SW¹/₄SE¹/₄ sec.3, T.5 N., R.70 W., Larimer County, Hydrologic Unit 10190006, approximately 280 ft downstream of bridge, approximately 1.7 mi from Hwy 34, approximately 880 ft downstream of Big Thompson Hydroelectric Power Plant.

DRAINAGE AREA.--306 mi².

PERIOD OF RECORD.--March 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=402518105131300

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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 09...	1050	57	11	--	7.9	58	11.0	20	6.15	1.24	0.71	0.3	3.46
NOV 20...	1100	29	<1.0	12.5	8.0	62	1.5	20	6.00	1.29	0.72	0.4	3.73
DEC 11...	1040	26	1.1	12.6	8.3	79	0.5	26	7.91	1.60	1.00	0.4	4.65
JAN 15...	1045	29	<1.0	12.3	8.2	73	0.0	26	7.89	1.59	0.97	0.4	4.41
FEB 12...	1200	28	<1.0	12.9	7.7	83	1.0	28	8.23	1.70	1.07	0.4	5.16
MAR 26...	1110	64	6.7	10.6	8.2	138	6.0	42	12.2	2.88	1.37	0.6	8.32
APR 16...	1015	154	3.6	10.1	8.2	103	8.0	34	9.76	2.32	1.06	0.4	6.01
MAY 07...	1100	117	4.0	9.9	8.1	93	8.0	29	8.21	2.09	0.88	0.4	5.31
21...	1120	412	3.9	9.4	7.9	68	10.0	23	6.49	1.65	0.85	0.4	4.12
JUN 04...	1140	1,030	5.8	9.7	7.5	28	10.0	11	3.10	0.729	0.60	0.2	1.73
18...	1045	594	3.0	9.1	7.6	26	11.5	9	2.67	0.633	0.46	0.2	1.40
JUL 09...	1045	346	<1.0	8.2	7.5	23	15.5	8	2.43	0.540	0.33	0.2	1.45
23...	1020	268	3.1	8.0	7.5	24	17.5	9	2.66	0.557	0.36	0.2	1.54
AUG 13...	1030	151	3.1	7.8	7.6	35	19.0	16	4.84	1.05	0.58	0.2	1.72
SEP 10...	1045	230	2.9	8.5	7.7	52	15.0	20	5.81	1.25	0.55	0.2	1.95

BIG THOMPSON PROJECT—Continued

402518105131300 BIG THOMPSON RIVER BELOW BIG THOMPSON POWER PLANT NEAR LOVELAND, CO—Continued

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT 09...	E23	2.18	3.2	--	--	--	35	0.28	<0.015	0.031	0.020	0.030	0.045
NOV 20...	23	2.90	3.6	33	0.05	2.70	35	0.19	<0.015	0.252	E.005	0.011	0.019
DEC 11...	E28	3.33	4.1	--	--	--	47	0.20	<0.015	0.561	0.015	0.022	0.037
JAN 15...	28	2.34	3.7	40	0.07	3.83	50	0.25	0.076	0.500	0.040	0.045	0.058
FEB 12...	29	4.47	<0.2	--	--	--	53	0.22	0.033	0.521	0.027	0.035	0.045
MAR 26...	27	12.8	10.6	71	0.13	16.1	93	0.63	E.014	1.51	0.019	0.029	0.109
APR 16...	28	7.56	7.4	52	0.10	32.1	77	0.41	E.008	0.203	E.005	0.015	0.045
MAY 07...	21	9.17	7.2	46	0.09	20.5	65	0.34	E.009	0.163	E.005	0.013	0.043
MAY 21...	18	5.41	5.3	35	0.07	56.2	51	0.40	0.016	0.185	E.006	0.014	0.040
JUN 04...	10	1.17	2.2	16	0.04	88.3	32	0.31	<0.015	0.179	<0.007	0.012	0.036
JUN 18...	9	1.09	1.9	14	0.03	38.6	24	0.17	E.009	0.185	<0.007	0.007	0.019
JUL 09...	9	1.04	1.7	14	0.03	17.8	19	0.21	E.010	0.137	0.009	0.015	0.025
JUL 23...	9	1.05	1.6	14	0.03	14.4	20	0.18	<0.015	0.173	0.019	0.028	0.035
AUG 13...	14	1.05	2.2	20	0.04	11.1	27	0.33	0.019	0.055	0.009	0.014	0.034
SEP 10...	22	1.27	3.2	27	0.05	24.4	39	0.28	E.014	0.075	<0.007	0.011	0.031

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 09...	0.3	1.2	52	0.09	2.4	<0.02	0.37	<0.20
NOV 20...	E.1	1.3	30	0.10	2.3	<0.02	0.39	<0.20
DEC 11...	E.2	0.9	34	E.07	2.6	<0.02	0.63	<0.20
JAN 15...	<0.3	0.8	20	0.17	2.1	<0.02	0.48	<0.20
FEB 12...	<0.3	0.9	22	<0.08	1.5	<0.02	0.42	<0.20
MAR 26...	0.3	1.7	58	0.16	7.8	<0.02	0.49	<0.20
APR 16...	E.2	3.7	54	E.06	4.4	<0.02	0.61	<0.20
MAY 07...	E.2	1.5	90	0.09	7.7	<0.02	0.57	<0.20
MAY 21...	E.2	5.2	93	E.06	4.5	<0.02	0.37	<0.20
JUN 04...	E.1	1.6	75	0.13	6.3	<0.02	0.33	<0.20
JUN 18...	<0.3	1.2	68	<0.08	7.0	<0.02	0.28	<0.20
JUL 09...	<0.3	13.6	52	0.11	3.1	<0.02	0.24	<0.20
JUL 23...	<0.3	1.4	58	<0.08	2.5	<0.02	0.19	<0.20
AUG 13...	E.2	20.3	63	<0.08	2.9	<0.02	0.31	<0.20
SEP 10...	E.2	1.2	39	E.05	1.3	<0.02	0.17	<0.20

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

PLATTE RIVER BASIN

BIG THOMPSON PROJECT—Continued

402518105131300 BIG THOMPSON RIVER BELOW BIG THOMPSON POWER PLANT NEAR LOVELAND, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT					
09...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV					
20...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC					
11...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB					
12...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR					
26...	<0.4	<0.4	<0.4	<0.4	<0.4
APR					
16...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY					
07...	<0.4	<0.4	<0.4	<0.4	<0.4
21...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN					
04...	<0.4	<0.4	<0.4	<0.4	<0.4
18...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL					
09...	<0.4	<0.4	<0.4	<0.4	<0.4
23...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP					
10...	<0.4	<0.4	<0.4	<0.4	<0.4

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

BIG THOMPSON PROJECT—Continued

402533105124300 BIG THOMPSON RIVER BELOW SULZER GULCH NEAR LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°25'33", long 105°12'43", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.5 N., R.70 W., Larimer County, Hydrologic Unit 10190006, approximately 230 ft downstream of bridge upstream of dam and Loveland Water Treatment Plant intake, approximately 1.2 mi from Hwy 34, and approximately 8.3 mi west of Loveland.

DRAINAGE AREA.--309 mi².

PERIOD OF RECORD.--August 2000 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=402533105124300

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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													
09...	1240	61	3.6	--	8.1	57	12.0	21	6.26	1.25	0.86	0.3	3.49
NOV													
20...	1225	28	1.0	12.5	9.0	64	2.5	21	6.30	1.34	0.78	0.4	3.84
DEC													
11...	1210	28	<1.0	13.2	8.7	80	1.0	27	8.07	1.63	0.97	0.4	4.66
JAN													
15...	1220	28	<1.0	12.4	8.2	73	0.5	26	7.81	1.59	1.00	0.4	4.29
FEB													
12...	1250	30	<1.0	13.4	8.6	83	1.0	28	8.30	1.71	1.03	0.4	5.14
MAR													
26...	1305	72	4.5	10.1	8.2	150	8.5	45	13.0	3.08	1.48	0.6	9.22
APR													
16...	1135	167	3.2	9.8	8.2	105	9.0	34	9.88	2.34	1.18	0.4	5.94
MAY													
07...	1240	129	5.2	9.7	8.3	93	10.0	29	8.29	2.09	0.89	0.4	5.32
21...	1250	424	4.2	9.3	8.0	69	11.5	23	6.61	1.68	0.85	0.4	4.16
JUN													
04...	1305	1,080	6.6	9.3	7.2	29	10.0	11	3.15	0.727	0.59	0.2	1.68
18...	1230	534	3.6	9.2	7.3	27	11.5	10	2.94	0.690	0.42	0.2	1.54
JUL													
09...	1240	419	2.0	8.4	7.4	24	16.5	8	2.49	0.546	0.37	0.2	1.48
23...	1125	250	2.9	7.8	7.3	24	18.0	9	2.56	0.519	0.38	0.2	1.44
AUG													
13...	1150	156	2.9	7.8	7.7	35	20.0	14	4.00	0.853	0.43	0.2	1.66
SEP													
10...	1225	245	2.8	8.6	8.1	53	16.0	21	6.17	1.31	0.58	0.2	2.09

PLATTE RIVER BASIN
BIG THOMPSON PROJECT—Continued

402533105124300 BIG THOMPSON RIVER BELOW SULZER GULCH NEAR LOVELAND, CO—Continued

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO ₃ (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT 09...	E24	2.24	3.2	--	--	--	28	0.29	E.008	0.023	0.021	0.032	0.047
NOV 20...	24	3.04	3.5	34	0.05	2.94	40	0.18	<0.015	0.196	0.007	0.014	0.019
DEC 11...	E28	3.40	4.0	--	--	--	51	0.24	<0.015	0.470	0.014	0.025	0.038
JAN 15...	28	2.38	3.7	40	0.06	3.45	46	0.26	0.064	0.472	0.039	0.043	0.060
FEB 12...	31	3.69	<0.2	--	--	--	49	0.27	0.032	0.473	0.026	0.033	0.043
MAR 26...	28	13.2	11.6	76	0.13	18.9	97	0.51	0.018	1.68	0.022	0.034	0.059
APR 16...	29	8.03	7.4	53	0.09	29.0	64	0.41	<0.015	0.205	E.005	0.015	0.043
MAY 07...	22	9.07	7.2	47	0.09	23.1	66	0.41	E.011	0.139	E.006	0.014	0.044
MAY 21...	18	5.42	5.4	36	0.08	63.9	56	0.41	0.017	0.167	E.005	0.013	0.038
JUN 04...	10	1.46	2.3	17	0.04	88.6	30	0.27	<0.015	0.173	<0.007	0.011	0.034
JUN 18...	10	1.18	2.0	15	0.04	38.1	26	0.22	E.008	0.193	<0.007	0.008	0.020
JUL 09...	9	1.03	1.7	14	0.03	26.8	24	0.21	E.010	0.135	0.010	0.015	0.025
JUL 23...	9	1.02	1.8	14	0.03	12.7	19	0.26	E.012	0.154	0.020	0.027	0.034
AUG 13...	14	0.97	2.3	19	0.04	12.5	30	0.24	0.017	0.054	0.009	0.016	0.029
SEP 10...	22	1.32	3.3	28	0.05	25.8	39	0.29	0.016	0.072	E.005	0.011	0.032

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 09...	0.3	1.2	58	E.06	4.1	<0.02	0.37	<0.20
NOV 20...	E.1	0.8	46	E.05	4.7	<0.02	0.40	<0.20
DEC 11...	E.2	0.9	49	0.09	4.9	<0.02	0.59	<0.20
JAN 15...	E.2	0.9	27	0.19	4.2	<0.02	0.50	<0.20
FEB 12...	<0.3	0.9	30	<0.08	3.4	<0.02	0.43	<0.20
MAR 26...	0.3	1.6	60	E.05	5.8	<0.02	0.53	<0.20
APR 16...	E.2	3.7	56	E.05	5.0	<0.02	0.62	<0.20
MAY 07...	E.2	1.6	99	E.06	8.1	<0.02	0.59	<0.20
MAY 21...	E.2	3.6	82	E.06	5.3	<0.02	0.50	<0.20
JUN 04...	E.1	110	70	E.05	6.7	<0.02	0.55	<0.20
JUN 18...	<0.3	1.1	66	E.06	7.0	<0.02	0.33	<0.20
JUL 09...	<0.3	5.9	54	E.07	3.5	<0.02	0.21	<0.20
JUL 23...	<0.3	62.9	52	<0.08	4.0	<0.02	0.19	<0.20
AUG 13...	E.2	9.8	51	0.11	3.8	<0.02	0.30	<0.20
SEP 10...	E.2	1.9	40	0.09	2.3	<0.02	0.16	<0.20

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

BIG THOMPSON PROJECT—Continued

402533105124300 BIG THOMPSON RIVER BELOW SULZER GULCH NEAR LOVELAND, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT					
09...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV					
20...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC					
11...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB					
12...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR					
26...	<0.4	<0.4	<0.4	<0.4	<0.4
APR					
16...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY					
07...	<0.4	<0.4	<0.4	<0.4	<0.4
21...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN					
04...	<0.4	<0.4	<0.4	<0.4	<0.4
18...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL					
09...	<0.4	<0.4	<0.4	<0.4	<0.4
23...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP					
10...	<0.4	<0.4	<0.4	<0.4	<0.4

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

PLATTE RIVER BASIN
BIG THOMPSON PROJECT—Continued

06741510 BIG THOMPSON RIVER AT LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°22'43", long 105°03'38", in SE¹/₄SE¹/₄ sec.24, T.5 N., R.69 W., Larimer County, Hydrologic Unit 10190006, on right bank 690 ft downstream from county road bridge C-13, 1.7 mi south of sugar refinery in Loveland, and 1.9 mi downstream from Farmers Ditch diversion.

DRAINAGE AREA.--535 mi².

PERIOD OF RECORD.--July 1979 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=06741510

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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													
10...	0855	20	4.3	--	8.0	449	12.0	200	55.6	15.2	1.35	0.5	16.0
NOV													
20...	1340	4.3	1.5	10.1	7.9	1,330	7.5	660	164	61.0	3.57	1	66.8
DEC													
11...	1410	3.3	2.4	11.1	8.3	1,450	4.0	700	172	65.4	3.17	1	78.7
JAN													
15...	1350	3.0	1.2	9.2	8.3	1,450	3.5	720	175	68.6	3.28	1	79.4
FEB													
12...	1350	2.5	1.8	12.7	8.4	1,510	4.0	740	181	70.2	3.28	1	79.9
MAR													
27...	0855	4.9	3.8	10.2	7.8	1,510	8.0	730	180	67.6	3.43	1	83.5
APR													
16...	1310	5.3	2.1	10.7	8.4	1,600	15.0	740	184	68.8	3.48	1	76.6
MAY													
08...	1005	4.4	2.6	8.1	7.7	1,530	15.0	710	175	66.3	3.99	1	74.6
22...	0830	3.6	3.3	6.1	7.8	1,710	14.5	780	174	83.7	4.30	2	110
JUN													
05...	0840	125	6.6	9.5	7.7	122	10.0	47	12.5	3.84	0.77	0.3	5.05
19...	0835	196	70	8.2	7.8	213	13.5	83	22.0	6.78	2.06	0.4	8.25
JUL													
10...	0835	49	2.6	7.9	7.8	547	17.0	220	46.8	24.2	1.53	0.8	28.5
23...	1250	79	4.1	8.3	8.3	665	21.5	270	59.6	30.1	1.94	0.9	33.2
AUG													
13...	1300	71	13	8.7	8.4	574	23.0	260	61.8	24.5	2.00	0.7	24.6
SEP													
10...	1350	20	16	9.9	8.5	759	18.5	290	68.8	29.8	2.16	0.8	29.6

BIG THOMPSON PROJECT—Continued

06741510 BIG THOMPSON RIVER AT LOVELAND, CO—Continued

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT 10...	E77	5.41	142	--	--	--	295	0.24	<0.015	0.091	<0.007	0.008	0.017
NOV 20...	178	23.1	575	1,000	1.50	12.8	1,100	0.20	E.010	0.338	<0.007	E.004	0.004
DEC 11...	E183	25.3	616	--	--	--	1,170	0.18	0.028	0.434	<0.007	0.006	0.010
JAN 15...	180	24.4	617	1,080	1.62	9.67	1,190	0.20	0.029	0.412	<0.007	0.006	0.013
FEB 12...	181	29.7	650	1,120	1.66	8.22	1,220	0.21	0.060	0.351	<0.007	E.003	0.014
MAR 27...	170	32.6	636	1,110	1.66	16.1	1,220	0.35	0.046	0.388	<0.007	0.007	0.014
APR 16...	172	30.3	638	1,110	1.65	17.4	1,220	0.31	0.045	0.278	<0.007	0.007	0.020
MAY 08...	185	33.3	653	1,120	1.69	14.7	1,240	0.30	0.063	0.353	<0.007	0.007	0.014
MAY 22...	220	40.0	675	1,220	1.88	13.5	1,380	0.46	0.160	0.753	E.005	0.010	0.025
JUN 05...	23	2.82	29.2	69	0.12	30.4	90	0.98	<0.015	0.197	0.007	0.017	0.040
JUN 19...	40	3.90	50.4	120	0.21	79.9	151	1.1	0.050	0.444	0.032	0.049	0.19
JUL 10...	55	6.07	204	345	0.52	50.6	382	1.0	0.021	0.191	E.006	0.012	0.029
JUL 23...	70	7.67	255	430	0.63	99.2	465	0.40	E.010	0.122	E.006	0.014	0.041
AUG 13...	81	8.12	194	364	0.54	75.6	394	0.39	<0.015	0.099	<0.007	0.009	0.042
SEP 10...	103	11.9	271	475	0.74	29.5	546	0.49	E.011	0.105	<0.007	0.010	0.052

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 10...	0.5	1.4	33	E.05	20.1	<0.02	1.97	<0.2
NOV 20...	0.6	1.8	27	E.05	52.5	<0.02	6.81	<0.2
DEC 11...	0.5	2.5	24	<0.08	48.4	<0.02	9.02	<0.2
JAN 15...	0.5	2.3	16	0.12	48.3	<0.02	6.67	<0.2
FEB 12...	0.4	3.2	15	<0.08	54.3	<0.02	6.11	<0.2
MAR 27...	0.8	3.3	38	<0.08	96.6	<0.02	3.18	<0.2
APR 16...	0.7	3.6	27	<0.08	72.1	<0.02	6.90	<0.2
MAY 08...	0.8	2.5	30	<0.08	116	<0.02	7.45	<0.2
MAY 22...	0.6	7.5	27	<0.08	159	<0.02	2.69	<0.2
JUN 05...	E.2	1.9	66	E.04	15.3	<0.02	0.48	<0.2
JUN 19...	0.4	2.3	58	E.06	14.7	<0.02	1.14	<0.2
JUL 10...	0.4	2.5	37	<0.08	31.2	<0.02	1.75	<0.2
JUL 23...	1.1	2.3	16	<0.08	37.2	<0.02	2.37	<0.2
AUG 13...	1.1	1.5	15	<0.08	18.8	<0.02	3.43	<0.2
SEP 10...	0.9	2.9	E5	<0.08	31.7	<0.02	1.22	<0.2

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

PLATTE RIVER BASIN

BIG THOMPSON PROJECT—Continued

06741510 BIG THOMPSON RIVER AT LOVELAND, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT					
10...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV					
20...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC					
11...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB					
12...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR					
27...	<0.4	<0.4	<0.4	<0.4	<0.4
APR					
16...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY					
08...	<0.4	<0.4	<0.4	<0.4	<0.4
22...	<0.4	<0.4	<0.4	<0.4	<0.4
JUN					
05...	<0.4	<0.4	<0.4	<0.4	<0.4
19...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL					
10...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP					
10...	<0.4	<0.4	<0.4	<0.4	<0.4

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

BIG THOMPSON PROJECT—Continued

06741520 BIG THOMPSON RIVER BELOW LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°23'00", long 105°01'45", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.20, T.5 N., R.68 W., Larimer County, Hydrologic Unit 10190006, at county road 9E bridge, about 0.3 mi upstream from outlet ditch and 2.0 mi southeast of Loveland.

DRAINAGE AREA.--543 mi².

PERIOD OF RECORD.--June 1979 to December 1992, and March 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=06741520

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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													
10...	1005	40	540	--	7.3	548	12.5	220	56.4	19.1	3.04	0.9	30.2
NOV													
21...	0920	11	1.5	8.2	7.6	1,090	8.5	400	95.5	39.6	7.43	2	76.0
DEC													
12...	0840	8.7	2.7	6.9	7.6	1,110	5.5	400	92.8	40.8	7.70	2	82.5
JAN													
16...	0850	7.1	2.9	5.7	7.6	1,090	4.5	390	90.3	38.7	9.36	2	84.0
FEB													
13...	0910	8.8	2.2	5.9	7.2	1,170	6.5	400	93.7	39.2	8.29	2	86.0
MAR													
27...	1035	16	10	9.6	8.2	1,460	9.0	600	138	61.4	6.23	2	108
APR													
17...	0835	11	3.0	6.9	7.9	1,450	10.5	550	119	62.1	8.19	2	118
MAY													
08...	1150	16	3.0	11.0	8.5	1,380	15.0	530	122	54.8	7.38	2	93.9
22...	0945	17	2.9	6.9	7.9	1,400	16.0	500	105	57.6	8.29	2	122
JUN													
05...	1015	140	5.6	9.1	8.0	251	11.5	83	20.0	8.10	1.63	0.7	15.4
19...	0930	204	74	7.7	8.1	390	14.0	130	31.2	12.9	3.03	0.9	24.1
JUL													
10...	0945	72	2.4	7.9	8.1	637	18.5	230	50.6	26.3	2.83	1	40.0
24...	0840	79	11	7.4	7.9	732	19.5	290	63.6	32.2	2.79	1	42.9
AUG													
14...	0915	80	13	7.2	8.0	627	20.5	260	61.8	25.7	2.72	0.9	32.0
SEP													
11...	0845	43	13	7.3	7.9	853	15.5	320	72.3	33.2	3.29	1	45.3

PLATTE RIVER BASIN
BIG THOMPSON PROJECT—Continued

06741520 BIG THOMPSON RIVER BELOW LOVELAND, CO—Continued

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT 10...	E81	11.2	163	--	--	--	363	1.8	0.072	3.48	0.360	0.39	1.09
NOV 21...	105	36.0	352	732	1.08	23.4	794	0.98	0.053	12.7	1.88	1.99	1.89
DEC 12...	E107	36.8	356	--	--	--	797	1.3	0.093	11.4	2.13	2.14	2.49
JAN 16...	133	38.5	333	726	1.04	14.6	764	7.1	5.66	8.50	2.34	2.53	2.74
FEB 13...	140	45.0	345	748	1.04	18.1	763	8.5	6.51	7.00	2.34	2.51	2.82
MAR 27...	173	43.8	550	1,030	1.49	46.7	1,090	4.2	2.63	3.31	0.95	1.10	1.25
APR 17...	155	43.3	525	1,010	1.48	33.6	1,090	2.8	1.35	6.85	1.50	1.67	1.78
MAY 08...	142	44.6	502	947	1.44	45.6	1,060	2.2	0.818	7.34	1.22	1.48	1.61
MAY 22...	152	45.5	482	960	1.42	47.7	1,050	2.8	1.30	9.29	1.69	1.95	1.94
JUN 05...	34	7.20	63.5	143	0.22	61.5	163	0.51	0.024	1.22	0.220	0.24	0.28
JUN 19...	52	7.82	114	230	0.35	143	259	1.2	0.072	1.11	0.143	0.163	0.32
JUL 10...	67	11.3	222	404	0.61	87.3	449	0.50	0.045	2.27	0.365	0.42	0.42
JUL 24...	82	11.7	268	478	0.71	112	522	0.54	0.030	1.69	0.246	0.27	0.29
AUG 14...	85	11.3	203	396	0.59	94.3	437	0.81	0.015	1.88	0.271	0.27	0.34
SEP 11...	109	17.9	295	548	0.85	72.5	623	0.69	0.031	3.23	0.432	0.51	0.57

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 10...	1.3	1.5	E8	0.23	68.3	<0.02	2.21	<0.20
NOV 21...	0.6	3.8	57	0.54	68.5	<0.02	4.87	<0.20
DEC 12...	0.5	4.0	73	0.52	88.6	<0.02	6.04	M
JAN 16...	0.5	6.5	79	0.58	77.5	<0.02	5.04	M
FEB 13...	0.5	5.2	77	0.68	69.0	<0.02	4.49	M
MAR 27...	0.7	3.5	45	0.57	84.3	<0.02	3.50	<0.20
APR 17...	0.8	3.6	53	0.34	105	<0.02	5.59	<0.20
MAY 08...	0.9	3.4	45	0.32	56.8	<0.02	5.91	<0.20
MAY 22...	0.9	6.7	57	0.45	96.9	<0.02	2.91	<0.20
JUN 05...	0.3	1.9	66	E.06	20.3	<0.02	1.06	<0.20
JUN 19...	0.6	2.2	50	0.09	20.3	<0.02	1.57	<0.20
JUL 10...	0.5	3.0	38	0.15	36.6	<0.02	2.15	<0.20
JUL 24...	1.0	3.0	17	0.08	36.0	<0.02	2.71	<0.20
AUG 14...	1.0	2.0	16	0.12	19.8	<0.02	3.71	<0.20
SEP 11...	0.9	3.3	31	0.12	28.9	<0.02	1.32	<0.20

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

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

BIG THOMPSON PROJECT—Continued

06741520 BIG THOMPSON RIVER BELOW LOVELAND, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT					
10...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV					
21...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC					
12...	<0.4	<0.4	M	<0.4	<0.4
JAN					
16...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB					
13...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR					
27...	<0.4	<0.4	<0.4	<0.4	<0.4
APR					
17...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY					
08...	<0.4	<0.4	<0.4	<0.4	M
22...	<0.4	<0.4	<0.4	<0.4	M
JUN					
05...	<0.4	<0.4	<0.4	<0.4	<0.4
19...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL					
10...	<0.4	<0.4	<0.4	<0.4	<0.4
24...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP					
11...	<0.4	<0.4	<0.4	<0.4	<0.4

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

PLATTE RIVER BASIN
BIG THOMPSON PROJECT

06741530 BIG THOMPSON RIVER AT I-25 NEAR LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°23'51", long 104°59'32", in NW¹/₄SW¹/₄ sec.15, T.5 N., R.68 W., Larimer County, Hydrologic Unit 10190006, at bridge on Big Thompson River on north bound lane of service road, east of Interstate Highway 25 (I-25), 1.5 mi downstream from Hillsboro Ditch, and 4.5 mi east of Loveland.

DRAINAGE AREA.--571mi².

PERIOD OF RECORD.--April 1987 to December 1992, and March 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=06741530

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (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													
10...	1110	1.3	2.7	--	8.2	941	13.0	400	94.3	39.2	3.66	1	52.7
NOV													
21...	1035	7.8	1.5	11.1	8.1	1,130	8.0	410	93.6	42.2	7.30	2	81.3
DEC													
12...	1040	7.3	2.0	10.0	7.3	1,190	4.0	450	104	47.1	7.41	2	85.6
JAN													
16...	1035	6.8	1.8	8.7	8.1	1,190	2.5	470	108	48.5	8.81	2	88.1
FEB													
13...	1040	8.2	2.3	8.4	8.1	1,190	5.0	440	101	45.1	8.00	2	88.9
MAR													
27...	1220	21	7.8	12.0	8.4	1,650	8.0	660	142	74.0	6.59	2	135
APR													
17...	1005	12	4.2	10.0	8.4	1,480	11.0	580	126	63.9	7.70	2	114
MAY													
08...	1315	16	3.5	7.0	8.1	1,420	13.5	530	118	56.0	7.91	2	110
22...	1110	11	2.1	6.0	7.9	1,470	16.5	560	119	64.0	8.03	2	117
JUN													
05...	1115	91	11	8.8	8.1	305	12.5	110	25.3	11.4	1.61	0.7	17.8
19...	1100	172	79	7.6	8.0	470	15.5	160	37.6	16.8	3.66	1	29.6
JUL													
10...	1055	38	36	9.3	8.4	635	18.5	240	55.5	25.7	2.50	1	37.8
24...	0955	41	9.7	8.0	7.9	703	21.0	270	62.3	28.9	2.55	1	39.5
AUG													
14...	1030	30	10	7.6	8.1	651	21.0	280	66.6	28.1	2.89	0.9	36.4
SEP													
11...	0955	18	6.7	8.5	8.2	832	15.5	310	70.3	31.5	3.10	1	44.0

BIG THOMPSON PROJECT—Continued

06741530 BIG THOMPSON RIVER AT I-25 NEAR LOVELAND, CO—Continued

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

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	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)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT 10...	E127	16.4	322	--	--	--	664	0.50	0.023	5.28	0.641	0.73	0.70
NOV 21...	115	34.9	373	763	1.13	17.6	833	0.93	0.026	12.6	1.88	2.07	1.95
DEC 12...	E132	34.3	394	--	--	--	852	1.0	0.054	9.70	1.87	1.87	2.26
JAN 16...	151	35.7	395	821	1.19	16.1	874	5.0	3.65	8.13	2.11	2.31	2.50
FEB 13...	148	41.4	381	798	1.13	18.3	829	5.5	3.98	7.18	2.17	2.25	2.54
MAR 27...	199	42.1	636	1,180	1.75	71.6	1,290	3.8	2.50	3.63	0.95	1.10	1.14
APR 17...	161	42.5	533	1,020	1.50	36.9	1,100	2.5	1.20	7.32	1.69	1.84	1.96
MAY 08...	145	43.9	508	973	1.44	45.4	1,060	2.8	1.47	7.93	1.49	1.75	1.82
MAY 22...	163	43.8	529	1,020	1.51	34.0	1,110	2.8	1.46	7.70	1.46	1.73	1.70
JUN 05...	44	6.76	82.3	176	0.27	49.1	199	0.58	0.037	0.877	0.159	0.179	0.27
JUN 19...	62	8.21	145	283	0.43	148	319	1.5	0.093	0.944	0.125	0.149	0.34
JUL 10...	84	10.2	217	405	0.60	45.4	441	0.76	0.027	1.22	0.196	0.22	0.34
JUL 24...	90	11.4	243	448	0.66	54.0	487	0.52	0.024	1.26	0.194	0.21	0.25
AUG 14...	97	11.2	208	419	0.60	35.2	442	0.52	0.026	1.46	0.217	0.23	0.28
SEP 11...	123	16.6	276	532	0.81	29.5	596	0.58	0.031	3.41	0.411	0.49	0.55

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

Date	Arsenic water, fltrd, ug/L (01000)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)
OCT 10...	1.0	3.3	27	0.18	29.1	<0.02	3.23	<0.2
NOV 21...	0.6	3.5	49	0.47	46.2	<0.02	4.85	<0.2
DEC 12...	0.7	4.0	57	0.49	65.4	<0.02	6.56	<0.2
JAN 16...	0.6	5.7	67	0.74	86.1	<0.02	5.64	E.1
FEB 13...	0.6	4.6	59	0.65	76.1	<0.02	4.83	<0.2
MAR 27...	0.9	3.6	37	0.51	106	<0.02	3.70	<0.2
APR 17...	0.8	3.4	52	0.29	112	<0.02	5.53	<0.2
MAY 08...	1.0	2.8	56	0.32	83.4	<0.02	5.54	<0.2
MAY 22...	1.0	6.7	49	0.33	90.6	<0.02	2.86	<0.2
JUN 05...	0.4	2.1	58	E.07	26.5	<0.02	0.78	<0.2
JUN 19...	0.7	2.1	47	0.14	25.6	<0.02	1.82	<0.2
JUL 10...	0.8	2.0	17	0.10	24.2	<0.02	2.34	<0.2
JUL 24...	1.1	2.9	16	E.05	25.6	<0.02	2.68	<0.2
AUG 14...	1.1	1.5	12	<0.08	24.0	<0.02	3.67	<0.2
SEP 11...	1.0	3.0	14	0.10	31.7	<0.02	1.06	<0.2

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

PLATTE RIVER BASIN

BIG THOMPSON PROJECT—Continued

06741530 BIG THOMPSON RIVER AT I-25 NEAR LOVELAND, CO—Continued

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

Date	Benzene water unfltrd ug/L (34030)	Ethyl- benzene water unfltrd ug/L (34371)	meta- + para- Xylene, water, unfltrd ug/L (85795)	o- Xylene, water, unfltrd ug/L (77135)	Toluene water unfltrd ug/L (34010)
OCT					
10...	<0.4	<0.4	<0.4	<0.4	<0.4
NOV					
21...	<0.4	<0.4	<0.4	<0.4	<0.4
DEC					
12...	<0.4	<0.4	<0.4	<0.4	<0.4
JAN					
16...	<0.4	<0.4	<0.4	<0.4	<0.4
FEB					
13...	<0.4	<0.4	<0.4	<0.4	<0.4
MAR					
27...	<0.4	<0.4	<0.4	<0.4	<0.4
APR					
17...	<0.4	<0.4	<0.4	<0.4	<0.4
MAY					
08...	<0.4	<0.4	<0.4	<0.4	M
22...	<0.4	<0.4	<0.4	<0.4	M
JUN					
05...	<0.4	<0.4	<0.4	<0.4	<0.4
19...	<0.4	<0.4	<0.4	<0.4	<0.4
JUL					
10...	<0.4	<0.4	<0.4	<0.4	<0.4
24...	<0.4	<0.4	<0.4	<0.4	<0.4
AUG					
15...	<0.4	<0.4	<0.4	<0.4	<0.4
SEP					
11...	<0.4	<0.4	<0.4	<0.4	<0.4

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

PUEBLO COUNTY

382323104200701. SC01906221AAA Pueblo Drought Well

LOCATION.--Lat 38°23'23", long 104°20'09", in NE¹/₄NE¹/₄NE¹/₄ sec.21, T.19 S., R.62 W., Pueblo County, Hydrologic Unit 11020005, 0.1 mi east of DOT Road, 9.0 mi north of U.S. Highway 50, and 20 mi northeast of Pueblo.

AQUIFER.--Terrace deposits.

WELL CHARACTERISTICS.--Drilled, observation well, diameter 2 in., depth 90 ft.

INSTRUMENTATION.--Water-level recorder with satellite telemetry.

DATUM.--Elevation of land-surface datum is 4,843.25 ft above NAVD of 1988. Measuring point: top of 2.4 in. PVC pipe above well casing, 1.10 ft above land-surface datum.

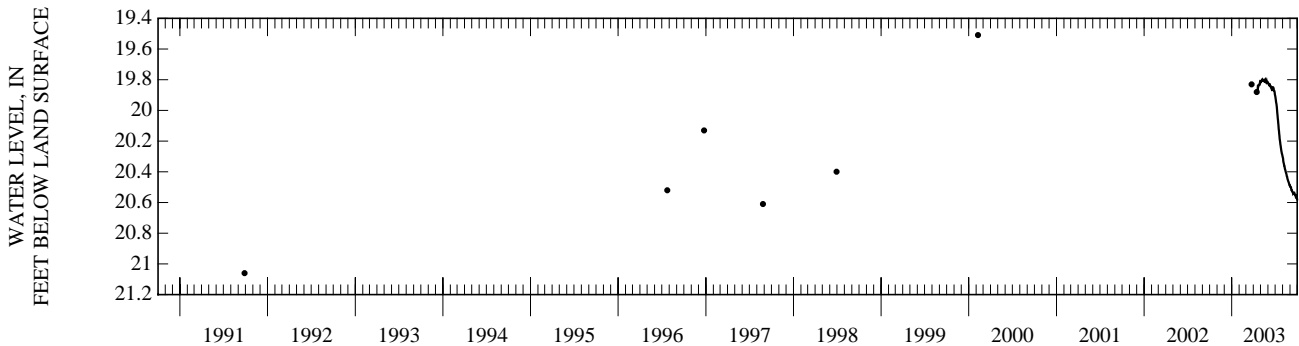
REMARKS.--Daily data that are not published are either missing or of unacceptable quality.

PERIOD OF RECORD.--Daily record from April to September 2003. Intermittent measurements made prior to April 2003 not previously published. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382323104200701

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.77 ft below land-surface datum, May 5, 2003; lowest, 21.07 ft, Sep. 27, 1991, from manual measurement.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	19.82	19.82	19.91	20.31	20.50
2	---	---	---	---	---	---	---	19.81	19.82	19.92	20.31	20.50
3	---	---	---	---	---	---	---	19.81	19.83	19.93	20.33	20.50
4	---	---	---	---	---	---	---	19.81	19.83	19.95	20.34	20.50
5	---	---	---	---	---	---	---	19.80	19.83	19.95	20.34	20.51
6	---	---	---	---	---	---	---	19.80	19.83	19.96	20.35	20.52
7	---	---	---	---	---	---	---	19.81	19.83	19.98	20.36	20.52
8	---	---	---	---	---	---	---	19.80	19.83	20.00	20.36	20.52
9	---	---	---	---	---	---	---	19.80	19.84	20.02	20.37	20.53
10	---	---	---	---	---	---	---	19.81	19.84	20.03	20.38	20.53
11	---	---	---	---	---	---	---	19.81	19.84	20.05	20.39	20.53
12	---	---	---	---	---	---	---	19.80	19.85	20.06	20.39	20.53
13	---	---	---	---	---	---	---	19.81	19.85	20.08	20.40	20.54
14	---	---	---	---	---	---	19.88	19.81	19.85	20.10	20.40	20.54
15	---	---	---	---	---	---	19.87	19.80	19.86	20.12	20.41	20.54
16	---	---	---	---	---	---	19.88	19.81	19.86	20.13	20.41	20.54
17	---	---	---	---	---	---	19.87	19.81	19.87	20.15	20.42	20.54
18	---	---	---	---	---	---	19.87	19.80	19.87	20.17	20.43	20.54
19	---	---	---	---	---	---	19.85	19.81	19.86	20.19	20.43	20.54
20	---	---	---	---	---	---	19.85	19.81	19.85	20.20	20.44	20.55
21	---	---	---	---	---	---	19.85	19.81	19.85	20.21	20.45	20.55
22	---	---	---	---	---	---	19.84	19.81	19.85	20.22	20.45	20.55
23	---	---	---	---	---	---	19.83	19.81	19.85	20.23	20.46	20.55
24	---	---	---	---	---	---	19.83	19.81	19.86	20.24	20.46	20.56
25	---	---	---	---	---	---	19.84	19.81	19.87	20.25	20.47	20.56
26	---	---	---	---	---	---	19.83	19.81	19.87	20.26	20.47	20.56
27	---	---	---	---	---	---	19.83	19.82	19.87	20.27	20.48	20.56
28	---	---	---	---	---	---	19.82	19.82	19.88	20.28	20.48	20.57
29	---	---	---	---	---	---	19.82	19.82	19.90	20.28	20.49	20.57
30	---	---	---	---	---	---	19.82	19.82	19.90	20.29	20.49	20.59
31	---	---	---	---	---	---	---	19.82	---	20.30	20.49	---
MEAN	---	---	---	---	---	---	---	19.81	19.85	20.12	20.41	20.54
MAX	---	---	---	---	---	---	---	19.82	19.90	20.30	20.49	20.59
MIN	---	---	---	---	---	---	---	19.80	19.82	19.91	20.31	20.50



QUALITY OF GROUND WATER

EL PASO COUNTY

384056104415601 - SC01606505CCB - FOUNTAIN NO. 3

LOCATION.--Lat 38°40'56", long 104°41'56", in NW¹/₄SW¹/₄SW¹/₄ sec.5, T.16 S., R.65 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Fountain Creek Alluvial Aquifer.

WELL CHARACTERISTICS.--Municipal well, diameter 16 in. (24 in. prior to 1989), depth 53 ft, screened 38 to 53 ft.

DATUM.--Elevation of land-surface datum is 5,540 ft above sea level, from topographic map.

PERIOD OF RECORD.--March 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=384056104415601

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 03...	1115	7.2	999	13.5	E.008	2.00	<0.008	E.01
AUG 12...	1050	7.2	1,010	13.0	E.013	2.12	<0.008	E.02

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

E -- Estimated laboratory analysis value.

384108104420701 - SC01606506DAA - FOUNTAIN NO. 2

LOCATION.--Lat 38°41'08", long 104°42'07", in NE¹/₄NE¹/₄SE¹/₄ sec.6, T.16 S., R.65 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Fountain Creek Alluvial Aquifer.

WELL CHARACTERISTICS.--Municipal well, diameter 16 in. (24 in. prior to 1990), depth 57 ft, screened 42 to 57 ft.

DATUM.--Elevation of land-surface datum is 5,549.6 ft above sea level, from levels.

PERIOD OF RECORD.--March 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=384108104420701

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 03...	1145	7.3	1,160	12.5	E.014	1.15	<0.008	E.01
AUG 12...	1120	7.6	1,190	13.0	0.016	2.81	<0.008	0.02

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

E -- Estimated laboratory analysis value.

384323104432201 - SC01506625AAB - WIDEFIELD NO. 5

LOCATION.--Lat 38°43'23", long 104°43'22", in NW¹/₄NE¹/₄NE¹/₄ sec.25, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Municipal well, diameter 16 in., depth 47 ft, screened 26.5 to 46.5 ft.

DATUM.--Elevation of land-surface datum is 5,640 ft above sea level, from topographic map.

PERIOD OF RECORD.--February 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=384323104432201

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 03...	1245	7.5	1,060	14.0	E.014	4.89	<0.008	0.04
AUG 12...	1400	7.4	1,160	13.5	0.023	6.50	<0.008	0.04

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

384345104241401 - SC01506324CBB - SWEET WATER NO. 1

LOCATION.--Lat 38°43'45", long 104°24'11", in NW¹/₄NW¹/₄SW¹/₄ sec.24, T.15 S., R.63 W., El Paso County, Hydrologic Unit 11020004.

AQUIFER.--Black Squirrel Alluvial Aquifer.

WELL CHARACTERISTICS.--Public-supply well, diameter 16 in., depth 152 ft, screened 112 to 152 ft.

DATUM.--Elevation of land-surface datum is 5,712 ft above sea level, from topographic map.

PERIOD OF RECORD.--February 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=384345104241401

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 04...	1040	7.6	314	13.5	<0.015	4.53	<0.008	0.06
AUG 11...	1415	7.4	316	13.5	<0.015	4.76	<0.008	<0.18

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

QUALITY OF GROUND WATER

EL PASO COUNTY—Continued

384407104434801 - SC01506624BAD1 - WIDEFIELD NO. 4

LOCATION.--Lat 38°44'07", long 104°43'48", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.24, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Municipal well, diameter 16 in., depth 71 ft, screened 41 to 71 ft.

DATUM.--Elevation of land-surface datum is 5,685 ft above sea level, from topographic map.

PERIOD OF RECORD.--February 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=384407104434801

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 03...	1330	7.3	560	13.5	<0.015	5.90	<0.008	E.01
AUG 12...	1430	7.1	559	13.5	<0.015	6.21	<0.008	0.02

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

E -- Estimated laboratory analysis value.

384433104440702 - SC01506613CBD2 - U-14

LOCATION.--Lat 38°44'33", long 104°44'07", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.13 (revised), T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Monitor well, diameter 2 in., depth 73 ft, screened 69 to 71 ft.

DATUM.--Elevation of land-surface datum is 5,701 ft above sea level, from levels.

PERIOD OF RECORD.--October 1992 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=384433104440702

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 04...	1400	7.2	549	12.0	<0.015	6.46	<0.008	0.02
AUG 12...	1210	7.1	533	13.5	<0.015	7.22	<0.008	0.02

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

384458104442601 - SC01506614AAD - SECURITY NO. 2

LOCATION.--Lat 38°44'58", long 104°44'26", in SE¹/₄NE¹/₄NE¹/₄ sec.14, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Municipal well, diameter 24 in., depth 78 ft, screened 43 to 78 ft.

DATUM.--Elevation of land-surface datum is 5,715 ft above sea level, from topographic map.

PERIOD OF RECORD.--February 1981 to August 2001, August to September 2003. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=384458104442601

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
AUG 12...	1510	7.1	490	13.0	<0.015	7.35	<0.008	E.02

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

384459104443401 - SC01506614ABD - SECURITY NO. 16

LOCATION.--Lat 38°44'59", long 104°44'34", in SE¹/₄NW¹/₄NE¹/₄ sec.14, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Municipal well, diameter 24 in., depth 76 ft, screening unknown.

DATUM.--Elevation of land-surface datum is 5,719.6 ft above sea level, from levels.

PERIOD OF RECORD.--May 2002 to March 2003 (discontinued). For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=384459104443401

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 03...	1500	7.2	512	13.5	<0.015	6.86	<0.008	E.02

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

QUALITY OF GROUND WATER

EL PASO COUNTY—Continued

384535104450801 - SC01506611BCD2 - VENETUCCI NO. 3

LOCATION.--Lat 38°45'35", long 104°45'08", in SE¹/₄SW¹/₄NW¹/₄ sec.11, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Irrigation well, diameter 24 in., depth 80 ft, screening unknown.

DATUM.--Elevation of land-surface datum is 5,750 ft above sea level, from topographic map.

PERIOD OF RECORD.--February 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=384535104450801

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 04...	1315	7.2	517	12.0	<0.015	6.99	<0.008	0.06
AUG 12...	1620	7.2	534	13.0	E.008	6.50	<0.008	0.06

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

E -- Estimated laboratory analysis value.

384604104451502 - SC01506602CCC2 - U-9

LOCATION.--Lat 38°46'04", long 104°45'15", in SW¹/₄SW¹/₄SW¹/₄ sec.2, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Monitor well, diameter 2 in., depth 55 ft, screened 51 to 53 ft.

DATUM.--Elevation of land-surface datum is 5,773.8 ft above sea level, from levels.

PERIOD OF RECORD.--October 1992 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=384604104451502

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 03...	1715	8.2	650	12.5	<0.015	7.82	<0.008	0.11
AUG 11...	1905	8.0	621	13.5	<0.015	8.08	<0.008	0.12

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

384610104453501 - SC01506603DDB - SECURITY NO. 14

LOCATION.--Lat 38°46'10", long 104°45'35", in NW¹/₄SE¹/₄SE¹/₄ sec.14, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Municipal well, diameter 24 in., depth 80 ft, screened 39 to 80 ft.

DATUM.--Elevation of land-surface datum is 5,779.2 ft above sea level, from levels.

PERIOD OF RECORD.--February 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=384610104453501

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 03...	1530	7.2	592	13.5	<0.015	7.70	<0.008	0.04
AUG 12...	1545	7.0	580	13.0	<0.015	8.11	<0.008	0.04

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

384617104455901 - SC01506603CAD - STRATMOOR HILLS NO. 4

LOCATION.--Lat 38°46'17", long 104°45'59", in SE¹/₄NE¹/₄SW¹/₄ sec.3, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Municipal well, diameter 12 in. (16 in. prior to 1998), depth 49 ft, screened 29 to 49 ft.

DATUM.--Elevation of land-surface datum is 5,775.4 ft above sea level, from levels.

PERIOD OF RECORD.--February 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=384617104455901

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 03...	1615	7.5	680	13.5	E.010	6.72	<0.008	E.02
AUG 11...	1555	7.3	998	13.5	0.026	6.25	<0.008	0.02

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

E -- Estimated laboratory analysis value.

QUALITY OF GROUND WATER

EL PASO COUNTY—Continued

384639104461401 - SC01506603BAC1 - MARS GAS

LOCATION.--Lat 38°46'39", long 104°46'14", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.3, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Fountain Creek Alluvial Aquifer.

WELL CHARACTERISTICS.--Commercial well, diameter 6 in., depth 85 ft, screened 50 to 85 ft.

DATUM.--Elevation of land-surface datum is 5,820 ft above sea level, from topographic map.

PERIOD OF RECORD.--March 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=384639104461401

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 04...	1455	7.2	1,260	12.0	0.018	3.73	E.004	0.02
AUG 11...	1700	7.2	1,240	13.5	0.018	5.62	<0.008	0.02

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

E -- Estimated laboratory analysis value.

384653104451901 - SC01506602BBB - TH-18

LOCATION.--Lat 38°46'53", long 104°45'19", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.2, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Monitor well, diameter 2 in., depth 122 ft, screened 96 to 122 ft.

DATUM.--Elevation of land-surface datum is 5,889.6 ft above sea level, from levels.

PERIOD OF RECORD.--August 1991 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=384653104451901

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 07...	1040	7.2	461	13.0	<0.015	8.69	<0.008	0.08
AUG 11...	1205	7.0	458	13.5	<0.015	8.15	<0.008	<0.18

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

384718104463701 - SC01406633DAA - BARNES WELL

LOCATION.--Lat 38°47'18", long 104°46'37", in NE¹/₄NE¹/₄SE¹/₄ sec.33, T.14 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Fountain Creek Alluvial Aquifer.

WELL CHARACTERISTICS.--Domestic well, diameter 6 in., depth 72 ft, screening unknown.

DATUM.--Elevation of land-surface datum is 5,830 ft above sea level, from topographic map.

PERIOD OF RECORD.--March 1985 to current year. For a complete listing of historical data available for this site, see http://waterdata.usgs.gov/co/nwis/inventory/?site_no=384718104463701

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

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	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)
MAR 04...	1530	7.2	1,310	12.5	0.038	8.65	<0.008	E.01
AUG 11...	1735	7.0	1,220	14.0	0.033	7.26	<0.008	0.02

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

E -- Estimated laboratory analysis value.

A

Access to USGS Water Data, explanation of	13
Accuracy of the records, explanation of	10
Acre-foot, definition of	14
Adenosine triphosphate, definition of	14
Adjusted discharge, definition of	14
Algae, Blue-green, definition of	15
Fire, definition of	17
Green, definition of	17
Algal growth potential, definition of	14
Alkalinity, definition of	14
Annual runoff, definition of	14
Annual 7-day minimum, definition of	14
Apishapa River near Fowler, precipitation record	376
surface-water record	375
Aquifer Confined, definition of	15
Unconfined, definition of	24
Water-table, definition of	24
Arikaree River above Spring Canyon near Idalia, surface-water record	148
Arkansas River basin, surface-water records in	150
Arkansas River, above Pueblo, surface-water record	217
water-quality record	218
at Canon City, surface-water record	177
water-quality record	178
at Catlin Dam near Fowler, surface-water record	377
water-quality record	378
at Granite, surface-water record	154
water-quality record	155
at La Junta, surface-water record	390
at Lamar, surface-water record	440
at Las Animas, surface-water record	391
water-quality record	392
at Moffat Street at Pueblo, surface-water record	227
water-quality record	228
at Parkdale, surface-water record	174
water-quality record	175
at Portland, surface-water record	183
water-quality record	184
at St. Charles Mesa Diversion at Pueblo, water-quality record	225
below Granite, surface-water record	159
below John Martin Reservoir, surface-water record	435
water-quality record	436
near Avondale, surface-water record	364
water-quality record	365
near Granada, surface-water record	443
near Leadville, surface-water record	151

near Nathrop, surface-water record	160
water-quality record	161
near Portland, water-quality record	195
near Rocky Ford, water-quality record	388
near Wellsville, surface-water record	163
water-quality record	164
Arkansas Rvier near Coolidge	446
Aroclor, definition of	14
Arrangement of records, explanation of	11
Artificial substrate, definition of	14
Ash mass, definition of	14
Aspect, definition of	14

B

Bacteria, definition of	14
Enterococcus, definition of	16
Escherichia coli, definition of	16
Fecal coliform, definition of	17
Fecal streptococcal, definition of	17
Total coliform, definition of	23
Badger Creek, Lower station near Howard, surface-water record	171
water-quality record	172
Upper station near Howard, surface-water record	165
water-quality record	166
Bankfull stage, definition of	14
Base discharge, definition of	14
Base flow, definition of	14
Bear Creek near Colorado Springs, surface-water record	302
water-quality record	303
Bear Creek, above 8th Street at Colorado Springs, water-quality record	304
above Bear Creek Lake near Morrison, surface-water record	76
above Evergreen, surface-water record	74
at Morrison, surface-water record	75
at mouth, at Sheridan, surface-water record	78
Bear Springs Meteorological Station near Houghton, precipitation record	474
Beaver Creek, above Highway 115 near Penrose, surface-water record	189
above Upper Beaver Cemetery near Penrose, surface-water record	188
Bed material, definition of	14
Bedload, definition of	14
Bedload discharge, definition of	14
Bent Canyon Creek at mouth near Timpas, precipitation record	426
water-quality record	423
surface-water record	422
Benthic organisms, definition of	14
Big Dry Creek, at mouth near Fort Lupton, surface-water record	108
at Westminster, surface-water record	107

- Big Sandy Creek near Lamar,
 precipitation record 442
 surface-water record 441
- Big Thompson River above Dillie Tunnel near Drake,
 water-quality record 534
- Big Thompson River above North Fork Big Thompson at Drake,
 water-quality record 528
- Big Thompson River at Estes Park,
 water quality record 514
- Big Thompson River at Loveland,
 surface-water record 123
 water-quality record 552
- Big Thompson River at Whispering Pines near Estes Park,
 water-quality record 525
- Big Thompson River below Big Thompson Power Plant
 near Loveland,
 water-quality record 546
- Big Thompson River below Loveland,
 water-quality record 555
- Big Thompson River below Sulzer Gultch near Loveland,
 water-quality record 549
- Big Thompson River blw Sanitation Outflow above Lake Estes,
 water-quality record 517
- Big Thompson River near Estes Park,
 water-quality record 520
- Big Thompson River,
 at mouth of Canyon near Drake,
 surface-water record 122
 below Moraine Park near Estes Park,
 surface-water record 114
- Biochemical oxygen demand, definition of 14
- Biomass, definition of 14
- Biomass pigment ratio, definition of 15
- Blue-green algae, definition of 15
- Bottom material, definition of 15
- Boulder Creek,
 at mouth near Longmont,
 surface-water record 113
 at North 75th Street near Boulder,
 surface-water record 111
- Brown Sheep Camp Meteorological Station near Tyrone,
 precipitation record 475
- Buffalo Creek at Mouth at Buffalo Creek,
 surface-water record 67
- Buffalo Creek,
 at Mouth, at buffalo Creek,
 precipitation record 68
- Bulk electrical conductivity, definition of 15
- Burson Well Meteorological Station near Thatcher,
 precipitation record 476
- C**
- Cache la Poudre River,
 above Box Elder Creek near Timnath,
 surface-water record 139
 water-quality record 140
 at Fort Collins,
 surface-water record 134
 water-quality record 135
 at mouth of canyon near Fort Collins,
 surface-water record 131
 at Shields Street, at Fort Collins,
 water-quality record 132
 below Fort Collins,
 water-quality record 137
- Camp Creek at Garden of the Gods,
 surface-water record 240
- Canadian Geodetic Vertical Datum 1928, definition of 15
- Cantonment Meteorological Station near Cemetery at Simpson,
 precipitation record 477
- Cantonment Windmill Meteorological Station near Tyrone,
 precipitation record 478
- Carter Lake near Berthoud,
 water-quality record 125
 surface-water record 124
- Cell volume, definition of 15
- Cells/volume, definition of 15
- Cfs-day, definition of 15
- Channel bars, definition of 15
- Chemical oxygen demand, definition of 15
- Cherry Creek,
 at Denver,
 surface-water record 92
 at Glendale,
 surface-water record 91
 below Cherry Creek Lake,
 surface-water record 90
 near Franktown,
 surface-water record 88
 near Parker,
 surface-water record 89
- Cheyenne Creek at Evans Avenue at Colorado Springs,
 precipitation record 306
 surface-water record 305
- Chicago Creek below Devils Canyon near Idaho Springs,
 surface-water record 102
- CIG Pipeline South Meteorological Station near Simpson,
 precipitation record 479
- Classification of records, explanation of 10
- Clear Creek,
 above Georgetown Lake near Georgetown,
 surface-water record 97
 above Johnson Gulch near Idaho Springs
 surface-water record 103
 above West Fork Clear Creek near Empire,
 surface-water record 99
 at Golden,
 surface-water record 105
 near Lawson,
 surface-water record 101
- Closed Basin in San Luis Valley 449
- Closed Basin Project Canal near Alamosa,
 surface-water record 453
- Clostridium perfringens, definition of 15
- Coal Creek near Louisville,
 surface-water record 112
- Coliphages, definition of 15
- Color unit, definition of 15
- Conductivity, definition of 21
- Conejos River,
 below Platoro Reservoir,
 surface-water record 455
 near Lasasuses,
 surface-water record 459
 near Mogote,
 surface-water record 456
- Confined aquifer, definition of 15
- Contents, definition of 15
- Continuous-record station, definition of 15
- Control, definition of 15
- Control structure, definition of 15
- Cooperation 4
- Cottonwood Creek Tributary above Rangewood Drive
 at Colorado Springs,
 precipitation record 283
 surface-water record 280
 water-quality record 281

Cottonwood Creek, at Cowpoke Road at Colorado Springs, surface-water record 273 water-quality record 274 at mouth at Pikeview, surface-water record 284 water-quality record 285 at Woodmen Road near Colorado Springs, precipitation record 279 surface-water record 277 water-quality record 278	
Crest-stage gage partial records 465	
Cubic foot per second, definition of 15	
Cubic foot per second-day, definition of 15	
Cubic foot per second per square mile, definition of 15	
Culebra Creek at San Luis, surface-water record 460	
D	
Daily mean suspended-sediment concentration, definition of ... 15	
Daily record station, definition of 16	
Data collection and computation, explanation of 7, 13	
Data collection platform, definition of 16	
Data logger, definition of 16	
Data presentation, explanation of 7, 12, 13	
Data table of daily mean values, explanation of 8	
Datum, definition of 16	
Deadmans Creek above Deadmans Lake at U.S. Air Force Academy, precipitation record 250 surface-water record 249	
Diatoms, definition of 16	
Diel, definition of 16	
Dinero Mine Drainage Tunnel below Turquoise Lake near Leadville, surface-water record 152	
Discharge at partial-record stations, miscellaneous sites, special studies 468	
Discharge, definition of 16	
Discontinued surface-water discharge or stage only stations 27–34	
Discontinued surface-water-quality stations 35–36	
Dissolved, definition of 16	
Dissolved oxygen, definition of 16	
Dissolved solids concentration, definition of 16	
Diversity index, definition of 16	
Downstream order system, explanation of 5	
Drainage area, definition of 16	
Drainage basin, definition of 16	
Dry mass, definition of 16	
Dry weight, definition of 16	
E	
East Fork Arkansas River at Highway 24 near Leadville, surface-water record 150	
East Fork Arkansas River at Highway 91 near Leadville, discharge measurements 468	
East Plum Creek below Haskins Gulch near Castle Rock, surface-water record 70	
El Paso County 562	
Embeddedness, definition of 16	
Enterococcus bacteria, definition of 16	
EPT Index, definition of 16	
Escherichia coli (E. coli), definition of 16	
Estimated (E) value, definition of 17	
Euglenoids, definition of 17	
Explanation of the records 5	
Extractable organic halides, definition of 17	
F	
Fecal coliform bacteria, definition of 17	
Fecal streptococcal bacteria, definition of 17	
Fire algae, definition of 17	
Flow, definition of 16	
Flow-duration percentiles, definition of 17	
Fountain Creek, at 8th Street at Colorado Springs, water-quality record 241 at Colorado Springs, surface-water record 307 water-quality record 308 at Green Mountain Falls, precipitation record 233 surface-water record 232 at Pueblo, surface-water record 353 water-quality record 354 at Security, surface-water record 325 water-quality record 326 below Janitell Road below Colorado Springs, surface-water record 315 water-quality record 316 precipitation record 320 near Colorado Springs, surface-water record 234 water-quality record 235 near Fountain, surface-water record 336 water-quality record 337 near Pinon, precipitation record 352 surface-water record 349 water-quality record 350	
Fourmile Creek above mouth near Deckers, precipitation record 54 surface-water record 53	
Fourmile Creek below Cripple Creek near Victor, surface-water record 182	
Frontier Ditch near Coolidge 445	
G	
Gage datum, definition of 17	
Gage height, definition of 17	
Gage values, definition of 17	
Gaging station, definition of 17	
Gas chromatography/flame ionization detector, definition of 17	
Geomorphic channel units, definition of 17	
Georgetown Lake, near Georgetown, reservoir record 98	
Green algae, definition of 17	
Ground-water quality, by county 562	
Ground-water records, by county, Pueblo County 561	
Gutierrez Windmill Meteorological Station near Model, precipitation record 480	
H	
Habitat, definition of 17	
Habitat quality index, definition of 17	
Halfmoon Creek near Malta, surface-water record 153	
Hansen Canal above Greeley Filtration Plant near Laporte, water-quality record 544	
Hansen Canal above Tunnel No 5 near Loveland, water-quality record 542	
Hansen Canal below Flatiron Reservoir near Loveland, water-quality record 537	

- Hansen Canal below Trifurcation near Loveland,
 water-quality record 540
- Hardness, definition of 17
- High tide, definition of 17
- Hilsenhoff's Biotic Index, definition of 17
- Horizontal datum, definition of 17
- Horsetooth Reservoir near Fort Collins,
 water-quality record 118, 120
 surface-water record 117
- Huerfano River near Boone,
 surface-water record 374
- Hydrologic index stations, definition of 18
- Hydrologic unit, definition of 18
- I**
- Identifying estimated daily discharge,
 explanation of 9
- Illinois River below Ish Baldwin Ditch near Walden,
 surface-water record 44
- Illinois River below Potter Creek near Walden,
 surface-water record 45
- Inch, definition of 18
- Instantaneous discharge, definition of 18
- International Boundary Commission Survey Datum, definition of 18
- Introduction 1
- Island, definition of 18
- J**
- Jimmy Camp Creek at Fountain,
 surface-water record 333
 water-quality record 334
- Joe Wright Creek,
 above Joe Wright Reservoir,
 surface-water record 127
 below Joe Wright Reservoir,
 surface-water record 128
- John Martin Reservoir at Caddoa,
 contents of 434
- K**
- Kerber Creek above Little Kerber Creek,
 near Villa Grove,
 surface-water record 449
- Kettle Creek,
 above Old Ranch Road near Colorado Springs,
 water-quality record 259
 above U.S. Air Force Academy,
 precipitation record 263
 surface-water record 260
 water-quality record 261
- L**
- La Garita Creek near La Garita,
 surface-water record 452
- Laboratory Measurements, explanation of 12
- Laboratory reporting level, definition of 18
- Lake Estes near Dam near Estes Park,
 water-quality record 115
- Lake Meredith Outlet at Highway 71 near Ordway,
 water-quality record 383
- Lakes and reservoirs,
 John Martin Reservoir 434
 Pond 46.212 223
 Pueblo Reservoir 204
 Teller Reservoir 198
 Trinidad Lake near Trinidad 397
- Land-surface datum, definition of 18
- Latent heat flux, definition of 18
- Latitude-Longitude System, explanation of 6
- Leavenworth Creek at mouth near Georgetown,
 surface-water record 96
- Light-attenuation coefficient, definition of 18
- Lipid, definition of 18
- Lockwood Canyon Creek near Thatcher,
 precipitation record 416
 surface-water record 414
 water-quality record 415
- Lonetree Creek,
 near Greeley,
 surface-water record 142
- Long-term method detection level, definition of 18
- Los Pinos River near Ortiz,
 surface-water record 458
- Low flow, 7-day, 10-year, definition of 21
- Low tide, definition of 18
- M**
- Macrophytes, definition of 18
- Map of Colorado, showing locations of
 crest-stage partial-record stations 3
- Map of Colorado, showing locations of lakes,
 surface-water and surface-water-
 quality stations 2
- Mean concentration of suspended sediment, definition of 18
- Mean discharge, definition of 18
- Mean high tide, definition of 18
- Mean low tide, definition of 18
- Mean sea level, definition of 18
- Measuring point, definition of 18
- Megahertz, definition of 18
- Membrane filter, definition of 18
- Metamorphic stage, definition of 18
- Method detection limit, definition of 18
- Method of Cubatures, definition of 18
- Methylene blue active substances, definition of 19
- Michigan River near Cameron Pass,
 surface-water record 43
- Micrograms per gram, definition of 19
- Micrograms per kilogram, definition of 19
- Micrograms per liter, definition of 19
- Microsiemens per centimeter, definition of 19
- Milligrams per liter, definition of 19
- Mincic Meteorological Station near Houghton,
 precipitation record 481
- Minimum reporting level, definition of 19
- Miscellaneous site, definition of 19
- Monument Creek Tributary 1,
 near Pulpit Rock at Colorado Springs,
 water-quality record 291
- Monument Creek Tributary 2,
 at Sondermann Park at Colorado Springs,
 water-quality record 294
 below Fillmore Street at Colorado Springs,
 water-quality record 293
- Monument Creek,
 above North Gate Boulevard at U.S. Air Force Academy,
 precipitation record 248
 surface-water record 245
 water-quality record 246
 above Woodmen Road at Colorado Springs,
 surface-water record 265
 water-quality record 266
 at Bijou Street at Colorado Springs,
 precipitation record 301
 surface-water record 295
 water-quality record 296
 at Pikeview,
 surface-water record 290

at South Boundary at U.S. Air Force Academy, precipitation record	258	Periodic-record station, definition of	20
surface-water record	257	Periphyton, definition of	20
below Sewage Treatment Plant at U.S. Air Force Academy, surface-water record	251	Pesticides, definition of	20
precipitation record	252	pH, definition of	20
Mosquito Creek near Alma, surface-water record	47	Phytoplankton, definition of	20
Most probable number, definition of	19	Picocurie, definition of	20
MPRC Meteorological Station at Fort Carson, precipitation record	469	Pine Creek above Highway 83 at Colorado Springs, water-quality record	264
Multiple-plate samplers, definition of	19	Plankton, definition of	20
		Plum Creek, at Titan Road near Louviers, surface-water record	72
N		near Sedalia, surface-water record	71
Nanograms per liter, definition of	19	Polychlorinated biphenyls, definition of	20
National Geodetic Vertical Datum of 1929, definition of	19	Polychlorinated naphthalenes, definition of	20
Natural substrate, definition of	19	Pond 46.212 near Teller Reservoir at Fort Carson, contents of	223
Nekton, definition of	19	precipitation record	224
Nephelometric turbidity unit, definition of	19	Pool, definition of	20
North American Datum of 1927, definition of	19	Primary productivity, definition of	20
North American Datum of 1983, definition of	19	Carbon method, definition of	20
North American Vertical Datum of 1988, definition of	19	Oxygen method, definition of	21
North Clear Creek, above mouth near Blackhawk, surface-water record	104	Publications on techniques of water-resources investigations	37–41
North Fork Big Thompson River at Drake, water quality record	531	Pueblo Reservoir near Pueblo, contents of	204
North Fork Cache la Poudre River, at Livermore, surface-water record	130	water-quality record	205
below Halligan Reservoir near Virginia Dale, surface-water record	129	Purgatoire River near Las Animas, precipitation record	433
North Fork South Platte River, above Elk Creek at Pine, surface-water record	65	Purgatoire River, at Madrid, surface-water record	396
precipitation record	66	at Rock Crossing near Timpas, precipitation record	431
North Monument Creek at Spring Street at Palmer Lake, precipitation record	244	surface-water record	427
surface-water record	243	water-quality record	428
North Platte River near Northgate, CO	46	below Trinidad Lake, surface-water record	398
North Rockrimmon Creek above Delmonico Drive at Colorado Springs, water-quality record	292	near Las Animas, precipitation record	433
		surface-water record	432
		near Thatcher, precipitation record	408
		surface-water record	407
		R	
		Radioisotopes, definition of	21
O		Range One Meteorological Station at Fort Carson, precipitation record	470
Olympus Tunnel at Lake Estes, water-quality record	523	Reach, definition of	21
Onsite measurements and sample collection, explanation of	11	Records of Ground-Water Quality, definition of	13
Open interval, definition of	19	explanation of	13
Organic carbon, definition of	19	Records of Stage and Water Discharge, definition of	6
Organic mass, definition of	19	explanation of	6
Organism count, Area, definition of	19	Records of Surface-Water Quality, definition of	10
Total, definition of	23	explanation of	10
Volume, definition of	19	Recoverable from bed (bottom) material, definition of	21
Organochlorine compounds, definition of	19	Recurrence interval, definition of	21
Other records available, explanation of	10	Red Creek below Sullivan Park at Fort Carson, precipitation record	194
		surface-water record	190
		water-quality record	191
P		Red Rock Canyon Creek at mouth near Thatcher, precipitation record	421
Parameter code, definition of	19	surface-water record	417
Partial-record station, definition of	20	water-quality record	418
Particle size, definition of	20		
Particle-size classification, definition of	20		
Peak flow, definition of	20		
Peak stage, definition of	20		
Percent composition, definition of	20		
Percent of total, definition of	20		
Percent shading, definition of	20		

- Remark codes, explanation of 13
- Replicate samples, definition of 21
- Return period, definition of 21
- Riffle, definition of 21
- Rio Grande,
 near Del Norte,
 surface-water record 448
- near Lobatos,
 surface-water record 461
- water-quality record 462
- River mileage, definition of 21
- Rock Creek above Fort Carson Reservation,
 surface-water record 335
- Rod and Gun Meteorological Station at Fort Carson,
 precipitation record 471
- Rourke Meteorological Station near Higbee,
 precipitation record 482
- Route Two Windmill Meteorological Station near Tyrone,
 precipitation record 483
- Run, definition of 21
- Runoff, definition of 21
- S**
- Saguache Creek near Saguache,
 surface-water record 450
- water-quality record 451
- San Antonio River at Ortiz,
 surface-water record 457
- Sand Creek above mouth at Colorado Springs,
 surface-water record 321
- water-quality record 322
- Sand Creek (Platte River Basin),
 at mouth near Commerce City,
 surface-water record 95
- Screened interval, definition of 19
- Sea level, definition of 21
- Sediment,
 explanation of 11
- Sediment, definition of 21
- Selected references 25
- Sensible heat flux, definition of 21
- Seven-day, 10-year low flow, definition of 21
- Shelves, definition of 21
- Sodium adsorption ratio, definition of 21
- Soil heat flux, definition of 21
- Soil-water content, definition of 21
- South Fork Rio Grande at South Fork,
 surface-water record 447
- South Platte River Basin,
 National Water-Quality Assessment Program study 510
- South Platte River,
 above Cheesman Lake
 precipitation record 51
- surface-water record 49
- at 64th Avenue, at Commerce City,
 surface-water record 94
- at Denver,
 surface-water record 93
- at Englewood,
 surface-water record 79
- water-quality record 80
- at Fort Lupton,
 surface-water record 109
- at Fort Morgan
 surface-water record 146
- at Henderson,
 surface-water record 106
- at Julesburg,
 surface-water record 147
- at South Platte,
 surface-water record 69
- below Cheesman Lake,
 surface-water record 52
- below Union Ave.,
 surface-water record 73
- near Kersey,
 surface-water record 143
- near Weldona,
 surface-water record 144
- water-quality record 145
- precipitation record 56, 58
- Special networks and programs 5
- Specific electrical conductance (conductivity), definition of 21
- Spring Creek,
 above mouth near South Platte,
 precipitation record 64
- surface-water record 63
- at mouth near South Platte,
 St. Charles River at Vineland,
 surface-water record 363
- St. Vrain Creek,
 below Longmont,
 surface-water record 110
- Stable isotope ratio, definition of 22
- Stage, definition of 22
- Stage-discharge relation, definition of 22
- Station Identification Numbers,
 explanation of 5
- Station manuscript, explanation of 7
- Statistics of monthly mean data,
 explanation of 8
- Streamflow, definition of 22
- Substrate, definition of 22
- Artificial, definition of 14
- Natural, definition of 19
- Substrate embeddedness class, definition of 22
- Sullivan Park Meteorological Station at Fort Carson,
 precipitation record 472
- Summary statistics, explanation of 8
- Supplemental water-quality data at gaging stations 486
- Surface area of a lake, definition of 22
- Surficial bed material, definition of 22
- Surrogate, definition of 22
- Suspended, definition of 22
- Recoverable, definition of 22
- Total, definition of 22
- Suspended sediment, definition of 22
- Suspended-sediment concentration, definition of 22
- Suspended-sediment discharge, definition of 22
- Suspended-sediment load, definition of 22
- Suspended solids, total residue at 105 °C concentration,
 definition of 22
- Sutherland Ditch at mouth near Pinon,
 water-quality record 348
- Synoptic studies, definition of 22
- System for numbering wells, springs, and
 miscellaneous sites 6
- T**
- Tarryall Creek at upper station near Como,
 surface-water record 48
- Taxa (Species) richness, definition of 22
- Taxonomy, definition of 23
- Taylor Arroyo below Rock Crossing near Thatcher,
 precipitation record 413
- surface-water record 409
- water-quality record 410
- Teller Reservoir near Stone City,
 contents of 198

Teller Reservoir Spillway near Stone City, precipitation record	203		
surface-water record	202		
Thalweg, definition of	23		
Thermograph, definition of	23		
Time-weighted average, definition of	23		
Timpas Creek at mouth near Swink, surface-water record	389		
Tons per acre-foot, definition of	23		
Tons per day, definition of	23		
Total, definition of	23		
Total coliform bacteria, definition of	23		
Total discharge, definition of	23		
Total in bottom material, definition of	23		
Total length, definition of	23		
Total load, definition of	23		
Total organism count, definition of	23		
Total recoverable, definition of	23		
Total sediment discharge, definition of	23		
Total sediment load, definition of	23		
Transect, definition of	23		
Transmountain diversions, no longer published	464		
Trinidad Lake near Trinidad, contents of	397		
Trout Creek below Fern Creek near Westcreek, precipitation record	56		
surface-water record	55		
Turbidity, definition of	23		
Turkey Creek (Platte River basin), near Indian Hills, surface-water record	77		
Turkey Creek East Seepage below Teller Reservoir near Stone City, water-discharge records	199		
Turkey Creek West Seepage below Teller Reservoir near Stone City, water-discharge records	200		
Turkey Creek, above Teller Reservoir near Stone City, surface-water record	197		
near Fountain, surface-water record	196		
near Stone City, surface-water record	201		
U			
Ultraviolet (UV) absorbance (absorption), definition of	24		
Unconfined aquifer, definition of	24		
Upper Bent Canyon Meteorological Station near Delhi, precipitation record	484		
Upper Red Rock Canyon Meteorological Station near Houghton, precipitation record	485		
Ute Creek near Fort Garland, surface-water record	454		
V			
Van Bremer Arroyo, near Model, precipitation record	406		
surface-water record	401		
water-quality record	402		
near Tyrone, precipitation record	400		
surface-water record	399		
Vertical datum, definition of	24		
Volatile mass, definition of	19		
Volatile organic compounds, definition of	24		
W			
Water	12		
Water table, definition of	24		
Water-table aquifer, definition of	24		
Water temperature, explanation of	11		
Water year, definition of	24		
Water-quality data reporting convention, explanantion of	12		
explanation of	12		
Watershed, definition of	24		
WDR, definition of	24		
Weighted average, definition of	24		
West Creek above Shrewsbury Gulch near Westcreek, precipitation record	58		
surface-water record	57		
West Fork Clear Creek above mouth near Empire, surface-water record	100		
West Monument Creek, at mouth at U. S. Air Force Academy, surface-water record	256		
at U.S. Air Force Academy, precipitation record	255		
surface-water record	254		
below Rampart Reservoir, surface-water record	253		
Wet mass, definition of	24		
Wet weight, definition of	24		
Wild Horse Creek above Holly, surface-water record	444		
Williams Creek at the mouth near Wigwam, water-quality record	347		
WSP, definition of	24		
Y			
Young Hollow Meteorological Station at Fort Carson, precipitation record	473		
Z			
Zooplankton, definition of	24		