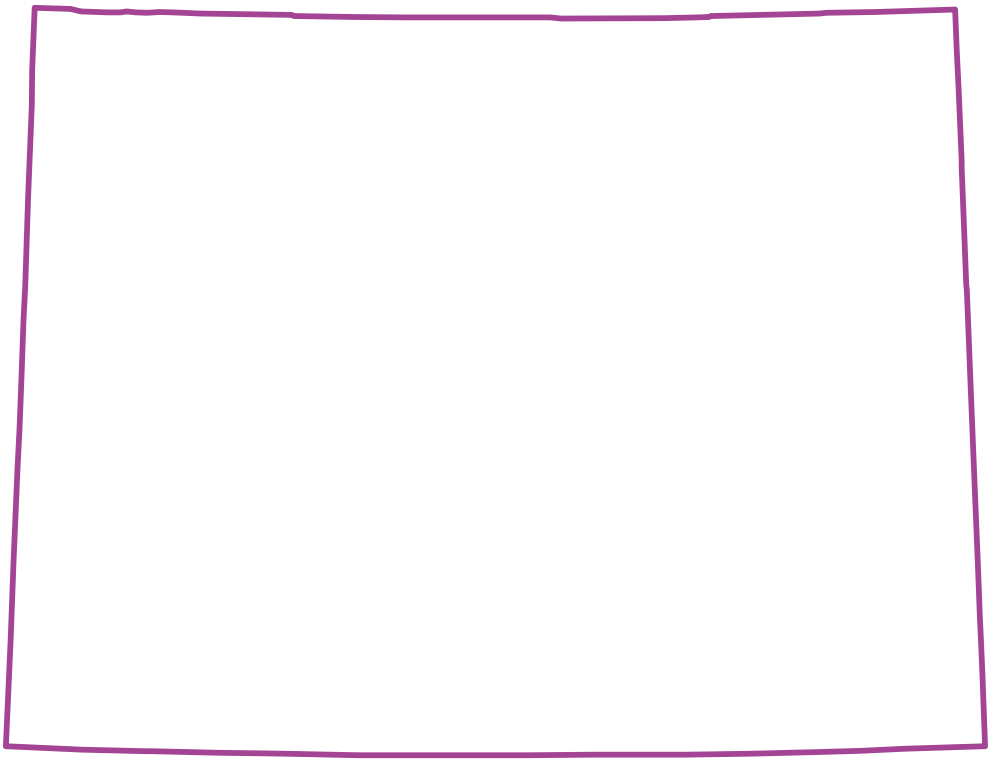
USGS
science for a changing world

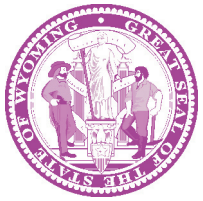
Water Resources Data
Wyoming
Water Year 2004

Volume 1. Surface Water

Water-Data Report WY-04-1



U.S Department of the Interior
U.S. Geological Survey



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

Calendar for Water Year 2004

2003

October

S	M	T	W	T	F	S
			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	

November

S	M	T	W	T	F	S
						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						

December

S	M	T	W	T	F	S
	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			

2004

January

S	M	T	W	T	F	S
				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

February

S	M	T	W	T	F	S
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						

March

S	M	T	W	T	F	S
	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			

April

S	M	T	W	T	F	S
				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	

May

S	M	T	W	T	F	S
						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					

June

S	M	T	W	T	F	S
		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			

July

S	M	T	W	T	F	S
				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

August

S	M	T	W	T	F	S
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				

September

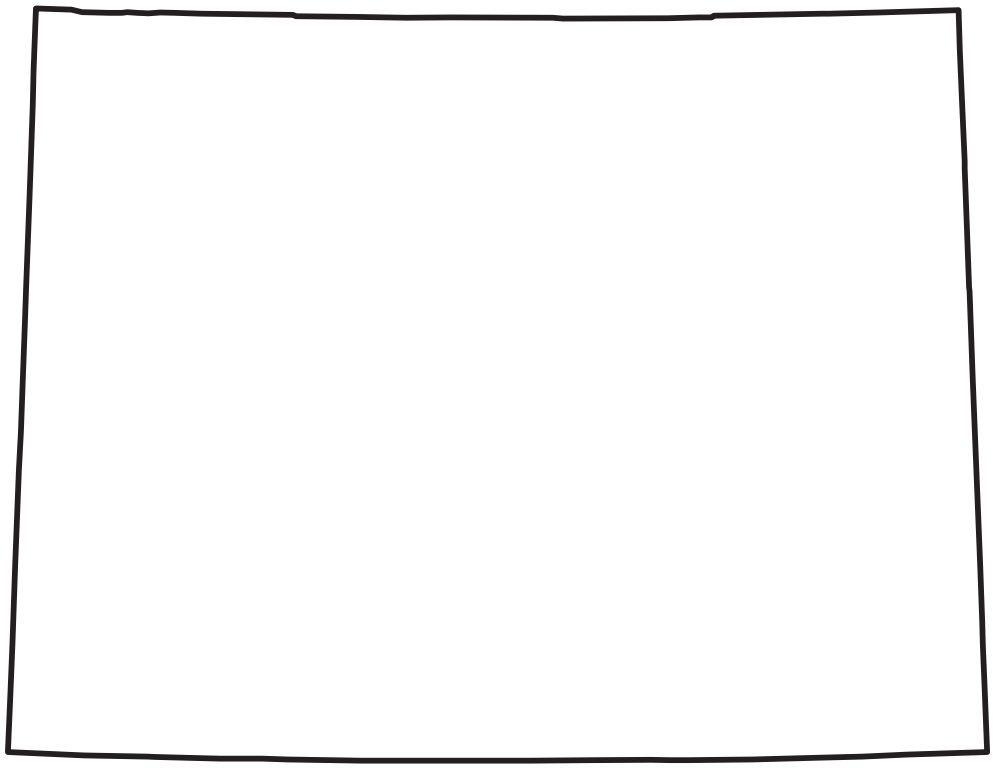
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Water Resources Data
Wyoming
Water Year 2004

Volume 1. Surface Water

By K.R. Watson, R.E. Woodruff, G.A. Laidlaw, M.L. Clark, and K.A. Miller

Water-Data Report WY-04-1



Prepared by the USGS Wyoming Water Science Center in cooperation with the State of Wyoming and other agencies

U.S. Department of the Interior
U.S. Geological Survey

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

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

2005

U.S. Geological Survey
2617 E. Lincolnway, Suite B
Cheyenne, Wyoming 82001
(307) 778-2931

Information about the USGS Wyoming Water Science Center is available on the Internet at http://wy.water.usgs.gov

Information about all USGS reports and products is available by calling 1-888-ASK-USGS or on the Internet via the World Wide Web at http://www.usgs.gov/

Additional earth science information is available by accessing the USGS home page at http://www.usgs.gov/

PREFACE

This annual hydrologic data report of Wyoming is one of a series of annual reports that documents 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 the quality of water provide the hydrologic information needed by Federal, State, and local agencies, and the private sector for administrating, developing, and managing our Nation's land and water resources. These records for Wyoming are contained in 2 volumes:

Volume 1. Surface-Water Data

Volume 2. Ground-Water Data

These reports are the culmination of a concerted effort by personnel of the U.S. Geological Survey of the Wyoming Water Science Center who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled this report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to U.S. Geological Survey policies and guidelines.

Most of the data were collected, computed, and processed from the Casper Field Office, Ray Woodruff, Chief and from the Riverton Field Office, Glenn Laidlaw, Chief. The following personnel are recognized for their significant contributions to this report:

Ty Blacklock	Stacy Kinsey	Kirk Miller	Jason Swanson
Eric Blajszczak	Tom Leman	Jake Neumiller	Karen Watson
Seth Davidson	Lexann Littau	Tom Pointon	Jerrod Wheeler
Nolan Friday	Jon Mason	Wil Sadler	Peter Wright

Some surface water discharge records contained in this report were collected and computed by personnel from the Wyoming State Engineer’s Office and reviewed and published by the U.S. Geological Survey. Wyoming State Engineer’s Office personnel who contributed significantly to this report are under the direction of the following division superintendents:

Jade Henderson	Loren Smith	Randy Tullis	Mike Whitaker

Lexann Littau and Karen Watson typed and assembled the report. Sue Roberts provided the illustrations.

This report was prepared under the general supervision of Myron Brooks, Director, Wyoming Water Science Center, and in cooperation with the State of Wyoming and other agencies.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	April 2005	Annual, October 2003 to September 2004

4. TITLE AND SUBTITLE
Water Resources Data for Wyoming, Water Year 2004
Volume 1. Surface-water data

5. FUNDING NUMBERS

6. AUTHOR(S)
K.R. Watson, R.E. Woodruff, G.A. Laidlaw, M.L. Clark, and K.A. Miller

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
U.S. Geological Survey, Water Resources Division
2617 E. Lincolnway, Suite B
Cheyenne, Wyoming 82001-5662

8. PERFORMING ORGANIZATION REPORT NUMBER
USGS-WDR-WY-04-1

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
U.S. Geological Survey, Water Resources Division
2617 E. Lincolnway, Suite B
Cheyenne, Wyoming 82001-5662

10. SPONSORING / MONITORING AGENCY REPORT NUMBER
USGS-WDR-WY-04-1

11. SUPPLEMENTARY NOTES
Prepared in cooperation with the State of Wyoming and other agencies.

12a. DISTRIBUTION / AVAILABILITY STATEMENT
This report may be purchased from:
National Technical Information Service
Springfield, VA

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

Water resources data for the 2004 water year for Wyoming consist of records of stage, discharge and water quality of streams; stage and contents of lakes and reservoirs, and water levels and water quality of ground water. Volume 1 of this report contains discharge records for 164 gaging stations; water quality for 43 gaging stations and 45 ungaged stations, and stage and contents for one reservoir. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data together with the data in Volume 2 represent part of the National Water Information System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Wyoming.

14. SUBJECT TERMS
*Wyoming, *Hydrologic data, *Surface water, *Ground water, *Water quality, Chemical analyses, Gaging stations, Reservoirs, Sediment, Water levels, Water analyses, Sampling sites

15. NUMBER OF PAGES
591

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	

CONTENTS

Page

PREFACE . . . iii
SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME . . . ix
INTRODUCTION . . . 1
COOPERATION . . . 3
SUMMARY OF HYDROLOGIC CONDITIONS . . . 4
Precipitation . . . 4
Streamflow . . . 6
Chemical Quality of Stream Water . . . 6
DOWNSTREAM ORDER AND STATION NUMBER . . . 10
NUMBERING SYSTEM FOR MISCELLANEOUS SITES . . . 10
SPECIAL NETWORKS AND PROGRAMS . . . 11
EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS . . . 12
Data Collection and Computation . . . 12
Data Presentation . . . 13
Station Manuscript . . . 14
Peak Discharge Greater than Base Discharge . . . 15
Data Table of Daily Mean Values . . . 15
Statistics of Monthly Mean Data . . . 15
Summary Statistics . . . 16
Identifying Estimated Daily Discharge . . . 18
Accuracy of Field Data and Computed Results . . . 18
Other Data Records Available . . . 18
EXPLANATION OF PRECIPITATION RECORDS . . . 19
Data Collection and Computation . . . 19
Data Presentation . . . 19
EXPLANATION OF WATER-QUALITY RECORDS . . . 19
Collection and Examination of Data . . . 19
Water Analysis . . . 20
SURFACE-WATER-QUALITY RECORDS . . . 20
Classification of Records . . . 20
Accuracy of the Records . . . 21
Arrangement of Records . . . 21
On-Site Measurements and Sample Collection . . . 21
Water Temperature . . . 21
Sediment . . . 22
Laboratory Measurements . . . 22
Data Presentation . . . 22
Remark Codes . . . 24
Water-Quality Control Data . . . 24
Blank Samples . . . 25
Reference Samples . . . 25
Replicate Samples . . . 25
Spike Samples . . . 26
ACCESS TO USGS WATER DATA . . . 26
SELECTED REFERENCES . . . 26
DEFINITION OF TERMS . . . 27
STATION RECORDS, SURFACE WATER . . . 43
Discharge at miscellaneous sites . . . 560
Discharge measurements made at miscellaneous sites during water year 2004 . . . 560
Analysis of samples collected at special study and miscellaneous sites . . . 561
Fremont County Weed and Pest District Study . . . 561
National Water Quality Assessment program . . . 562
Miscellaneous hydrologic data collected at special study sites . . . 569
Powder River basic water influx project . . . 569
INDEX . . . 573

ILLUSTRATIONS

Figure 1. Location of surface-water streamflow-gaging stations, water-quality stations, and reservoir station, 2004 water year. . . . 2
Figure 2. Water year 2004 and 1971-2000 average precipitation by climate division (Source: Western Regional Climate Center, 2005a). . . . 4
Figure 3. Sixty month Standardized Precipitation Index (SPI) by climate divisions for Wyoming, October 1999 through September 2004 (Modified from Western Regional Climate Center, 2005b). . . . 5
Figure 4. Annual average discharge for water year 2004 and median and maximum annual average discharge for period of record for seven long-term index gaging stations in Wyoming. . . . 7

Page

Figure 5. Average monthly and annual discharge for water year 2004 and median and maximum monthly and annual discharge for period of record for seven long-term index gaging stations in Wyoming. 8
Figure 6. System for numbering miscellaneous sites (latitude and longitude). 10

TABLES

Table 1. Summary of snowpack conditions in eight major river basins in Wyoming for water year 2004 (Source: Natural Resources Conservation Service,2005). 5
Table 2. Statistical summary of specific-conductance measurements for discrete water samples from selected stations for 2004 and 1994-2003 water years. 9
Table 3. Rating classifications for continuous water-quality records 21
Table 4. Water-quality data remark codes. 24

Station number Page

[Letters after station number designate type of data - **Daily tables:** (D) discharge, (C) specific conductance, (S) sediment, (T) temperature, (V) elevation or contents, (O) dissolved oxygen, (P) pH, (N) turbidity - **Periodic table:** (c) chemical, (m) microbiological, (s) sediment, (b) biological]

Note.--Data for NAWQA stations, partial record stations, and miscellaneous sites are published in seperate sections of the data report.

MISSOURI RIVER BASIN

MADISON RIVER BASIN

FIREHOLE RIVER NEAR WEST YELLOWSTONE, MT (DT) ..... 06036905 .. 43

GIBBON RIVER AT MADISON JUNCTION, YELLOWSTONE NATIONAL PARK (DT) ..... 06037100 .. 47

MADISON RIVER NEAR WEST YELLOWSTONE, MT (Dc) ..... 06037500 .. 51

GALLATIN RIVER BASIN

GALLATIN RIVER NEAR GALLATIN GATEWAY, MT (D) ..... 06043500 .. 54

YELLOWSTONE RIVER BASIN

YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK (D) ..... 06186500 .. 56

LAMAR RIVER:

SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT (DT) ..... 06187915 .. 58

SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK (D) ..... 06187950 .. 62

LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK (D) ..... 06188800 .. 64

GARDNER RIVER:

BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK (DT) ..... 06190540 .. 66

GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK (D) ..... 06191000 .. 70

YELLOWSTONE RIVER AT CORWIN SPRINGS, MT (D) ..... 06191500 .. 72

CLARKS FORK YELLOWSTONE RIVER AT MONTANA-WYOMING STATE LINE, NEAR COOKE CITY, MT (c) ..... 06205450 .. 74

CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT (D) ..... 06207500 .. 75

WIND RIVER NEAR DUBOIS, WY (D) ..... 06218500 .. 77

WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY (D) ..... 06220800 .. 79

DINWOODY CREEK ABOVE LAKES, NEAR BURRIS, WY (D) ..... 06221400 .. 81

UPPER WIND RIVER A CANAL AT HEADWORKS, NEAR BURRIS, WY (D) ..... 06222100 .. 83

DRY CREEK NEAR BURRIS, WY (D) ..... 06222500 .. 85

DRY CREEK CANAL AT HEADGATE, NEAR BURRIS, WY (D) ..... 06222510 .. 87

WILLOW CREEK NEAR CROWHEART, WY (D) ..... 06223500 .. 89

BULL LAKE CREEK ABOVE BULL LAKE, WY (D) ..... 06224000 .. 91

BULL LAKE CREEK NEAR LENORE, WY (D) ..... 06225000 .. 93

WIND RIVER NEAR CROWHEART, WY (D) ..... 06225500 .. 95

WYOMING CANAL NEAR LENORE, WY (D) ..... 06226000 .. 97

JOHNSTOWN DITCH AT HEADWORKS, NEAR KINNEAR, WY (D) ..... 06227596 .. 99

WIND RIVER NEAR KINNEAR, WY (D) ..... 06227600 . 101

LEFTHAND DITCH AT HEADWORKS, NEAR RIVERTON, WY (D) ..... 06227810 . 103

WIND RIVER AT RIVERTON, WY (D) ..... 06228000 . 105

LITTLE WIND RIVER:

SOUTH FORK LITTLE WIND RIVER ABOVE WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY (D) ... 06228350 . 107

SOUTH FORK LITTLE WIND RIVER BELOW WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY (D) ... 06228450 . 109

RAY CANAL AT HEADWORKS, NEAR FORT WASHAKIE, WY (D) ..... 06228510 . 111

NORTH FORK LITTLE WIND RIVER NEAR FORT WASHAKIE, WY (D) ..... 06228800 . 113

TROUT CREEK NEAR FORT WASHAKIE, WY (D) ..... 06229900 . 115

POPO AGIE RIVER:

LITTLE POPO AGIE RIVER NEAR LANDER, WY (D) ..... 06233000 . 117

LITTLE WIND RIVER NEAR RIVERTON, WY (Dcm) ..... 06235500 . 119

WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY (D) ..... 06236100 . 122

FIVEMILE CREEK ABOVE WYOMING CANAL, NEAR PAVILLION, WY (D) ..... 06244500 . 124

FIVEMILE CREEK NEAR SHOSHONI, WY (D) ..... 06253000 . 126

WIND RIVER BELOW BOYSEN RESERVOIR, WY (D) ..... 06259000 . 128

BIGHORN RIVER:

OWL CREEK:

SOUTH FORK OWL CREEK BELOW ANCHOR RESERVOIR, WY (D) ..... 06260400 . 130

BIGHORN RIVER AT LUCERNE, WY (cm) ..... 06264700 . 132

COTTONWOOD CREEK AT HIGH ISLAND RANCH, NEAR HAMILTON DOME, WY (D) ..... 06265337 . 133

BIGHORN RIVER AT BASIN, WY (Dcms) ..... 06274300 . 135

GREYBULL RIVER AT MEETEETSE, WY (Dms) ..... 06276500 . 138

SHELL CREEK ABOVE SHELL RESERVOIR, WY (D) ..... 06278300 . 141

SHELL CREEK NEAR SHELL, WY (D) ..... 06278500 . 143

BIGHORN RIVER AT KANE, WY (Dcms) ..... 06279500 . 145

NORTH FORK SHOSHONE RIVER:

CROW CREEK AT MOUTH, AT PAHASKA, WY (DCPOTcs) ..... 06279795 . 148

NORTH FORK SHOSHONE RIVER AT WAPITI, WY (D) ..... 06279940 . 161

SOUTH FORK SHOSHONE RIVER NEAR VALLEY, WY (D) ..... 06280300 . 163

SOUTH FORK SHOSHONE RIVER ABOVE BUFFALO BILL RESERVOIR, WY (D) ..... 06281000 . 165

SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY (D) ..... 06282000 . 167

BITTER CREEK NEAR GARLAND, WY (cm) ..... 06284500 . 169

SHOSHONE RIVER NEAR LOVELL, WY (Dcm) ..... 06285100 . 170

BIGHORN RIVER NEAR ST. XAVIER, MT (D) ..... 06287000 . 173

LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT (D) ..... 06289000 . 175

Station number Page

MISSOURI RIVER BASIN--Continued
YELLOWSTONE RIVER BASIN--Continued
BIGHORN RIVER--Continued
LITTLE BIGHORN RIVER--Continued
PASS CREEK:
WEST PASS CREEK NEAR PARKMAN, WY (D) . . . 06289600 . 177
EAST PASS CREEK NEAR DAYTON, WY (D) . . . 06289820 . 179
PASS CREEK NEAR WYOLA, MT (D) . . . 06290000 . 181
TONGUE RIVER:
HIGHLINE DITCH NEAR DAYTON, WY (D) . . . 06297500 . 183
TONGUE RIVER NEAR DAYTON, WY (D) . . . 06298000 . 185
WOLF CREEK AT WOLF, WY (D) . . . 06299500 . 187
TONGUE RIVER AT MONARCH, WY (DCcs) . . . 06299980 . 189
EAST FORK BIG GOOSE CREEK:
WEST FORK BIG GOOSE CREEK:
CONEY CREEK ABOVE TWIN LAKES, NEAR BIG HORN, WY (D) . . . 06301480 . 195
CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY (D) . . . 06301495 . 197
BIG GOOSE CREEK:
LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY (D) . . . 06303500 . 199
LITTLE GOOSE CREEK AT SHERIDAN, WY (cm) . . . 06304500 . 201
GOOSE CREEK BELOW SHERIDAN, WY (cm) . . . 06305500 . 203
GOOSE CREEK NEAR ACME, WY (DCcs) . . . 06305700 . 205
PRAIRIE DOG CREEK AT WAKELEY SIDING, NEAR SHERIDAN, WY (Dc) . . . 06306200 . 211
PRAIRIE DOG CREEK NEAR ACME, WY (DCcs) . . . 06306250 . 215
TONGUE RIVER AT STATE LINE, NEAR DECKER, MT (DCcsb) . . . 06306300 . 221
POWDER RIVER:
MIDDLE FORK POWDER RIVER NEAR BARNUM, WY (D) . . . 06309200 . 232
NORTH FORK POWDER RIVER NEAR HAZELTON, WY (D) . . . 06311000 . 234
NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY (D) . . . 06311400 . 236
SALT CREEK NEAR SUSSEX, WY (c) . . . 06313400 . 238
POWDER RIVER AT SUSSEX, WY (DCTc) . . . 06313500 . 240
WILLOW CREEK NEAR MOUTH NEAR, SUSSEX, WY (c) . . . 06313540 . 249
PUMPKIN CREEK NEAR MOUTH NEAR, SUSSEX, WY (c) . . . 06313560 . 250
BEAVER CREEK AT MOUTH NEAR, SUSSEX, WY (c) . . . 06313585 . 251
POWDER RIVER ABOVE BURGER DRAW, NEAR BUFFALO (Dc) . . . 06313590 . 252
BURGER DRAW AT MOUTH, BUFFALO, WY (c) . . . 06313604 . 256
POWDER RIVER BELOW BURGER DRAW, NEAR BUFFALO, WY (c) . . . 06313605 . 257
VAN HOUTEN DRAW AT MOUTH, NEAR BUFFALO, WY (c) . . . 06313633 . 259
DEAD HORSE CREEK NEAR BUFFALO, WY (c) . . . 06313700 . 260
BARBER CREEK AT MOUTH NEAR, Buffalo, WY (c) . . . 06313750 . 261
CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY (DCTcs) . . . 06316400 . 262
COTTONWOOD CREEK AT MOUTH, NEAR ARVADA, WY (c) . . . 06316900 . 271
POWDER RIVER AT ARVADA, WY (Dc) . . . 06317000 . 272
WILD HORSE CREEK NEAR ARVADA, WY (Dc) . . . 06317020 . 277
WILD HORSE CREEK AT MOUTH, NEAR ARVADA, WY (c) . . . 06317030 . 281
IVY CREEK AT MOUTH, NEAR ARVADA, WY (c) . . . 06317040 . 282
SPOTTED HORSE CREEK AT MOUTH, NEAR ARVADA, WY (c) . . . 06317095 . 283
POWDER RIVER ABOVE CLEAR CREEK, NEAR ARVADA, WY (c) . . . 06317100 . 284
ROCK CREEK NEAR BUFFALO, WY (D) . . . 06320000 . 285
CLEAR CREEK ABOVE KUMOR DRAW, NEAR BUFFALO, WY (cm) . . . 06320210 . 287
CLEAR CREEK ABOVE DOUBLE CROSSING CREEK, NEAR CLEARMONT, WY (c) . . . 06323550 . 289
CLEAR CREEK NEAR ARVADA, WY (DCTc) . . . 06324000 . 290
L X BAR CREEK AT MOUTH, NEAR MOORHEAD, MT (c) . . . 06324200 . 299
S A CREEK AT MOUTH, NEAR MOORHEAD, MT (c) . . . 06324300 . 300
POWDER RIVER AT MOORHEAD, MT (DCcs) . . . 06324500 . 301
LITTLE POWDER RIVER:
DRY FORK LITTLE POWDER RIVER AT MOUTH, NEAR GILLETTE, WY (c) . . . 06324785 . 310
RAWHIDE CREEK AT MOUTH, NEAR GILLETTE, WY (c) . . . 06324870 . 311
HORSE CREEK AT MOUTH, NEAR WESTON, WY (c) . . . 06324940 . 312
LITTLE POWDER RIVER BELOW ELK CREEK AT MOUTH, NEAR WESTON, WY (c) . . . 06324950 . 313
OLMSTEAD CREEK AT MOUTH, NEAR WESTON, WY (c) . . . 06324965 . 314
LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY (Dc) . . . 06324970 . 315
CHEYENNE RIVER BASIN
ANTELOPE CREEK (HEAD OF CHEYENNE RIVER):
PORCUPINE CREEK NEAR TECKLA, WY (Dc) . . . 06364300 . 320
ANTELOPE CREEK NEAR TECKLA, WY (c) . . . 06364700 . 324
CHEYENNE RIVER NEAR DULL CENTER, WY (Dc) . . . 06365900 . 326
BLACK THUNDER CREEK:
LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY (c) . . . 06375600 . 329
BLACK THUNDER CREEK NEAR HAMPSHIRE, WY (c) . . . 06376300 . 330
CHEYENNE RIVER AT RIVERVIEW, WY (c) . . . 06386400 . 332
CHEYENNE RIVER NEAR SPENCER, WY (DCPTONcs) . . . 06386500 . 334

Station number Page

MISSOURI RIVER BASIN--Continued
CHEYENNE RIVER BASIN--Continued
BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY (D) . . . 06392900 . 342
STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY (D) . . . 06392950 . 344
CHEYENNE RIVER AT EDGEMONT, SD (D) . . . 06395000 . 346
BELLE FOURCHE RIVER:
BELLE FOURCHE RIVER BELOW RATTLENSAKE CREEK, NEAR PINEY, WY (Dc) . . . 06425720 . 348
CABALLO CREEK NEAR GILLETTE, WY (c) . . . 06425800 . 352
CABALLO CREEK AT MOUTH, NEAR PINEY, WY (c) . . . 06425900 . 353
DONKEY CREEK NEAR GILLETTE, WY (D) . . . 06426130 . 355
STONEPILE CREEK AT MOUTH, NEAR GILLETTE, WY (D) . . . 06426160 . 357
DONKEY CREEK NEAR MOORCROFT, WY (c) . . . 06426400 . 359
BELLE FOURCHE RIVER BELOW MOORCROFT, WY (Dcm) . . . 06426500 . 361
BELLE FOURCHE RIVER BELOW HULETT, WY (cm) . . . 06428050 . 365
BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE (D) . . . 06428500 . 367
REDWATER CREEK:
COLD SPRINGS CREEK AT BUCKHORN, WY (D) . . . 06429500 . 369
SAND CREEK NEAR RANCH A, NEAR BEULAH, WY (D) . . . 06429905 . 371
MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE (D) . . . 06429997 . 373
REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE (D) . . . 06430500 . 375
CROW CREEK NEAR BEULAH, WY (D) . . . 06430532 . 377
PLATTE RIVER BASIN
NORTH PLATTE RIVER NEAR NORTHGATE, CO (D) . . . 06620000 . 379
NORTH BRUSH CREEK NEAR SARATOGA, WY (D) . . . 06622700 . 381
SOUTH BRUSH CREEK NEAR SARATOGA, WY (D) . . . 06622900 . 383
ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY (D) . . . 06623800 . 385
ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY (D) . . . 06625000 . 387
JACK CREEK ABOVE COYOTE DRAW, NEAR SARATOGA, WY (D) . . . 06627800 . 389
PASS CREEK NEAR ELK MOUNTAIN, WY (D) . . . 06628900 . 391
NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY (Dcms) . . . 06630000 . 393
ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY (D) . . . 06632400 . 396
MEDICINE BOW RIVER:
LITTLE MEDICINE BOW RIVER AT BOLES SPRING, NEAR MEDICINE BOW, WY (D) . . . 06634620 . 398
MEDICINE BOW RIVER ABOVE SEMINOE RESERVOIR, NEAR HANNA, WY (D) . . . 06635000 . 400
SWEETWATER RIVER NEAR ALCOVA, WY (Dcs) . . . 06639000 . 402
NORTH PLATTE RIVER BELOW CASPER, WY (cm) . . . 06645000 . 405
BOX ELDER CREEK AT BOXELDER, WY (D) . . . 06647500 . 406
NORTH PLATTE RIVER AT ORIN, WY (Dcm) . . . 06652000 . 408
NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY (D) . . . 06652800 . 411
NORTH PLATTE RIVER BELOW WHALEN DIVERSION DAM, WY (D) . . . 06657000 . 413
LARAMIE RIVER AND PIONEER CANAL NEAR WOODS, WY (D) . . . 06659500 . 415
SAND CREEK AT COLORADO-WYOMING STATE LINE (D) . . . 06659580 . 417
LITTLE LARAMIE RIVER NEAR FILMORE, WY (D) . . . 06661000 . 419
LARAMIE RIVER NEAR BOSLER, WY (D) . . . 06661585 . 421
SYBILLE CREEK ABOVE MULE CREEK, NEAR WHEATLAND, WY (D) . . . 06664400 . 423
SYBILLE CREEK ABOVE CANAL NO. 3, NEAR WHEATLAND, WY (D) . . . 06665790 . 425
WHEATLAND CREEK BELOW WHEATLAND, WY (cm) . . . 06669050 . 427
LARAMIE RIVER NEAR FORT LARAMIE, WY (Dcms) . . . 06670500 . 428
NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE (Dcs) . . . 06674500 . 431
SOUTH PLATTE RIVER:
CROW CREEK AT 19TH STREET, AT CHEYENNE, WY (D) . . . 06755960 . 434
CROW CREEK NEAR ARCHER, WY (cm) . . . 06756060 . 436
LODGEPOLE CREEK AT BUSHNELL, NE (D) . . . 06762500 . 437

COLORADO RIVER BASIN
GREEN RIVER BASIN
GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WY (D) . . . 09188500 . 439
NEW FORK RIVER:
PINE CREEK ABOVE FREMONT LAKE, WY (D) . . . 09196500 . 441
PINE CREEK BELOW FREMONT LAKE, WY (D) . . . 09197000 . 443
NEW FORK RIVER NEAR BIG PINEY, WY (D) . . . 09205000 . 445
LA BARGE CREEK ABOVE VIOLA, WY (D) . . . 09208400 . 447
GREEN RIVER NEAR LA BARGE, WY (D) . . . 09209400 . 449
FONTENELLE CREEK NEAR HERSCHLER RANCH, NEAR FONTENELLE, WY (D) . . . 09210500 . 451
GREEN RIVER BELOW FONTENELLE RESERVOIR, WY (Dc) . . . 09211200 . 453
BIG SANDY RIVER NEAR FARSON, WY (D) . . . 09213500 . 456
BIG SANDY RESERVOIR NEAR FARSON, WY (V) . . . 09213700 . 458
BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY (D) . . . 09216050 . 460
GREEN RIVER NEAR GREEN RIVER, WY (Dc) . . . 09217000 . 462
GREEN RIVER BELOW GREEN RIVER, WY (c) . . . 09217010 . 465
BLACKS FORK NEAR ROBERTSON, WY (D) . . . 09217900 . 466
EAST FORK OF SMITHS FORK NEAR ROBERTSON, WY (D) . . . 09220000 . 468
BLACKS FORK NEAR LYMAN, WY (cms) . . . 09222000 . 470

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

	Station number	Page
COLORADO RIVER BASIN--Continued		
GREEN RIVER BASIN--Continued		
BLACKS FORK--Continued		
HAMS FORK BELOW POLE CREEK, NEAR FRONTIER, WY (D)	09223000	471
HAMS FORK NEAR DIAMONDVILLE, WY (cm)	09224050	473
BLACKS FORK NEAR LITTLE AMERICA, WY (D)	09224700	474
HENRYS FORK NEAR MANILA, UT (D)	09229500	476
GREEN RIVER NEAR GREENDALE, UT (DT)	09234500	478
YAMPA RIVER:		
LITTLE SNAKE RIVER NEAR SLATER, CO (D)	09253000	482
BATTLE CREEK:		
WEST FORK BATTLE CREEK:		
HAGGARTY CREEK ABOVE BELVIDERE DITCH, NEAR ENCAMPMENT, WY (c)	09253455	484
WEST FORK BATTLE CREEK AT BATTLE CREEK CAMPGROUND, NEAR SAVERY, WY (c)	09253465	485
SLATER FORK NEAR SLATER, CO (D)	09255000	486
MUDDY CREEK BELOW YOUNG DRAW NEAR BAGGS, WY (D)	09258980	488
LITTLE SNAKE RIVER BELOW BAGGS, WY (cs)	09259050	490
GREAT SALT LAKE BASIN		
BEAR RIVER BASIN		
BEAR RIVER NEAR UTAH-WYOMING STATE LINE (D)	10011500	491
BEAR RIVER AT EVANSTON, WY (D)	10016900	493
BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT (Dcs)	10020100	495
BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT (D)	10020300	498
BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY (D)	10028500	500
SMITHS FORK NEAR BORDER, WY (D)	10032000	502
SMITHS FORK AT COKEVILLE, WY (cs)	10035000	504
BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY (Dcmsb)	10038000	505
BEAR RIVER AT BORDER, WY (D)	10039500	508
COLUMBIA RIVER BASIN		
SNAKE RIVER BASIN		
SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY (Dcs)	13010065	510
SNAKE RIVER NEAR MORAN, WY (D)	13011000	516
PACIFIC CREEK AT MORAN, WY (D)	13011500	518
BUFFALO FORK ABOVE LAVA CREEK, NEAR MORAN, WY (D)	13011900	520
SNAKE RIVER AT MOOSE, WY (DCTOPcs)	13013650	522
GROS VENTRE RIVER AT ZENITH, WY (D)	13015000	535
FISH CREEK:		
GRANITE CREEK ABOVE GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY (D)	13016305	537
FISH CREEK AT WILSON, WY (D)	13016450	539
FLAT CREEK:		
CACHE CREEK NEAR JACKSON, WY (D)	13018300	541
FLAT CREEK BELOW CACHE CREEK, NEAR JACKSON, WY (D)	13018350	543
SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY (Dcs)	13018750	545
SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WY (D)	13022500	551
GREYS RIVER ABOVE RESERVOIR, NEAR ALPINE, WY (D)	13023000	553
SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY (Dcms)	13027500	555
HENRYS FORK:		
FALLS RIVER:		
BOUNDARY CREEK NEAR BECHLER RANGER STATION, WY (D)	13046680	558

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey (USGS), in cooperation with State, Tribal, county, municipal, and other Federal agencies, collects data each water year describing the water resources of Wyoming. 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 USGS, the data are published annually in this report series entitled, "**Water Resources Data - Wyoming**".

Water resources data for water year 2004 for Wyoming in this volume consists of records of stage, discharge, and water quality of streams; and stage and contents of lakes and reservoirs. This report contains discharge records for 164 gaging stations; water quality at 43 gaging stations and 45 ungaged stations; and stage and contents for one reservoir. Locations of streamflow-gaging stations and water-quality stations are shown in figure 1. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of USGS water-supply papers entitled "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities of the United States or may be purchased from USGS Information Services, Box 25286, Denver Federal Center, Denver, Colorado 80225. Most water-supply papers also are available from the USGS Publications Warehouse on the World Wide Web at:

http://infotrek.er.usgs.gov/pubs/

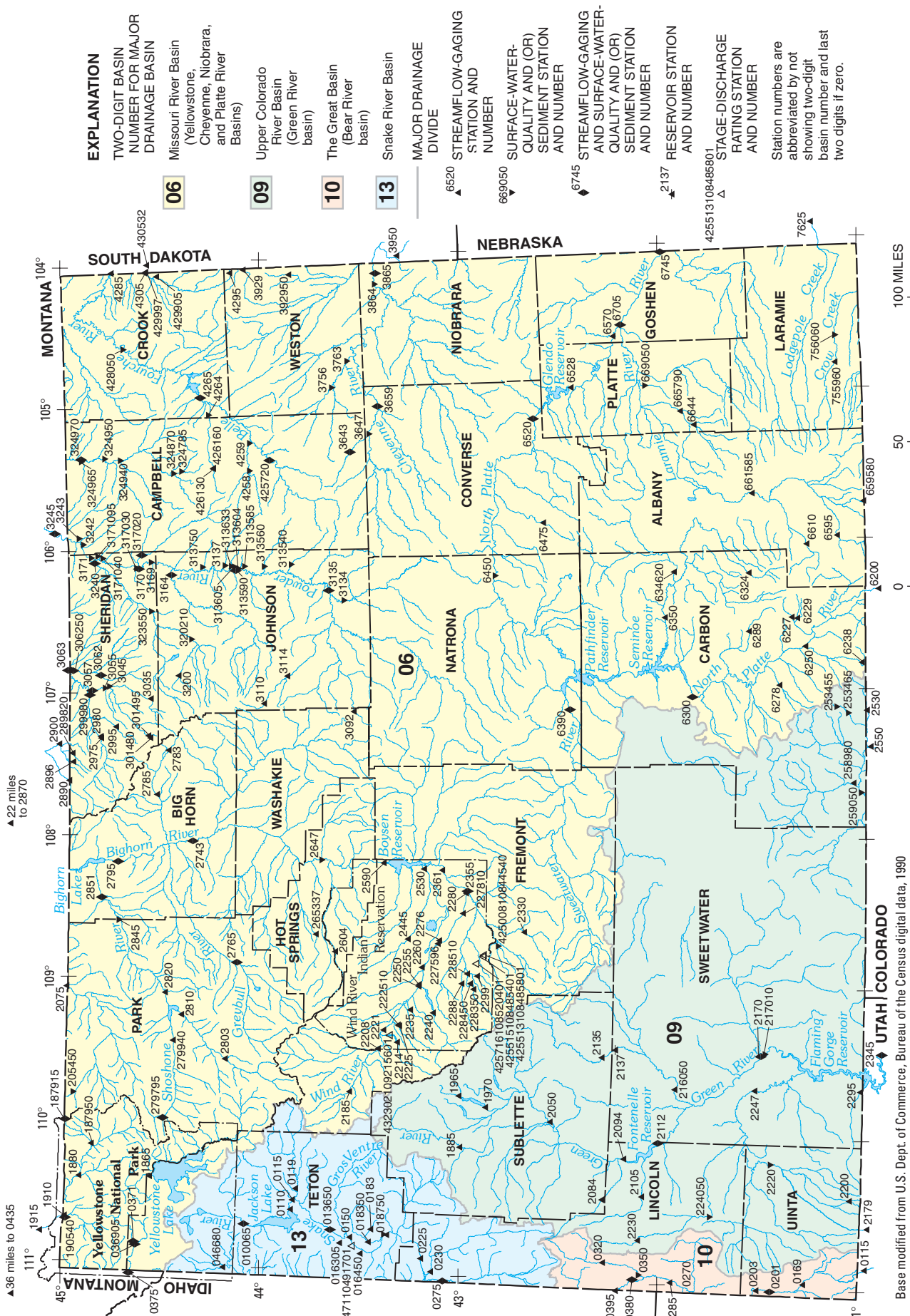
For water years 1961 through 1970, streamflow data were released by the USGS in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water have been published in official USGS reports on a State-boundary basis. These official USGS 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 WY-04-1**." These water-data reports are for sale, in paper copy or on microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Water-data reports also are available from the USGS Publications Warehouse on the World Wide Web at:

http://infotrek.er.usgs.gov/pubs/

Additional information, including current prices, for ordering specific reports may be obtained from the USGS Wyoming Water Science Center at the address given on the back of the title page, by telephone to (307) 778-2931, or by email to state_rep_wy@usgs.gov. Hydrologic data for Wyoming is available on the World Wide Web at:

http://wy.water.usgs.gov/



Base modified from U.S. Dept. of Commerce, Bureau of the Census digital data, 1990
Hydrography modified from U.S. Geological Survey digital data, Enhanced River Reach File, 1999
Albers Equal-area Conic projection, Standard parallels 29°30' and 45°30', central meridian -107°30'

Figure 1. Location of surface-water streamflow-gaging stations, water-quality stations, and reservoir station, 2004 water year.

COOPERATION

The USGS and organizations of the State of Wyoming have had cooperative agreements for the systematic collection of streamflow records since 1895 and for collection of water-quality samples since 1946. Agencies and organizations that assisted in data collection through cooperative agreements with the USGS during water year 2004 were:

Federal Agencies

Bureau of Reclamation, U.S. Department of the Interior

Bureau of Land Management, U.S. Department of the Interior

U.S. Forest Service, U.S. Department of Agriculture

National Park Service, U.S. Department of the Interior

Corps of Engineers, U.S. Army

Tribal Governments

Eastern Shoshone and Northern Arapaho Tribes, Joint Business Council

State Agencies

Wyoming State Engineers Office, Patrick T. Tyrrell, State Engineer

Wyoming Department of Environmental Quality, John Corra, Director

Local Agencies

Teton Conservation District, Randy Williams, Executive Director

Sheridan Area Water Supply Joint Powers Board, Bruce Yates, Administrator

Sweetwater County Conservation District, Ginger Eaton, District Coordinator

Fremont County Weed and Pest Control District, Lars Baker, Supervisor

Municipalities

City of Gillette, Duane Evenson, Mayor

SUMMARY OF HYDROLOGIC CONDITIONS

Water year 2004 was the fifth consecutive year of below average precipitation for parts of Wyoming. Statewide precipitation for the water year was about 89 percent of average and snowpack accumulation through May 1 2004 was about 69 percent of average. The continuing drought resulted in the recording of below normal streamflows at gaging stations across the State. Water year 2004 average annual discharge at 94 percent of stations with 10 or more years of streamflow record was less than the median average annual discharge. The maximum specific-conductance measurements at 2 of ten long-term water-quality monitoring sites were greater in water year 2004 than the maximum for the 10-year period of water years 1994-2003.

Precipitation

Precipitation for water year 2004 was below average for parts of Wyoming for the fifth consecutive year. Precipitation data for the State are summarized by climate divisions as defined by the National Oceanic and Atmospheric Administration (NOAA). Divisional precipitation in water year 2004 ranged from about 111 percent of the 1971-2000 average for the Wind climate division to about 65 percent of the average for the Belle Fourche climate division (fig. 2; Western Regional Climate Center, 2005a). Water year 2004 precipitation for all Wyoming climate divisions averaged about 89 percent of the 1971-2000 average. For the Belle Fourche climate division, water year 2004 precipitation was the fourth lowest for the period of record (water years 1896-2004).

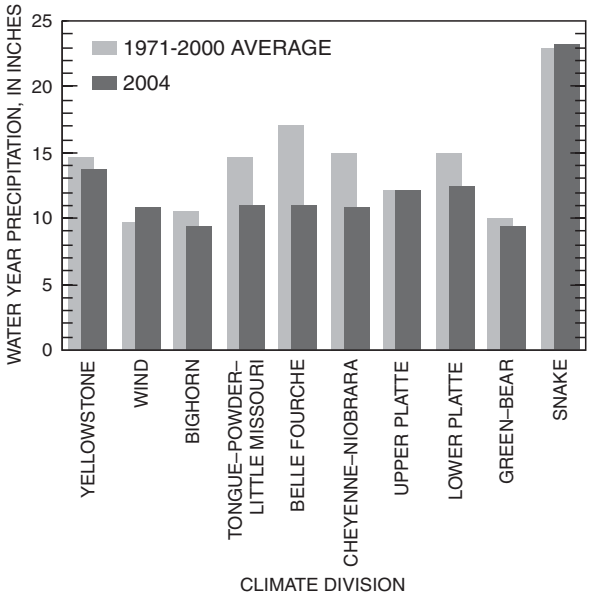


Figure 2. Water year 2004 and 1971-2000 average precipitation by climate division (Source: Western Regional Climate Center, 2005a).

Snow accumulation for water year 2004 was below average for most of Wyoming. Most runoff in the State is derived from snowmelt. Snowpack conditions are summarized by major river basins by the Natural Resources Conservation Service (NRCS). As of May 1, 2004 prior to the normal snowmelt period, basin snowpack conditions for Wyoming ranged from about 88 percent of average for parts of the Wind River basin to about 24 percent of average for parts of the Green and Bear River basins (table 1; Natural Resources Conservation Service, 2005). Snowpack conditions as of May 1, 2004 for all Wyoming major river basins were about 69 percent of average. The Belle Fourche and Cheyenne River basins are lower in

elevation than the other basins and the snowpack generally is mostly melted by May 1; thus, snowpack conditions for the Belle Fourche and Cheyenne River basins are not listed in table 1.

Table 1.--Summary of snowpack conditions in eight major river basins in Wyoming for water year 2004 (Source: Natural Resources Conservation Service, 2005).

Major River Basin	Range of snowpack, in percent of average snow water equivalent as of May1, 2004	
	Low	High
Yellowstone River	52	63
Wind River	58	88
Bighorn River	48	76
Powder and Tongue Rivers	50	66
Upper North Platte River	45	73
Lower North Platte River	27	77
Green and Bear River	24	65
Snake River	40	59

Drought conditions in Wyoming continued in Wyoming during water year 2004 because of consecutive years of below normal precipitation. These cumulative effects are not quantified in annual precipitation summaries. The Standardized Precipitation Index (SPI) is a measure of the probability of recording a given amount of precipitation over a specified period (Western Regional Climate Center, 2005b). The SPI is centered such that an index value of zero equals the median precipitation. The index is increasingly negative for drought conditions in both magnitude and (or) duration. The SPI for water years 1999 through 2004 for seven of the 10 NOAA climate divisions in Wyoming was classified as extremely dry, illustrating the cumulative effect of consecutive years of below normal precipitation (fig. 3; Western Regional Climate Center, 2005b). Overall, Wyoming was one of the driest states in the country for this 60-month period.

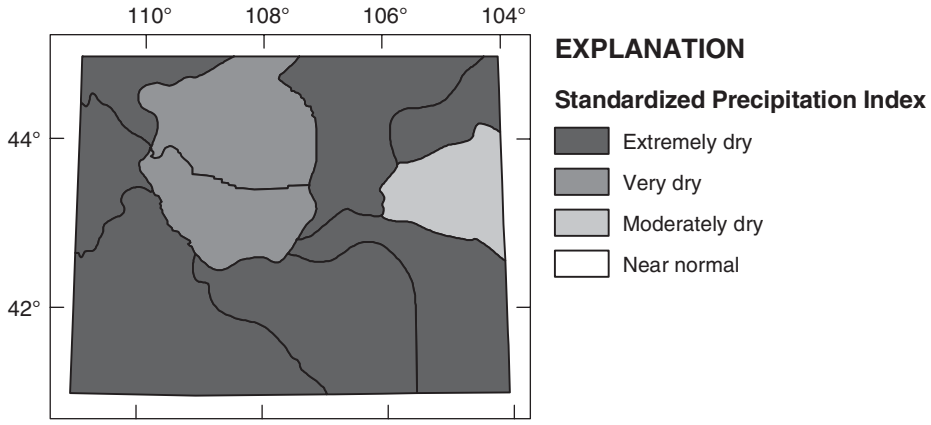


Figure 3. Sixty month Standardized Precipitation Index (SPI) by climate divisions for Wyoming, October 1999 through September 2004 (Modified from Western Regional Climate Center, 2005b).

Streamflow

Average annual discharge at seven long-term index gaging stations was less than the median average annual discharge for the period of record (fig. 4). Average annual discharge at the index stations ranged from about 35 percent of the median average annual discharge at 06317000 Powder River at Arvada to about 84 percent of the median average annual discharge at 13022500 Snake River above reservoir near Alpine. For the third consecutive year, a new record low average annual discharge was recorded at 06674500 North Platte River at Wyoming-Nebraska State Line (75 years). Average annual discharge was the second lowest on record at 06279500 Bighorn River at Kane (75 years) and at 06317000 Powder River at Arvada and the third lowest on record at 06285100 Shoshone River near Lovell (38 years).

Average annual discharge at most gaging stations in and near Wyoming was less than the median annual discharge for the period of record. Water year 2004 average annual discharge was less than the period of record median average annual discharge at about 94 percent (101 of 107) of all stations with at least 10 years of annual streamflow data. About 35 percent (37 of 107) of all stations with at least 10 years of annual streamflow data recorded the third lowest or lower average annual discharge in water year 2004. New record lows for average annual discharge were set at 15 of the 37 stations. The average record length for stations recording the third lowest or lower average annual discharge in water year 2004 was about 39 years.

Most average monthly discharges at seven long-term index gaging stations were less than the median average monthly discharges for the period of record (fig. 5). Average monthly discharges during some months were the lowest on record at 06279500 Bighorn River near Kane (75 years), 06285100 Shoshone River near Lovell (38 years), and 06674500 North Platte River at Wyoming-Nebraska State Line (75 years). Streamflows at these three stations are influenced by regulation from upstream reservoirs.

Chemical Quality of Stream Water

The U.S. Geological Survey operates a network of water-quality stations throughout Wyoming in cooperation with numerous Federal, State, and local agencies. The network changes from year to year as objectives are achieved or changed, or funding is changed. The sampling frequency varies from station to station; however, most stations are sampled at least four times per year. Some stations have only a few years of water-quality information, while other stations have been in operation for many years and provide a basis for the description of long-term conditions that represent a wide range of natural variability. Various water-quality measurements are made, either onsite or by laboratory analyses of samples, depending on the water-quality objectives of the investigation. Onsite stream measurements at stations generally include specific conductance, pH, water temperature, and dissolved oxygen. In addition, bacteria is sometimes analyzed in the field. Laboratory analyses in water year 2004 may include major ions, dissolved solids, nutrients, trace elements, organic compounds, or sediment.

The concentration of dissolved solids represents the total of all constituents dissolved in the water. Specific conductance typically varies directly with the dissolved-solids concentration; thus, specific conductance was chosen as an indicator of the concentration of dissolved solids and general water quality. Concentrations of dissolved solids generally are inversely related to discharge. A statistical summary of specific-conductance measurements for samples at 10 stations for selected streams in Wyoming describes the general water-quality variability of the stream water during 2004 (table 2). The specific conductance varies considerably in Wyoming owing to the diverse geology of the State. The maximum value measured on these streams (5,250 microsiemens per centimeter at 25 degrees Celsius) was from a sample collected at

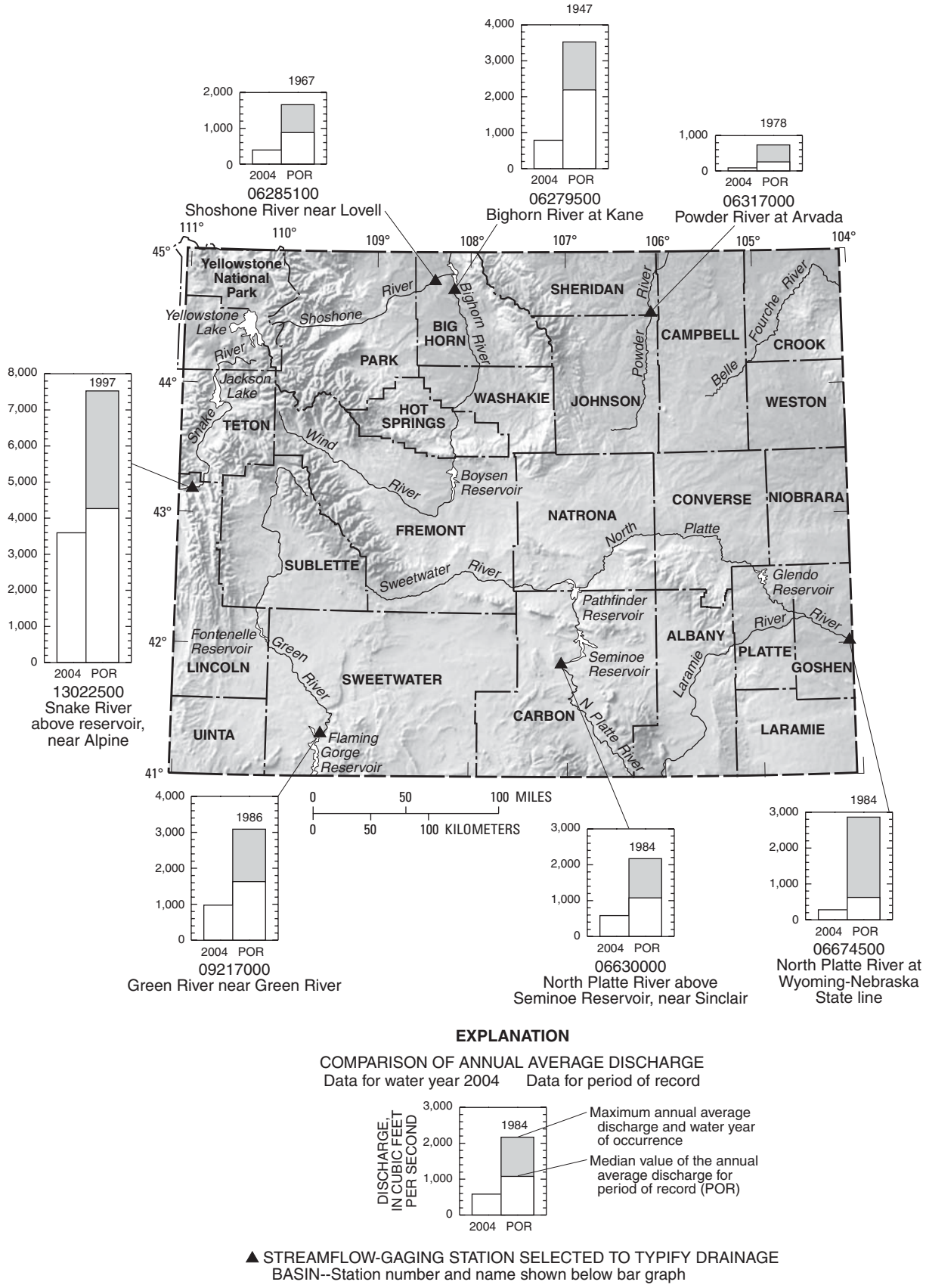


Figure 4. Annual average discharge for water year 2004 and median and maximum annual average discharge for period of record for seven long-term index gaging stations in Wyoming.

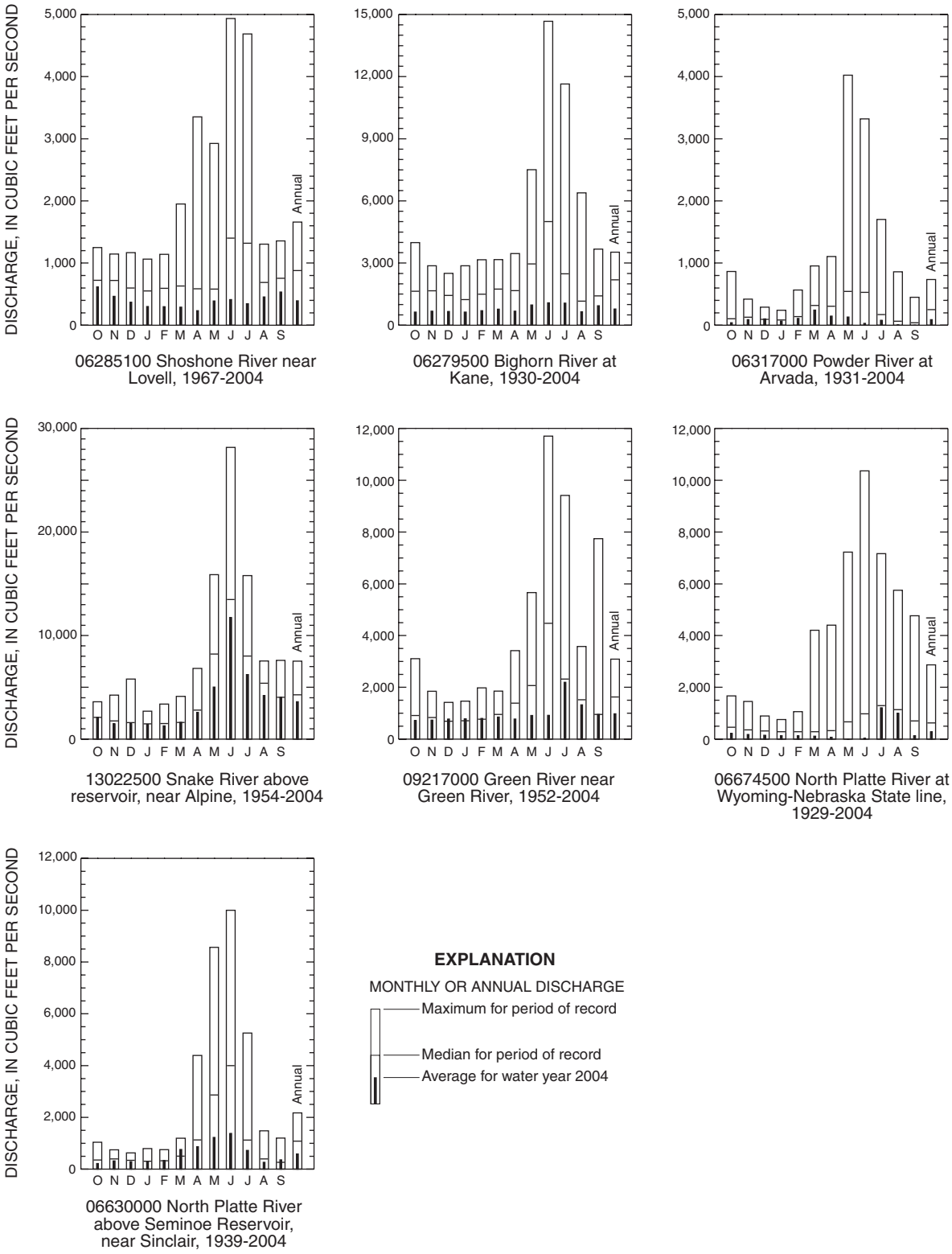


Figure 5. Average monthly and annual discharge for water year 2004 and median and maximum monthly and annual discharge for period of record for seven long-term index gaging stations in Wyoming.

the Little Powder River above Dry Creek, near Weston, Wyoming (station 06324970); the minimum value measured (148 microsiemens per centimeter at 25 degrees Celsius) was from a sample collected at the Snake River at Moose, Wyoming (station 13013650).

To compare the current and long-term water-quality conditions, specific-conductance measurements are summarized for water year 2004 and the 10-year period of water years 1994-2003. The range of specific-conductance measurements is described by the minimum and maximum values. In addition, the central tendency of data collected over the 10-year period is described by the median (50th percentile). All specific-conductance measurements in 2004 were within the range of measurements for the 10-year period of water years 1994-2003, except for two stations. The maximum specific-conductance measurements at the Little Powder River above Dry Creek, near Weston, Wyoming (station 06324970) and the Belle Fourche River below Moorcroft, Wyoming (station 06426500) were greater in water year 2004 than the maximum for the 10-year period of water years 1994-2003.

Table 2.--Statistical summary of specific-conductance measurements for discrete water samples from selected stations for 2004 and 1994-2003 water years.
[Specific conductance, in microsiemens per centimeter at 25 degrees Celsius]

	Specific Conductance						
	Water Year 2004			Water Years 1994-2003			
Station Name and Number	Number of Samples	Maximum	Minimum	Number of Samples	Maximum	Median	Minimum
Little Wind River near Riverton, Wyo. 06235500	4	825	240	45	1,240	859	161
Bighorn River at Kane, Wyo. 06279500	4	1,180	635	91	1,850	880	321
Powder River at Arvada, Wyo. 06317000	20	4,430	1,940	75	5,170	2,180	744
Little Powder River above Dry Creek near Weston, Wyo. 06324970	12	5,250	725	89	4,470	3,300	358
Belle Fourche River below Moorcroft, Wyo. 06426500	12	3,750	1,570	60	3,720	2,460	299
North Platte River at Wyoming-Nebraska State line 06674500	4	983	850	62	1,240	869	545
Green River below Green River, Wyo. 09217010	6	570	382	60	988	570	277
Black's Fork near Lyman, Wyo. 09222000	4	2,110	1,140	31	3,880	1,410	700
Bear River above reservoir, near Woodruff, Utah 10020100	4	485	357	40	993	456	145
Snake River at Moose, Wyo. 13013650	9	217	148	74	228	184	113

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, hydrologic-station records in USGS reports have been listed in order of downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary entering between two main-stream stations is listed between those stations. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is located with respect to the stream to which it is immediately tributary is indicated by an indention in that list of stations in the front of this report. Each indentation represents one rank. This downstream order and system of indentation indicates which stations are on tributaries between any two stations and the rank of the tributary on which each station is located.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, 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 composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 09004100, which appears just to the left of the station name, includes a 2-digit part number "09" plus the 6-digit (or 8-digit) downstream order number "004100." In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

NUMBERING SYSTEM FOR MISCELLANEOUS SITES

The USGS miscellaneous site-numbering system is based on the grid system of latitude and longitude. The system provides the geographic location of the miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, and the next 7 digits denote degrees, minutes, and seconds of longitude; the last 2 digits are a sequential number for miscellaneous sites within a 1-second grid. In the event that the latitude-longitude coordinates for more than one miscellaneous site are the same, a sequential number such as "01," "02," and so forth, would be assigned (see fig. 6). The 8-digit, downstream order station numbers are not assigned to miscellaneous sites where only random water-quality samples or discharge measurements are taken.

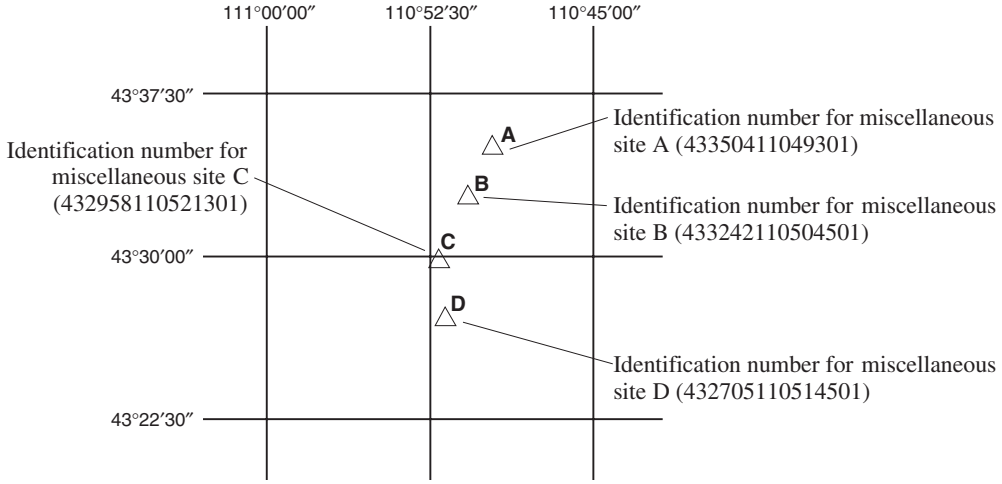


Figure 6. System for numbering miscellaneous sites (latitude and longitude).

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 provides 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 STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

The base data collected at gaging stations (fig. 1) consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2, which may be accessed from *http://water.usgs.gov/pubs/twri/*. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standardization (ISO).

For stream-gaging stations, discharge-rating tables for any stage are prepared from stage-discharge curves. If extensions to the rating curves are necessary to express discharge greater than measured, the extensions are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams and weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features of the stream channel, the daily mean discharge is computed by the shifting-control method in which correction factors based on individual discharge measurements and notes by engineers and observers are used when applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the controlling section, the daily mean discharge is computed by the shifting-control method.

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence 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 at some distance from the base gage.

An index velocity is measured using ultrasonic or acoustic instruments at some stream-gaging stations and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

At some stations, 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.

At some stream-gaging stations in the northern United States, the stage-discharge relation is affected by ice in the winter; therefore, computation of the discharge in the usual manner is impossible. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter-discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge from other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the volume or contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly changes are computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of five parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; and (5) a hydrograph of discharge.

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 follow that clarify information presented under the various headings of the station description.

LOCATION.—Location information 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 term indicates the time period for which records have been published 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 its flow reasonably can be considered equivalent to flow at the present station.

REVISED RECORDS.—If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

GAGE.—The type of gage in current use, the datum of the current gage referred to a standard datum, 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 either will be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See section titled Identifying Estimated Daily Discharge.) Information is presented relative to the accuracy of the records, to special methods of computation, and 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, the outlet works and spillway, and the purpose and use of the reservoir.

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents 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 USGS.

REVISIONS.—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (*http://water.usgs.gov/nwis/nwis*). Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations 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 revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. 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 stage-capacity table when daily volumes are given.

Peak Discharge Greater than Base Discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

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 for the table, the line headed TOTAL gives the sum of the daily figures for each month; the line headed MEAN gives the arithmetic average flow in cubic feet per second for 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 is 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). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in effect or if the drainage area includes large noncontributing areas. At some stations, monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir volumes are given. These values are identified by a symbol and a corresponding footnote.

Statistics of Monthly Mean Data

A tabular summary of the mean (line headed MEAN), maximum (MAX), and minimum (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 values. 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. The designated period will consist of all of the station record within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are 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 records within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are 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 of 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 the dates of occurrence do not fall within the selected water years listed in the heading, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration-curve statistics and runoff data also are given. Runoff data may be omitted if extensive regulation or diversion of flow is in effect in the drainage basin.

The following summary statistics data are provided with each continuous record of discharge. Comments that 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.

ANNUAL MEAN.—The arithmetic mean for the individual daily mean discharges for the year noted or for the designated period.

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 equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per square mile (CFSM) 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.

Inches (INCHES) indicate 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 table lists annual maximum stage and discharge at crest-stage stations, and the second table lists 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 often made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for a 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. This identification is shown either by flagging individual daily values with the letter "e" and noting in a table footnote, "e–Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of Field Data and Computed Results

The accuracy of streamflow data 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 observations of stage, measurements of discharge, and interpretations of records.

The degree of accuracy of the records is stated in the REMARKS in the station description. "Excellent" indicates that about 95 percent of the daily discharges are within 5 percent of the true value; "good" within 10 percent; and "fair," within 15 percent. "Poor" indicates that daily discharges have less than "fair" accuracy. Different accuracies may be attributed to different parts of a given record.

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

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. For such stations, values of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. 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 Data Records Available

Information of a more detailed nature than that published for most of the stream-gaging stations such as discharge measurements, gage-height records, and rating tables is available from the District office. Also, most stream-gaging station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the District office (see address that is shown on the back of the title page of this report).

EXPLANATION OF PRECIPITATION RECORDS

Data Collection and Computation

Rainfall data generally are collected using electronic data loggers that measure the rainfall in 0.01-inch increments every 15 minutes using either a tipping-bucket rain gage or a collection well gage. Twenty-four hour rainfall totals are tabulated and presented. A 24-hour period extends from just past midnight of the previous day to midnight of the current day. Snowfall-affected data can result during cold weather when snow fills the rain-gage funnel and then melts as temperatures rise. Snowfall-affected data are subject to errors. Missing values are indicated by this symbol "---" in the table.

Data Presentation

Precipitation records collected at surface-water gaging stations are identified with the same station number and name as the stream-gaging station. Where a surface-water daily-record station is not available, the precipitation record is published with its own name and latitude-longitude identification number.

Information pertinent to the history of a precipitation station is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, period of record, and general remarks.

The following information is provided with each precipitation station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

INSTRUMENTATION.—Information on the type of rainfall collection system is given.

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

Surface-water samples for analysis usually are collected at or near stream-gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, water temperature, sediment discharge, and so forth); extremes for the current year; and general remarks.

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*.

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 at several verticals to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

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 and minimum values (and sometimes mean or median values) for each constituent measured, and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

SURFACE-WATER-QUALITY RECORDS

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data are useful in the interpretation of surface-water quality. Records of surface-water quality in this report involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A *continuous-record station* is a site where data are collected on a regularly scheduled basis. Frequency may be one 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 continuous- or partial-record station, where 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 *continuous records* as used in this report and *continuous recordings* that refer to a continuous graph or a series of discrete values recorded at short intervals. 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.

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 (table 3). The accuracy rating is based on data values recorded before any shifts or corrections are made. Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Table 3.--Rating classifications for 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	Rating			
	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%

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 station 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 table of discharge measurements at miscellaneous sites.

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must 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 on-site measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from *http://water.usgs.gov/pubs/twri/*. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS District office (see address that is shown on the back of title page in this report).

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the 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 published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

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 section.

During periods of rapidly changing flow or rapidly changing concentration, samples may be 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 are collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, 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.

Laboratory Measurements

Samples for biochemical oxygen demand (BOD) and indicator bacteria are analyzed locally. All other samples are analyzed in the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRIs, Book 1, Chapter D2; and Book 5, Chapters A1, A3, and A4. The TWRI publications may be accessed from *http://water.usgs.gov/pubs/twri/*. These methods are consistent with ASTM standards and generally follow ISO standards.

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 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 information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

DRAINAGE AREA.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—This indicates the time periods for which published water-quality records for the station are available. 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 USGS by a cooperating organization are identified here.

EXTREMES.—Maximums and minimums are given only for parameters measured daily or more frequently. For parameters measured weekly or less frequently, true maximums or minimums may not have been obtained. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.—Records are revised if errors in published water-quality records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (*http://waterdata.usgs.gov/nwis*). Users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent updates. Updates to the NWISWeb are 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

Remark codes may appear with the water-quality data in this section (table 4).

Table 4.--Water-quality data remark codes.

Printed Output	Remark
E	Value is estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

Water-Quality Control Data

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-MDLs) and laboratory reporting levels (LRLs). 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. Falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not 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 less than LRL for samples in which the analyte was either not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the 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 generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this District office are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples. These data are not presented in this report but are available from the District office.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated in the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. Many types of blank samples are possible; each is designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank—A blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank—A blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank—A blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank—A blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank—A blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank—A blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank—A blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory. The reference material composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. Many types of replicate samples are possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Concurrent samples—A type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating the collection of samples into two or more compositing containers.

Sequential samples—A type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample—A type of replicate sample in which a sample is split into subsamples, each subsample contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

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 from *http://water.usgs.gov*.

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each Water Discipline District Office (See address that is shown on the back of the title page of this report).

SELECTED REFERENCES

Natural Resources Conservation Service, 2005, State basin outlook reports: Natural Resources Conservation Service, National Water and Climate Center, online version *http://www.wcc.nrcs.usda.gov/cgi-bin/bor.pl* [Mar. 15, 2005].

Western Regional Climate Center, 2005a, U.S.A. divisional climate data, time series plot #2: National Oceanic and Atmospheric Administration, Western Regional Climate Center, online version *http://www.wrcc.dri.edu/spi/divplot2map.html* [Mar. 14, 2005].

Western Regional Climate Center, 2005b, 60-month standardized precipitation index through the end of September 2004: National Oceanic and Atmospheric Administration, Western Regional Climate Center, online version *http://www.wrcc.dri.edu/spi/images0410/spi60.gif* [Mar. 15, 2005].

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 "unfiltered" 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 "filtered" 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 polychlorinated 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 streamflows. Natural base flow is sustained largely by ground-water discharge.

Bed material is the sediment mixture of which a streambed, 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-flowing 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 (μm^3/mL). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (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….

From cell volume, total algal biomass expressed as biovolume (μm^3/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 warmblooded 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 a flowing 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, ft^3/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, [$(ft^3/s)/d$]) 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, $(ft^3/s)/mi^2$] 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 Verti-

cal 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 (μm^3/mL). The abundance of diatoms in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (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 0.4917 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) 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:

$$\bar{d} = -\sum_{i \approx 1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n},$$

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 feacalis, Streptococcus*

feacium, 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")

Filtered pertains to constituents in a water sample passed through a filter of specified pore diameter, most commonly 0.45 micrometer or less for inorganic analytes and 0.7 micrometer for organic analytes.

Filtered, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that has passed through a filter has been extracted. Complete recovery is not achieved by the extraction procedure and thus the analytical determination represents something less than 95 percent of the total constituent concentration in the sample. To achieve comparability of analytical data, equivalent extraction procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

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 fluvial 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 floating "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 (μm^3/mL). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (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 ($CaCO_3$).

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.csc.noaa.gov/text/glossary.html* (see "High water")

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:

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

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 streamflow 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 streamflow, 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:

$$I = I_o e^{-\lambda L},$$

where I_o 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

$$\lambda = -\frac{1}{L}\log_e \frac{I}{I_o}.$$

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.csc.noaa.gov/text/glossary.html* (see "Low water")

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 code is a one-character code that identifies the analytical or field method used to determine a value stored in the National Water Information System (NWIS).

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, µg/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, µg/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, µg/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, µS/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 streamflow, 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.

Nonfilterable refers to the portion of the total residue retained by a filter.

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 streamflows 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 measure-

ments 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 photosynthetic 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 [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/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 [mg O/(m^2/time)] for periphyton and macrophytes or per volume [mg O/(m^3/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 is the amount of a given constituent that is in solution after a representative water sample has been

extracted or digested. Complete recovery is not achieved by the extraction or digestion and thus the determination represents something less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different 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")

Salinity is the total quantity of dissolved salts, measured by weight in parts per thousand. Values in this report are calculated from specific conductance and temperature. Seawater has an average salinity of about 35 parts per thousand (for additional information, refer to: Miller, R.L., Bradford, W.L., and Peters, N.E., 1988, Specific conductance: theoretical considerations and application to analytical quality control: U.S. Geological Survey Water-Supply Paper 2311, 16 p.)

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 "fluvial 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 "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow 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 is the amount (concentration) of undissolved material in a water-sediment mixture. Most commonly refers to that 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 water-suspended sediment sample that is retained on a 0.45-micrometer filter has been extracted or digested. Complete recovery is not achieved by the extraction or digestion procedures and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also "Suspended")

Suspended sediment is sediment carried in suspension by the turbulent components of the fluid or by the Brownian movement (a law of physics). (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 (ft^3/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 hierarchial 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:	Arthropeda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	*Hexagenia*
Species:	*Hexagenia limbata*

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, nonspore-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 (fish) 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 an expression of the optical properties of a liquid that causes light rays to be scattered and absorbed rather than transmitted in straight lines through water. Turbidity, which can make water appear cloudy or muddy, is caused by the presence of suspended and dissolved matter, such as clay, silt, finely divided organic matter, plankton and other microscopic organisms, organic acids, and dyes (ASTM International, 2003, D1889–00 Standard test method for turbidity of water, *in* ASTM International, Annual Book of ASTM Standards, Water and Environmental Technology, v. 11.01: West Conshohocken, Pennsylvania, 6 p.). The color of water, whether resulting from dissolved compounds or suspended particles, can affect a turbidity measurement. To ensure that USGS turbidity data can be understood and interpreted properly within the context of the instrument used and site conditions encountered, data from each instrument type are stored and reported in the National Water Information System (NWIS) using parameter codes and measurement reporting units that are specific to the instrument type, with specific instruments designated by the method code. The respective measurement units, many of which also are in use internationally, fall into two categories: (1) the designations NTU, NTRU, BU, AU, and NTMU signify the use of a broad spectrum incident light in the wavelength range of 400-680 nanometers (nm), but having different light detection configurations; (2) The designations FNU, FNRU, FBU, FAU, and FNMU generally signify an incident light in the range between 780-900 nm, also with varying light detection configurations. These reporting units are equivalent when measuring a calibration solution (for example, formazin or polymer beads), but their respective instruments may not produce equivalent results for environmental samples. Specific reporting units are as follows:

NTU (Nephelometric Turbidity Units): white or broadband [400-680 nm] light source, 90 degree detection angle, one detector.

NTRU (Nephelometric Turbidity Ratio Units): white or broadband [400-680 nm] light source, 90 degree detection angle, multiple detectors with ratio compensation.

BU (Backscatter Units): white or broadband [400-680 nm] light source, 30 ± 15 degree detection angle (backscatter).

AU (Attenuation Units): white or broadband [400-680 nm] light source, 180 degree detection angle (attenuation).

NTMU (Nephelometric Turbidity Multibeam Units): white or broadband [400-680 nm] light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

FNU (Formazin Nephelometric Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, one detector.

FNRU (Formazin Nephelometric Ratio Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, multiple detectors, ratio compensation.

FBU (Formazin Backscatter Units): near infrared [780-900 nm] or monochrome light source, 30±15 degree detection angle.

FAU (Formazin Attenuation Units): near infrared [780-900 nm] light source, 180 degree detection angle.

FNMU (Formazin Nephelometric Multibeam Units): near infrared [780-900 nm] or monochrome light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

For more information please see http://water.usgs.gov/owq/FieldManual/Chapter6/6.7_contents.html.

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")

Unfiltered pertains to the constituents in an unfiltered, representative water-suspended sediment sample.

Unfiltered, recoverable is the amount of a given constituent in a representative water-suspended sediment sample that has been extracted or digested. Complete recovery is not achieved by the extraction or digestion treatment and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

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")

06036905 FIREHOLE RIVER NEAR WEST YELLOWSTONE, MT

LOCATION.--Lat 44°37'13", long 110°51'44", Yellowstone National Park, Hydrologic Unit 10020007, on right bank 1.6 mi south of Madison Junction, 12 mi east of West Yellowstone, and at river mile 1.8.

DRAINAGE AREA.--282 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to March 1996, October 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,050 ft above NGVD of 1929. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. No regulation or diversions upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	240	251	262	249	241	290	303	371	309	251	244
2	235	238	248	250	244	237	295	324	370	302	251	249
3	234	243	248	258	248	237	294	360	382	294	256	251
4	235	245	248	244	244	239	301	390	398	313	255	251
5	235	240	244	242	242	236	305	434	406	333	254	245
6	235	239	253	246	239	226	305	503	426	297	251	243
7	236	239	265	258	244	232	318	530	427	283	250	242
8	236	240	261	250	241	243	320	506	425	275	247	241
9	234	244	250	249	239	251	337	460	441	272	246	239
10	265	249	253	247	238	252	302	422	483	270	244	239
11	244	250	252	245	238	246	290	417	446	265	244	238
12	243	244	250	242	233	247	283	382	461	262	243	242
13	242	245	253	240	239	244	290	340	394	263	242	272
14	243	247	258	241	235	242	302	324	373	264	243	320
15	243	250	253	241	237	238	300	313	372	260	244	294
16	242	257	250	242	236	239	281	357	374	258	246	287
17	240	259	249	238	245	245	313	385	347	261	258	267
18	240	246	244	238	250	255	310	386	348	263	267	259
19	239	252	245	240	248	275	287	448	378	277	260	262
20	239	260	248	239	242	276	301	369	357	292	262	314
21	239	256	250	236	239	272	304	384	343	284	254	274
22	239	248	245	235	236	278	283	537	323	282	279	263
23	240	243	243	238	236	288	274	562	332	278	317	264
24	239	252	246	244	236	299	278	435	322	264	269	261
25	234	251	251	246	239	292	269	371	318	261	331	255
26	241	250	258	239	242	282	275	358	359	262	358	252
27	243	243	250	239	241	259	299	402	335	260	296	250
28	246	245	246	242	241	248	340	473	342	258	265	250
29	265	250	253	246	241	246	318	579	320	255	255	249
30	240	251	255	252	---	259	306	458	331	254	250	251
31	238	---	258	252	---	275	---	394	---	251	247	---
TOTAL	7,457	7,416	7,778	7,581	6,982	7,899	8,970	12,906	11,304	8,522	8,135	7,768
MEAN	241	247	251	245	241	255	299	416	377	275	262	259
MAX	265	260	265	262	250	299	340	579	483	333	358	320
MIN	233	238	243	235	233	226	269	303	318	251	242	238
AC-FT	14,790	14,710	15,430	15,040	13,850	15,670	17,790	25,600	22,420	16,900	16,140	15,410

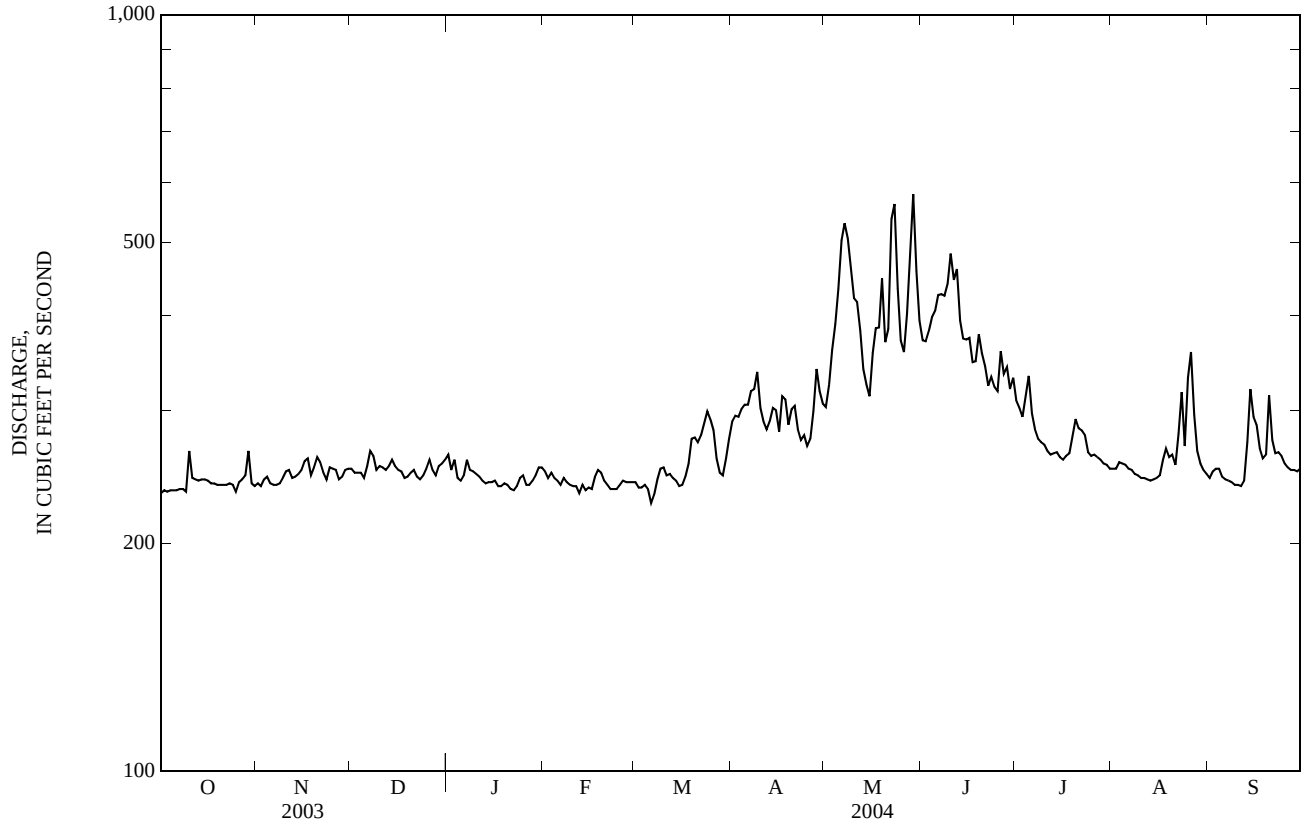
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2004, BY WATER YEAR (WY)*

MEAN	277	274	267	262	261	270	329	483	425	294	271	271
MAX	356	348	316	298	304	336	398	613	756	415	371	368
(WY)	(1984)	(1984)	(1984)	(1985)	(1986)	(1986)	(1986)	(1986)	(1986)	(1986)	(1986)	(1986)
MIN	225	227	220	223	226	239	276	367	273	221	212	217
(WY)	(1989)	(1993)	(1993)	(1993)	(1993)	(1992)	(1993)	(1987)	(1992)	(1988)	(1994)	(1988)

06036905 FIREHOLE RIVER NEAR WEST YELLOWSTONE, MT—Continued

SUMMARY STATISTICS	FOR 2003 WATER YEAR		FOR 2004 WATER YEAR		WATER YEARS 1984 - 2004*	
ANNUAL TOTAL	100,622		102,718		--	
ANNUAL MEAN	276		281		306	
HIGHEST ANNUAL MEAN	--		--		399	1986
LOWEST ANNUAL MEAN	--		--		264	1988
HIGHEST DAILY MEAN	644	May 30	579	May 29	1,240	May 31, 1986
LOWEST DAILY MEAN	233	Aug 21	226	Mar 6	201	Dec 4, 1992
ANNUAL SEVEN-DAY MINIMUM	225	Aug 11	235	Oct 1	205	Aug 15, 1994
MAXIMUM PEAK FLOW	--		659	May 7	2,050[a]	May 18, 1996
MAXIMUM PEAK STAGE	--		4.09	May 7	6.10[b]	May 18, 1996
ANNUAL RUNOFF (AC-FT)	199,600		203,700		221,900	
10 PERCENT EXCEEDS	349		371		419	
50 PERCENT EXCEEDS	250		252		274	
90 PERCENT EXCEEDS	232		239		233	

* For period of operation.
a From rating curve extended above 1,540 ft^3/s.
b From floodmark.



06036905 FIREHOLE RIVER NEAR WEST YELLOWSTONE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983 to 1993, October 2002 to current year.

PERIOD OF DAILY RECORD.--
SEPCIFIC CONDUCTANCE: August 1983 to September 1986, October 1987 to September 1988.
WATER TEMPERATURE: October 1983 to September 1993, October 2002 to current year.

INSTRUMENTATION.--Temperature recorder installed Sept. 18, 2002.

REMARKS.--Daily water temperature records good. Unpublished records of instantaneous water temperature and specific conductance are available in files of the Montana District office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum 633 microsiemens per centimeter (mS/cm) at 25.0×C, Apr. 1, 1988; minimum 140 mS/cm at 25.0×C, June 5, 1986.
WATER TEMPERATURE: Maximum, 30.0°C, June 24, 1988; minimum, 0.5°C Dec. 21, 1990.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 29.0°C, July 16; minimum, 2.5°C, Jan. 6.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.0	14.0	17.0	10.5	7.5	9.0	13.5	11.0	12.5	9.0	5.5	7.5
2	21.0	15.5	18.0	11.0	7.0	9.0	12.0	9.5	10.5	7.5	4.5	5.5
3	20.5	14.0	17.0	12.5	9.0	10.5	12.0	11.0	11.5	8.5	5.5	7.0
4	19.5	13.5	17.0	10.5	6.5	8.0	11.0	9.0	10.0	6.0	3.5	4.5
5	19.5	14.5	17.0	9.5	5.5	7.0	11.5	8.0	10.0	5.0	3.0	4.0
6	19.0	14.5	17.0	9.5	5.0	7.0	13.0	11.5	12.0	7.5	2.5	4.5
7	18.5	14.5	16.5	10.0	6.0	8.0	12.0	9.5	11.0	9.5	7.5	8.5
8	19.5	15.5	17.0	11.0	6.0	8.5	11.0	8.5	9.5	10.5	8.0	9.5
9	18.5	15.0	16.5	12.5	9.5	11.0	10.0	7.0	8.5	13.0	10.5	11.5
10	16.0	13.5	15.0	12.0	9.5	11.0	10.5	8.5	9.5	11.0	8.5	10.0
11	14.5	11.0	13.0	9.5	6.5	7.5	10.5	9.0	10.0	12.5	9.0	10.5
12	14.5	12.5	13.5	11.5	7.0	9.0	10.0	8.5	9.5	10.5	8.0	9.5
13	14.5	12.5	13.5	11.0	7.5	9.0	9.5	8.0	8.5	10.5	7.5	9.0
14	15.0	12.0	13.5	13.0	11.0	12.0	9.0	7.0	8.0	11.0	8.0	9.5
15	15.5	12.5	14.0	12.5	11.5	12.0	9.0	7.0	8.0	10.0	7.5	9.0
16	15.0	11.0	13.0	13.5	8.5	11.5	9.0	6.5	8.0	11.5	9.0	10.0
17	17.5	12.5	15.0	10.0	7.5	8.5	9.5	7.5	8.5	10.0	7.5	9.0
18	17.5	13.5	15.5	9.0	7.5	8.0	8.5	6.0	7.5	10.0	7.0	8.5
19	17.0	13.0	15.0	13.0	8.0	10.0	9.0	6.0	7.5	11.5	9.5	10.5
20	17.0	13.0	15.0	9.0	7.0	8.0	10.0	7.0	8.5	12.0	9.5	10.5
21	19.5	14.0	16.5	10.0	8.0	9.0	12.5	10.0	11.0	9.5	6.5	8.0
22	18.5	13.5	16.0	9.0	5.5	7.5	11.0	8.0	9.0	9.0	6.5	8.0
23	16.5	13.5	15.0	7.5	4.5	6.0	9.0	7.0	8.0	10.0	8.0	9.0
24	14.0	11.0	12.5	8.5	6.0	7.5	10.0	6.5	8.5	11.0	9.5	10.0
25	14.0	9.0	11.5	7.0	6.0	6.5	11.0	9.5	10.5	10.0	7.0	9.0
26	15.5	11.0	13.0	9.5	6.0	7.5	10.0	7.5	9.0	7.5	5.5	6.5
27	14.0	12.0	13.5	8.0	6.0	7.0	8.5	7.0	8.0	8.5	6.0	6.5
28	14.5	12.5	14.0	10.0	7.0	8.5	8.5	6.0	7.0	8.5	6.5	7.5
29	13.0	9.0	11.0	10.5	8.5	9.5	7.5	5.5	6.5	9.5	7.5	8.5
30	9.0	6.5	7.0	13.5	10.5	12.0	8.5	5.0	7.0	10.0	6.0	8.0
31	11.0	6.0	8.5	---	---	---	10.0	7.5	8.5	8.5	5.5	7.0
MONTH	21.0	6.0	14.5	13.5	4.5	9.0	13.5	5.0	9.0	13.0	2.5	8.5

06036905 FIREHOLE RIVER NEAR WEST YELLOWSTONE, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.5	6.0	7.0	14.0	10.5	12.0	18.5	13.5	16.0	21.5	13.5	17.5
2	9.0	5.0	7.0	13.5	8.5	10.5	17.5	13.0	15.0	21.0	14.5	18.0
3	12.5	8.5	10.0	12.5	9.0	10.5	20.0	11.5	15.5	18.5	14.5	17.0
4	11.0	8.5	10.0	13.5	9.5	11.5	17.5	13.0	15.5	19.5	13.5	16.5
5	11.5	9.5	10.0	12.0	6.0	10.0	20.0	13.5	16.5	18.0	12.5	15.5
6	11.0	8.0	9.5	8.5	4.0	6.5	19.0	12.5	16.0	17.5	10.5	14.5
7	11.0	8.5	9.5	12.5	6.5	9.5	20.0	14.0	17.0	17.5	10.0	14.0
8	11.0	8.5	9.5	16.0	9.0	12.5	19.0	14.5	16.5	16.0	10.0	13.5
9	11.0	7.5	9.5	16.5	10.5	13.5	16.5	11.0	13.0	16.5	11.5	14.0
10	10.0	6.5	8.5	16.0	11.0	13.0	17.0	9.5	13.0	17.0	12.5	15.0
11	9.5	6.0	8.0	16.5	9.5	13.0	19.0	11.0	14.5	15.5	12.0	13.5
12	9.5	4.5	7.0	16.0	11.0	13.5	20.5	12.5	16.5	14.5	9.5	12.0
13	11.0	6.0	8.5	16.5	10.0	13.0	20.0	13.5	17.0	15.5	11.0	13.5
14	10.5	6.0	8.5	13.0	11.5	12.0	18.0	14.0	16.0	16.5	12.5	14.5
15	11.5	8.5	10.0	14.5	10.5	12.0	15.0	11.0	13.0	19.5	13.0	16.5
16	13.0	9.5	11.0	14.0	10.5	12.5	18.0	10.5	14.0	17.5	14.0	16.0
17	12.5	11.0	11.5	14.5	10.0	12.5	15.5	13.0	14.5	19.5	12.0	15.5
18	14.0	11.5	12.5	16.5	11.5	13.5	15.0	13.0	14.0	18.5	15.0	16.5
19	14.0	11.0	12.5	14.5	9.0	11.5	17.0	12.0	14.5	17.0	11.0	13.5
20	13.5	10.0	11.5	17.5	9.5	13.0	15.0	11.5	13.0	17.0	13.5	15.5
21	12.0	8.0	10.0	18.5	12.5	15.0	16.5	10.0	13.5	17.5	14.0	15.5
22	12.0	6.5	9.5	17.5	12.0	15.0	17.5	12.0	14.5	15.5	12.0	13.0
23	12.5	8.0	10.5	18.5	13.0	15.5	20.5	12.5	16.0	14.5	10.0	12.0
24	13.5	9.0	11.5	17.5	11.5	14.0	18.5	14.0	16.0	15.0	11.0	13.0
25	13.0	10.5	11.5	16.5	11.0	13.5	20.5	12.5	16.0	19.0	13.5	15.5
26	13.0	10.5	12.0	14.0	11.0	13.0	22.0	14.0	17.5	16.0	13.0	14.0
27	14.5	9.5	12.0	14.0	9.5	12.0	20.5	14.5	17.5	19.0	13.5	16.0
28	12.5	10.0	11.0	16.0	10.5	13.0	17.0	9.5	12.5	17.0	13.5	15.0
29	13.0	9.5	11.0	19.0	10.0	14.5	16.0	8.0	12.0	13.5	10.0	11.5
30	---	---	---	19.0	12.0	15.5	20.0	12.0	15.5	15.5	10.0	12.5
31	---	---	---	19.0	12.5	15.5	---	---	---	18.0	12.5	15.0
MONTH	14.5	4.5	10.0	19.0	4.0	12.5	22.0	8.0	15.0	21.5	9.5	14.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.5	14.5	17.5	25.5	18.5	22.0	26.5	19.5	23.0	23.0	18.0	20.5
2	22.5	16.0	19.0	24.5	18.5	21.5	26.5	20.5	23.0	21.5	17.5	19.0
3	22.0	16.0	19.5	24.5	18.0	21.0	26.5	20.5	23.0	18.0	16.5	17.0
4	21.0	17.5	19.5	22.5	20.0	21.0	25.5	19.5	22.0	22.0	15.0	18.0
5	22.0	16.5	19.5	23.0	17.5	20.0	27.0	20.5	23.5	20.0	16.0	18.0
6	20.0	16.5	18.0	24.5	18.0	21.0	24.5	18.5	21.5	22.5	15.5	19.0
7	20.5	15.0	18.0	24.5	19.0	21.5	23.5	18.0	20.5	22.0	15.5	19.0
8	22.5	16.0	19.0	24.0	17.5	20.5	25.5	17.5	21.5	22.0	16.5	19.0
9	20.0	16.5	18.5	24.0	17.0	20.5	26.0	18.5	22.0	22.0	16.0	19.0
10	18.0	12.5	14.5	26.0	18.5	22.0	25.5	19.0	22.0	20.0	16.5	18.0
11	15.0	12.0	13.0	25.0	19.5	22.0	26.0	18.5	22.0	22.0	15.5	18.5
12	18.0	13.0	15.0	27.0	18.0	22.5	25.5	18.0	22.0	19.0	17.0	18.0
13	18.0	15.0	16.5	24.0	20.0	22.0	26.0	18.5	22.0	18.0	16.0	17.0
14	21.0	15.0	18.0	28.5	19.5	23.5	26.5	18.5	22.5	16.5	13.0	14.5
15	20.0	14.5	17.5	28.0	22.5	25.0	24.0	19.5	22.0	17.0	12.5	14.5
16	18.5	14.5	16.5	29.0	20.5	24.5	25.0	19.0	21.5	19.0	15.5	17.0
17	21.5	14.0	17.5	27.0	21.0	24.0	23.5	20.5	22.0	21.0	15.5	18.0
18	18.5	15.5	17.0	27.0	20.5	23.5	23.0	20.5	21.5	20.5	17.0	19.0
19	19.5	15.0	17.0	26.5	23.0	24.5	25.0	20.0	22.5	19.0	16.5	17.5
20	19.5	17.0	18.5	25.5	20.5	22.5	23.0	18.5	21.0	16.5	14.0	15.0
21	22.0	15.0	18.5	27.0	20.0	23.0	24.0	19.0	21.5	17.5	13.0	15.0
22	24.0	16.0	20.0	24.5	21.0	23.0	22.0	18.5	20.5	15.0	12.5	13.5
23	24.0	18.0	21.0	26.0	19.5	22.5	19.5	15.0	16.5	17.5	14.0	15.5
24	25.0	18.5	21.5	27.5	19.0	23.0	20.0	14.5	17.0	20.5	15.0	17.5
25	24.5	19.0	21.5	27.0	20.0	23.5	18.5	14.5	17.0	21.5	15.5	18.5
26	23.5	17.0	20.5	26.5	21.5	23.5	18.5	13.5	15.5	21.5	15.0	18.5
27	22.0	19.0	20.5	26.5	20.0	23.0	21.0	15.5	17.5	21.5	16.5	19.0
28	23.5	18.0	20.5	27.0	20.5	23.5	21.5	16.0	19.0	20.5	16.5	18.5
29	25.0	18.5	21.5	26.0	20.0	23.0	24.0	17.0	20.5	20.5	15.0	18.0
30	23.0	19.5	21.0	26.0	19.5	23.0	24.5	18.0	21.0	19.5	17.5	18.5
31	---	---	---	26.5	19.5	23.0	25.0	17.5	21.5	---	---	---
MONTH	25.0	12.0	18.5	29.0	17.0	22.5	27.0	13.5	21.0	23.0	12.5	17.5

06037100 GIBBON RIVER AT MADISON JUNCTION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°38'26", long 110°51'38", Yellowstone National Park. Hydrologic Unit 10020007, on left bank 40 ft downstream from highway, 0.4 mi south of Madison Junction, 14 mi east of West Yellowstone, and at river mile 0.2.

DRAINAGE AREA.--126 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2001 to September 2001, October 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,800 ft above NGVD of 1929. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. No regulation or diversions upstream from station. Station operated and records provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	81	86	92	84	88	132	141	191	122	91	86
2	88	83	86	91	85	82	133	148	173	123	91	86
3	88	85	87	87	88	87	139	170	161	119	93	86
4	88	87	86	84	88	87	163	187	157	135	91	86
5	88	80	81	e75	87	83	173	206	154	146	92	85
6	89	e80	91	e80	86	81	154	210	146	125	88	85
7	89	81	93	89	88	77	155	201	141	117	88	84
8	90	81	92	88	88	81	161	185	134	113	86	84
9	89	84	84	86	89	85	157	170	136	110	86	83
10	111	87	88	84	85	89	129	165	205	108	86	82
11	98	88	89	84	88	83	121	163	232	105	84	82
12	94	86	86	81	e82	82	122	165	204	102	83	83
13	92	82	87	80	85	80	135	148	169	101	82	106
14	91	87	93	82	84	79	145	140	150	102	81	186
15	90	85	88	79	88	79	140	138	137	100	81	159
16	89	86	81	79	87	77	125	159	134	101	81	155
17	89	90	88	79	90	78	137	198	132	99	85	131
18	88	85	79	78	92	81	146	178	130	101	90	109
19	88	85	83	81	91	87	140	201	141	113	88	105
20	87	90	86	81	86	91	141	154	135	111	85	133
21	87	88	89	77	86	91	134	149	129	108	87	113
22	87	81	84	76	87	95	123	259	123	114	94	106
23	88	80	81	80	89	114	118	301	141	111	108	105
24	87	87	81	83	90	121	123	233	124	102	110	104
25	83	87	89	87	91	118	116	187	129	99	109	99
26	87	87	91	82	91	117	118	182	136	99	130	97
27	88	82	88	82	93	108	137	190	126	98	117	99
28	90	83	84	83	90	100	170	205	141	94	98	97
29	104	86	89	84	86	96	148	280	122	93	94	94
30	89	87	89	89	---	101	146	259	121	92	90	98
31	83	---	89	86	---	116	---	214	---	91	88	---
TOTAL	2,786	2,541	2,688	2,569	2,544	2,834	4,181	5,886	4,454	3,354	2,857	3,108
MEAN	89.9	84.7	86.7	82.9	87.7	91.4	139	190	148	108	92.2	104
MAX	111	90	93	92	93	121	173	301	232	146	130	186
MIN	83	80	79	75	82	77	116	138	121	91	81	82
AC-FT	5,530	5,040	5,330	5,100	5,050	5,620	8,290	11,670	8,830	6,650	5,670	6,160

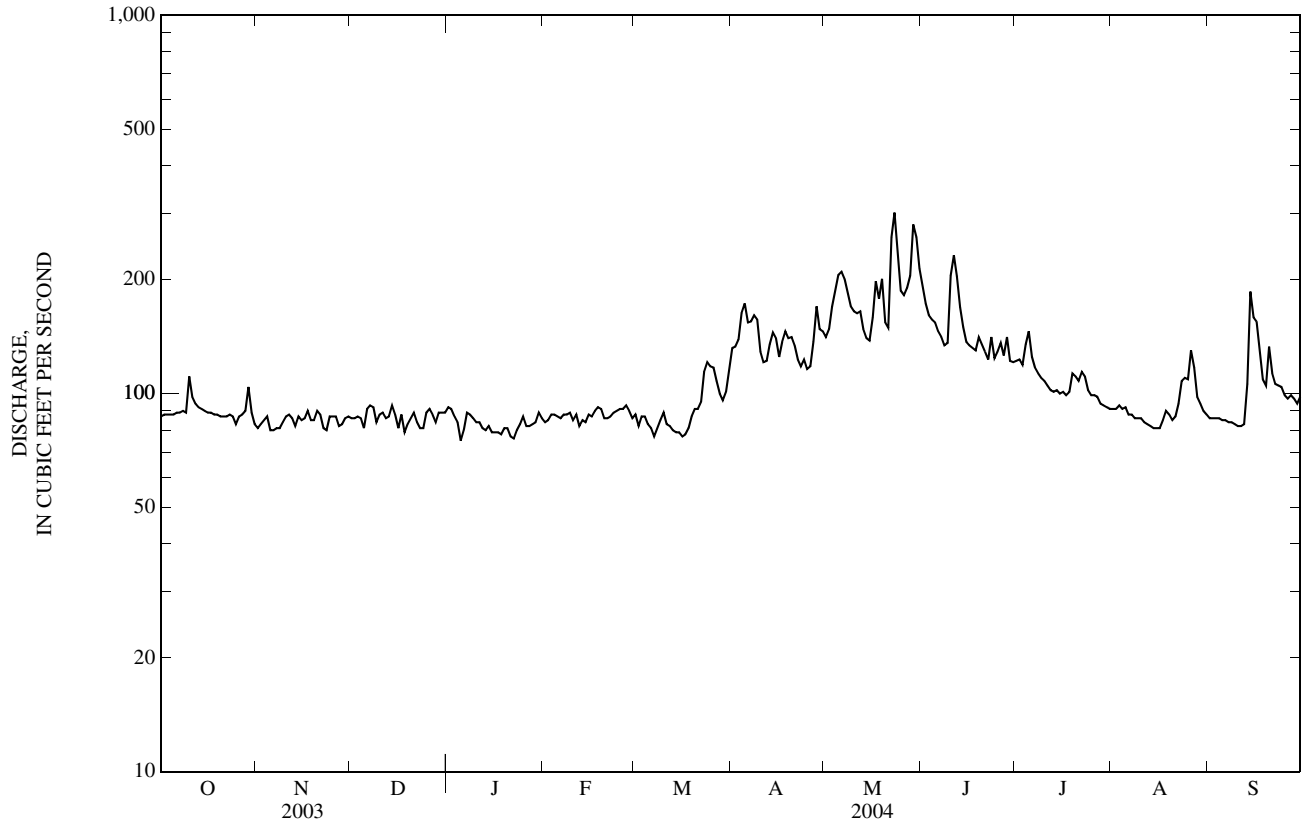
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)*

MEAN	93.3	88.6	89.6	88.5	90.6	92.5	140	250	167	110	92.1	92.9
MAX	96.8	92.6	92.5	94.2	93.6	93.6	152	315	216	114	96.5	104
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2004)
MIN	89.9	84.7	86.7	82.9	87.7	91.4	130	190	137	108	87.7	82.6
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2001)	(2004)	(2001)	(2004)	(2001)	(2001)

06037100 GIBBON RIVER AT MADISON JUNCTION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2003 WATER YEAR		FOR 2004 WATER YEAR		WATER YEARS 2001 - 2004*	
ANNUAL TOTAL	46,545		39,802		--	
ANNUAL MEAN	128		109		119	
HIGHEST ANNUAL MEAN	--		--		129	2003
LOWEST ANNUAL MEAN	--		--		109	2004
HIGHEST DAILY MEAN	506	May 27	301	May 23	584	May 16, 2001
LOWEST DAILY MEAN	79	Dec 18	75	Jan 5	75	Jan 5, 2004
ANNUAL SEVEN-DAY MINIMUM	82	Nov 1	79	Jan 16	79	Jan 16, 2004
MAXIMUM PEAK FLOW	--		334	May 23	674	May 16, 2001
MAXIMUM PEAK STAGE	--		4.79	May 23	5.93	May 16, 2001
ANNUAL RUNOFF (AC-FT)	92,320		78,950		86,200	
10 PERCENT EXCEEDS	203		159		185	
50 PERCENT EXCEEDS	95		90		95	
90 PERCENT EXCEEDS	86		81		84	

* For period of operation.
e Estimated.



06037100 GIBBON RIVER AT MADISON JUNCTION, YELLOWSTONE NATIONAL PARK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2002 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 2002 to current year.

INSTRUMENTATION.--Temperature recorder installed Sept. 19, 2002.

REMARKS.--Daily water temperature records good. Unpublished records of instantaneous water temperature and specific conductance are available in files of the Montana District office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 25.5°C, July 21, 2003; minimum, 0.0°C, several days during winter months.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 25.5°C, July 15, 16; minimum, 0.0°C, several days November through February.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.0	9.0	12.5	5.0	1.0	3.0	8.5	5.5	7.0	4.5	1.5	3.5
2	16.0	10.5	13.5	5.5	1.0	3.0	6.5	3.5	5.5	2.5	1.5	2.0
3	15.5	9.0	12.5	6.0	4.0	5.0	7.5	6.5	6.5	3.0	0.5	2.0
4	15.5	8.5	12.0	5.0	1.5	3.5	6.5	3.5	5.0	1.5	0.5	1.0
5	14.5	9.0	12.0	2.0	0.0	1.0	6.5	2.5	4.0	0.5	0.0	0.0
6	15.0	9.0	12.0	2.0	0.0	1.0	8.0	6.0	7.0	0.5	0.0	0.0
7	14.5	9.5	12.0	3.0	0.0	1.5	7.5	4.5	6.5	2.5	0.5	1.0
8	15.5	11.0	13.0	4.5	0.0	2.5	6.5	4.0	5.0	5.5	2.5	4.5
9	14.5	9.5	12.0	6.5	3.5	5.0	5.0	1.5	3.0	7.5	5.5	6.0
10	12.5	8.5	11.0	7.0	5.5	6.5	5.0	3.0	4.0	5.5	3.0	4.5
11	10.5	6.5	8.5	5.5	3.5	4.5	5.5	3.5	4.5	6.0	3.5	4.5
12	11.5	9.0	10.0	6.5	2.5	4.0	5.0	4.5	4.5	4.5	1.5	3.0
13	10.5	8.0	9.0	6.0	1.0	3.5	5.0	4.0	4.5	4.5	1.0	3.0
14	11.0	7.0	9.0	7.5	5.5	6.5	6.0	3.5	5.0	5.0	2.0	3.5
15	10.5	8.5	9.5	7.5	6.0	7.0	4.0	2.0	3.0	3.5	0.5	2.5
16	11.0	7.5	9.0	8.0	5.0	7.0	4.5	2.5	3.5	6.0	2.5	4.0
17	13.5	8.0	10.5	6.0	4.0	5.0	5.0	2.0	3.5	4.5	1.0	3.0
18	13.0	8.5	10.5	5.5	3.0	4.5	2.5	0.0	1.5	4.5	0.0	2.5
19	12.5	8.0	10.0	8.0	5.5	6.5	3.0	0.0	1.5	6.0	4.0	5.0
20	13.0	8.0	10.5	6.0	4.0	5.0	5.0	1.0	3.0	6.5	3.5	5.0
21	14.5	9.0	11.5	4.5	2.5	3.5	7.0	5.0	6.0	3.5	0.5	2.0
22	14.0	8.5	11.0	3.5	0.0	2.0	5.5	2.5	3.5	3.0	0.5	1.5
23	12.0	8.5	10.0	2.0	0.0	1.0	3.5	2.0	3.0	4.5	2.5	3.5
24	9.5	6.5	8.0	3.0	1.0	2.0	4.5	1.0	3.0	5.0	4.0	4.5
25	8.5	4.0	6.0	2.5	0.5	1.5	7.0	4.5	5.5	4.5	2.0	3.5
26	10.5	5.5	7.5	4.5	2.0	3.0	5.5	3.0	4.5	3.0	0.5	2.0
27	10.0	7.0	8.5	3.5	1.0	2.0	3.5	2.5	3.0	3.5	2.5	3.0
28	10.0	8.5	9.5	4.5	2.0	3.0	2.5	1.5	2.0	4.0	3.5	3.5
29	9.5	5.0	8.0	5.5	2.5	4.0	3.0	2.0	2.5	6.0	4.0	5.0
30	5.0	2.0	3.5	8.0	5.5	7.0	3.0	1.5	2.5	6.5	3.0	5.0
31	6.0	1.5	3.5	---	---	---	4.5	2.5	3.5	4.0	0.5	2.0
MONTH	16.0	1.5	10.0	8.0	0.0	4.0	8.5	0.0	4.0	7.5	0.0	3.0

06037100 GIBBON RIVER AT MADISON JUNCTION, YELLOWSTONE NATIONAL PARK—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	1.0	2.5	9.0	5.0	7.0	14.0	9.0	11.5	17.0	8.5	12.5
2	3.5	0.0	1.5	8.0	2.5	5.0	13.5	9.0	11.0	17.0	9.5	13.0
3	6.5	3.0	4.5	7.0	3.5	5.0	15.0	7.0	11.0	14.5	11.0	13.0
4	5.5	2.0	4.0	8.0	4.5	6.0	14.0	8.5	11.0	17.0	10.0	13.5
5	6.0	4.0	5.0	7.5	3.5	5.5	15.5	8.5	11.5	16.0	10.5	13.0
6	6.0	3.5	4.0	5.0	0.5	3.0	14.0	8.0	11.0	16.5	10.5	13.0
7	5.5	3.0	4.0	7.5	1.5	4.5	14.0	9.0	11.5	16.5	11.0	13.5
8	5.5	3.0	4.5	11.0	3.5	7.0	13.0	10.0	11.5	14.5	10.5	12.5
9	5.5	3.0	4.0	12.0	5.0	8.5	11.0	7.5	9.0	14.5	10.5	12.5
10	4.5	1.0	2.5	10.5	6.5	8.5	13.0	5.0	8.5	15.5	10.0	12.5
11	4.5	1.0	2.5	11.5	4.5	7.5	14.5	6.5	10.0	13.0	9.0	11.0
12	2.0	0.0	1.0	11.5	5.5	8.5	15.5	7.5	11.5	11.0	7.5	9.5
13	4.5	0.0	2.0	11.5	6.0	8.5	15.5	8.5	12.0	11.5	7.0	9.5
14	4.5	0.0	2.5	8.5	6.0	7.5	13.0	9.5	11.0	12.5	7.5	10.0
15	6.0	3.5	4.5	10.0	6.0	7.5	10.0	6.5	8.5	15.5	8.5	12.0
16	7.5	4.5	6.0	9.5	6.5	8.0	13.0	6.0	9.5	13.0	9.5	11.5
17	7.0	5.5	6.5	11.0	7.5	8.5	11.0	8.0	9.5	16.0	9.0	12.0
18	8.5	7.0	7.5	13.0	7.5	10.0	9.5	8.0	8.5	14.0	11.0	13.0
19	9.0	6.0	7.0	12.0	7.0	9.5	11.0	6.5	9.0	13.0	9.0	11.0
20	8.0	4.5	6.0	13.0	5.5	9.0	10.0	6.5	8.0	14.0	9.5	12.0
21	7.0	3.0	4.5	14.5	7.5	10.5	13.5	6.0	9.0	15.0	10.5	12.5
22	6.5	0.5	4.0	14.0	7.5	10.5	14.5	7.0	10.5	12.0	9.5	10.0
23	7.0	2.0	4.5	15.0	8.5	11.5	16.0	7.5	11.5	10.0	8.0	9.0
24	8.5	2.5	5.5	14.0	8.0	10.5	13.5	9.0	11.0	11.5	8.0	9.5
25	8.0	5.5	7.0	12.5	7.0	9.5	15.5	7.0	11.0	14.0	9.0	11.5
26	8.5	5.5	7.0	9.5	6.5	8.5	17.5	9.0	13.0	11.5	9.5	10.0
27	9.0	5.5	7.5	9.0	6.0	7.0	16.5	10.0	13.0	16.5	9.5	12.5
28	7.0	5.5	6.5	11.0	5.5	8.0	12.5	6.5	9.0	13.5	11.0	12.5
29	8.5	4.5	6.5	14.0	5.5	9.5	12.0	4.5	8.0	11.0	7.5	9.5
30	---	---	---	15.0	7.0	10.5	15.5	7.0	11.0	10.5	8.5	9.5
31	---	---	---	15.5	7.5	11.0	---	---	---	15.0	9.0	11.5
MONTH	9.0	0.0	4.5	15.5	0.5	8.0	17.5	4.5	10.5	17.0	7.0	11.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.0	11.0	14.0	23.0	14.0	18.0	23.0	14.5	18.5	20.5	13.0	16.5
2	20.0	12.0	15.5	21.0	14.5	18.0	23.5	16.0	19.0	18.5	14.5	16.0
3	20.0	12.5	16.0	21.5	13.5	17.5	23.5	16.5	19.5	14.5	12.0	13.5
4	18.5	14.0	16.5	19.5	15.5	17.5	22.0	15.5	18.5	18.0	10.0	13.5
5	20.5	13.5	17.0	19.5	13.5	16.5	23.5	16.0	19.5	17.0	11.5	14.5
6	18.5	14.0	16.0	21.0	14.0	17.5	22.0	14.5	18.0	18.5	11.0	14.5
7	20.5	13.0	16.5	20.5	14.5	17.5	20.0	13.5	17.0	18.5	11.0	14.5
8	21.0	13.5	17.0	21.0	13.5	17.0	22.0	13.0	17.0	19.0	11.5	15.0
9	19.5	14.0	16.5	20.5	12.5	16.5	22.5	14.0	18.0	18.5	11.5	15.0
10	15.5	11.0	13.0	23.0	14.0	18.0	22.5	14.5	18.5	18.0	12.0	14.5
11	13.0	10.0	11.5	22.0	15.0	18.5	22.5	14.5	18.5	18.5	11.5	15.0
12	15.0	10.5	12.5	23.5	13.5	18.5	22.5	13.0	18.0	16.0	12.5	14.0
13	17.0	12.0	14.0	20.5	15.0	18.0	22.5	13.5	18.0	13.5	12.0	12.5
14	19.0	12.0	15.5	25.0	14.5	19.5	23.0	14.5	18.5	12.0	8.5	10.0
15	17.5	11.5	14.5	25.5	17.5	21.0	20.5	14.5	17.5	12.5	8.5	10.5
16	17.0	11.5	13.5	25.5	16.0	20.5	21.5	15.0	18.0	15.0	11.0	12.5
17	18.5	11.0	14.5	25.0	16.5	20.5	20.0	17.0	18.5	17.0	11.0	13.5
18	15.0	11.5	13.5	24.0	17.0	20.5	20.0	16.0	18.0	17.5	13.0	15.0
19	17.5	12.0	14.5	22.0	19.0	20.5	23.0	15.5	18.5	15.5	12.5	13.5
20	18.5	12.5	15.5	23.0	16.5	19.0	21.5	14.5	18.0	13.0	10.5	11.5
21	20.5	12.5	16.0	24.0	15.0	19.5	19.5	14.5	16.5	13.5	8.5	11.0
22	21.5	12.5	16.5	21.0	16.5	18.5	19.0	14.0	16.5	10.0	8.0	9.0
23	21.0	13.0	17.0	22.0	15.5	18.5	16.0	12.5	13.5	13.5	9.5	11.0
24	21.5	14.5	18.0	24.0	14.5	19.0	17.0	11.0	13.5	17.0	10.0	13.0
25	20.0	15.0	17.5	22.5	15.5	19.5	14.5	12.0	13.5	17.5	10.5	14.0
26	22.0	13.5	17.5	23.0	17.0	19.5	15.5	11.0	13.0	17.5	10.5	14.0
27	19.5	15.5	17.5	22.5	15.5	19.0	17.5	11.5	14.0	18.0	12.5	15.0
28	22.5	14.0	18.0	23.5	15.5	19.5	18.0	12.0	15.0	17.0	11.5	14.0
29	22.5	15.0	18.5	22.0	15.0	18.5	20.0	13.0	16.5	16.5	10.5	13.5
30	20.0	16.0	18.0	23.0	14.5	18.5	21.0	13.0	17.0	15.5	13.0	14.0
31	---	---	---	22.5	15.0	18.5	21.5	13.0	17.0	---	---	---
MONTH	22.5	10.0	15.5	25.5	12.5	19.0	23.5	11.0	17.0	20.5	8.0	13.5

06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT

LOCATION.--Lat 44°39'25", long 111°04'03", in NE¼NW¼SW¼ sec.36, T.13 S., R.5 E., Gallatin County, Hydrologic Unit 10020007, Yellowstone National Park, on left bank 0.7 mi downstream of Montana-Wyoming stateline, 1.5 mi east of West Yellowstone, 16.4 mi downstream from Gibbon River, and at river mile 132.7.

DRAINAGE AREA.--420 mi^2.

PERIOD OF RECORD.--June 1913 to December 1917, July 1918 to October 1921, June 1922 to September 1973, August 1983 to September 1986, October 1988 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 6,650 ft above NGVD of 1929, from topographic map. Prior to October 20, 1918, nonrecording gage, and October 20, 1918 to June 29, 1930, nonrecording gage or water-stage recorder at sites 2.5 mi upstream at different datums. Supplementary nonrecording gage at site 0.3 mi downstream at different datum used at time during 1927-30. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for January to February, which are fair. No regulation or diversions upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	341	331	341	361	347	360	458	481	599	455	375	380
2	341	331	339	354	344	355	475	499	579	442	375	379
3	341	335	338	355	347	357	476	542	575	431	380	382
4	341	340	339	344	345	358	489	588	582	439	378	384
5	341	e330	333	289	337	357	503	638	594	466	380	378
6	341	e320	345	e250	334	349	506	692	599	446	375	375
7	341	e320	359	e300	336	348	504	724	603	415	373	376
8	342	330	359	340	338	363	510	717	589	405	369	376
9	341	334	345	336	333	373	522	678	593	401	369	375
10	371	340	344	334	330	385	482	630	648	398	369	375
11	366	346	348	330	337	377	458	609	704	393	364	375
12	352	343	345	328	325	377	449	602	672	387	366	374
13	348	337	347	326	330	377	460	552	614	387	369	410
14	347	342	356	326	334	372	480	521	567	388	369	490
15	347	341	354	327	336	371	479	512	541	387	369	496
16	347	347	343	329	339	369	457	521	536	387	369	455
17	345	356	346	327	349	379	470	626	525	382	374	441
18	341	342	336	325	354	387	504	568	505	387	395	415
19	341	341	341	326	358	407	477	678	535	403	386	406
20	341	356	341	326	346	428	473	587	525	427	387	467
21	341	354	346	322	342	418	485	573	504	418	386	435
22	341	344	340	321	344	423	461	694	477	413	405	412
23	341	e340	334	324	347	433	443	864	484	419	428	411
24	340	347	336	332	348	463	444	738	476	398	427	409
25	334	345	345	342	354	465	437	617	456	392	430	400
26	337	345	354	333	354	458	437	579	495	387	539	393
27	341	338	347	332	355	432	465	608	481	387	457	392
28	343	335	339	339	358	416	522	652	492	387	412	392
29	365	340	345	338	360	406	511	798	478	381	396	390
30	350	343	353	349	---	410	498	790	468	376	387	390
31	333	---	353	353	---	426	---	654	---	375	385	---
TOTAL	10,682	10,193	10,691	10,218	9,961	12,199	14,335	19,532	16,496	12,559	12,143	12,133
MEAN	345	340	345	330	343	394	478	630	550	405	392	404
MAX	371	356	359	361	360	465	522	864	704	466	539	496
MIN	333	320	333	250	325	348	437	481	456	375	364	374
AC-FT	21,190	20,220	21,210	20,270	19,760	24,200	28,430	38,740	32,720	24,910	24,090	24,070

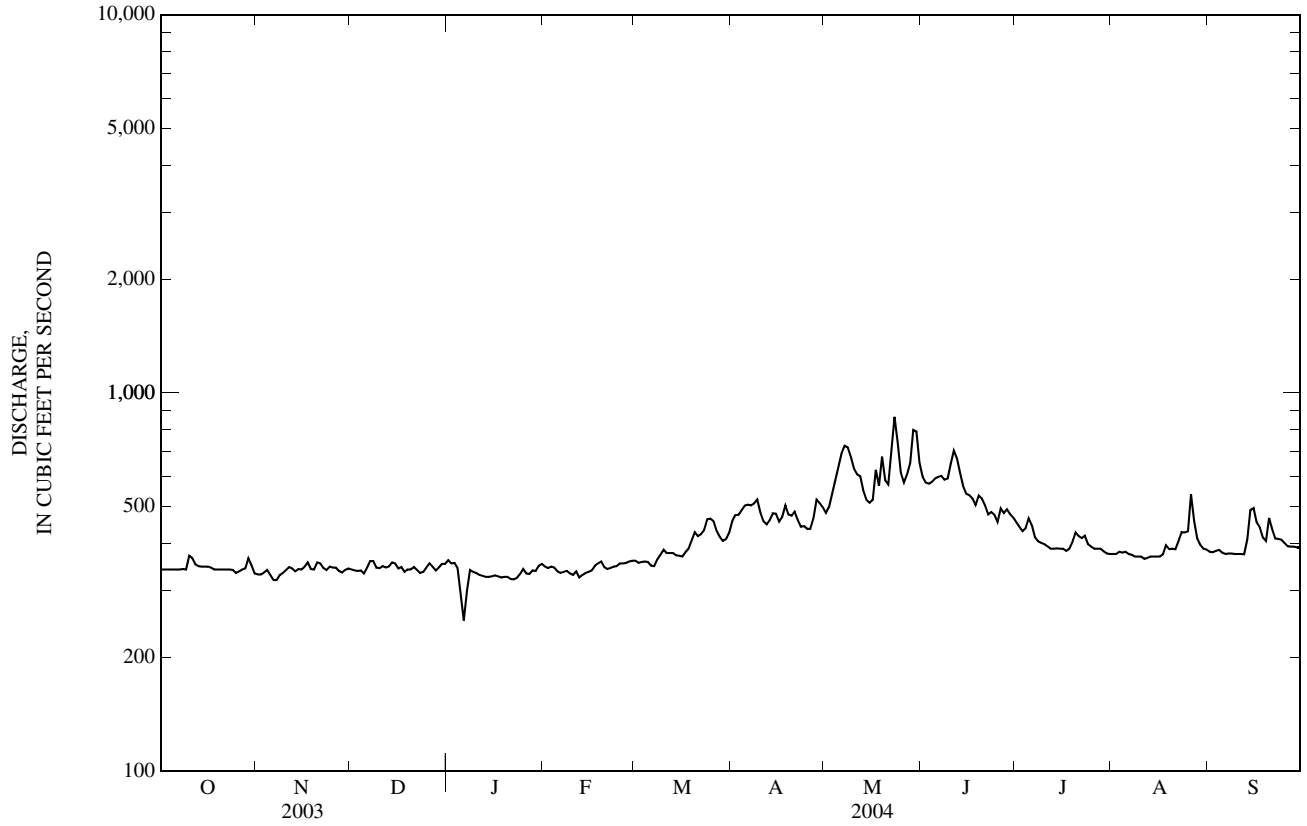
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913-2004, BY WATER YEAR (WY)*

MEAN	432	423	415	403	398	406	496	847	809	497	432	426
MAX	710	697	641	586	572	539	671	1,725	1,479	917	759	704
(WY)	(1914)	(1914)	(1997)	(1997)	(1914)	(1917)	(1925)	(1997)	(1997)	(1913)	(1913)	(1913)
MIN	297	297	304	304	303	313	369	388	341	282	273	282
(WY)	(1935)	(1932)	(1932)	(1932)	(1932)	(1943)	(1941)	(1934)	(1931)	(1931)	(1934)	(1934)

06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1913 - 2004*	
ANNUAL TOTAL	154,876		151,142		--	
ANNUAL MEAN	424		413		497	
HIGHEST ANNUAL MEAN	--		--		789	1997
LOWEST ANNUAL MEAN	--		--		337	1934
HIGHEST DAILY MEAN	1,120	May 27	864	May 23	2,570	May 18, 1996
LOWEST DAILY MEAN	320	Nov 6,7	250	Jan 6	245.	Jan 1, 1942
ANNUAL SEVEN-DAY MINIMUM	329	Nov 2	311	Jan5	267	Aug 6, 1931
MAXIMUM PEAK FLOW	--		909	May 23	2,820[a]	May 18, 1996
MAXIMUM PEAK STAGE	--		2.36	May 12	10.00[b]	Jan 8 , 1937
ANNUAL RUNOFF (AC-FT)	307,200		299,800		360,400	
10 PERCENT EXCEEDS	580		570		739	
50 PERCENT EXCEEDS	737		375		431	
90 PERCENT EXCEEDS	341		334		339	

* For period of operation.
a Gage height, 3.78 ft.
b About, backwater from ice.
e Estimated.



06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983-86, 1989-95, April 2004 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1983 to July 1986.
WATER TEMPERATURE: July 1983 to July 1986.

REMARKS.--Results for mercury are shown in nanograms per liter.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 558 microsiemens per centimeter (μS/cm) at 25.0°C, Mar. 24, 25, 1986; minimum, 78 μS/cm at 25.0°C, May 30, 1986.
WATER TEMPERATURE: Maximum, 25.5°C, Aug. 6, 9, 1983; minimum, 0.0°C, many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water unfltrd uS/cm 25 degC (00095)	Hardness, water, 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)	Sodium, percent (00932)
APR 19...	1045	482	8.1	470	17	5.80	.712	8.29	9	86.0	87

Date	Alkalinity, water fltrd fxd end pt., lab, mg/L as CaCO3 (29801)	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)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)
APR 19...	106	60.0	6.8	87.5	15.9	336	.46	437	269	258	707

Date	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury water fltrd, **ng/L** (50287)	Mercury water unfltrd **ng/L** (50286)	Zinc, water, fltrd, ug/L (01090)	Filter pore size, um (81352)
APR 19...	125	330	443	12.1	4.99	26.3	.8	.10

06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT

LOCATION.--Lat 45°29'51", long 111°16'11" in SE¼ SE¼ SE¼ sec.7, T.4 S., R.4 E., Gallatin County, Hydrologic Unit 10020008, on left bank 0.3 mi downstream from Spanish Creek, 7.3 mi south of Gallatin Gateway, and at river mile 47.7.

DRAINAGE AREA.--825 mi^2.

PERIOD OF RECORD.--August 1889 to September 1894, June 1930 to September 1969, annual maximum, water years 1970-71, October 1971 to September 1981, October 1984 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as West Gallatin River near Bozeman 1889-94.

REVISED RECORDS.--WSP 1389: 1892(M), 1893-94. WSP 1559: Drainage area. WDR MT-85-1 (M), WDR MT-02-1: 1970-71 (M).

GAGE.--Water-stage recorder. Elevation of gage is 5,167.67 ft above NGVD of 1929. Prior to October 20, 1932, nonrecording gages at several different sites and datums within 0.8 mi of present site. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. Diversions for irrigation of about 1,400 acres upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	314	224	270	268	240	252	428	630	1,380	1,650	542	408
2	313	246	266	254	229	245	433	703	1,450	1,550	545	439
3	309	282	264	224	244	243	400	869	1,630	1,460	587	468
4	309	283	272	e200	248	253	436	1,110	2,050	1,560	566	434
5	309	224	259	e180	247	252	478	1,380	2,530	1,620	531	417
6	308	199	283	e200	245	249	522	1,520	3,080	1,400	504	406
7	308	229	306	239	243	222	520	1,560	2,800	1,320	488	399
8	316	230	290	261	251	233	566	1,610	2,480	1,280	478	390
9	309	256	261	258	252	258	575	1,540	2,610	1,150	468	384
10	321	290	245	251	243	284	501	1,440	3,330	1,090	460	380
11	329	283	271	244	242	276	474	1,450	3,200	1,060	453	373
12	328	267	255	242	229	274	473	1,250	2,590	1,010	442	375
13	327	252	263	231	228	283	524	1,080	2,290	955	436	455
14	321	269	282	236	238	275	587	966	2,140	921	430	454
15	319	275	264	240	237	270	603	896	2,120	899	421	450
16	322	288	218	236	239	272	555	890	2,000	880	424	455
17	321	294	236	244	247	279	540	885	1,860	832	440	447
18	326	274	224	234	261	297	548	902	1,790	808	536	422
19	316	286	199	239	267	329	509	1,040	1,760	814	498	445
20	310	303	239	250	255	314	500	996	1,840	808	458	526
21	306	268	258	241	236	310	480	1,130	1,770	796	441	487
22	304	255	253	230	232	311	459	1,200	1,780	743	434	455
23	304	222	217	235	236	329	444	1,330	1,860	718	463	471
24	300	229	240	245	245	360	462	1,240	1,960	683	486	512
25	282	229	252	256	247	380	455	1,110	1,950	654	519	473
26	300	238	263	256	259	376	476	1,090	2,010	637	525	452
27	313	246	254	251	258	344	577	1,120	1,900	619	532	453
28	314	230	231	247	260	324	740	1,460	1,830	597	477	438
29	352	243	242	249	256	304	677	1,850	1,740	583	450	429
30	305	258	250	254	---	322	639	1,610	1,700	568	432	421
31	248	---	250	248	---	369	---	1,440	---	549	418	---
TOTAL	9,663	7,672	7,877	7,443	7,114	9,089	15,581	37,297	63,430	30,214	14,884	13,118
MEAN	312	256	254	240	245	293	519	1,203	2,114	975	480	437
MAX	352	303	306	268	267	380	740	1,850	3,330	1,650	587	526
MIN	248	199	199	180	228	222	400	630	1,380	549	418	373
AC-FT	19,170	15,220	15,620	14,760	14,110	18,030	30,900	73,980	125,800	59,930	29,520	26,020

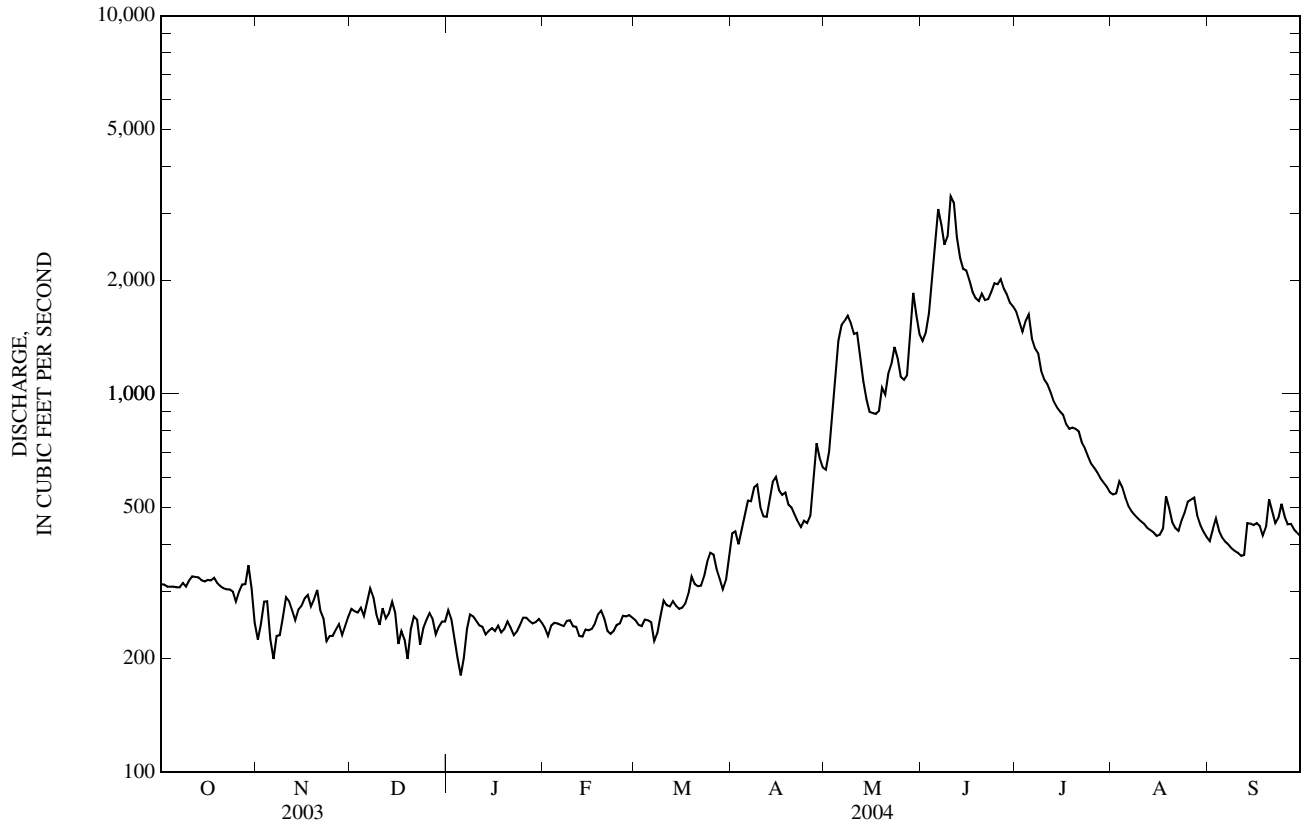
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 2004, BY WATER YEAR (WY)*

MEAN	452	380	320	306	303	311	502	1,794	2,926	1,282	607	490
MAX	743	589	549	468	430	465	899	3,135	5,110	3,669	1,162	788
(WY)	(1893)	(1960)	(1893)	(1893)	(1893)	(1960)	(1990)	(1976)	(1997)	(1975)	(1993)	(1968)
MIN	238	247	214	200	220	206	263	873	643	345	269	233
(WY)	(1932)	(1937)	(1935)	(1931)	(1935)	(1935)	(1937)	(1953)	(1934)	(1934)	(1934)	(1931)

06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1889 - 2004*	
ANNUAL TOTAL	231,954		223,382		--	
ANNUAL MEAN	635		610		808	
HIGHEST ANNUAL MEAN	--		--		1,184	1976
LOWEST ANNUAL MEAN	--		--		408	1934
HIGHEST DAILY MEAN	5,860	May 30	3,330	Jun 10	8,970	Jun17, 1974
LOWEST DAILY MEAN	196	Jan 11	180	Jan 5	153	Dec 25, 2002
ANNUAL SEVEN-DAY MINIMUM	213	Jan 7	223	Jan 2	182	Jan 18, 1931
MAXIMUM PEAK FLOW	--		3,810	Jun 10	9,160[a]	Jun 2, 1997
MAXIMUM PEAK STAGE	--		4.30	Jun 10	7.38	JUN 17, 1974
ANNUAL RUNOFF (AC-FT)	460,100		443,100		585,700	
10 PERCENT EXCEEDS	1,240		1,540		2,020	
50 PERCENT EXCEEDS	321		376		429	
90 PERCENT EXCEEDS	238		239		267	

* For period of operation.
a Gage height, 6.71 ft.
e Estimated.



06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°34'03", long 110°22'48", Yellowstone National Park, Hydrologic Unit 10070001, on left bank 450 ft downstream from Fishing Bridge, 0.3mi downstream from outlet of Yellowstone Lake, and at river mile 616.4.

DRAINAGE AREA.--991 mi^2.

PERIOD OF RECORD.--December 1922 to September 1982, October 1983 to September 1986, October 1988 to current year. Prior to October 1926, gage heights only. Monthly discharge only for winter periods in water years 1927-30, 1932-33, 1935-38, 1940, 1942-46 published in WSP 1309; figures of daily discharge for these months published in WSP 646, 666, 686, 701, 731, 746, 786, 806, 826, 856, 896, 956, 976, 1006, 1036, and 1056, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1309: See PERIOD OF RECORD. WSP 1729: Drainage area. WDR MT-03-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,729.58 ft above NGVD of 1929. Prior to October 2, 1928, nonrecording gage at site 450 ft upstream at datum 1.07 ft higher. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No artificial regulation. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	689	485	380	e350	e350	383	378	642	1,600	2,590	1,940	1,260
2	683	478	376	e350	e350	383	375	660	1,600	2,600	1,910	1,270
3	673	473	376	e350	e350	383	385	685	1,620	2,590	1,870	1,240
4	669	467	371	e340	e350	384	389	720	1,650	2,590	1,830	1,230
5	664	457	369	e340	e350	387	392	779	1,690	2,590	1,800	1,220
6	654	452	368	e340	e350	394	398	823	1,770	2,600	1,770	1,210
7	651	444	365	e340	e350	391	409	883	1,830	2,600	1,730	1,190
8	647	438	e360	e350	e350	388	419	950	1,920	2,580	1,670	1,160
9	635	435	e360	e350	e350	389	426	1,000	2,030	2,550	1,640	1,150
10	638	444	e360	e350	e350	386	434	1,040	2,180	2,530	1,600	1,120
11	640	456	e360	e350	e350	383	439	1,090	2,270	2,500	1,560	1,110
12	634	450	e360	e350	e350	387	443	1,120	2,320	2,470	1,540	1,090
13	615	444	e360	e350	e360	384	449	1,140	2,350	2,440	1,510	1,100
14	601	446	e360	e350	e360	383	462	1,170	2,360	2,430	1,470	1,100
15	594	440	e360	e350	e370	384	472	1,180	2,360	2,410	1,440	1,090
16	589	448	e350	e350	e370	386	478	1,210	2,330	2,390	1,400	1,080
17	580	448	e350	e350	e370	384	497	1,240	2,350	2,360	1,390	1,060
18	572	446	e350	e350	e380	381	518	1,260	2,350	2,330	1,380	1,050
19	565	450	e350	e350	e380	389	531	1,280	2,370	2,340	1,370	1,040
20	558	447	e350	e350	e380	374	546	1,300	2,380	2,330	1,350	1,060
21	554	435	e350	e350	384	372	555	1,350	2,370	2,310	1,330	1,040
22	550	427	e350	e350	383	371	556	1,390	2,380	2,290	1,330	1,030
23	550	424	e350	e350	381	375	561	1,430	2,410	2,280	1,360	1,040
24	534	418	e350	e350	380	374	563	1,440	2,430	2,250	1,320	1,030
25	522	420	e350	e350	380	371	569	1,460	2,460	2,210	1,330	1,030
26	518	407	e350	e350	381	377	574	1,470	2,480	2,180	1,340	1,020
27	515	403	e350	e350	382	381	586	1,500	2,510	2,140	1,350	1,010
28	515	398	e350	e350	378	380	600	1,530	2,540	2,110	1,340	1,010
29	516	394	e350	e350	379	377	618	1,570	2,570	2,070	1,310	1,000
30	489	389	e350	e350	---	379	631	1,600	2,580	2,040	1,290	1,000
31	487	---	e350	e350	---	380	---	1,600	---	1,990	1,280	---
TOTAL	18,301	13,163	11,085	10,810	10,598	11,840	14,653	36,512	66,060	73,690	46,750	33,040
MEAN	590	439	358	349	365	382	488	1,178	2,202	2,377	1,508	1,101
MAX	689	485	380	350	384	394	631	1,600	2,580	2,600	1,940	1,270
MIN	487	389	350	340	350	371	375	642	1,600	1,990	1,280	1,000
AC-FT	36,300	26,110	21,990	21,440	21,020	23,480	29,060	72,420	131,000	146,200	92,730	65,530
CFSM	0.60	0.44	0.36	0.35	0.37	0.39	0.49	1.19	2.22	2.40	1.52	1.11
IN.	0.69	0.49	0.42	0.41	0.40	0.44	0.55	1.37	2.48	2.77	1.75	1.24

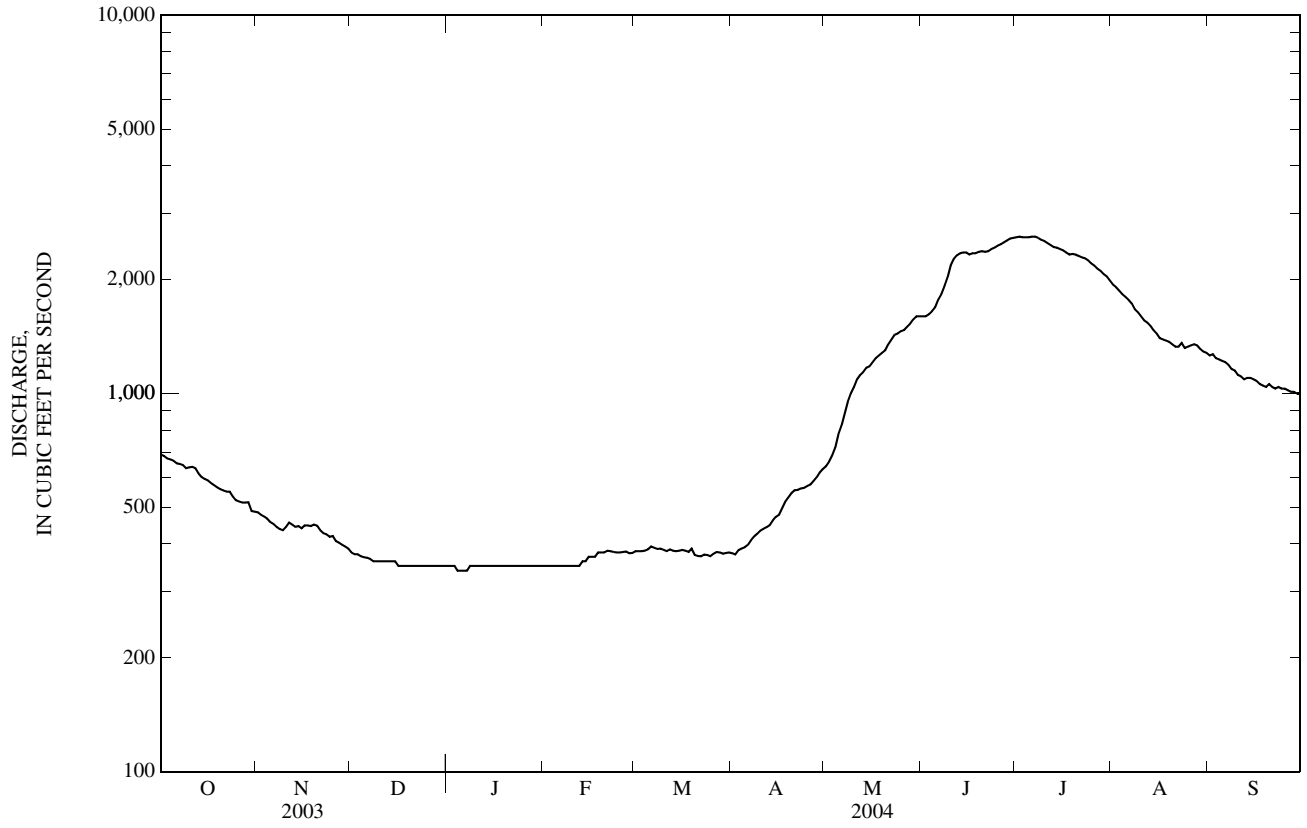
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2004, BY WATER YEAR (WY)*

MEAN	796	602	473	397	387	445	541	1,161	3,686	4,012	2,196	1,205
MAX	1,259	984	775	699	637	717	801	2,214	8,574	7,160	4,031	1,954
(WY)	(1973)	(1951)	(1951)	(1998)	(1998)	(1962)	(1952)	(1997)	(1997)	(1982)	(1982)	(1982)
MIN	327	276	246	168	122	130	175	605	1,707	1,272	812	538
(WY)	(1989)	(1989)	(1932)	(1989)	(1989)	(1935)	(1937)	(1953)	(1934)	(1934)	(1934)	(1934)

06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1927 - 2004*	
ANNUAL TOTAL	435,342		346,502		--	
ANNUAL MEAN	1,193		947		1,330	
HIGHEST ANNUAL MEAN	--		--		2,253	1997
LOWEST ANNUAL MEAN	--		--		682	1934
HIGHEST DAILY MEAN	4,900	Jun 21	2,600	Jul 2	9,930	Jun 19, 1997
LOWEST DAILY MEAN	350	Dec 16-31	340	Jan 4-7	100	Feb 18, 1993
ANNUAL SEVEN-DAY MINIMUM	350	Dec 16	344	Jan 1	113	Feb 11, 1989
MAXIMUM PEAK FLOW	--		2,670	Jul 7	9,950	Jun 18, 1997
MAXIMUM PEAK STAGE	--		5.10	Jul 7	8.90	Jun 18, 1997
ANNUAL RUNOFF (AC-FT)	863,500		687,300		963,600	
10 PERCENT EXCEEDS	3,710		2,330		3,460	
50 PERCENT EXCEEDS	522		554		676	
90 PERCENT EXCEEDS	370		350		340	

* For period of operation.
e Estimated.



06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT

LOCATION.--Lat 45°00'11", long 110°00'04", in SW ¼ NW ¼ SW ¼ sec.33, T.9 S., R.14 E., Park County, Hydrologic Unit 10070001, at Yellowstone National park boundary, 0.25 mi downstream from Silver Creek, 0.75 mi southwest of Silver Gate, and at river mile 17.8.

DRAINAGE AREA.--31.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1998 to current year. October 1998 to September 2002 records collected by the National Park Service and U.S. Department of Agriculture, Forest Service, under the general supervision of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Elevation of gage is 7,340 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except for those discharges greater than 600 ft^3/s, which are fair, and those for estimated daily discharges, which are poor. No known regulation or diversion upstream of station.

COOPERATION.--Records collected by the National Park Service and U.S. Department of Agriculture, Forest Service, under the general supervision of the U.S. Geological Survey. Record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	6.5	4.0	3.6	2.0	1.0	10	39	96	288	46	24
2	6.9	6.0	3.9	3.4	1.5	0.90	8.7	56	114	266	48	24
3	6.7	6.5	3.9	3.0	1.5	0.90	8.5	72	153	246	44	25
4	6.5	7.0	3.6	2.5	1.5	1.1	9.7	95	227	247	40	23
5	6.4	6.5	3.5	1.5	2.0	1.1	11	131	303	241	38	22
6	6.4	5.5	4.0	2.0	2.0	1.3	14	155	391	212	36	20
7	6.4	5.5	3.8	3.0	2.0	1.5	16	171	427	222	33	19
8	6.4	6.0	3.6	3.5	2.0	1.3	18	162	414	207	31	18
9	6.3	6.5	3.5	3.0	1.5	1.3	18	134	496	183	30	17
10	9.2	7.0	3.9	2.5	1.5	1.5	15	123	458	185	29	17
11	7.6	7.5	3.7	2.5	1.2	1.2	15	121	365	176	27	17
12	7.3	7.0	3.6	2.0	1.0	1.3	17	99	284	159	26	16
13	7.1	6.5	3.7	2.0	1.2	1.2	24	85	239	149	24	26
14	6.7	6.0	3.5	2.0	1.2	1.3	28	77	219	148	23	31
15	6.7	6.3	3.4	2.0	2.0	1.2	24	71	219	134	23	24
16	6.8	5.8	3.6	2.0	2.0	1.2	21	70	202	125	22	37
17	7.9	5.5	3.5	2.0	2.6	1.2	21	68	175	117	24	39
18	7.5	5.2	3.0	2.0	2.4	1.2	20	82	161	112	24	36
19	7.0	5.0	3.0	2.5	2.1	1.5	19	86	159	127	24	34
20	6.7	5.0	3.5	2.0	1.5	1.6	19	77	166	104	22	42
21	6.6	4.5	4.0	2.0	1.0	1.9	18	83	180	95	21	33
22	6.4	4.0	3.5	2.0	1.0	2.5	17	89	216	92	27	30
23	6.3	3.5	3.0	2.5	1.1	3.7	18	87	275	80	46	31
24	5.5	4.0	3.5	2.5	1.2	5.1	19	77	323	73	28	37
25	4.9	4.0	4.0	2.5	1.3	5.0	18	72	324	69	61	33
26	4.9	4.0	4.0	2.0	1.3	4.0	21	70	317	66	50	33
27	5.1	4.0	3.7	2.5	1.4	3.5	33	81	321	65	40	34
28	8.2	4.4	3.5	2.7	1.3	3.2	39	134	320	62	32	32
29	29	4.4	3.6	2.7	1.2	3.3	29	122	304	56	29	31
30	8.0	4.2	3.7	2.5	---	4.8	30	101	300	52	27	31
31	7.2	---	3.8	2.0	---	7.8	---	92	---	49	26	---
TOTAL	1.84	2.81	2.40	1.42	0.51	9.08	4.21	6.67	2.19	0.18	0.00	0.00
MEAN	0.06	0.09	0.08	0.05	0.02	0.29	0.14	0.22	0.07	0.01	0.00	0.00
MAX	0.09	0.13	0.10	0.08	0.05	1.8	0.23	1.1	0.15	0.02	0.00	0.00
MIN	0.05	0.06	0.06	0.00	0.00	0.04	0.07	0.10	0.02	0.00	0.00	0.00
AC-FT	3.6	5.6	4.8	2.8	1.0	18	8.4	13	4.3	0.4	0.00	0.00

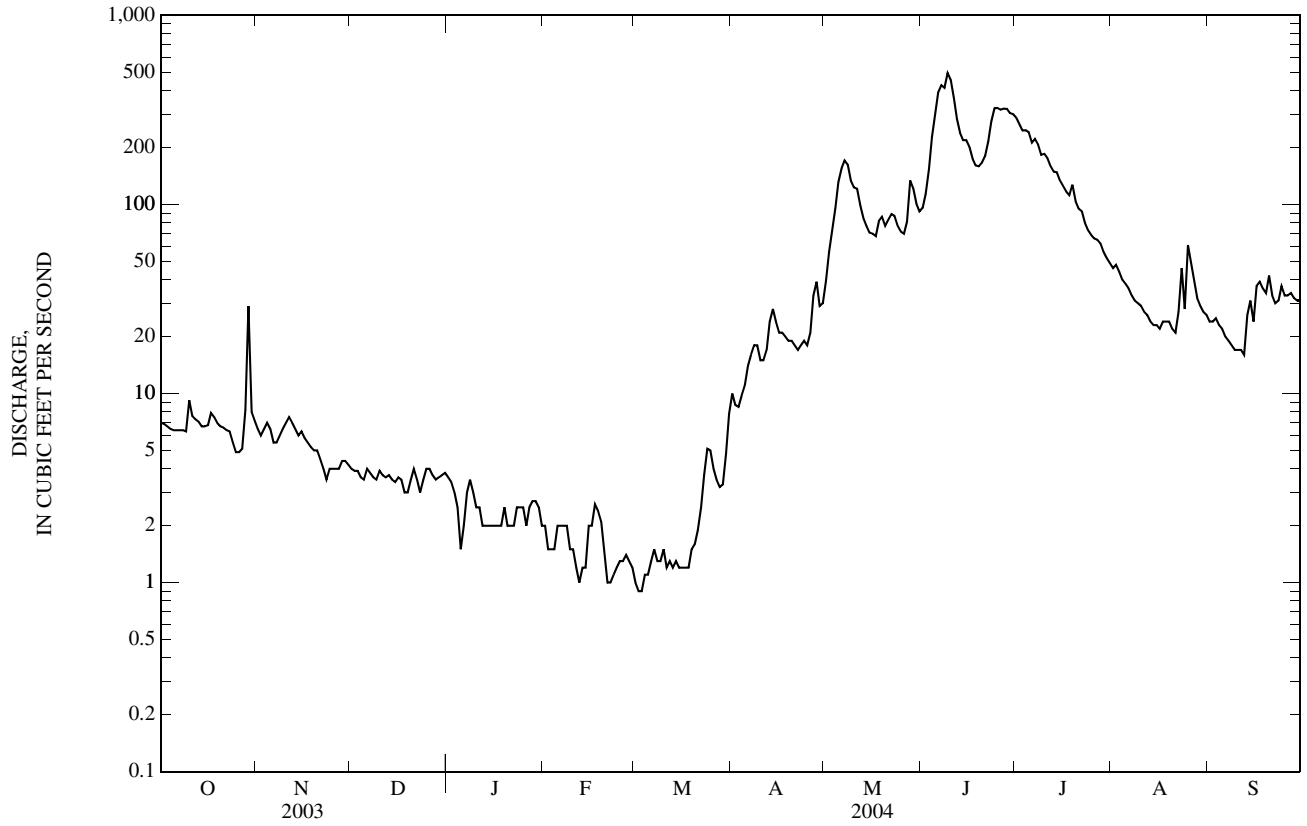
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

MEAN	8.69	5.41	3.55	2.45	1.90	1.70	10.1	133	318	132	28.2	15.9
MAX	11.9	6.84	4.70	3.36	2.31	2.25	19.3	167	408	212	45.0	27.9
(WY)	(1999)	(1999)	(2002)	(2002)	(2002)	(2004)	(2004)	(2001)	(2003)	(1999)	(1999)	(2004)
MIN	5.14	4.30	2.85	2.01	1.57	1.13	4.23	95.9	176	61.6	15.5	8.27
(WY)	(2002)	(2003)	(2001)	(2000)	(2004)	(2003)	(1999)	(1999)	(2001)	(2001)	(2001)	(2001)

06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1999 - 2004	
ANNUAL TOTAL	23,874.00		18,650.80		--	
ANNUAL MEAN	65.4		51.0		55.1	
HIGHEST ANNUAL MEAN	--		--		65.4	2003
LOWEST ANNUAL MEAN	--		--		38.5	2001
HIGHEST DAILY MEAN	730	May 31	496	Jun 9	735	Jun 1, 2002
LOWEST DAILY MEAN	0.80	Feb 23	0.90	Mar 2	0.80	Feb 23, 2003
ANNUAL SEVEN-DAY MINIMUM	0.99	Mar 23	1.1	Feb 28	0.99	Mar 23, 2003
MAXIMUM PEAK FLOW	--		613	Jun 9	912	Jun 1, 2002
MAXIMUM PEAK STAGE	--		2.82	Jun 9	3.49	Jun 1, 2002
ANNUAL RUN0FF (AC-FT)	47.350		36,990		39,950	
10 PERCENT EXCEEDS	264		168		202	
50 PERCENT EXCEEDS	7.0		8.9		7.8	
90 PERCENT EXCEEDS	1.5		1.5		1.8	

e Estimated.



06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1999 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April 2003 to current year.

INSTRUMENTATION.--Temperature recorder installed April 23, 2003.

REMARKS.--Dail water temperature record good. Unpublished records of instantaneous water temperature and specific conductance are available in files of the Montana District office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 17.5°C, August 15, 2003; minimum during period of collection, 0.0°C, April 26, 27, and May 19, 20, 2003.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 17.5°C, August 14; minimum, 0.0°C, many days October through May.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.5	2.0	5.5	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0
2	9.0	3.5	6.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
3	8.5	2.5	5.0	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0
4	8.5	2.5	5.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
5	8.5	2.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	8.5	3.0	5.5	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0
7	7.5	3.5	5.5	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0
8	8.0	5.5	6.5	0.0	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.0
9	8.5	4.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	7.0	3.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	4.5	1.5	3.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0
12	5.0	3.0	4.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
13	4.5	2.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	4.5	1.5	3.0	0.5	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0
15	4.5	2.0	3.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
16	5.5	1.5	3.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
17	6.5	3.5	5.0	1.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
18	6.5	2.0	4.5	0.5	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
19	6.5	2.0	4.0	1.0	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
20	6.5	2.5	4.5	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
21	7.0	3.5	5.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	6.5	2.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	5.5	2.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	3.0	0.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	2.5	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	4.5	1.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	3.5	2.0	3.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	4.0	3.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	3.5	0.0	2.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	9.0	0.0	3.8	1.0	0.0	0.1	0.5	0.0	0.1	0.5	0.0	0.0

06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	0.0	0.0	0.0	0.0	0.0	0.0	5.5	1.0	2.5	9.5	1.0	4.0
2	0.0	0.0	0.0	0.5	0.0	0.0	4.5	1.0	2.0	9.5	0.5	4.0
3	0.0	0.0	0.0	0.5	0.0	0.0	6.5	0.0	2.5	7.0	1.5	3.5
4	0.0	0.0	0.0	0.5	0.0	0.0	4.0	1.0	2.5	8.0	1.0	3.5
5	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.5	2.5	8.5	1.5	4.0
6	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.5	2.5	7.5	1.5	4.0
7	0.0	0.0	0.0	0.0	0.0	0.0	7.0	1.5	3.0	7.5	1.5	3.5
8	0.0	0.0	0.0	0.5	0.0	0.0	6.0	1.0	3.0	5.5	1.5	3.0
9	0.0	0.0	0.0	0.5	0.0	0.5	3.5	1.0	2.0	5.0	2.0	3.0
10	0.0	0.0	0.0	1.0	0.0	0.5	6.0	0.0	2.0	7.0	1.5	4.0
11	0.0	0.0	0.0	1.0	0.0	0.5	7.0	0.0	3.0	3.0	1.0	2.5
12	0.0	0.0	0.0	1.5	0.0	0.5	7.5	0.0	3.0	3.5	0.5	2.0
13	0.0	0.0	0.0	2.0	0.0	1.0	7.0	0.5	3.0	3.5	0.0	1.5
14	0.0	0.0	0.0	0.5	0.0	0.5	5.5	1.0	2.5	4.5	0.0	2.0
15	0.0	0.0	0.0	1.5	0.0	0.5	4.0	0.5	2.0	8.0	0.5	4.0
16	0.0	0.0	0.0	1.0	0.5	0.5	5.0	0.0	2.5	4.0	1.0	2.5
17	0.0	0.0	0.0	2.0	0.5	1.0	3.5	0.0	2.0	9.0	1.5	4.5
18	0.0	0.0	0.0	2.5	0.5	1.5	5.5	1.0	2.5	6.0	2.5	3.5
19	0.0	0.0	0.0	2.0	1.0	1.5	5.5	1.0	2.5	5.5	2.0	3.5
20	0.5	0.0	0.0	3.5	0.0	1.5	4.0	0.5	2.0	7.0	1.5	4.0
21	0.0	0.0	0.0	3.5	0.0	1.5	7.5	0.0	3.0	5.5	2.5	3.5
22	0.0	0.0	0.0	3.5	0.0	1.5	7.5	0.0	3.0	4.0	0.5	2.5
23	0.0	0.0	0.0	3.5	0.0	1.0	9.5	0.0	4.0	4.5	1.5	2.5
24	0.0	0.0	0.0	4.0	0.0	1.0	6.0	0.5	3.0	5.0	1.0	3.0
25	0.0	0.0	0.0	3.0	0.0	1.0	9.0	0.0	4.0	6.5	1.0	3.5
26	0.5	0.0	0.0	2.5	0.5	1.0	10.0	1.0	4.5	3.5	2.0	2.5
27	0.5	0.0	0.0	3.5	0.0	1.0	9.0	1.0	4.5	6.0	2.5	4.0
28	0.5	0.0	0.0	5.0	0.0	1.5	3.5	1.0	2.5	5.0	2.5	3.5
29	0.5	0.0	0.0	6.0	0.0	2.0	7.0	0.0	2.5	5.5	1.5	3.0
30	---	---	---	6.0	0.0	2.0	9.5	0.0	4.0	4.5	1.0	2.5
31	---	---	---	5.5	0.5	2.0	---	---	---	7.5	1.5	4.0
MONTH	0.5	0.0	0.0	6.0	0.0	0.8	10.0	0.0	2.8	9.5	0.0	3.3
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.5	2.5	5.0	10.5	3.5	6.0	14.5	6.0	10.0	13.0	5.0	9.0
2	8.5	2.0	5.0	8.0	3.0	5.5	12.0	7.5	9.5	9.5	6.5	8.0
3	9.5	2.0	5.0	9.5	3.0	5.5	14.0	7.0	10.0	7.5	5.0	6.0
4	8.0	2.5	4.5	7.5	4.0	5.5	13.5	6.0	9.5	10.0	3.0	6.5
5	8.5	2.0	4.5	9.0	3.5	5.5	12.5	7.0	9.5	10.0	3.5	6.5
6	7.0	3.0	4.5	10.5	3.5	6.0	12.5	6.0	9.0	12.0	3.5	7.0
7	8.0	2.5	4.5	9.5	3.5	6.0	13.5	5.0	9.0	12.0	3.5	7.5
8	8.5	2.5	4.5	10.5	4.0	6.0	14.5	4.5	9.0	11.5	4.0	7.5
9	8.5	2.5	4.5	11.0	2.5	6.5	15.5	5.5	10.0	12.0	4.5	8.0
10	3.5	1.0	2.5	12.0	4.0	7.0	15.0	6.0	10.0	11.0	4.5	7.5
11	4.5	2.0	3.0	12.0	4.0	7.0	15.0	5.5	9.5	13.0	4.0	8.0
12	6.5	2.5	4.0	12.5	3.5	7.5	15.0	5.0	9.5	9.0	6.0	7.5
13	6.5	3.0	4.0	10.0	4.5	7.0	15.5	5.0	10.0	7.0	4.0	6.0
14	8.5	2.5	5.0	13.0	5.0	8.5	16.0	6.0	10.5	7.0	3.0	4.5
15	8.5	2.5	4.5	11.0	6.0	8.0	14.5	6.5	10.0	4.5	3.0	4.0
16	6.0	2.0	3.5	12.5	5.0	8.5	13.5	7.0	10.0	7.0	3.5	5.0
17	7.0	1.5	4.0	12.0	5.0	8.5	12.5	8.5	10.0	11.0	3.0	6.5
18	6.5	2.5	4.0	10.5	5.5	8.0	11.0	8.0	9.5	10.5	5.0	7.0
19	8.5	3.0	5.0	11.0	6.5	8.0	15.5	7.5	10.5	7.0	4.0	5.5
20	7.0	3.0	4.5	12.5	5.5	8.0	13.5	6.5	9.5	5.5	3.0	4.0
21	10.0	2.5	5.0	13.0	5.5	9.0	12.0	6.0	9.0	6.0	1.5	3.0
22	9.0	2.0	5.0	11.0	6.5	8.0	10.5	6.5	8.5	3.5	0.5	2.0
23	10.0	2.5	5.5	11.5	6.0	8.5	8.0	5.5	6.5	5.5	2.5	4.0
24	9.5	3.0	5.5	13.5	4.5	8.5	9.0	5.0	7.0	9.5	3.5	6.0
25	7.5	3.0	5.0	12.5	5.0	9.0	8.0	4.5	6.5	9.5	2.0	5.5
26	9.0	3.0	5.5	13.0	6.0	9.0	8.5	3.5	5.5	8.0	2.5	5.5
27	8.0	3.5	5.0	14.0	5.5	9.0	10.0	4.5	6.5	8.5	4.0	6.0
28	9.0	3.0	5.0	14.5	5.5	9.0	10.0	4.5	7.0	8.5	4.0	6.0
29	8.5	3.0	5.5	13.5	5.0	9.0	13.5	5.5	9.0	8.5	1.5	5.0
30	7.5	4.0	5.5	14.5	5.0	9.5	13.5	5.0	9.0	7.5	4.5	6.0
31	---	---	---	15.0	5.5	10.0	14.5	5.0	9.0	---	---	---
MONTH	10.0	1.0	4.6	15.0	2.5	7.6	16.0	3.5	9.0	13.0	0.5	6.0

06187950 SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°52'06", long 110°09'53", Yellowstone National Park, Hydrologic Unit 10070001, on left bank, 4 mi southeast of Lamar Ranger Station and at river mile 1.5.

DRAINAGE AREA.--99.0 mi^2.

PERIOD OF RECORD.--October 1988 to current year. October 1998 to September 2002 records collected by the National Park Service and U.S. Department of Agriculture, Forest Service, under the general supervision of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Elevation of gage is 6,630 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream of station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	e30	28	e27	e17	e20	55	124	268	455	104	70
2	36	31	26	e25	e16	e21	59	160	299	438	109	68
3	36	33	29	e22	e16	22	52	215	349	405	111	72
4	35	e30	e25	e18	e16	21	63	260	429	414	101	70
5	35	e24	e25	e15	21	e20	64	330	517	417	97	66
6	35	e24	30	e15	22	e20	78	366	670	359	93	64
7	35	e25	28	e22	21	e20	85	381	715	363	89	61
8	35	e26	27	e25	e21	22	94	373	703	350	84	59
9	34	27	e22	e22	e21	21	89	331	804	311	81	57
10	43	28	23	e20	e20	22	74	299	963	294	78	56
11	39	29	24	e22	e15	e20	73	306	751	287	76	55
12	37	28	25	e20	e13	e21	75	262	614	267	73	55
13	38	e26	26	e20	e16	21	95	228	538	252	70	67
14	37	30	e25	e20	e16	18	111	208	499	243	68	91
15	36	28	e25	e20	20	20	100	191	489	230	66	82
16	36	28	24	e20	21	20	91	191	465	213	66	98
17	36	28	e22	e20	21	20	94	186	423	203	69	107
18	37	26	e20	e20	22	22	93	215	402	207	72	101
19	37	28	e22	20	22	27	86	243	388	252	71	92
20	36	29	e25	e20	e20	26	84	211	385	198	66	114
21	36	e27	27	e18	e17	25	79	219	383	184	66	95
22	36	e21	e23	e18	e16	27	74	255	412	194	68	88
23	35	e20	e20	21	e17	31	72	259	457	172	104	87
24	34	24	e23	21	e19	36	76	231	502	154	83	95
25	31	e24	25	e20	21	35	72	214	520	144	123	93
26	31	26	e24	e20	22	33	77	213	504	137	134	88
27	32	e25	e22	e21	22	30	106	232	515	134	105	88
28	34	e26	e23	e22	22	29	140	337	507	132	89	86
29	69	27	24	22	21	30	117	342	484	121	81	84
30	46	28	e22	e20	---	33	111	301	476	114	76	82
31	33	---	25	e18	---	41	---	274	---	110	73	---
TOTAL	1,146	806	759	634	554	774	2,539	7,957	15,431	7,754	2,646	2,391
MEAN	37.0	26.9	24.5	20.5	19.1	25.0	84.6	257	514	250	85.4	79.7
MAX	69	33	30	27	22	41	140	381	963	455	134	114
MIN	31	20	20	15	13	18	52	124	268	110	66	55
AC-FT	2,270	1,600	1,510	1,260	1,100	1,540	5,040	15,780	30,610	15,380	5,250	4,740

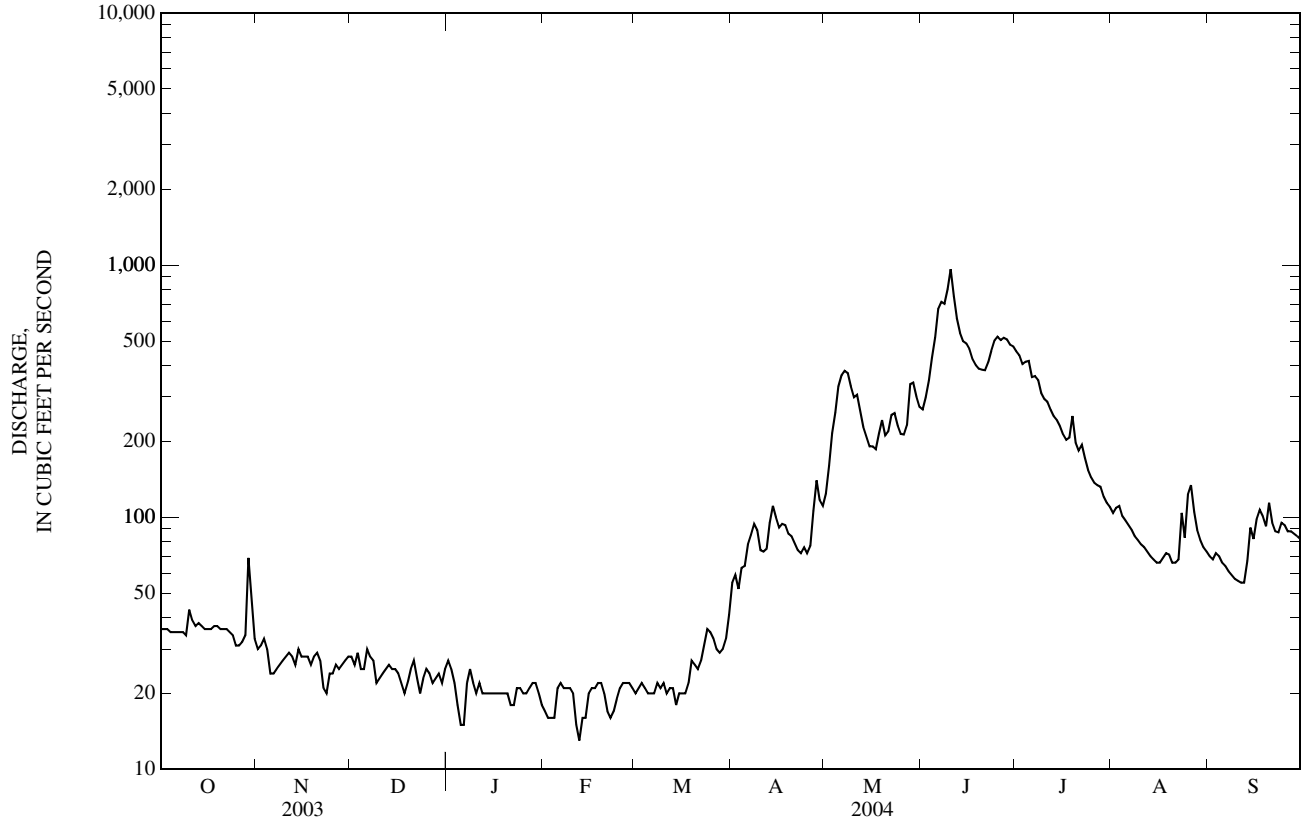
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

MEAN	43.1	31.3	25.1	25.0	23.2	23.6	63.0	397	683	286	93.3	58.2
MAX	68.8	40.3	31.2	33.3	32.0	32.0	127	580	1,251	447	162	92.0
(WY)	(1998)	(1997)	(1996)	(1997)	(2000)	(1997)	(1990)	(1993)	(1996)	(1998)	(1997)	(1997)
MIN	27.8	21.4	16.0	16.7	16.2	17.2	32.3	217	338	106	51.0	36.1
(WY)	(1989)	(1995)	(1989)	(1989)	(2002)	(2002)	(1993)	(1995)	(2001)	(1994)	(2001)	(2001)

06187950 SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004	
ANNUAL MEAN	146		119		146	
HIGHEST ANNUAL MEAN	--		--		204	1996
LOWEST ANNUAL MEAN	--		--		96.5	2001
HIGHEST DAILY MEAN	1,430	May 29	963	Jun 10	2,070	Jun 9, 1996
LOWEST DAILY MEAN	15	Feb 24,25	13	Feb 12	12	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	19	Feb 22	17	Feb 9	13	Feb 2, 1989
MAXIMUM PEAK FLOW	--		1,120	Jun 10	2,450 [a]	Jun 8, 1996
MAXIMUM PEAK STAGE	--		6.76	Jun 10	7.20	May 28, 2003
ANNUAL RUNOFF (AC-FT)	105,500		86,070		105,900	
10 PERCENT EXCEEDS	478		360		471	
50 PERCENT EXCEEDS	36		54		42	
90 PERCENT EXCEEDS	21		20		21	

a Gage height, 5.61 ft.
e Estimated.



06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°55'40", long 110°23'35", Yellowstone National Park, Hydrologic Unit 10070001, on left bank 0.5 mi north of the Cooke City highway, 1.6 mi northeast of Tower Falls Ranger Station, 2.7 mi downstream from Slough Creek, and at river mile 0.5.

DRAINAGE AREA.--660 mi^2.

PERIOD OF RECORD.--September 1922, April 1923 to September 1969, May 1985 to September 1986 (seasonal records only), October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,000 ft above NGVD of 1929, from topographic map. Prior to September 16, 1925, nonrecording gage and September 16, 1925 to July 29, 1927, water-stage recorder at same site at datum 1.00 ft higher. July 29, 1927 to September 30, 1969, water-stage recorder at same site and datum. May 1985 to September 1986, nonrecording gage at same site and 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. No regulation or diversion upstream of station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	e100	e110	e100	e80	e75	582	1,250	2,050	2,060	409	291
2	127	e110	e110	e90	e80	e80	663	1,700	2,310	1,930	395	282
3	125	e110	e120	e80	e80	e85	551	2,450	2,770	1,770	438	304
4	125	e100	e110	e70	e80	e90	703	2,930	3,500	1,790	391	329
5	124	e90	e110	e65	e90	e90	774	3,840	4,150	2,070	381	285
6	124	e90	e120	e65	e90	e85	990	4,310	4,880	1,650	363	266
7	124	e95	e110	e85	e90	e90	1,050	4,320	4,990	1,530	348	251
8	125	e100	e100	e100	e90	e90	1,220	4,180	4,450	1,550	325	241
9	124	e110	e90	e90	e85	e90	1,070	3,700	4,510	1,330	309	233
10	157	e130	e95	e80	e85	e90	793	3,070	5,130	1,230	296	225
11	192	e120	e100	e80	e70	e85	749	3,170	4,190	1,160	284	220
12	160	e110	e110	e75	e65	e90	740	2,370	3,570	1,060	269	211
13	154	e100	e120	e75	e70	e95	1,020	1,890	3,170	977	257	260
14	147	e110	e110	e80	e70	e95	1,320	1,610	2,910	936	247	431
15	142	e120	e100	e80	e85	e100	1,160	1,450	2,780	885	238	472
16	142	e120	e95	e80	e85	e120	929	1,470	2,650	832	235	464
17	140	e120	e90	e85	e100	e140	909	1,470	2,320	764	247	585
18	148	e120	e85	e80	e120	e150	860	1,600	2,200	757	283	518
19	156	e130	e90	e85	e110	e150	750	2,190	2,120	1,170	276	426
20	147	e110	e100	e90	e90	e150	743	1,820	2,090	914	284	595
21	141	e100	e110	e85	e75	e160	687	1,920	2,040	831	261	574
22	138	e90	e100	e80	e70	e170	660	2,350	2,080	812	267	510
23	134	e85	e90	e85	e75	e200	636	2,380	2,200	792	349	493
24	131	e100	e95	e90	e80	e250	732	2,000	2,390	674	354	609
25	117	e100	e100	e90	e85	e300	687	1,740	2,480	604	424	657
26	116	e100	e95	e90	e85	401	739	1,660	2,360	576	879	563
27	119	e90	e85	e85	e85	319	1,180	1,740	2,330	563	608	543
28	125	e95	e80	e85	e85	269	1,720	2,750	2,210	531	467	523
29	218	e100	e85	e85	e80	231	1,230	3,010	2,120	489	389	487
30	243	e120	e80	e85	---	272	1,090	2,470	2,510	461	344	477
31	e120	---	e90	e80	---	399	---	2,120	---	429	314	---
TOTAL	4,413	3,175	3,085	2,575	2,435	5,011	26,937	74,930	89,460	33,127	10,931	12,325
MEAN	142	106	99.5	83.1	84.0	162	898	2,417	2,982	1,069	353	411
MAX	243	130	120	100	120	401	1,720	4,320	5,130	2,070	879	657
MIN	116	85	80	65	65	75	551	1,250	2,040	429	235	211
AC-FT	8,750	6,300	6,120	5,110	4,830	9,940	53,430	148,600	177,400	65,710	21,680	24,450

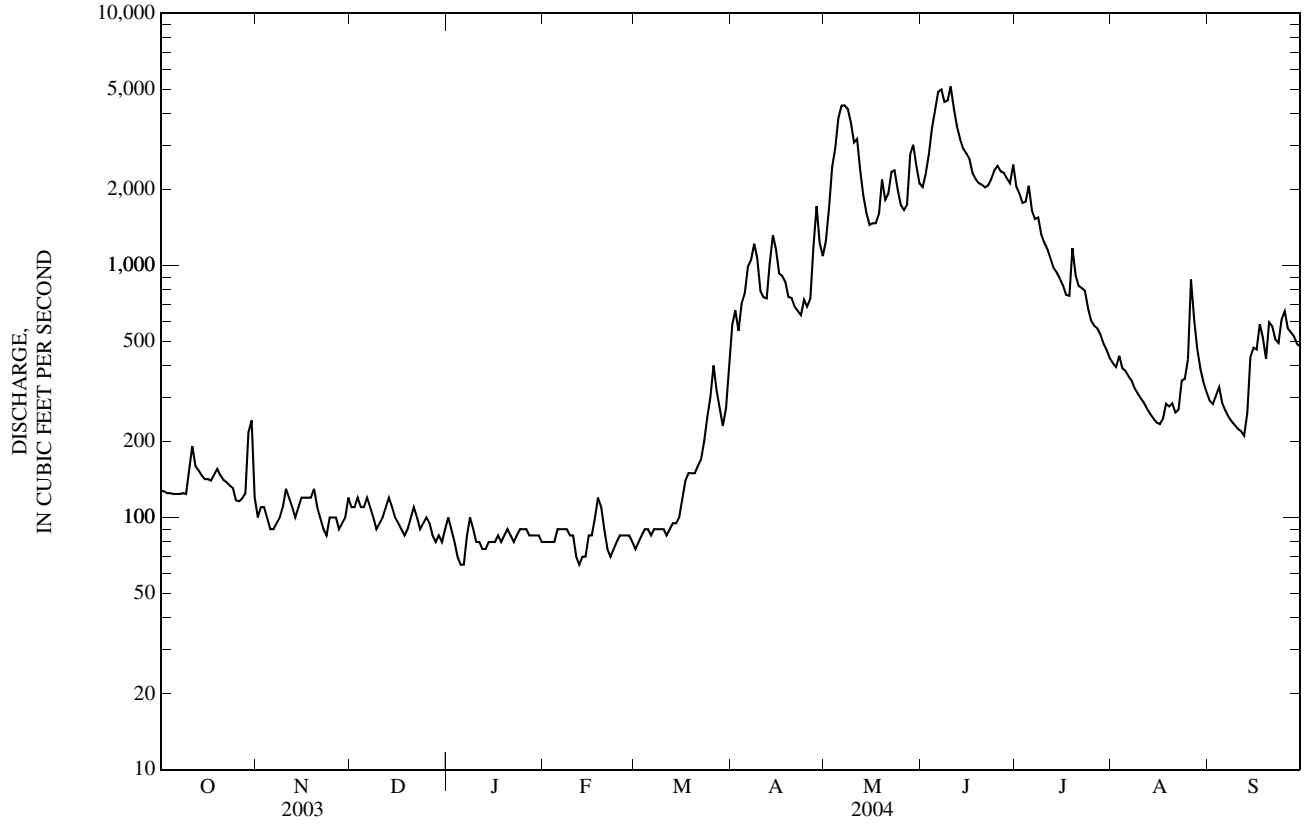
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2004, BY WATER YEAR (WY)*

MEAN	211	155	119	106	102	114	476	2,860	4,229	1,342	351	231
MAX	485	330	202	200	171	204	1,684	6,885	9,044	3,256	886	518
(WY)	(1942)	(1928)	(1951)	(1969)	(1969)	(1999)	(1990)	(1928)	(1996)	(1943)	(1968)	(1968)
MIN	109	88.1	75.5	71.8	70.0	67.9	106	969	1,408	344	173	115
(WY)	(1989)	(1937)	(1953)	(1989)	(1942)	(1964)	(1945)	(1933)	(1934)	(1931)	(1940)	(1988)

06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1923 - 2004*	
ANNUAL TOTAL	297,974		268,404		--	
ANNUAL MEAN	816		733		864	
HIGHEST ANNUAL MEAN	--		--		1,531	1997
LOWEST ANNUAL MEAN	--		--		525	1934
HIGHEST DAILY MEAN	11,600	May 29	5,130	Jun 10	15,600	Jun 10, 1996
LOWEST DAILY MEAN	70	Feb 24	65	Several days	45	Mar 23, 1964
ANNUAL SEVEN-DAY MINIMUM	76	Feb 24	76	Feb 9	57	Mar 5, 1964
MAXIMUM PEAK FLOW	--		5,790	Jun 7	19,500	Jun 10, 1996
MAXIMUM PEAK STAGE	--		6.63	Jun 7	12.15	Jun 10, 1996
ANNUAL RUNOFF (AC-FT)	591,000		532,400		626,000	
10 PERCENT EXCEEDS	2,180		2,240		2,910	
50 PERCENT EXCEEDS	141		245		182	
90 PERCENT EXCEEDS	90		85		90	

* For period of operation.
e Estimated.



06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°59'07", long 110°41'18" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank 50 ft downstream from outfall, 150 ft upstream of mouth, and 0.8 mi northeast of U.S. Post Office at Mammoth.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to September 1995, October 2002 to current year. Published as "Hot River" at Mammoth from 1989-94.

GAGE.--Water-stage recorder. Elevation of gage is 5,666.11 ft above NGVD of 1929 (levels by U.S. National Park Service). U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. No regulation or diversion upstream from station, however, flow is added from sinkholes upstream from spring. Station operation and record provided by the Montana Distirct.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	20	22	e22	20	21	23	24	26	27	26	24
2	22	21	22	e22	20	21	23	24	26	27	26	24
3	22	21	22	e21	20	21	23	24	26	27	26	24
4	22	21	22	e21	21	21	23	24	27	27	26	24
5	22	20	22	e21	21	21	23	25	27	27	26	24
6	22	20	22	e21	21	21	23	25	27	27	26	24
7	22	21	e22	21	21	21	23	26	27	27	26	24
8	22	21	e22	21	21	21	23	26	27	27	26	24
9	22	21	e22	21	21	21	24	26	27	27	23	24
10	22	21	e22	21	21	21	23	26	27	26	20	24
11	21	21	e22	21	21	21	23	26	27	26	20	24
12	21	21	e22	21	21	21	23	26	27	26	20	24
13	21	21	e22	21	21	22	24	26	27	26	20	24
14	21	22	e22	21	21	22	24	25	27	26	20	24
15	21	22	e22	21	21	22	24	25	27	26	19	24
16	21	22	e22	21	21	22	24	25	27	26	20	24
17	21	22	e22	21	21	22	24	25	27	26	23	24
18	21	22	e21	21	21	22	24	26	27	26	24	24
19	21	22	e22	21	21	22	24	26	27	26	24	24
20	21	22	e22	21	21	22	24	26	27	26	24	24
21	21	22	e22	20	21	22	24	25	27	26	24	24
22	21	21	e22	20	21	22	24	26	27	26	24	24
23	21	21	e21	21	21	22	24	26	27	26	24	24
24	21	22	e22	21	21	22	24	26	27	26	24	24
25	21	22	e22	21	21	22	24	26	27	26	24	24
26	21	22	e22	21	21	22	24	25	27	26	24	24
27	21	22	e22	21	21	22	24	25	27	26	24	24
28	21	22	e21	21	22	22	25	26	27	26	24	24
29	21	22	e21	21	21	22	24	27	27	26	24	24
30	21	22	e22	21	---	22	24	27	27	26	24	24
31	20	---	e22	20	---	22	---	27	---	26	24	---
TOTAL	659	642	678	650	607	670	710	792	807	815	729	720
MEAN	21.3	21.4	21.9	21.0	20.9	21.6	23.7	25.5	26.9	26.3	23.5	24.0
MAX	22	22	22	22	22	22	25	27	27	27	26	24
MIN	20	20	21	20	20	21	23	24	26	26	19	24
AC-FT	1,310	1,270	1,340	1,290	1,200	1,330	1,410	1,570	1,600	1,620	1,450	1,430

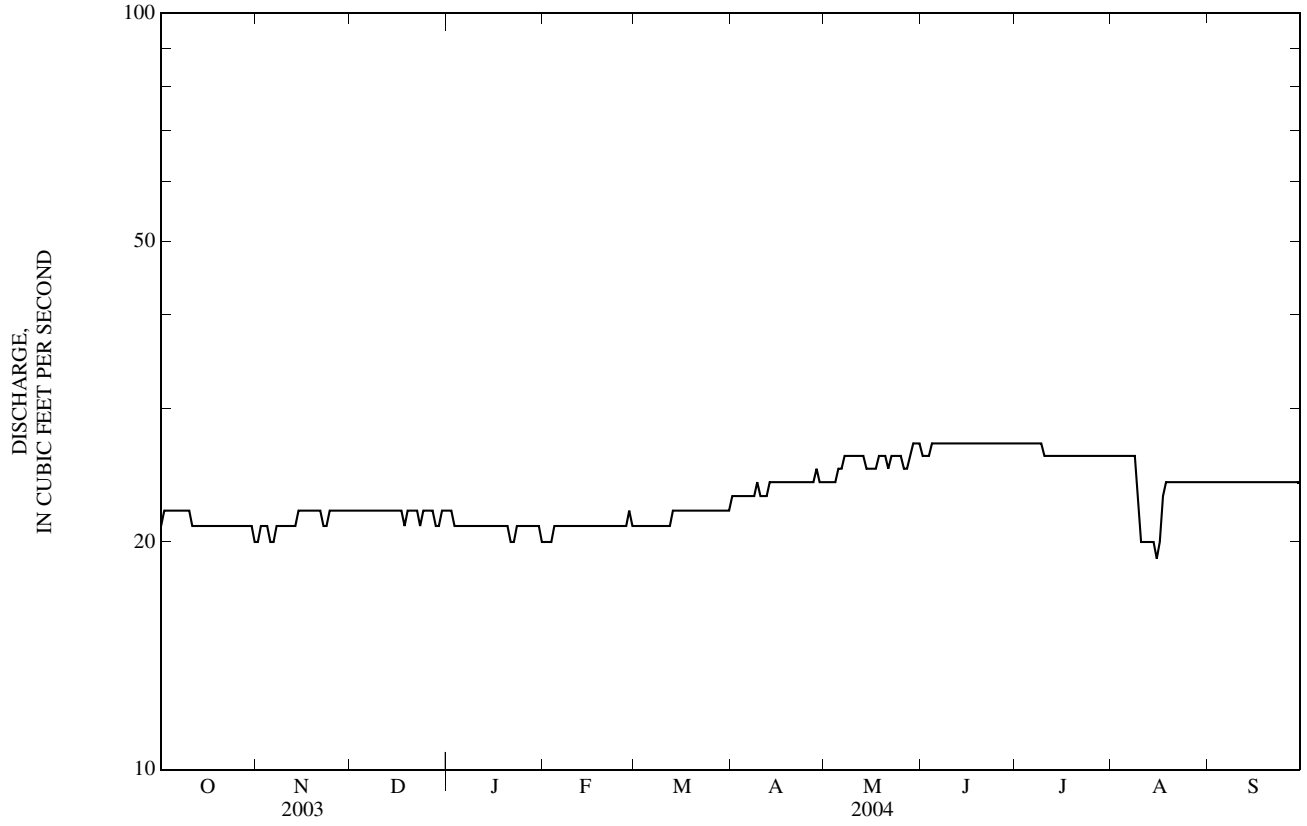
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)*

MEAN	26.7	25.6	25.4	25.9	25.0	25.3	26.7	29.3	29.0	27.4	26.4	25.9
MAX	29.9	29.1	28.3	29.8	29.6	30.8	31.5	33.1	33.0	31.2	29.1	28.6
(WY)	(1989)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(1995)	(1995)	(1995)	(1995)	(1995)
MIN	21.3	21.4	21.9	21.0	20.9	21.6	23.7	25.5	26.9	25.0	23.5	21.3
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(2003)

06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004*	
ANNUAL TOTAL	9,716		8,479		--	
ANNUAL MEAN	26.6		23.2		26.6	
HIGHEST ANNUAL MEAN	--		--		28.5	2003
LOWEST ANNUAL MEAN	--		--		23.2	2004
HIGHEST DAILY MEAN	33	Many days	27	Many days	36	May 20, 1995
LOWEST DAILY MEAN	20	Several days	19	Aug 15	19	Nov 23, 1993
ANNUAL SEVEN-DAY MINIMUM	20	Oct 31	20	Aug 10	20	Aug 10, 2004
MAXIMUM PEAK FLOW	--		28	Jul 4	36 [a]	May 20, 1995
MAXIMUM PEAK STAGE	--		1.33	Jul 4	1.50	May 17, 1993
ANNUAL RUNOFF (AC-FT)	19,270		16,820		19,240	
10 PERCENT EXCEEDS	32		27		30	
50 PERCENT EXCEEDS	27		22		27	
90 PERCENT EXCEEDS	21		21		23	

* For period of operation.
a Gage height, 1.45 ft.
e Estimated.



06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to September 1994, October 2002 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1988 to September 1990.
WATER TEMPERATURE: October 1988 to September 1994, October 2002 to current year.

INSTRUMENTATION.--Temperature recorder installed Sept. 25, 2002.

REMARKS.--Daily water temperature record rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,410 microsiemens per centimeter (µS/cm) at 25.0°C, Jan. 29, 1990; minimum daily, 1,500 µS/cm at 25.0°C, July, 17, 22, 23, 1990.
WATER TEMPERATURE: Maximum, 59.0°C, many days October 2003 to January 2004 and August 2004; minimum, 38.0°C, June 16, 27, 1989, Apr. 19, 1990.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum 59.0°C, many days October to January and August; minimum, 44.5°C, May 29, 30, June 10-12.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	56.0	56.0	56.0	59.0	54.0	57.5	55.5	55.5	55.5	55.0	55.0	55.0
2	56.0	56.0	56.0	57.0	54.0	55.5	55.5	55.5	55.5	58.5	55.0	56.0
3	56.0	56.0	56.0	55.5	55.0	55.0	55.5	55.5	55.5	59.0	55.5	58.0
4	56.0	56.0	56.0	58.5	54.5	56.5	56.5	55.5	55.5	59.0	56.0	58.0
5	56.0	56.0	56.0	59.0	56.5	58.0	58.5	55.5	56.5	57.5	57.0	57.5
6	56.0	56.0	56.0	58.5	55.0	57.0	55.5	55.5	55.5	57.0	56.0	56.5
7	56.5	56.0	56.0	58.5	55.0	56.5	55.5	55.5	55.5	56.0	55.0	56.0
8	56.5	56.0	56.0	59.0	54.5	56.5	55.5	55.5	55.5	55.0	54.5	55.0
9	56.5	56.0	56.0	55.0	54.5	54.5	58.5	55.5	56.5	55.0	54.5	54.5
10	56.5	54.5	55.0	55.0	54.5	55.0	55.5	55.5	55.5	55.5	55.0	55.0
11	56.5	54.5	55.5	55.5	55.0	55.0	56.0	55.5	55.5	55.5	55.0	55.0
12	55.5	55.0	55.5	55.0	55.0	55.0	58.5	55.5	56.0	58.0	55.0	56.0
13	56.0	55.5	55.5	59.0	55.0	56.5	56.5	55.5	56.0	56.0	55.0	55.5
14	56.0	55.5	55.5	55.5	55.0	55.0	56.5	55.5	56.0	56.0	55.5	55.5
15	56.0	55.5	56.0	55.5	55.0	55.0	57.0	55.5	56.0	58.5	55.0	56.5
16	56.0	55.0	55.5	55.5	55.0	55.0	58.0	55.5	56.0	55.5	55.0	55.5
17	56.0	55.5	56.0	56.0	55.0	55.5	57.5	55.5	56.0	59.0	55.0	56.5
18	56.0	56.0	56.0	56.0	55.0	55.5	59.0	55.5	57.5	59.0	55.0	57.0
19	56.0	56.0	56.0	55.5	55.0	55.0	58.5	55.0	56.5	55.5	55.0	55.5
20	56.0	56.0	56.0	55.5	55.0	55.5	55.5	54.5	55.0	55.5	55.5	55.5
21	56.0	56.0	56.0	58.5	55.0	56.0	55.0	54.5	55.0	59.0	55.5	57.5
22	56.0	56.0	56.0	58.5	57.0	58.0	59.0	55.0	56.0	59.0	55.5	57.0
23	56.0	56.0	56.0	57.5	56.0	56.5	59.0	56.0	57.5	55.5	55.0	55.5
24	56.5	55.0	56.0	56.0	55.5	55.5	56.5	54.5	55.5	55.5	55.5	55.5
25	57.0	54.5	56.0	56.0	55.5	55.5	55.0	54.5	54.5	55.5	55.0	55.5
26	56.5	55.0	56.0	55.5	55.5	55.5	55.0	55.0	55.0	58.0	55.0	56.0
27	56.0	55.5	56.0	55.5	55.5	55.5	57.0	55.0	55.0	56.0	55.0	55.5
28	56.0	55.5	55.5	55.5	55.5	55.5	59.0	56.0	58.0	55.5	55.0	55.0
29	55.5	54.5	54.5	55.5	55.5	55.5	57.5	55.0	56.0	55.5	55.0	55.0
30	57.0	54.5	56.0	55.5	55.5	55.5	57.0	55.0	56.0	55.5	55.0	55.0
31	59.0	55.0	57.5	---	---	---	55.5	55.0	55.0	57.0	55.0	56.0
MONTH	59.0	54.5	56.0	59.0	54.0	56.0	59.0	54.5	56.0	59.0	54.5	56.0

06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	57.0	55.0	56.0	54.0	53.5	54.0	53.0	52.5	53.0	51.0	49.5	50.0
2	57.0	55.0	56.0	58.5	54.0	55.0	53.0	52.5	53.0	51.0	49.5	50.5
3	55.0	55.0	55.0	56.5	54.0	54.5	53.5	52.5	53.0	50.5	49.5	50.0
4	57.0	55.0	55.5	54.5	54.0	54.0	53.0	52.0	52.5	50.0	49.0	49.5
5	55.0	55.0	55.0	56.5	54.0	54.5	53.0	52.0	52.5	50.0	48.5	49.0
6	57.0	55.0	56.0	57.5	54.0	56.0	52.0	51.5	52.0	49.5	48.0	48.5
7	57.0	55.0	55.0	56.5	54.5	55.0	52.5	51.5	52.0	48.5	47.0	47.5
8	55.0	55.0	55.0	55.0	54.5	54.5	52.0	51.5	51.5	48.0	46.5	47.5
9	55.0	55.0	55.0	55.0	54.5	54.5	52.0	51.0	51.5	48.0	46.5	47.5
10	58.0	55.0	55.5	54.5	54.5	54.5	52.0	51.5	51.5	48.0	47.0	47.5
11	57.0	55.0	56.0	54.5	54.5	54.5	52.0	51.0	51.5	47.5	46.5	47.0
12	58.5	55.0	56.5	54.5	54.0	54.5	52.5	51.5	52.0	47.5	46.5	47.0
13	57.0	55.0	56.0	54.5	53.5	54.0	51.5	50.0	51.0	47.5	46.5	47.0
14	57.5	55.0	56.0	54.0	53.5	54.0	51.0	50.0	50.5	48.0	47.0	47.5
15	55.0	55.0	55.0	54.0	53.5	54.0	50.5	50.0	50.0	48.5	47.5	48.0
16	56.5	55.0	55.0	54.0	53.5	54.0	51.0	50.5	50.5	48.5	48.0	48.0
17	55.0	55.0	55.0	54.0	53.5	54.0	50.5	50.5	50.5	49.0	47.5	48.0
18	55.0	55.0	55.0	54.0	53.5	54.0	51.0	50.5	50.5	48.5	47.5	48.0
19	55.0	55.0	55.0	54.0	53.5	53.5	51.5	50.5	51.0	48.0	47.0	47.5
20	55.0	55.0	55.0	54.0	53.5	53.5	51.0	50.5	50.5	48.5	47.5	48.0
21	58.0	55.0	56.5	54.0	53.5	54.0	51.5	50.5	51.0	48.5	48.0	48.0
22	58.0	55.0	56.5	54.0	53.5	53.5	51.5	50.5	51.0	48.5	47.0	47.5
23	57.5	55.0	56.0	54.0	53.0	53.5	51.5	50.5	51.0	47.0	46.5	46.5
24	57.5	55.0	56.0	53.5	52.5	53.0	51.0	50.5	51.0	47.0	46.5	46.5
25	55.5	54.0	54.0	53.0	52.5	53.0	51.5	50.5	51.0	48.0	47.0	47.5
26	54.0	54.0	54.0	53.0	52.5	53.0	51.5	50.5	51.0	48.0	47.5	47.5
27	54.0	54.0	54.0	53.5	53.0	53.0	51.0	50.0	50.5	48.5	47.5	48.0
28	54.0	53.5	54.0	53.5	53.0	53.5	50.0	49.0	49.5	48.0	46.0	47.0
29	54.0	53.5	54.0	54.0	53.5	53.5	50.0	49.0	49.5	46.0	44.5	45.0
30	---	---	---	54.0	53.0	53.5	50.5	49.5	50.0	46.0	44.5	45.0
31	---	---	---	53.5	52.5	53.0	---	---	---	46.5	45.0	45.5
MONTH	58.5	53.5	55.5	58.5	52.5	54.0	53.5	49.0	51.0	51.0	44.5	47.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	47.0	45.5	46.0	47.5	46.0	47.0	49.5	48.0	48.5	50.5	49.0	50.0
2	47.0	45.5	46.5	47.5	46.0	47.0	50.0	48.5	49.0	50.5	49.5	50.0
3	47.0	45.5	46.5	47.0	46.0	46.5	49.5	48.5	49.0	50.0	49.0	49.0
4	47.0	46.0	46.5	47.0	46.5	47.0	49.0	48.0	48.5	49.5	48.5	49.0
5	47.0	45.5	46.0	47.0	46.0	46.5	49.5	48.0	48.5	49.5	49.0	49.5
6	46.5	45.5	46.0	48.0	46.0	47.0	49.5	48.0	49.0	50.0	48.5	49.5
7	46.5	45.0	45.5	48.0	46.5	47.5	49.5	48.0	48.5	50.0	49.0	49.5
8	46.0	45.0	45.5	48.0	46.5	47.0	49.5	48.0	48.5	50.5	49.0	50.0
9	46.0	45.0	45.5	48.0	46.5	47.5	58.5	48.0	53.5	50.5	49.5	50.0
10	45.5	44.5	45.0	48.5	47.0	47.5	58.5	58.5	58.5	50.0	49.5	50.0
11	45.5	44.5	45.0	48.5	47.0	47.5	59.0	58.5	58.5	50.5	49.5	50.0
12	46.0	44.5	45.5	48.5	46.5	47.5	59.0	58.5	59.0	50.5	49.5	50.0
13	46.5	45.0	45.5	48.0	47.0	47.5	59.0	59.0	59.0	49.5	48.5	49.0
14	47.0	45.0	46.0	49.0	47.0	48.0	59.0	59.0	59.0	48.5	48.0	48.0
15	46.5	45.0	45.5	49.0	47.5	48.5	59.0	59.0	59.0	48.5	48.0	48.0
16	46.0	45.0	45.5	49.0	47.5	48.0	59.0	51.5	56.5	49.0	48.0	48.5
17	46.5	45.0	45.5	49.0	47.5	48.5	51.5	50.0	50.5	49.5	48.5	49.0
18	46.0	45.0	45.5	49.0	47.5	48.5	50.0	49.5	50.0	49.5	49.0	49.0
19	46.5	45.0	46.0	49.0	48.5	49.0	50.5	49.5	50.0	49.5	48.5	49.0
20	46.5	45.5	46.0	49.5	48.5	48.5	50.0	49.0	49.5	48.5	48.0	48.5
21	47.0	45.0	46.0	49.0	48.0	48.5	50.0	49.5	50.0	48.5	48.0	48.0
22	47.0	45.5	46.0	49.0	48.0	48.5	50.0	49.0	49.5	48.0	47.5	48.0
23	47.0	45.5	46.5	49.0	47.5	48.0	49.5	49.0	49.0	48.5	48.0	48.0
24	47.0	45.5	46.5	49.0	47.5	48.0	49.5	48.5	49.0	49.0	48.0	48.5
25	47.0	46.0	46.5	49.0	47.5	48.0	49.5	48.5	49.0	49.0	48.0	48.5
26	47.0	45.5	46.5	49.0	48.0	48.5	48.5	48.0	48.5	49.0	48.5	49.0
27	47.0	46.0	46.5	49.0	47.5	48.5	49.0	48.0	48.5	49.5	48.5	49.0
28	47.5	46.0	46.5	49.0	47.5	48.5	49.5	48.0	49.0	49.0	48.5	49.0
29	47.5	46.0	47.0	49.0	47.5	48.5	50.0	48.5	49.5	49.0	48.0	49.0
30	47.0	46.5	46.5	49.0	47.5	48.5	50.0	49.0	49.5	49.5	48.5	49.0
31	---	---	---	49.0	48.0	48.5	50.5	49.0	50.0	---	---	---
MONTH	47.5	44.5	46.0	49.5	46.0	48.0	59.0	48.0	51.5	50.5	47.5	49.0

06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°59'33", long 110°41'26", Yellowstone National Park, Hydrologic Unit 10070001, on left bank at Wyoming-Montana state line, 400 ft upstream from highway bridge, 0.5 mi downstream from Hot River (formerly Boiling River), 1.5 mi north of Mammoth, and at river mile 2.9.

DRAINAGE AREA.--202 mi^2.

PERIOD OF RECORD.--October 1938 to September 1972, April l984 to current year. Prior to October 1959, published as Gardiner River near Mammoth.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,623.97 ft above NGVD of 1929 (levels by National Park Service). U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. No regulation or diversion upstream of station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	85	98	100	82	85	125	210	393	305	147	117
2	100	96	96	94	83	81	129	253	396	304	145	117
3	100	97	96	91	90	82	130	303	429	289	148	120
4	100	94	94	89	86	81	143	363	491	294	146	120
5	100	77	93	80	88	81	160	440	545	314	143	119
6	100	82	97	87	87	70	179	482	645	276	138	117
7	100	84	99	105	87	80	188	489	655	264	136	116
8	100	89	97	102	86	82	193	502	608	262	134	115
9	98	99	88	102	85	85	186	473	608	243	133	114
10	111	99	97	96	83	87	157	430	677	231	131	113
11	105	95	95	96	83	86	152	429	577	224	129	112
12	105	95	93	90	68	86	155	376	496	216	127	112
13	104	93	89	90	87	85	177	332	450	211	125	128
14	102	96	90	90	84	85	196	299	428	206	123	142
15	101	94	92	85	87	86	190	279	428	200	122	132
16	103	95	91	93	86	86	168	306	416	197	122	143
17	101	91	93	85	85	86	178	306	381	192	125	132
18	98	94	79	85	88	89	176	323	371	190	132	123
19	98	97	89	92	87	95	168	358	363	221	128	124
20	96	95	102	88	84	96	172	321	359	203	126	136
21	96	94	104	78	76	94	164	318	350	196	126	129
22	96	79	91	83	75	98	159	409	341	199	130	125
23	95	76	80	89	82	104	158	447	350	183	145	126
24	94	92	96	89	83	111	168	388	360	175	140	125
25	91	89	105	87	84	111	163	339	360	170	145	120
26	95	93	97	85	85	109	178	327	354	167	156	118
27	96	95	96	83	85	103	216	333	347	164	141	119
28	96	95	84	87	84	100	246	484	339	159	132	120
29	109	97	92	86	83	99	214	585	323	154	126	115
30	87	98	90	87	---	103	206	489	323	151	122	115
31	87	---	101	83	---	112	---	422	---	148	119	---
TOTAL	3,064	2,755	2,904	2,777	2,433	2,838	5,194	11,815	13,163	6,708	4,142	3,664
MEAN	98.8	91.8	93.7	89.6	83.9	91.5	173	381	439	216	134	122
MAX	111	99	105	105	90	112	246	585	677	314	156	143
MIN	87	76	79	78	68	70	125	210	323	148	119	112
AC-FT	6,080	5,460	5,760	5,510	4,830	5,630	10,300	23,440	26,110	13,310	8,220	7,270

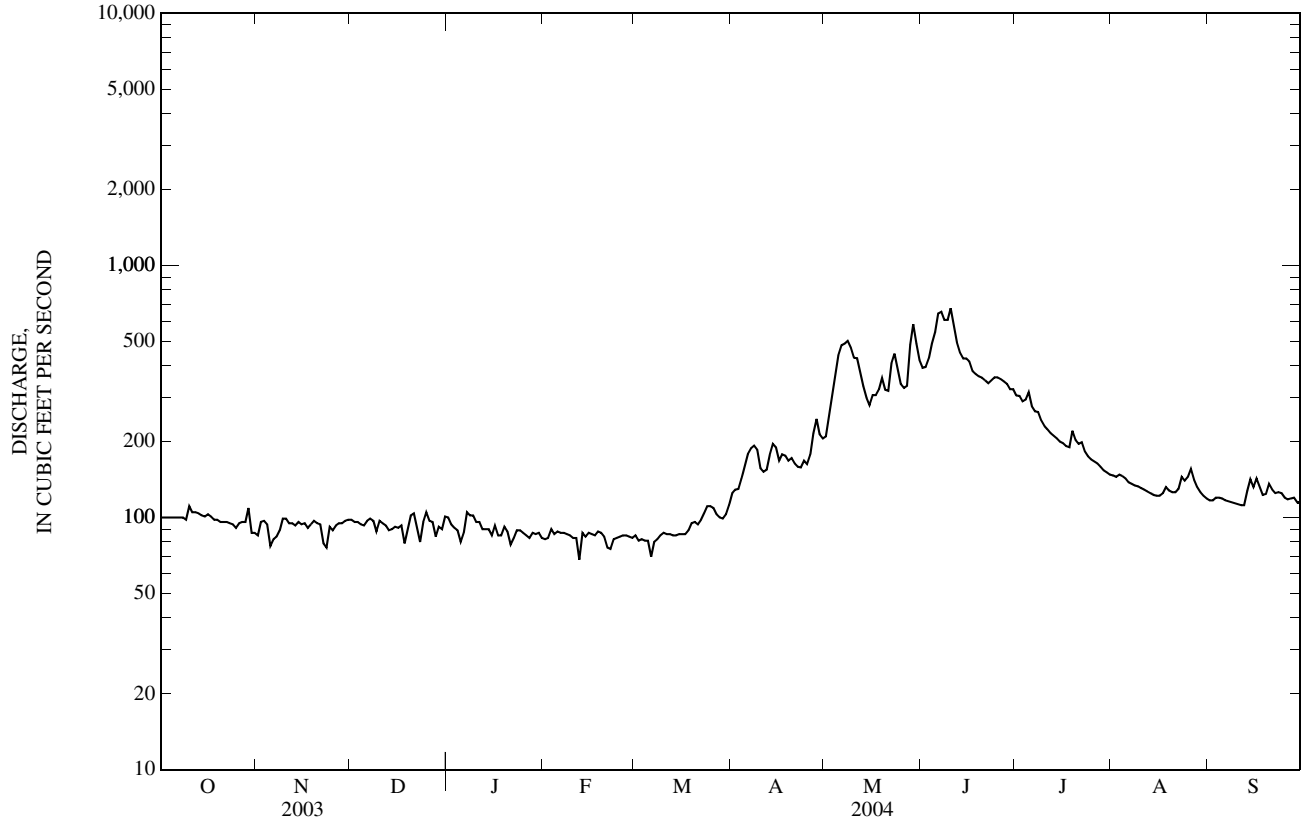
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)*

MEAN	127	112	102	96.9	92.9	93.8	142	507	707	300	161	136
MAX	175	151	135	134	128	128	304	1,067	1,354	662	236	190
(WY)	(1969)	(1998)	(1998)	(1998)	(1998)	(1998)	(1990)	(1997)	(1971)	(1943)	(1943)	(1968)
MIN	94.9	85.5	79.3	77.6	75.0	75.4	84.1	283	212	133	103	93.4
(WY)	(2002)	(1940)	(1941)	(1941)	(1940)	(1942)	(1945)	(1960)	(1987)	(1988)	(1988)	(1988)

06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004*	
ANNUAL TOTAL	64,091		61,457		--	
ANNUAL MEAN	176		168		215	
HIGHEST ANNUAL MEAN	--		--		324	1997
LOWEST ANNUAL MEAN	--		--		138	1988
HIGHEST DAILY MEAN	1,520	Jun 1	677	Jun 10	1,830	May 29, 1956
LOWEST DAILY MEAN	55	Feb 24	68	Feb 12	53	Dec 15, 1988
ANNUAL SEVEN-DAY MINIMUM	76	Feb 19	80	Mar 2	61	Feb 1, 1989
MAXIMUM PEAK FLOW	--		711	Jun 7	2,080 [a]	Jun 4, 1956
MAXIMUM PEAK STAGE	--		3.42	Jun 7	5.03	Jun 2, 1997
ANNUAL RUNOFF (AC-FT)	127,100		121,900		155,800	
10 PERCENT EXCEEDS	367		360		504	
50 PERCENT EXCEEDS	101		112		121	
90 PERCENT EXCEEDS	82		85		87	

* For period of operation.
a Gage height, 4.46 ft.



06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT

LOCATION.--Lat 45°06'43", long 110°47'37", in NW¼ SE¼ NW¼ sec.30, T.8 S., R.8 E., Park County, Hydrologic Unit 10070002, on left bank 20 ft downstream from county road bridge at Corwin Springs, 1.3 mi upstream from Mol Heron Creek, 7 mi northwest of Gardiner, and at river mile 549.7.

DRAINAGE AREA.--2,619 mi^2.

PERIOD OF RECORD.--August 1889 to November 1893 (published as "at Horr"), September 1910 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1912. WSP 1509: 1889-94, 1911, 1913, 1916-18, 1920-21, 1925, 1927. WSP 1559: Drainage area. WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,079.09 ft above NGVD of 1929. August 12, 1889 to November 4, 1893, nonrecording gages at site 2 mi upstream at different datums. September 2, 1910 to April 19, 1935, nonrecording gages on bridge at present datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Water-discharge records good. Natural storage in Yellowstone Lake. Diversions for irrigation of about 960 acres of which 40 acres lies downstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,160	857	854	783	722	744	1,430	2,660	5,290	6,100	2,820	1,970
2	1,150	937	812	768	751	723	1,570	3,200	5,540	5,870	2,760	1,950
3	1,130	962	838	723	759	737	1,510	4,180	6,110	5,650	2,790	1,980
4	1,130	950	829	e680	759	755	1,660	4,920	7,190	5,590	2,700	1,970
5	1,120	809	730	e660	759	751	1,830	6,270	8,450	6,090	2,630	1,920
6	1,110	824	817	e680	760	721	2,080	7,150	9,870	5,480	2,580	1,880
7	1,110	856	871	e740	762	676	2,200	7,240	10,500	5,190	2,520	1,850
8	1,110	878	822	789	760	766	2,420	7,200	9,580	5,250	2,470	1,820
9	1,100	903	773	787	762	774	2,330	6,690	9,640	4,880	2,400	1,790
10	1,170	901	726	773	739	808	1,960	5,790	11,100	4,660	2,360	1,760
11	1,220	914	791	770	751	788	1,850	5,980	9,780	4,520	2,280	1,730
12	1,170	916	792	767	712	794	1,830	5,040	8,620	4,360	2,240	1,720
13	1,150	860	805	745	711	808	2,140	4,320	7,830	4,190	2,200	1,780
14	1,110	908	806	750	732	793	2,550	3,880	7,320	4,100	2,160	2,060
15	1,090	910	790	742	736	801	2,510	3,690	7,150	3,990	2,110	2,130
16	1,090	899	735	748	745	796	2,220	3,710	6,920	3,900	2,080	2,060
17	1,080	909	776	742	757	797	2,150	3,880	6,470	3,780	2,080	2,230
18	1,070	871	723	731	780	824	2,140	3,990	6,240	3,690	2,170	2,090
19	1,070	902	700	740	804	875	2,000	5,010	6,130	4,340	2,110	1,950
20	1,060	921	724	753	784	965	1,960	4,450	6,060	4,020	2,080	2,170
21	1,040	870	791	741	751	903	1,900	4,530	6,000	3,880	2,050	2,180
22	1,020	810	780	724	728	935	1,850	5,260	6,010	3,760	2,050	2,040
23	1,010	793	705	734	736	1,020	1,780	5,760	6,200	3,770	2,170	2,020
24	1,000	914	682	756	748	1,130	1,900	5,150	6,490	3,530	2,240	2,130
25	952	780	768	773	757	1,270	1,890	4,600	6,610	3,390	2,150	2,190
26	961	765	784	751	769	1,240	1,950	4,460	6,540	3,310	2,830	2,080
27	967	778	762	734	770	1,140	2,450	4,520	6,420	3,250	2,480	2,030
28	974	754	717	754	777	1,030	3,300	5,960	6,350	3,150	2,300	2,000
29	1,080	798	736	770	758	967	2,750	6,860	6,240	3,040	2,180	1,950
30	1,150	853	749	780	---	983	2,530	6,160	6,550	2,960	2,090	1,930
31	917	---	753	761	---	1,140	---	5,520	---	2,900	2,020	---
TOTAL	33,471	26,002	23,941	23,149	21,839	27,454	62,640	158,030	219,200	132,590	72,100	59,360
MEAN	1,080	867	772	747	753	886	2,088	5,098	7,307	4,277	2,326	1,979
MAX	1,220	962	871	789	804	1,270	3,300	7,240	11,100	6,100	2,830	2,230
MIN	917	754	682	660	711	676	1,430	2,660	5,290	2,900	2,020	1,720
AC-FT	66,390	51,570	47,490	45,920	43,320	54,460	124,200	313,500	434,800	263,000	143,000	117,700

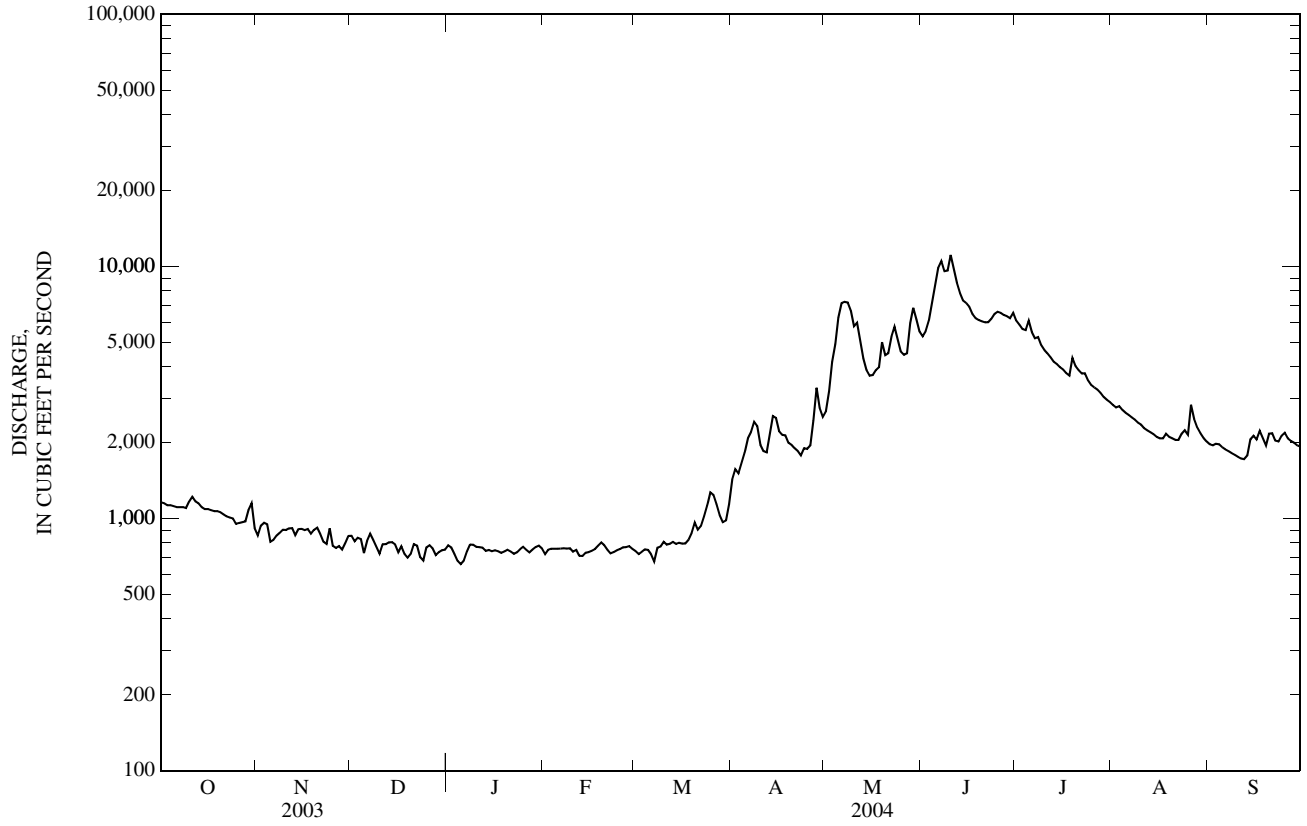
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 2004, BY WATER YEAR (WY)*

MEAN	1,513	1,184	961	849	837	919	1,553	6,094	11,430	6,756	3,166	1,946
MAX	2,429	2,058	1,424	1,361	1,340	1,376	3,542	13,590	22,540	13,260	5,688	3,207
(WY)	(1973)	(1928)	(1984)	(1997)	(1997)	(1997)	(1990)	(1928)	(1997)	(1982)	(1982)	(1968)
MIN	781	702	551	448	411	412	576	2,575	4,245	2,025	1,319	938
(WY)	(1989)	(1989)	(1937)	(1937)	(1937)	(1937)	(1937)	(1975)	(1934)	(1919)	(1919)	(1988)

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1889 - 2004*	
ANNUAL TOTAL	1,012,864		859,776		--	
ANNUAL MEAN	2,775		2,349		3,109	
HIGHEST ANNUAL MEAN	--		--		5,158	1997
LOWEST ANNUAL MEAN	--		--		1,903	1934
HIGHEST DAILY MEAN	21,200	Jun 1	11,100	Jun 10	32,000	Jun 14, 1918
LOWEST DAILY MEAN	682	Dec 24	660	Jan 5	380	Feb 5, 1989
ANNUAL SEVEN-DAY MINIMUM	729	Dec 18	719	Jan 1	393	Feb 4, 1937
MAXIMUM PEAK FLOW	--		11,800	Jun 10	32,200 [a]	Jun 10, 1996
MAXIMUM PEAK STAGE	--		6.56	Jun 10	11.50	Jun 14, 1918
ANNUAL RUNOFF (AC-FT)	2,009,000		1,705,000		2,252,000	
10 PERCENT EXCEEDS	7,140		6,000		8,480	
50 PERCENT EXCEEDS	1,120		1,350		1,400	
90 PERCENT EXCEEDS	774		745		760	

* For period of operation.
a Gage height, 10.92 ft.
e Estimated.



06205450 CLARKS FORK YELLOWSTONE RIVER NEAR MONTANA-WYOMING STATE LINE, NEAR COOKE CITY, MT

LOCATION.--Lat 44°57'28", long 109°48'21", Park County, WY, Hydrologic Unit 10070006, Shoshone National Forest, at bridge on U.S. Highway 212, 300 ft upstream from Pilot Creek, 0.9 mi downstream from Rock Creek, 1.8 mi northwest of Crazy Creek Campground, and 7.5 mi southeast of Cooke City, MT.

PERIOD OF RECORD.--August 1975 to October 1977, November 1990 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
29...	1045	59	578	9.8	96	8.1	111	2.0	3.0	45	13.5	2.72	.64
JAN													
29...	0850	10	588	10.3	93	7.8	119	-2.0	.5	58	18.6	2.82	.45
MAY													
12...	0910	286	592	11.3	104	8.5	42	.0	1.5	20	6.13	1.13	.27
AUG													
18...	0845	52	611	8.3	97	--	70	10.5	12.0	34	10.7	1.75	.41

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	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)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
29...	.2	3.72	15	50	.75	<.2	5.7	7.2	65	.09	10.3	<.04	.15
JAN													
29...	.1	1.46	5	56	.35	<.2	5.4	5.8	69	.09	1.86	<.04	.09
MAY													
12...	.1	.85	8	19	.37	<.2	4.1	3.6	28	.04	21.7	<.04	E.04
AUG													
18...	.1	1.06	6	33	E.19	<.2	3.3	4.7	--	--	--	<.04	<.06

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	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)
OCT													
29...	<.008	.02	6	<.20	.5	16	<.06	7.2	<.04	<.8	.066	1.5	16
JAN													
29...	E.004	<.02	3	<.20	E.2	18	<.06	E6.5	E.02	<.8	.055	.7	E4
MAY													
12...	<.008	<.02	22	<.20	E.2	10	<.06	<7.0	.14	<.8	.034	2.6	18
AUG													
18...	<.008	<.02	5	<.20	E.2	14	<.06	E4.0	<.04	<.8	.031	.9	6

Date	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	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)	Uranium natural water, fltrd, ug/L (22703)
OCT												
29...	<.08	<3	4.0	E.02	E.3	.45	<.4	<.2	60.1	E3	1.5	.13
JAN												
29...	<.08	<3	.8	<.02	E.2	.25	<.4	<.2	49.8	<5	.6	.13
MAY												
12...	<.08	<3	1.9	E.01	<.4	.28	<.4	<.2	24.4	<5	1.0	.07
AUG												
18...	<.08	<3	1.0	E.01	<.4	.14	<.4	<.2	38.1	<5	1.0	.07

< -- Less than
E -- Estimated value

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT

LOCATION.--Lat 45°00'37", long 109°03'53", in NW¼ SW¼ NW¼ sec.32, T.9 S., R.22 E., Carbon County, Hydrologic Unit 10070006, on left bank 0.2 mi upstream from county road bridge and Big Sand Coulee, 0.8 mi north of Wyoming-Montana State line, 9.5 mi southwest of Belfry, and at river mile 71.2.

DRAINAGE AREA.--1,154 mi^2.

PERIOD OF RECORD.--July 1921 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as Clarks Fork at Chance prior to October 1956 and as Clarks Fork Yellowstone River at Chance October 1956 to September 1968.

REVISED RECORDS.--WSP 1309: 1922 (M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,986.24 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to November 15, 1934, nonrecording gage, and November 15, 1934 to July 26, 1951, water-stage recorder at bridge 0.4 mi downstream of different datum. July 27, 1951 to September 30, 1953, water-stage recorder at present site at datum 0.98 ft higher. 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 11,100 acres upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	249	315	e210	e190	205	437	477	904	3,150	508	397
2	100	278	304	e200	e200	198	495	530	917	3,100	470	363
3	98	288	297	e190	e210	196	440	760	1,130	2,820	457	395
4	96	300	299	e170	e230	193	388	1,080	1,710	2,640	436	446
5	95	265	252	e160	231	193	454	1,630	2,540	2,750	433	388
6	95	253	299	e170	232	188	565	2,110	3,540	2,490	425	343
7	95	260	296	e210	222	184	633	2,410	4,720	2,270	379	311
8	94	260	286	269	226	200	690	2,530	4,740	2,230	342	286
9	94	281	275	250	223	214	674	2,340	4,330	2,080	310	262
10	111	319	e220	271	211	221	608	1,950	5,640	1,920	281	233
11	126	305	e220	261	e200	221	553	1,830	5,370	1,860	257	229
12	109	288	e220	259	e180	224	539	1,600	3,900	1,820	239	216
13	112	285	e260	250	e190	238	595	1,290	3,010	1,740	221	218
14	122	297	316	253	e200	241	669	1,040	2,480	1,620	205	275
15	123	302	288	253	208	229	643	889	2,290	1,600	190	360
16	122	296	236	247	212	224	592	785	2,220	1,550	176	313
17	120	290	256	245	217	219	512	749	1,930	1,480	174	387
18	125	282	270	236	246	225	491	715	1,690	1,380	192	399
19	133	290	256	233	230	240	438	852	1,560	1,380	198	398
20	129	327	307	236	214	285	386	847	1,560	1,370	220	500
21	126	315	305	229	204	280	344	839	1,600	1,320	238	608
22	125	e260	283	209	198	297	322	918	1,710	1,260	229	563
23	124	e220	252	225	205	346	297	1,010	2,020	1,330	230	519
24	120	e240	244	230	212	426	277	982	2,510	1,130	282	511
25	131	e250	291	223	217	458	281	872	2,990	950	269	539
26	140	e260	284	218	208	415	261	776	3,320	822	1,080	501
27	145	e270	274	e180	205	351	336	734	3,360	790	910	485
28	163	e280	e220	e170	213	306	538	895	3,120	757	724	470
29	194	320	e200	e180	215	278	597	1,180	2,990	672	622	442
30	382	347	e200	e190	---	276	517	1,150	3,150	619	538	424
31	278	---	e200	e200	---	341	---	1,000	---	561	468	---
TOTAL	4,123	8,477	8,225	6,827	6,149	8,112	14,572	36,770	82,951	51,461	11,703	11,781
MEAN	133	283	265	220	212	262	486	1,186	2,765	1,660	378	393
MAX	382	347	316	271	246	458	690	2,530	5,640	3,150	1,080	608
MIN	94	220	200	160	180	184	261	477	904	561	174	216
AC-FT	8,180	16,810	16,310	13,540	12,200	16,090	28,900	72,930	164,500	102,100	23,210	23,370

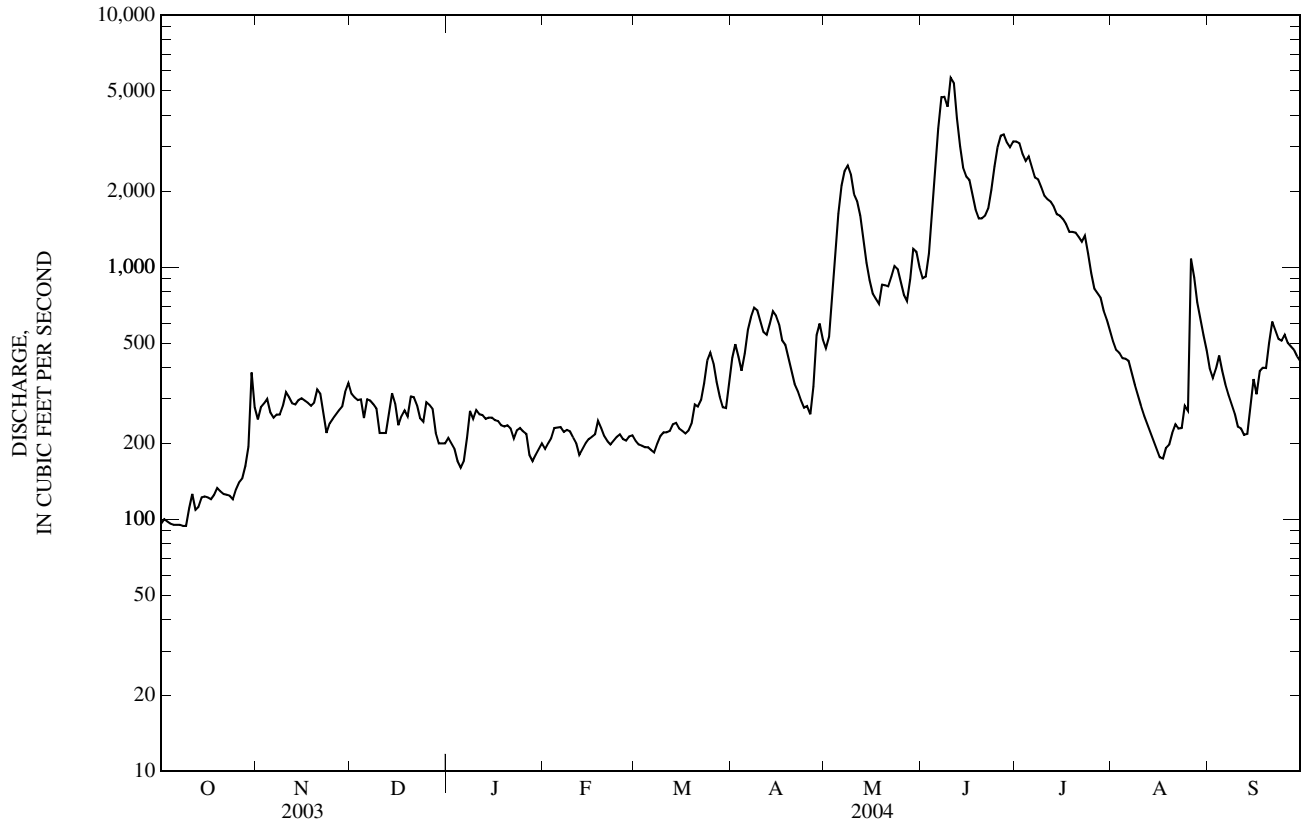
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2004, BY WATER YEAR (WY)

MEAN	276	294	262	231	222	222	427	2,037	4,092	2,182	609	313
MAX	725	648	379	359	329	364	1,167	5,704	7,225	5,744	1,453	834
(WY)	(1931)	(1928)	(1951)	(1997)	(1963)	(1972)	(1943)	(1928)	(1997)	(1975)	(1951)	(1941)
MIN	45.5	115	110	110	100	96.3	110	839	1,607	349	66.5	50.1
(WY)	(1989)	(1989)	(1922)	(1922)	(1922)	(1922)	(1961)	(1968)	(1987)	(1988)	(1988)	(1988)

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1921 - 2004	
ANNUAL TOTAL	326,249		251,151		--	
ANNUAL MEAN	894		686		932	
HIGHEST ANNUAL MEAN	--		--		1,485	1997
LOWEST ANNUAL MEAN	--		--		547	1977
HIGHEST DAILY MEAN	10,000	Jun 1	5,640	Jun 10	12,300	Jun 9, 1981
LOWEST DAILY MEAN	86	Sep 29	94	Oct 8,9	33	Apr 26, 1961
ANNUAL SEVEN-DAY MINIMUM	93	Sep 24	95	Oct 3	37	Oct 8, 1988
MAXIMUM PEAK FLOW	--		6,300	Jun 11	14,800	Jun 9, 1981
MAXIMUM PEAK STAGE	--		6.26	Jun 11	9.97	Jun 9, 1981
ANNUAL RUNOFF (AC-FT)	647,100		498,200		675,300	
10 PERCENT EXCEEDS	2,690		1,880		2,870	
50 PERCENT EXCEEDS	274		296		300	
90 PERCENT EXCEEDS	120		180		170	

e Estimated.



06218500 WIND RIVER NEAR DUBOIS, WY

LOCATION.--Lat 43°34'43", long 109°45'33", in NW¼ NE¼ sec. 25. T.42N., R.108 W., Fremont County, Hydrologic Unit 10080001, on left bank 2.5 mi upstream from Warm Springs Creek and 6.7 mi northwest of Dubois.

DRAINAGE AREA.--232 mi^2.

PERIOD OF RECORD.--October 1945 to September 1992, May 2001 to current year.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,188.71 ft above NGVD of 1929 (levels by Bureau of Reclamation). U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimtated daily discharges, which are poor. Diversions upstream from station for irrigation of about 2,300 acres.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	51	e57	e49	e43	46	75	89	185	328	104	74
2	64	60	e54	e47	e43	52	72	100	218	288	100	71
3	61	52	e53	e42	e45	e50	65	135	258	275	99	84
4	60	51	e51	e40	e45	e54	67	180	343	262	98	99
5	60	e43	e49	e40	e45	e50	77	244	450	313	97	93
6	59	e43	e49	e43	e45	e47	85	309	557	257	93	83
7	60	e44	e50	e47	e43	e45	80	353	588	246	87	80
8	61	e46	e50	e50	e42	44	81	337	566	236	83	78
9	62	e48	e48	e52	e41	49	81	298	566	200	81	76
10	57	e55	e44	e50	e45	53	67	258	617	205	80	72
11	47	59	e49	e48	e44	56	68	249	474	197	78	73
12	54	e54	e50	e47	e42	54	82	195	381	185	76	71
13	43	e58	e52	e47	e41	53	83	194	313	165	75	77
14	44	e60	e52	e46	e43	58	88	181	276	163	73	73
15	47	e60	e52	e45	e43	51	83	159	291	168	69	78
16	52	e60	e51	e48	e46	51	78	165	288	167	68	82
17	54	e58	e50	e47	48	56	75	159	264	150	64	82
18	52	e56	e49	e46	53	61	72	183	283	146	70	81
19	52	e54	e49	e47	50	74	65	254	341	144	82	78
20	51	e56	e50	e48	e47	63	69	258	348	140	79	79
21	51	e48	e52	e46	e46	73	65	250	308	134	77	74
22	51	e44	e51	e47	e47	81	64	229	293	119	74	73
23	51	e40	e48	e49	e49	85	63	223	309	176	93	77
24	45	e45	e48	e49	e46	81	68	181	337	158	84	80
25	39	e50	e50	e47	48	72	65	176	326	136	94	82
26	45	e52	e50	e45	51	67	74	157	380	130	110	77
27	56	e50	e48	e44	51	50	90	156	347	121	94	72
28	56	e55	e47	e49	49	53	112	275	322	116	88	74
29	61	e59	e45	e47	48	51	84	305	320	116	84	75
30	30	e60	e47	e45	---	59	82	228	353	112	78	84
31	38	---	e47	e45	---	66	---	189	---	105	76	---
TOTAL	1,625	1,571	1,542	1,442	1,329	1,805	2,280	6,669	10,902	5,658	2,608	2,352
MEAN	52.4	52.4	49.7	46.5	45.8	58.2	76.0	215	363	183	84.1	78.4
MAX	64	60	57	52	53	85	112	353	617	328	110	99
MIN	30	40	44	40	41	44	63	89	185	105	64	71
AC-FT	3,220	3,120	3,060	2,860	2,640	3,580	4,520	13,230	21,620	11,220	5,170	4,670

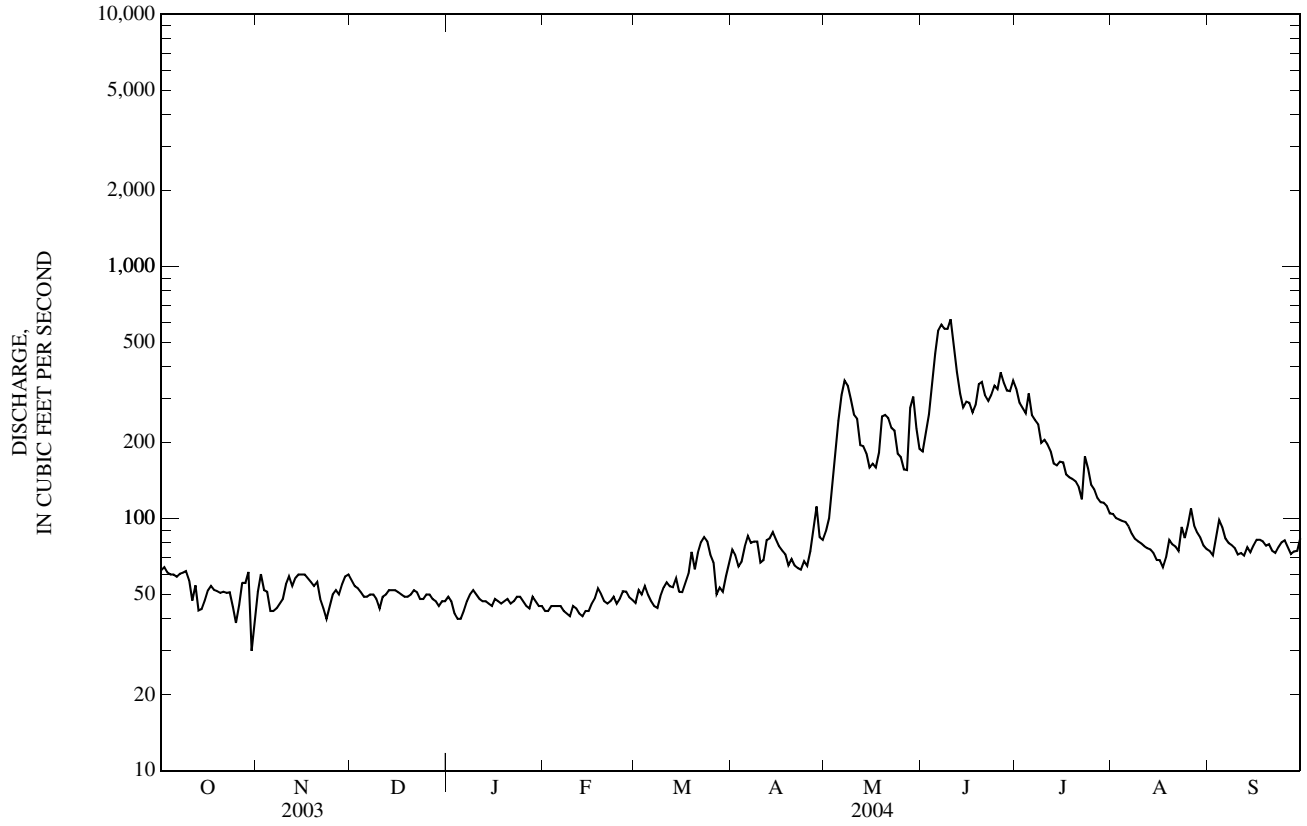
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004, BY WATER YEAR (WY)

MEAN	86.1	70.3	61.1	56.0	55.0	60.9	103	357	636	304	134	98.2
MAX	158	103	88.3	88.4	77.6	105	192	628	1,181	796	290	171
(WY)	(1987)	(1951)	(1951)	(1965)	(1972)	(1972)	(1946)	(1951)	(1972)	(1975)	(1951)	(1986)
MIN	43.8	39.8	36.1	36.2	35.3	39.8	56.4	160	143	66.0	52.7	51.5
(WY)	(2002)	(2002)	(2002)	(1989)	(2002)	(2002)	(1961)	(1953)	(2001)	(1977)	(2001)	(1977)

06218500 WIND RIVER NEAR DUBOIS, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1946 - 2004	
ANNUAL TOTAL	43,255		39,783		--	
ANNUAL MEAN	119		109		170	
HIGHEST ANNUAL MEAN	--		--		280	1951
LOWEST ANNUAL MEAN	--		--		90.0	1977
HIGHEST DAILY MEAN	1,180	May 31	617	Jun 10	1,870	Jun 8, 1972
LOWEST DAILY MEAN	30	Oct 30	30	Oct 30	26	Feb 5, 1982
ANNUAL SEVEN-DAY MINIMUM	45	Jan 6	43	Feb 7	28	Feb 3, 1982
MAXIMUM PEAK FLOW	--		966[a]	Jun 6	1,940[b]	Jun 8, 1972
MAXIMUM PEAK STAGE	--		4.56[c]	Mar 7	5.66	Jun 2, 1956
ANNUAL RUNOFF (AC-FT)	85,800		78,910		123,200	
10 PERCENT EXCEEDS	245		267		435	
50 PERCENT EXCEEDS	64		66		82	
90 PERCENT EXCEEDS	46		45		50	

a Gage height, 4.36 ft.
b Gage height, 5.48 ft.
c Backwater from ice.
e Estimated.



06220800 WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY

LOCATION.--Lat 43°26'30", long 109°27'29", in NW¼ SW¼ NW¼ sec.3, T.5 N., R.6 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, 400 ft downstream from East Fork Wind River and 12.1 mi southeast of Dubois.

DRAINAGE AREA.--1,073 mi^2.

PERIOD OF RECORD.--October 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft above NGVD of 1929, from topographic map. 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 15,000 acres upstream from station.

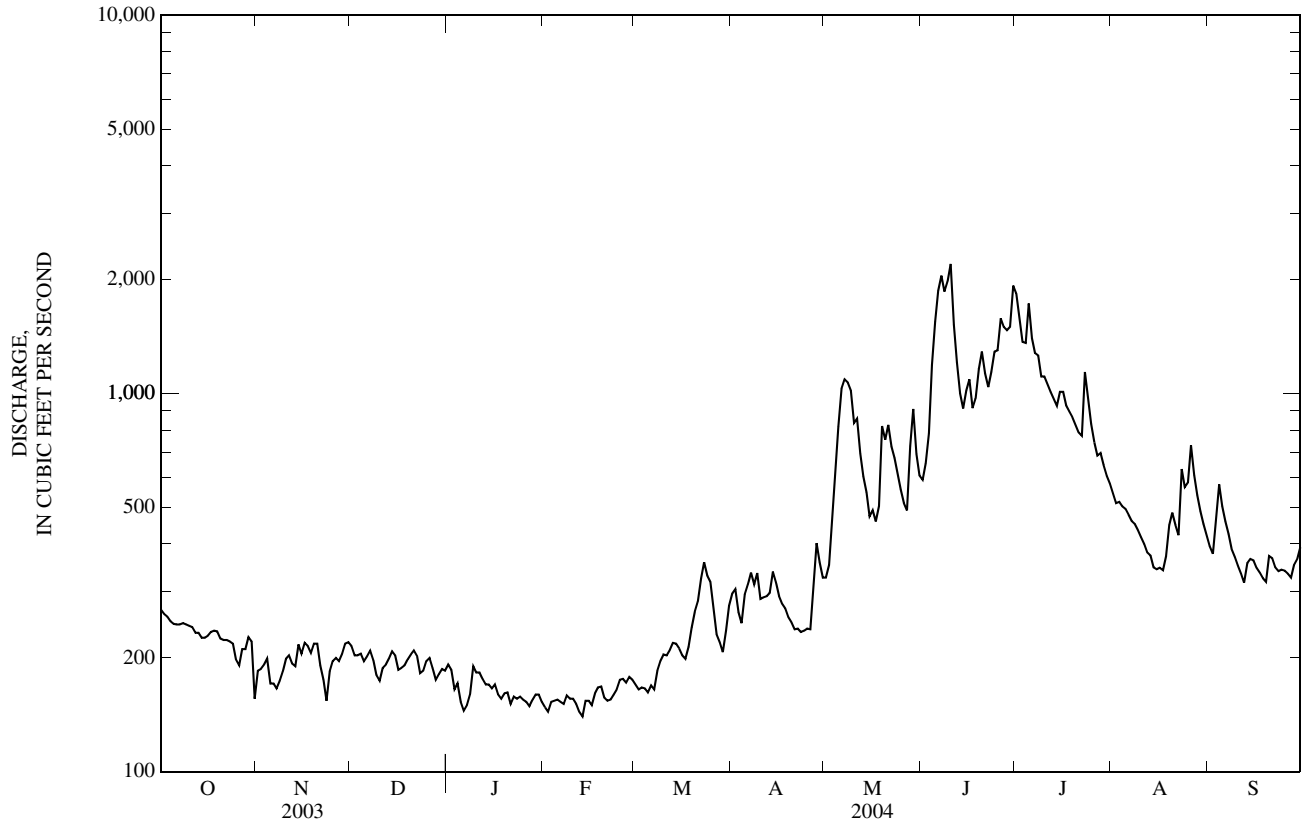
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	268	185	215	192	148	170	296	326	591	1,840	544	395
2	261	187	203	186	144	165	304	352	654	1,580	513	377
3	257	192	203	165	153	167	264	460	784	1,370	517	470
4	250	199	205	171	154	166	247	601	1,190	1,360	503	575
5	246	171	196	153	155	162	294	818	1,550	1,730	495	504
6	245	171	202	e145	153	169	313	1,030	1,870	1,400	478	459
7	245	166	209	e150	151	165	336	1,090	2,050	1,280	460	425
8	247	174	197	e160	159	185	313	1,070	1,860	1,260	452	388
9	245	184	180	190	156	196	335	1,020	1,980	1,110	435	370
10	243	199	174	183	156	204	286	836	2,200	1,110	417	351
11	241	203	188	183	151	203	289	859	1,520	1,060	400	334
12	233	193	192	176	144	210	291	694	1,210	1,010	380	316
13	233	190	199	170	e140	219	297	604	1,000	969	373	356
14	226	217	208	170	154	218	338	548	913	928	347	365
15	226	205	203	166	154	212	317	473	1,020	1,010	343	362
16	229	219	186	170	150	203	291	491	1,090	1,010	346	346
17	234	215	188	160	161	199	278	459	915	930	341	336
18	236	206	191	156	167	214	270	504	971	895	371	325
19	235	218	198	161	168	240	256	820	1,160	865	449	318
20	225	218	204	162	157	265	248	755	1,290	825	484	372
21	223	191	209	151	154	282	238	826	1,130	789	449	367
22	223	175	202	158	155	324	239	724	1,040	773	422	347
23	221	154	182	156	160	358	234	676	1,140	1,140	631	339
24	218	184	185	158	165	330	236	612	1,290	962	566	342
25	198	196	196	155	175	318	239	557	1,300	831	582	340
26	191	200	200	153	176	269	238	513	1,580	743	730	334
27	211	196	188	149	172	231	304	491	1,500	685	608	326
28	211	205	175	155	178	220	402	726	1,470	696	539	352
29	227	218	181	160	175	207	358	910	1,500	647	488	365
30	221	220	187	160	---	236	326	692	1,930	606	452	392
31	156	---	185	153	---	275	---	607	---	579	421	---
TOTAL	7,125	5,851	6,031	5,077	4,585	6,982	8,677	21,144	39,698	31,993	14,536	11,248
MEAN	230	195	195	164	158	225	289	682	1,323	1,032	469	375
MAX	268	220	215	192	178	358	402	1,090	2,200	1,840	730	575
MIN	156	154	174	145	140	162	234	326	591	579	341	316
AC-FT	14,130	11,610	11,960	10,070	9,090	13,850	17,210	41,940	78,740	63,460	28,830	22,310
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)												
MEAN	299	232	191	179	176	203	318	1,267	2,376	1,288	554	385
MAX	421	303	242	222	218	246	429	2,121	4,559	2,473	1,020	663
(WY)	(1998)	(1999)	(1998)	(1998)	(1999)	(1999)	(1994)	(1997)	(1997)	(1995)	(1997)	(1997)
MIN	214	171	146	122	142	155	213	621	698	386	261	197
(WY)	(2002)	(1993)	(1993)	(1993)	(2002)	(2002)	(1995)	(1995)	(2001)	(1994)	(2001)	(2001)

06220800 WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1991 - 2004	
ANNUAL TOTAL	188,341		162,947		--	
ANNUAL MEAN	516		445		623	
HIGHEST ANNUAL MEAN	--		--		982	1997
LOWEST ANNUAL MEAN	--		--		345	2001
HIGHEST DAILY MEAN	5,130	May 31	2,200	Jun 10	8,770	Jun 9, 1997
LOWEST DAILY MEAN	115	Feb 25	140	Feb 13	90	Jan 13, 1993
ANNUAL SEVEN-DAY MINIMUM	143	Feb 3	150	Feb 10	96	Jan 9, 1993
MAXIMUM PEAK FLOW	--		2,650	Jun 10	11,300	Jun 9, 1997
MAXIMUM PEAK STAGE	--		5.88	Jun 10	9.97	Jun 9, 1997
ANNUAL RUNOFF (AC-FT)	373,600		323,200		451,600	
10 PERCENT EXCEEDS	1,260		1,030		1,610	
50 PERCENT EXCEEDS	245		262		276	
90 PERCENT EXCEEDS	159		160		162	

e Estimated



06221400 DINWOODY CREEK ABOVE LAKES, NEAR BURRIS, WY

LOCATION.--Lat 43°20'44", long 109°24'34", in SE¼ SE¼ sec.1, T.4 N., R.6 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.5 mi upstream from Upper Dinwoody Lake, 7.0 mi west of Burris, and 17 mi southeast of Dubois.

DRAINAGE AREA.--88.2 mi^2.

PERIOD OF RECORD.--October 1957 to September 1978, October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,500 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	e16	13	9.3	6.3	5.1	18	48	88	824	341	175
2	81	e18	13	9.1	6.0	5.2	24	55	94	597	345	187
3	83	e19	12	e9.0	5.6	5.1	21	76	128	523	369	227
4	95	e20	12	e9.0	5.4	5.3	19	108	221	485	368	223
5	87	e19	11	e8.8	5.4	5.3	26	170	287	483	351	191
6	78	e17	12	8.5	5.4	4.9	29	210	358	463	360	157
7	80	e16	12	e8.5	5.5	5.6	42	212	426	445	350	138
8	74	e16	12	8.5	5.6	6.8	42	215	417	469	300	129
9	62	17	e12	8.6	5.5	7.9	44	208	468	441	294	127
10	63	17	e12	8.6	5.4	7.6	40	157	473	428	291	126
11	47	17	e12	8.4	5.3	7.1	42	154	359	433	269	121
12	47	17	e12	8.4	5.2	6.9	42	120	256	432	274	125
13	40	18	e11	8.6	5.0	7.4	48	105	206	455	265	154
14	34	18	11	8.8	e5.0	7.6	52	98	182	467	267	128
15	34	17	e12	8.7	5.0	7.8	48	93	207	540	255	110
16	38	17	e12	8.6	4.8	8.2	40	99	216	600	235	101
17	38	17	e12	8.2	4.8	8.5	35	90	247	558	256	90
18	35	17	e11	7.6	5.0	8.5	33	99	274	513	336	85
19	34	17	e10	7.5	5.2	9.2	30	146	379	491	342	84
20	32	17	9.7	7.4	5.1	9.0	28	134	470	553	317	95
21	33	16	9.9	7.3	5.2	10	26	150	365	509	276	85
22	35	e14	9.8	7.0	5.2	11	27	129	303	491	276	80
23	37	e12	e10	7.0	5.1	13	25	113	297	481	417	76
24	33	e11	9.8	7.1	5.0	15	26	100	339	423	343	71
25	22	e12	9.3	7.1	5.0	18	25	92	381	399	280	68
26	27	e12	9.5	6.9	5.1	18	26	84	487	379	289	65
27	32	e12	9.6	6.3	5.1	14	35	80	539	360	240	64
28	28	e13	e9.4	6.3	5.1	14	51	101	780	366	203	66
29	27	e13	e9.8	6.4	5.1	13	46	130	644	359	176	63
30	17	13	e9.5	6.5	---	13	46	104	1,160	345	167	75
31	12	---	9.1	6.4	---	14	---	92	---	343	170	---
TOTAL	1,465	475	339.40	244.4	152.4	292.0	1,036	3,772	11,051	14,655	9,022	3,486
MEAN	47.3	15.8	10.9	7.88	5.26	9.42	34.5	122	368	473	291	116
MAX	95	20	13	9.3	6.3	18	52	215	1,160	824	417	227
MIN	12	11	9.1	6.3	4.8	4.9	18	48	88	343	167	63
AC-FT	2,910	942	673	485	302	579	2,050	7,480	21,920	29,070	17,900	6,910

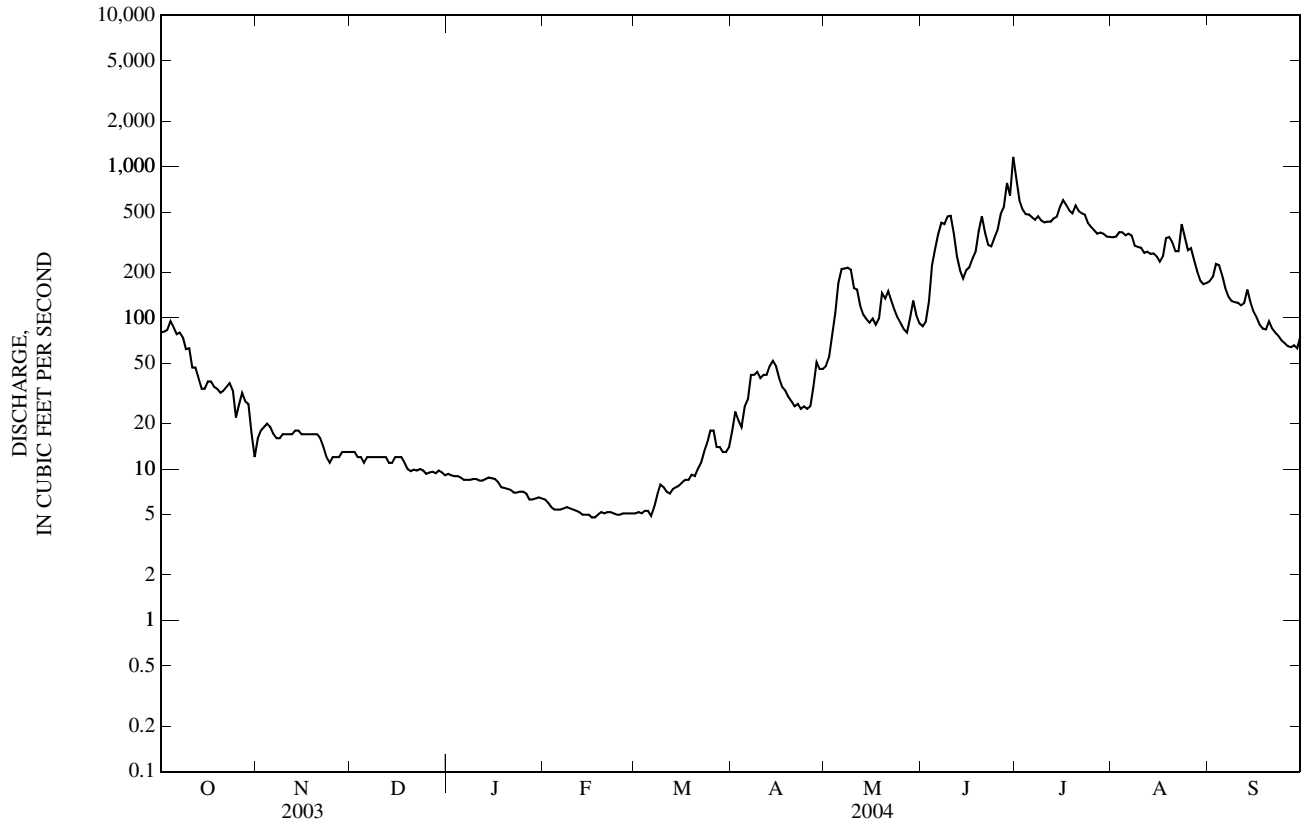
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004, BY WATER YEAR (WY)

MEAN	42.2	19.9	12.2	8.41	7.42	8.50	20.4	164	448	477	316	139
MAX	72.5	40.6	22.8	19.2	12.5	13.6	60.3	299	739	794	406	250
(WY)	(1968)	(1974)	(1974)	(1962)	(1962)	(1972)	(1962)	(1958)	(1971)	(1975)	(1971)	(1973)
MIN	22.8	9.74	3.79	1.53	2.12	2.31	8.48	71.1	251	280	224	59.2
(WY)	(1989)	(1977)	(1977)	(1977)	(1977)	(1977)	(1970)	(1959)	(2001)	(1992)	(2002)	(1964)

06221400 DINWOODY CREEK ABOVE LAKES, NEAR BURRIS, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1958 - 2004	
ANNUAL TOTAL	54,859.00		45,990.20		--	
ANNUAL MEAN	150		126		139	
HIGHEST ANNUAL MEAN	--		--		179	1971
LOWEST ANNUAL MEAN	--		--		95.2	1992
HIGHEST DAILY MEAN	925	Sep 9	1,160	Jun 30	1,250	Jun 15, 1995
LOWEST DAILY MEAN	5.6	Jan 1,2	4.8	Feb 16,17	1.0	Jan 9, 1977
ANNUAL SEVEN-DAY MINIMUM	6.3	Jan 1	5.0	Feb 12	1.3	Jan 4, 1977
MAXIMUM PEAK FLOW	--		1,530	Jun 30	1,530	Jun 30, 2004
MAXIMUM PEAK STAGE	--		4.24	Jun 30	4.50	Jul 13, 1995
ANNUAL RUNOFF (AC-FT)	108,800		91,220		101,000	
10 PERCENT EXCEEDS	475		386		437	
50 PERCENT EXCEEDS	34		35		28	
90 PERCENT EXCEEDS	8.0		6.3		6.8	

e Estimated



06222100 UPPER WIND RIVER A CANAL AT HEADWORKS, NEAR BURRIS, WY

LOCATION.--Lat 43°24'59", long 109°19'40", in NE¼ NW¼ NW¼ sec.14, T.5 N., R.5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 30 ft downstream from headworks, 2 mi southeast of Wilderness, and 4 mi northwest of Burris.

PERIOD OF RECORD.--May 1997 to September 1999, April 2001 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,150 ft above NGVD of 1929, from topographic map. Miscellaneous measurements (July 1988 to September 1996) published at equivalent site previously identified as 432609109205001 at different datum.

REMARKS.--Records good except those for July 1, which is poor. Flow completely regulated by headworks.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	60	95	e14	83	19
2	---	---	---	---	---	---	---	45	101	11	83	19
3	---	---	---	---	---	---	---	46	102	9.5	82	19
4	---	---	---	---	---	---	---	46	96	41	81	18
5	---	---	---	---	---	---	---	45	84	51	82	17
6	---	---	---	---	---	---	---	43	64	50	82	17
7	---	---	---	---	---	---	---	42	58	51	83	17
8	---	---	---	---	---	---	---	38	54	51	81	36
9	---	---	---	---	---	---	---	36	58	50	81	68
10	---	---	---	---	---	---	---	58	57	50	84	68
11	---	---	---	---	---	---	---	82	56	50	88	66
12	---	---	---	---	---	---	---	86	52	50	89	66
13	---	---	---	---	---	---	---	83	47	50	87	66
14	---	---	---	---	---	---	---	81	46	50	85	66
15	---	---	---	---	---	---	---	79	45	50	85	66
16	---	---	---	---	---	---	---	75	44	50	85	66
17	---	---	---	---	---	---	---	73	41	50	83	66
18	---	---	---	---	---	---	---	72	41	50	85	66
19	---	---	---	---	---	---	---	70	39	50	87	66
20	---	---	---	---	---	---	---	69	34	50	84	66
21	---	---	---	---	---	---	---	70	33	57	89	66
22	---	---	---	---	---	---	---	68	32	67	87	66
23	---	---	---	---	---	---	---	77	32	68	85	64
24	---	---	---	---	---	---	---	81	31	68	83	40
25	---	---	---	---	---	---	---	80	30	66	51	26
26	---	---	---	---	---	---	---	81	28	66	26	50
27	---	---	---	---	---	---	---	82	26	77	25	50
28	---	---	---	---	---	---	---	82	25	83	24	50
29	---	---	---	---	---	---	---	84	23	83	24	51
30	---	---	---	---	---	---	---	82	20	83	24	51
31	---	---	---	---	---	---	---	84	---	83	21	---
TOTAL	---	---	---	---	---	---	---	2,100	1,494	1,679.5	2,219	1,472
MEAN	---	---	---	---	---	---	---	67.7	49.8	54.2	71.6	49.1
MAX	---	---	---	---	---	---	---	86	102	83	89	68
MIN	---	---	---	---	---	---	---	36	20	9.5	21	17
AC-FT	---	---	---	---	---	---	---	4,170	2,960	3,330	4,400	2,920

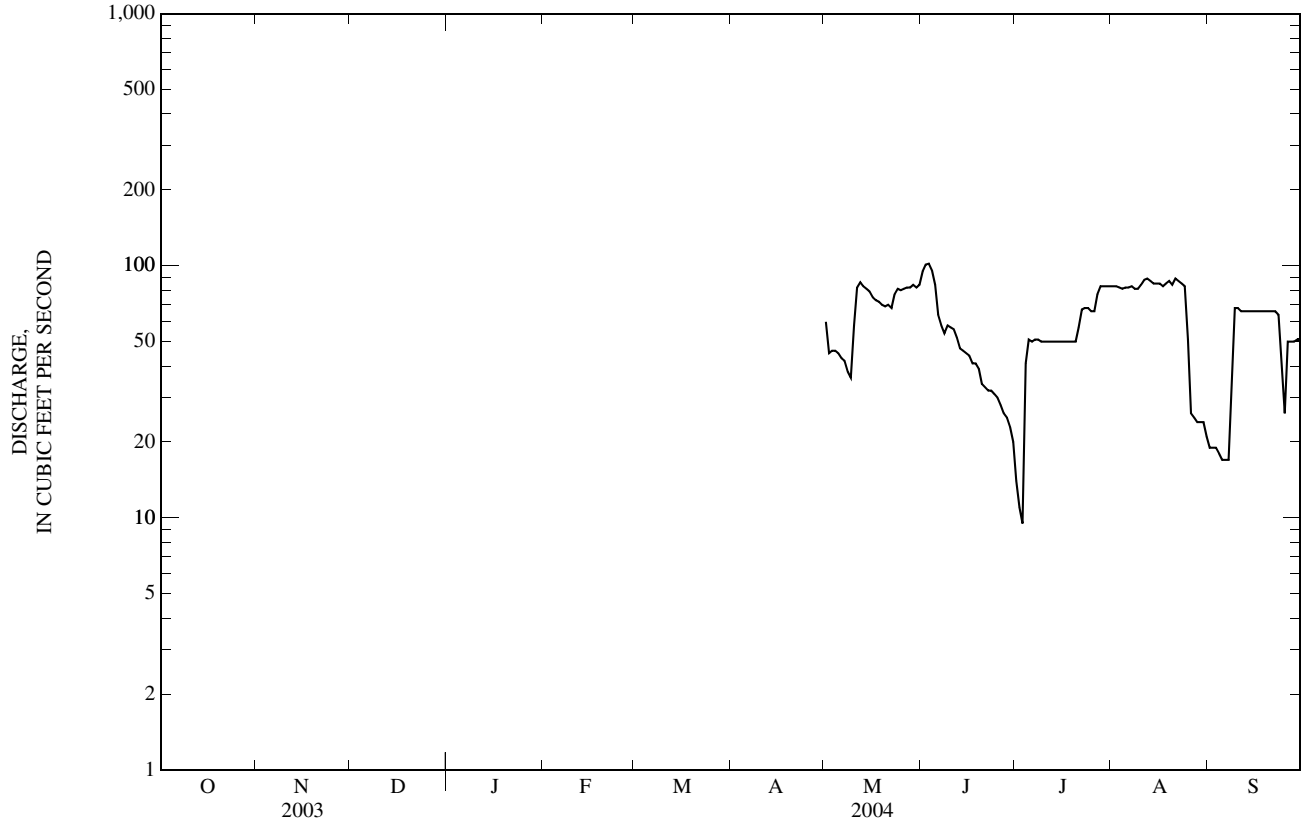
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2004, BY WATER YEAR (WY)*

MEAN	---	---	---	---	---	---	---	68.1	62.6	55.4	59.7	45.5
MAX	---	---	---	---	---	---	---	79.1	76.7	65.4	71.6	62.2
(WY)	---	---	---	---	---	---	---	(2003)	(2001)	(1997)	(2004)	(1998)
MIN	---	---	---	---	---	---	---	59.7	49.8	45.5	53.3	26.0
(WY)	---	---	---	---	---	---	---	(1998)	(2004)	(2001)	(1999)	(2002)

06222100 UPPER WIND RIVER A CANAL AT HEADWORKS, NEAR BURRIS, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1997 - 2004*	
HIGHEST DAILY MEAN	102	Jun 3	105	Jun 3, 1998
LOWEST DAILY MEAN	9.5	Jul 3	0.27	Apr 26, 2003
MAXIMUM PEAK FLOW	105	Jun 3	250	May 1, 1998
MAXIMUM PEAK STAGE	2.18	Jun 3	2.52	May 1, 1998

* For period of operation.
e Estimated



06222500 DRY CREEK NEAR BURRIS, WY

LOCATION.--Lat 43°20'11", long 109°17'55", in NW¼ NE¼ SW¼ sec. 12, T.4 N., R.5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.9 mi upstream from Dry Creek Canal headgate and 2.4 mi southwest of Burris.

DRAINAGE AREA.--57 mi^2.

PERIOD OF RECORD.--June 1921 to September 1940, October 1988 to current year (no winter records since 1995). Published as "near Lenore" 1921 to 1924.

GAGE.--Water-stage recorder. Elevation of gage is 6,430 ft above NGVD of 1929, from topographic map. Prior to November 5, 1934, at site 50 ft downstream at datum 4.07 ft higher. November 5, 1934 to September 1940, at site 5 ft downstream at datum 3.00 ft higher. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.-- Records good. Adjudicated diversion upstream for irrigation of 267 acres. Result of discharge measurement, in cubic feet per second, made during the period when the station was not in operation, is given below:

Oct. 14 . . . 9.06

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	2.6	21	32	394	53	38
2	---	---	---	---	---	---	3.9	23	32	284	77	37
3	---	---	---	---	---	---	3.7	29	39	210	63	53
4	---	---	---	---	---	---	3.7	42	65	223	58	66
5	---	---	---	---	---	---	4.5	72	102	211	52	62
6	---	---	---	---	---	---	5.0	95	138	218	50	58
7	---	---	---	---	---	---	5.8	101	164	159	48	51
8	---	---	---	---	---	---	7.7	116	177	194	49	46
9	---	---	---	---	---	---	10	116	210	184	41	42
10	---	---	---	---	---	---	11	85	232	172	31	39
11	---	---	---	---	---	---	12	79	140	163	29	36
12	---	---	---	---	---	---	11	65	84	150	27	34
13	---	---	---	---	---	---	12	54	55	143	27	37
14	---	---	---	---	---	---	14	48	47	155	26	40
15	---	---	---	---	---	---	15	44	47	171	25	39
16	---	---	---	---	---	---	14	43	51	144	24	37
17	---	---	---	---	---	---	13	42	59	124	24	35
18	---	---	---	---	---	---	13	42	57	111	27	33
19	---	---	---	---	---	---	12	50	117	97	33	31
20	---	---	---	---	---	---	11	50	242	94	34	33
21	---	---	---	---	---	---	11	59	178	86	32	33
22	---	---	---	---	---	---	11	55	118	78	31	33
23	---	---	---	---	---	---	11	46	95	124	40	32
24	---	---	---	---	---	---	11	41	103	108	47	30
25	---	---	---	---	---	---	11	37	120	89	53	29
26	---	---	---	---	---	---	11	35	206	70	70	28
27	---	---	---	---	---	---	13	32	311	60	66	27
28	---	---	---	---	---	---	18	36	421	63	59	28
29	---	---	---	---	---	---	22	44	321	56	50	25
30	---	---	---	---	---	---	21	40	429	47	45	24
31	---	---	---	---	---	---	---	36	---	44	41	---
TOTAL	---	---	---	---	---	---	324.9	1,678	4,392	4,426	1,332	1,136
MEAN	---	---	---	---	---	---	10.8	54.1	146	143	43.0	37.9
MAX	---	---	---	---	---	---	22	116	429	394	77	66
MIN	---	---	---	---	---	---	2.6	21	32	44	24	24
AC-FT	---	---	---	---	---	---	644	3,330	8,710	8,780	2,640	2,250

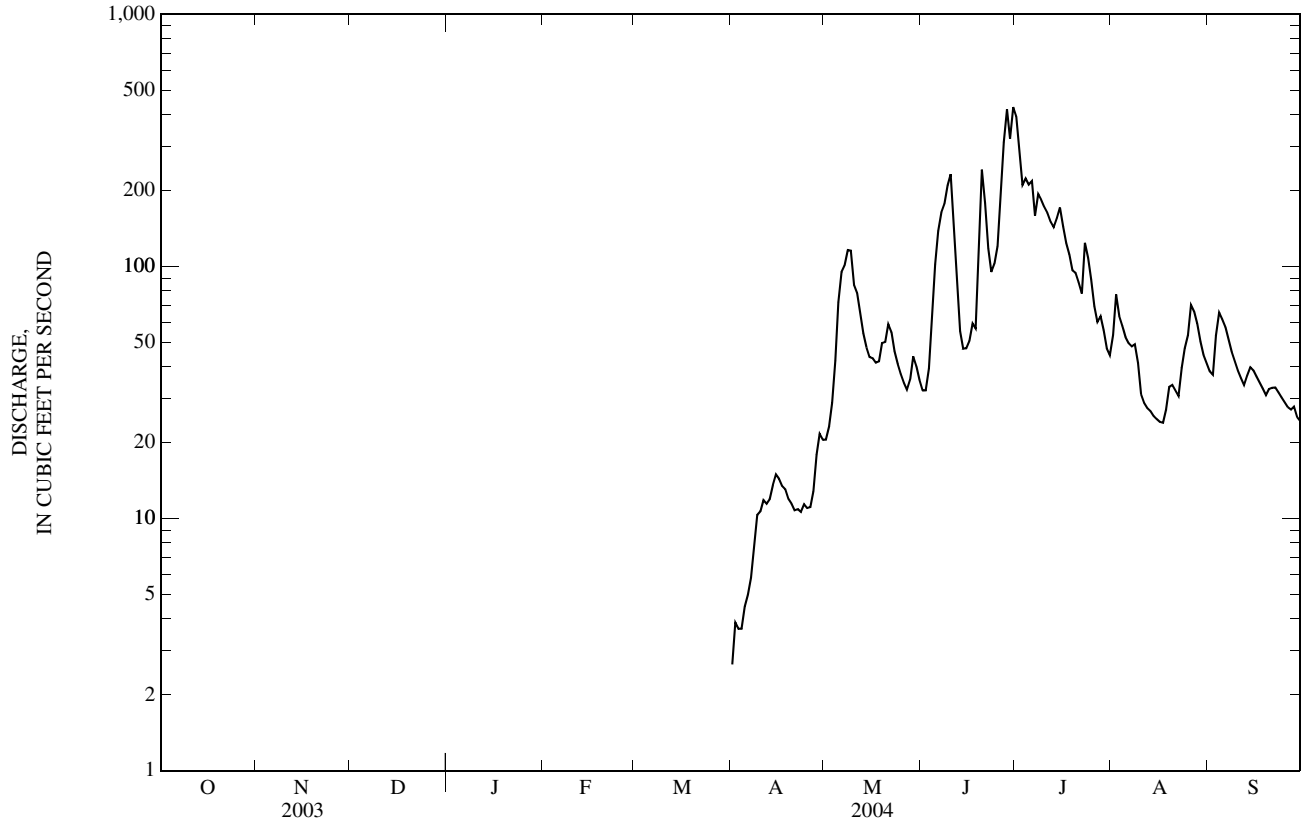
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2004, BY WATER YEAR (WY)*

MEAN	17.3	10.3	5.97	4.10	2.71	2.91	8.75	84.4	195	120	55.2	30.9
MAX	50.0	25.4	15.0	10.0	7.00	10.0	25.7	162	525	328	164	64.6
(WY)	(1924)	(1928)	(1926)	(1926)	(1923)	(1923)	(1926)	(1924)	(1921)	(1995)	(1930)	(1927)
MIN	5.16	1.76	0.55	0.30	0.20	0.00	0.88	29.5	51.4	33.8	18.0	12.2
(WY)	(1934)	(1934)	(1934)	(1934)	(1934)	(1934)	(1940)	(1935)	(1934)	(1940)	(2002)	(1934)

06222500 DRY CREEK NEAR BURRIS, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1921 - 2004*	
ANNUAL MEAN	--		44.6	
HIGHEST ANNUAL MEAN	--		73.0	1995
LOWEST ANNUAL MEAN	--		20.1	1940
HIGHEST DAILY MEAN	429	Jun 30	1,240	Jun 7, 1921
LOWEST DAILY MEAN	2.6	Apr 1	0.00	Mar 1, to Apr 11, 1934
MAXIMUM PEAK FLOW	612	Jun 30	1,400[a]	Jun 12, 1921
MAXIMUM PEAK STAGE	5.06	Jun 30	5.95[b]	Jun 17, 1999
ANNUAL RUNOFF (AC-FT)	--		32,290	

* For period of operation.
a Gage height, 3.9 ft, from floodmarks, site and datum then in use, from rating curve above 580 ft^3/s.
b From floodmarks.



06222510 DRY CREEK CANAL AT HEADGATE, NEAR BURRIS, WY

LOCATION.--Lat 43°20'38", long 109°17'25", in NW¼ NE¼ NE¼ sec.12, T.4 S., R.5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 200 ft downstream from headgate and 1.7 miles southwest of Burris.

PERIOD OF RECORD.--April 1989 to September 1999, April 2003 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of the gage is 6,360 ft above NGVD of 1929, from topographic map. Prior to April 1, 1990, at datum 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow is diverted from Dry Creek and Dinwoody Canal for irrigation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	0.00	41	122	e190	202	140
2	---	---	---	---	---	---	0.00	39	119	e188	198	148
3	---	---	---	---	---	---	0.00	37	127	e185	211	164
4	---	---	---	---	---	---	0.00	57	157	180	218	128
5	---	---	---	---	---	---	0.00	30	189	184	216	100
6	---	---	---	---	---	---	0.00	31	192	184	221	84
7	---	---	---	---	---	---	0.00	55	202	197	213	115
8	---	---	---	---	---	---	0.00	55	223	201	202	167
9	---	---	---	---	---	---	0.00	31	227	217	200	161
10	---	---	---	---	---	---	0.00	71	229	216	207	141
11	---	---	---	---	---	---	0.00	89	217	211	206	131
12	---	---	---	---	---	---	0.00	91	213	208	210	116
13	---	---	---	---	---	---	0.00	133	210	209	207	120
14	---	---	---	---	---	---	0.00	129	222	214	205	141
15	---	---	---	---	---	---	0.00	129	234	226	204	149
16	---	---	---	---	---	---	0.00	128	232	216	199	154
17	---	---	---	---	---	---	0.00	128	234	189	198	148
18	---	---	---	---	---	---	0.00	142	231	174	210	137
19	---	---	---	---	---	---	0.00	156	224	199	218	112
20	---	---	---	---	---	---	0.00	174	184	234	214	112
21	---	---	---	---	---	---	0.00	183	206	230	199	122
22	---	---	---	---	---	---	0.00	182	205	228	187	105
23	---	---	---	---	---	---	0.00	173	223	239	200	107
24	---	---	---	---	---	---	0.00	164	222	222	207	114
25	---	---	---	---	---	---	0.00	161	231	204	158	105
26	---	---	---	---	---	---	0.00	152	237	208	122	92
27	---	---	---	---	---	---	0.00	139	154	215	109	98
28	---	---	---	---	---	---	51	133	109	221	114	108
29	---	---	---	---	---	---	49	138	185	225	112	100
30	---	---	---	---	---	---	43	137	187	216	116	94
31	---	---	---	---	---	---	---	129	---	210	132	---
TOTAL	---	---	---	---	---	---	143.00	3,437	5,947	6,440	5,815	3,713
MEAN	---	---	---	---	---	---	4.77	111	198	208	188	124
MAX	---	---	---	---	---	---	51	183	237	239	221	167
MIN	---	---	---	---	---	---	0.00	30	109	174	109	84
AC-FT	---	---	---	---	---	---	284	6,820	11,800	12,770	11,530	7,360

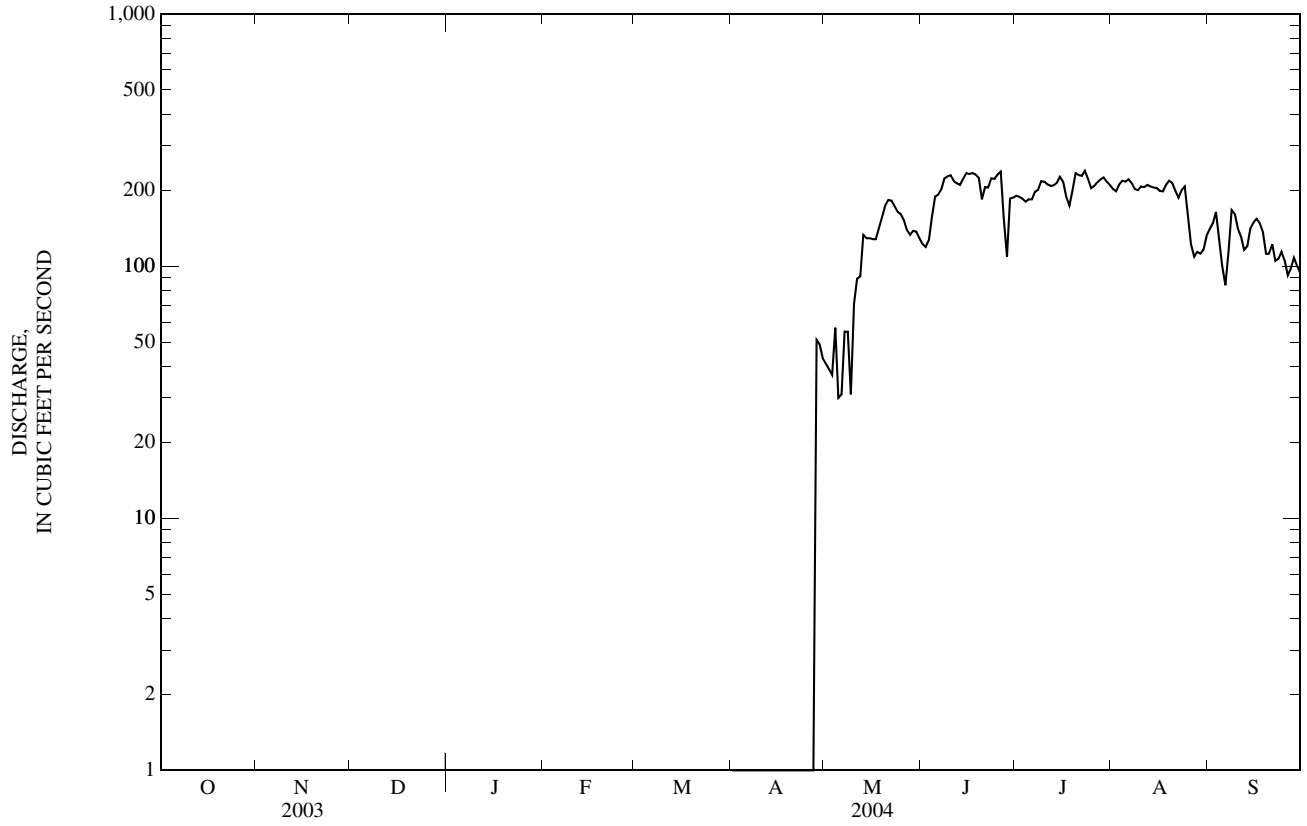
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2004, BY WATER YEAR (WY)*

MEAN	1.44	---	---	---	---	---	3.18	100	193	207	191	131
MAX	2.29	---	---	---	---	---	6.24	154	247	240	217	188
(WY)	(1993)	---	---	---	---	---	(1989)	(1994)	(1994)	(2003)	(1994)	(1990)
MIN	0.60	---	---	---	---	---	0.00	53.8	116	155	169	90.2
(WY)	(1994)	---	---	---	---	---	(1991)	(1991)	(1995)	(1989)	(1998)	(1992)

06222510 DRY CREEK CANAL AT HEADGATE, NEAR BURRIS, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1988 - 2004*	
HIGHEST DAILY MEAN	239	Jul 23	285	Jun 23, 1994
LOWEST DAILY MEAN	0.00	Apr 1-27	0.00	Many days, most years
MAXIMUM PEAK FLOW	249	Jun 26	301	Jun 23, 1994
MAXIMUM PEAK STAGE	3.05	Jun 26	3.88	Jun 23, 1994

* For period of operation.
e Estimated.



06223500 WILLOW CREEK NEAR CROWHEART, WY

LOCATION.--Lat 43°17'00", long 109°11'08", in SE¼ NW¼ NW¼ sec.36, T.4 N., R.4 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank 1000 ft upstream from Willow Creek Canal diversion and 2.0 mi south of Crowheart.

DRAINAGE AREA.--55.4 mi^2.

PERIOD OF RECORD.--June to October 1909 (published as "J. K. Ranch Post Office"), June 1921 to September 1922 (published as "near Lenore"), May and June 1923, May 1925 to September 1940, October 1988 to current year (no winter record since 1995).

REVISED RECORDS.--WSP 1309: 1939 (M).

GAGE.--Water-stage recorder. Elevation of gage is 6,080 ft above NGVD of 1929, from topographic map. May 17 to October 31, 1909, nonrecording gage 1.9 mi downstream at different datum, May 16, 1921 to August 24, 1923, nonrecording gage 200 ft upstream at different datum, and May 1925 to September 1940, water-stage recorder 600 ft downstream at different datum.

REMARKS.--Records good. Diversions for irrigation of 60.1 acres upstream from station. Result of discharge measurement, in cubic feet per second, made during the period station was not in operation, is given below:

Oct. 14 . . . 6.42

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	3.5	6.2	9.8	59	11	10
2	---	---	---	---	---	---	4.1	6.3	9.8	42	11	10
3	---	---	---	---	---	---	3.7	6.3	9.9	35	11	12
4	---	---	---	---	---	---	3.6	6.5	22	33	11	11
5	---	---	---	---	---	---	3.7	7.1	47	34	11	11
6	---	---	---	---	---	---	3.8	7.4	58	30	11	11
7	---	---	---	---	---	---	4.1	7.8	52	26	11	10
8	---	---	---	---	---	---	4.4	8.1	50	27	10	10
9	---	---	---	---	---	---	5.0	8.5	47	24	10	10
10	---	---	---	---	---	---	4.4	8.8	47	22	10	10
11	---	---	---	---	---	---	4.4	8.9	27	20	10	10
12	---	---	---	---	---	---	4.3	9.2	22	18	10	10
13	---	---	---	---	---	---	4.4	9.4	18	16	10	10
14	---	---	---	---	---	---	4.5	9.1	20	15	10	10
15	---	---	---	---	---	---	4.5	9.1	21	16	9.8	10
16	---	---	---	---	---	---	4.6	9.3	18	16	9.7	10
17	---	---	---	---	---	---	4.7	9.2	17	14	9.9	10
18	---	---	---	---	---	---	4.8	9.5	17	13	11	10
19	---	---	---	---	---	---	4.8	9.3	25	12	18	10
20	---	---	---	---	---	---	4.8	9.6	31	12	12	10
21	---	---	---	---	---	---	4.7	9.9	24	12	11	10
22	---	---	---	---	---	---	4.8	9.9	19	12	11	10
23	---	---	---	---	---	---	4.9	9.8	18	14	11	10
24	---	---	---	---	---	---	4.9	9.8	21	15	10	10
25	---	---	---	---	---	---	5.0	9.8	26	13	10	10
26	---	---	---	---	---	---	5.1	9.7	33	12	11	10
27	---	---	---	---	---	---	5.1	9.7	43	12	10	10
28	---	---	---	---	---	---	5.8	9.9	80	12	10	10
29	---	---	---	---	---	---	6.6	9.8	56	12	10	10
30	---	---	---	---	---	---	6.3	9.7	72	11	10	11
31	---	---	---	---	---	---	---	9.7	---	11	10	---
TOTAL	---	---	---	---	---	---	139.3	273.3	960.5	620	331.4	306
MEAN	---	---	---	---	---	---	4.64	8.82	32.0	20.0	10.7	10.2
MAX	---	---	---	---	---	---	6.6	9.9	80	59	18	12
MIN	---	---	---	---	---	---	3.5	6.2	9.8	11	9.7	10
AC-FT	---	---	---	---	---	---	276	542	1,910	1,230	657	607

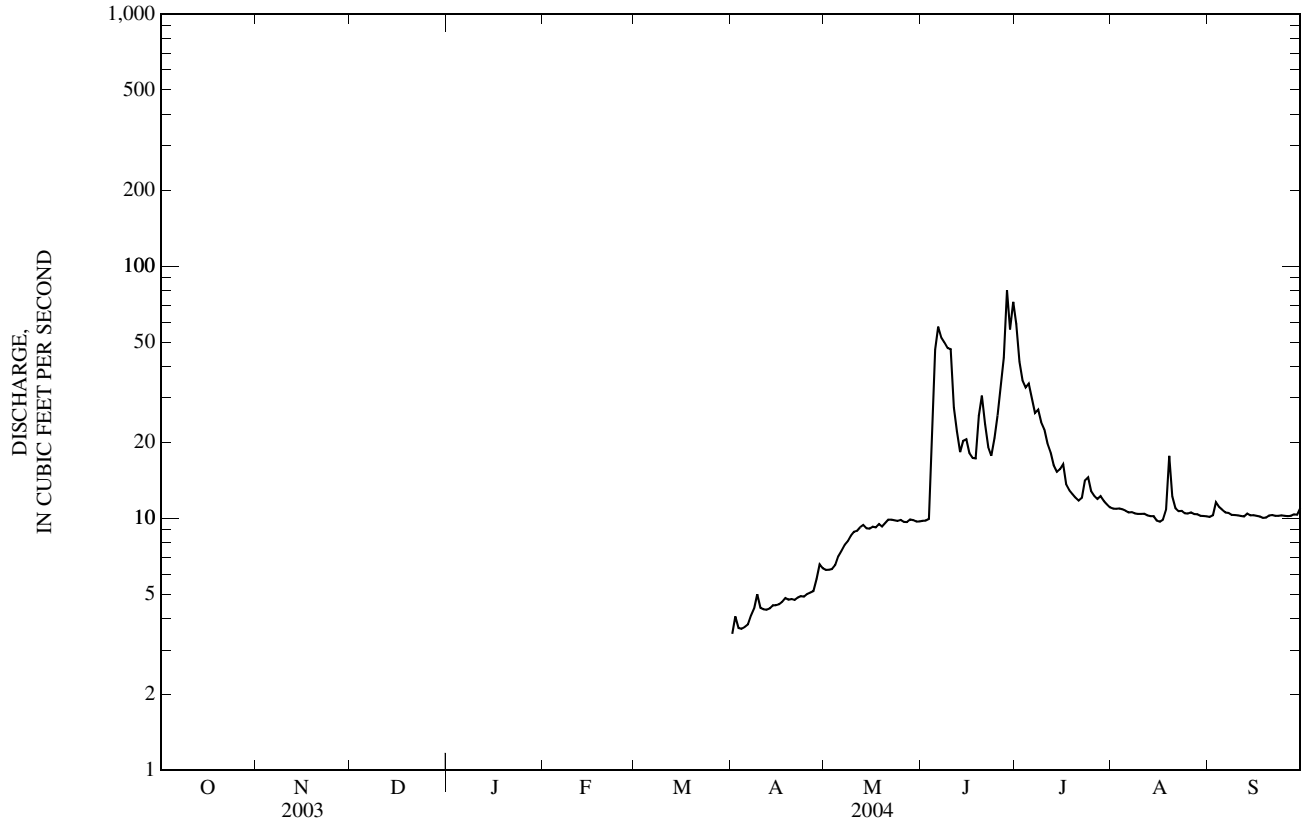
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2004, BY WATER YEAR (WY)*

MEAN	9.03	7.53	6.15	5.25	4.76	4.96	6.36	29.1	76.8	29.0	12.2	8.96
MAX	17.6	13.3	10.0	8.00	7.00	8.00	9.40	79.6	242	112	45.4	21.9
(WY)	(1931)	(1927)	(1927)	(1927)	(1922)	(1922)	(1999)	(1999)	(1999)	(1995)	(1930)	(1930)
MIN	5.15	2.50	2.00	2.00	2.00	2.50	3.97	6.85	8.94	5.68	3.50	4.60
(WY)	(1989)	(1940)	(1940)	(1940)	(1940)	(1940)	(1940)	(1935)	(2001)	(1940)	(1940)	(2001)

06223500 WILLOW CREEK NEAR CROWHEART, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1922 - 2004*	
ANNUAL MEAN	--		16.5	
HIGHEST ANNUAL MEAN	--		31.0	1995
LOWEST ANNUAL MEAN	--		4.60	1940
HIGHEST DAILY MEAN	80	Jun 28	468	Jun 12, 1991
LOWEST DAILY MEAN	3.5	Apr 1	2.0	Dec 1, 1939
MAXIMUM PEAK FLOW	141	Aug 19	1,100[a]	May 31, 1939
MAXIMUM PEAK STAGE	3.27	Aug 19	5.40[b]	May 31, 1939
ANNUAL RUNOFF (AC-FT)	--		11,930	

* For period of operation.
a On basis of flow-over-dam measurement of peak flow.
b Site and datum then in use.



06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY

LOCATION.--Lat 43°10'37", long 109°12'08", in NE¼ SW¼ sec.2, T.2 N., R.4 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on right bank 1.2 mi upstream from high-water line of Bull Lake and 9.0 mi south of Crowheart.

DRAINAGE AREA.--187 mi^2.

PERIOD OF RECORD.--June 1941 to December 1953, October 1966 to current year. Monthly discharge only for some periods, published in WSP 1309. Prior to October 1950, published as "above Bull Lake Reservoir."

GAGE.--Water-stage recorder. Elevation of gage is 5,874 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except for estimated daily discharges, which are poor. No diversions upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	39	33	29	15	14	24	122	266	1,750	464	287
2	77	39	30	31	16	14	33	132	266	1,380	446	279
3	77	40	28	27	18	14	32	162	321	1,200	464	355
4	76	39	27	30	17	14	33	230	501	1,090	490	e410
5	74	26	25	34	17	14	38	347	723	1,040	472	e370
6	70	26	26	35	17	14	45	459	e817	990	452	e340
7	69	27	26	40	17	14	59	536	e1,000	922	441	e310
8	70	35	27	41	16	15	67	573	e1,310	988	410	e290
9	69	37	25	37	17	16	83	591	e1,450	999	371	e270
10	67	36	27	34	16	16	87	540	e1,410	932	341	e240
11	63	35	28	36	17	15	89	555	e1,080	894	322	e220
12	60	36	19	30	14	14	91	485	e807	866	310	e200
13	55	36	27	28	16	14	94	420	e650	849	302	e260
14	51	39	30	28	14	14	98	365	e520	838	e292	e270
15	48	39	25	26	14	14	96	318	e560	852	e287	e260
16	46	39	19	25	14	14	87	298	576	839	e276	e250
17	44	40	28	23	14	14	83	272	575	782	e240	238
18	40	41	24	21	15	14	82	260	560	755	e300	217
19	38	42	23	23	14	15	79	289	648	731	e370	201
20	36	40	24	21	13	15	75	316	842	750	e335	213
21	35	38	24	19	12	14	72	383	812	e700	e324	224
22	34	27	24	20	12	15	70	394	706	e660	e299	227
23	34	21	22	21	13	18	68	372	682	e850	e363	221
24	33	37	23	20	12	20	69	327	737	e900	e484	212
25	32	36	23	19	12	21	68	284	820	e740	e520	201
26	31	33	24	16	12	20	68	254	981	e640	e575	190
27	31	30	26	18	12	18	74	233	1,170	e600	493	181
28	33	31	21	18	13	18	96	255	1,730	e580	438	174
29	33	36	22	18	14	18	112	374	1,800	e540	379	168
30	36	35	30	18	---	19	116	337	1,950	518	335	184
31	33	---	29	15	---	20	---	294	---	488	307	---
TOTAL	1,571	1,055	789	801	423	489	2,188	10,777	26,270	26,663	11,902	7,462
MEAN	50.7	35.2	25.5	25.8	14.6	15.8	72.9	348	876	860	384	249
MAX	77	42	33	41	18	21	116	591	1,950	1,750	575	410
MIN	31	21	19	15	12	14	24	122	266	488	240	168
AC-FT	3,120	2,090	1,560	1,590	839	970	4,340	21,380	52,110	52,890	23,610	14,800

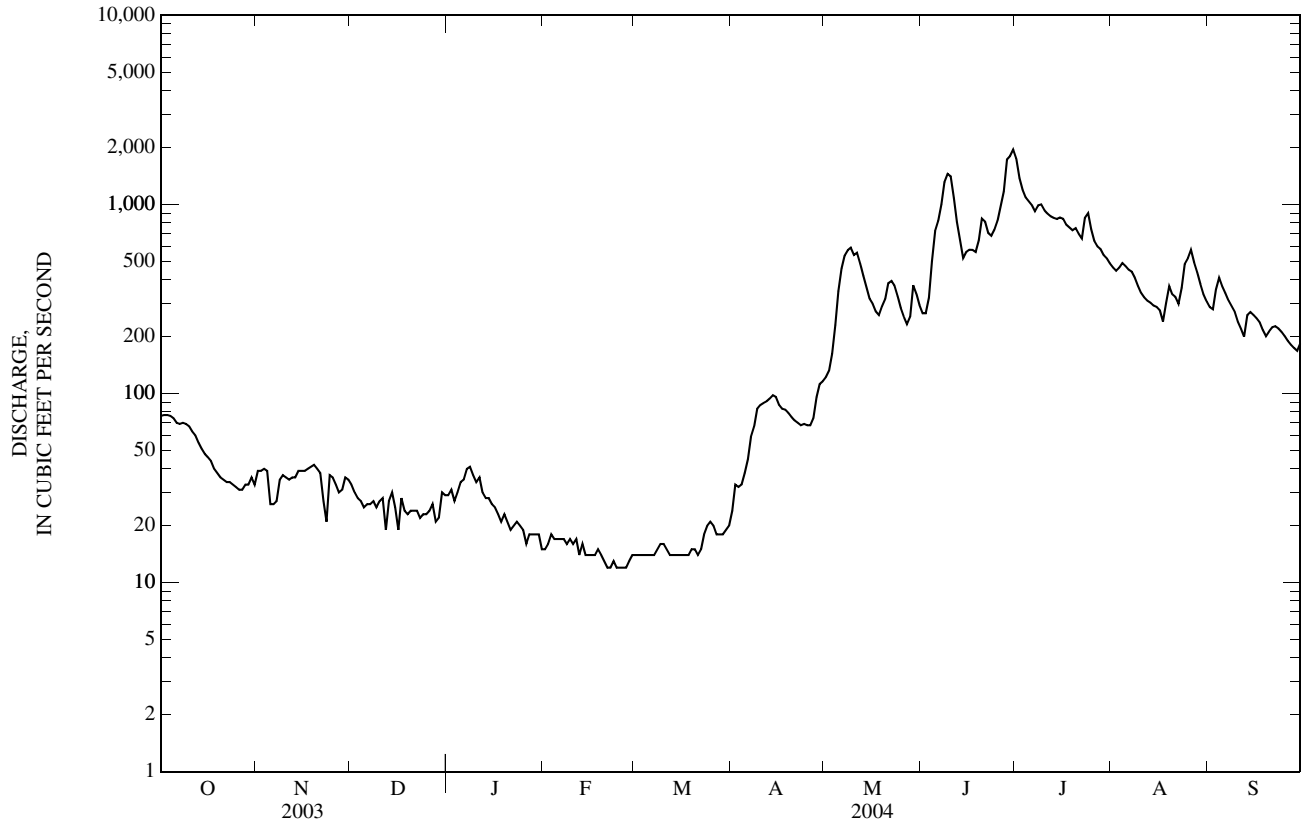
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2004, BY WATER YEAR (WY)

MEAN	96.4	54.0	36.6	28.2	24.6	26.3	65.6	466	1,134	895	421	204
MAX	222	109	62.2	57.1	41.4	57.4	199	777	2,104	1,581	655	533
(WY)	(1983)	(1951)	(1951)	(1997)	(1943)	(1986)	(1943)	(1969)	(1986)	(1975)	(1982)	(1973)
MIN	32.9	29.5	14.6	7.29	6.88	6.69	24.9	170	544	337	145	109
(WY)	(1989)	(1977)	(1977)	(1977)	(1977)	(1977)	(1970)	(1975)	(2001)	(1994)	(1985)	(1988)

06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1942 - 2004	
ANNUAL TOTAL	80,569		90,390		--	
ANNUAL MEAN	221		247		289	
HIGHEST ANNUAL MEAN	--		--		415	1986
LOWEST ANNUAL MEAN	--		--		174	1977
HIGHEST DAILY MEAN	1,910	May 30	1,950	Jun 30	3,560	Jun 9, 1981
LOWEST DAILY MEAN	16	Jan 10	12	Several days	6.2	Jan 9, 1977
ANNUAL SEVEN-DAY MINIMUM	18	Jan 15	12	Feb 21	6.5	Mar 10, 1977
MAXIMUM PEAK FLOW	--		2,060	Jun 30	4,470	Jun 9, 1981
MAXIMUM PEAK STAGE	--		5.61	Jun 30	7.98	Jun 9, 1981
ANNUAL RUNOFF (AC-FT)	159,800		179,300		209,300	
10 PERCENT EXCEEDS	675		743		890	
50 PERCENT EXCEEDS	54		68		74	
90 PERCENT EXCEEDS	20		15		22	

e Estimated.



06225000 BULL LAKE CREEK NEAR LENORE, WY

LOCATION.--Lat 43°14'33", long 109°01'20", in NE¼ NW¼ sec.17, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 700 ft upstream from mouth, 2.8 mi downstream from Bull Lake, and 8.5 mi southeast of Lenore.

DRAINAGE AREA.--213 mi^2, of which 12 mi^2 probably is noncontributing.

PERIOD OF RECORD.--May 1918 to current year.

REVISED RECORDS.--WSP 1309: 1921 (M, date only), 1925(M), 1926(M), 1930(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,654 ft above NGVD of 1929, from topographic map. May 18, 1918 to March 25, 1922, at site 10 ft upstream at datum 0.86 ft higher, March 26, 1922 to October 3, 1934, at present site at datum 2.00 ft lower. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated by Bull Lake 2.8 mi upstream since April 1938. Diversions upstream from station for irrigation of about 730 acres downstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	30	e25	e24	23	22	23	478	26	543	669
2	18	18	30	e24	e24	23	24	28	474	27	557	630
3	18	18	30	e24	24	23	22	27	471	27	598	503
4	19	19	30	e24	24	23	22	27	418	27	624	342
5	19	24	e30	e24	24	24	22	26	247	29	619	288
6	18	29	30	e24	24	23	22	26	133	29	654	329
7	18	28	29	e24	24	24	19	26	42	29	670	383
8	18	28	29	e24	25	24	16	26	24	28	672	452
9	18	28	e29	e24	24	24	18	26	25	29	710	534
10	18	28	29	e24	e24	23	17	37	26	30	722	557
11	18	28	e29	e24	e23	23	17	168	25	31	745	573
12	18	28	e29	e24	e23	23	16	226	26	33	784	575
13	17	28	29	e24	e23	23	17	244	119	33	781	616
14	17	28	29	e24	e23	23	16	299	306	34	784	589
15	18	28	e29	e24	23	23	16	380	228	67	782	589
16	17	29	e29	25	24	23	16	508	166	32	808	609
17	17	28	e27	24	24	23	16	485	194	32	869	632
18	18	29	e27	e24	25	23	17	508	196	33	904	629
19	18	29	e27	24	24	22	17	417	161	32	958	651
20	17	29	e26	24	24	22	16	325	56	98	991	646
21	17	e29	26	e24	23	22	17	325	26	208	1,000	645
22	18	e29	26	e24	23	22	17	325	24	246	1,000	640
23	18	e29	e26	24	23	22	17	378	24	215	907	590
24	17	30	e26	24	23	22	16	455	24	107	755	553
25	18	31	e26	e24	24	22	16	502	24	210	752	511
26	18	e29	e25	e24	24	22	16	517	25	281	698	484
27	18	e29	e25	e24	24	22	16	539	25	364	635	483
28	18	30	e25	24	25	22	16	524	26	403	635	481
29	18	29	e25	24	25	22	17	417	26	405	637	425
30	20	30	e25	24	---	22	17	417	26	448	925	230
31	18	---	e25	24	---	22	---	423	---	519	932	---
TOTAL	555	817	857	746	691	704	533	8,654	4,065	4,112	23,651	15,838
MEAN	17.9	27.2	27.6	24.1	23.8	22.7	17.8	279	136	133	763	528
MAX	20	31	30	25	25	24	24	539	478	519	1,000	669
MIN	17	18	25	24	23	22	16	23	24	26	543	230
AC-FT	1,100	1,620	1,700	1,480	1,370	1,400	1,060	17,170	8,060	8,160	46,910	31,410

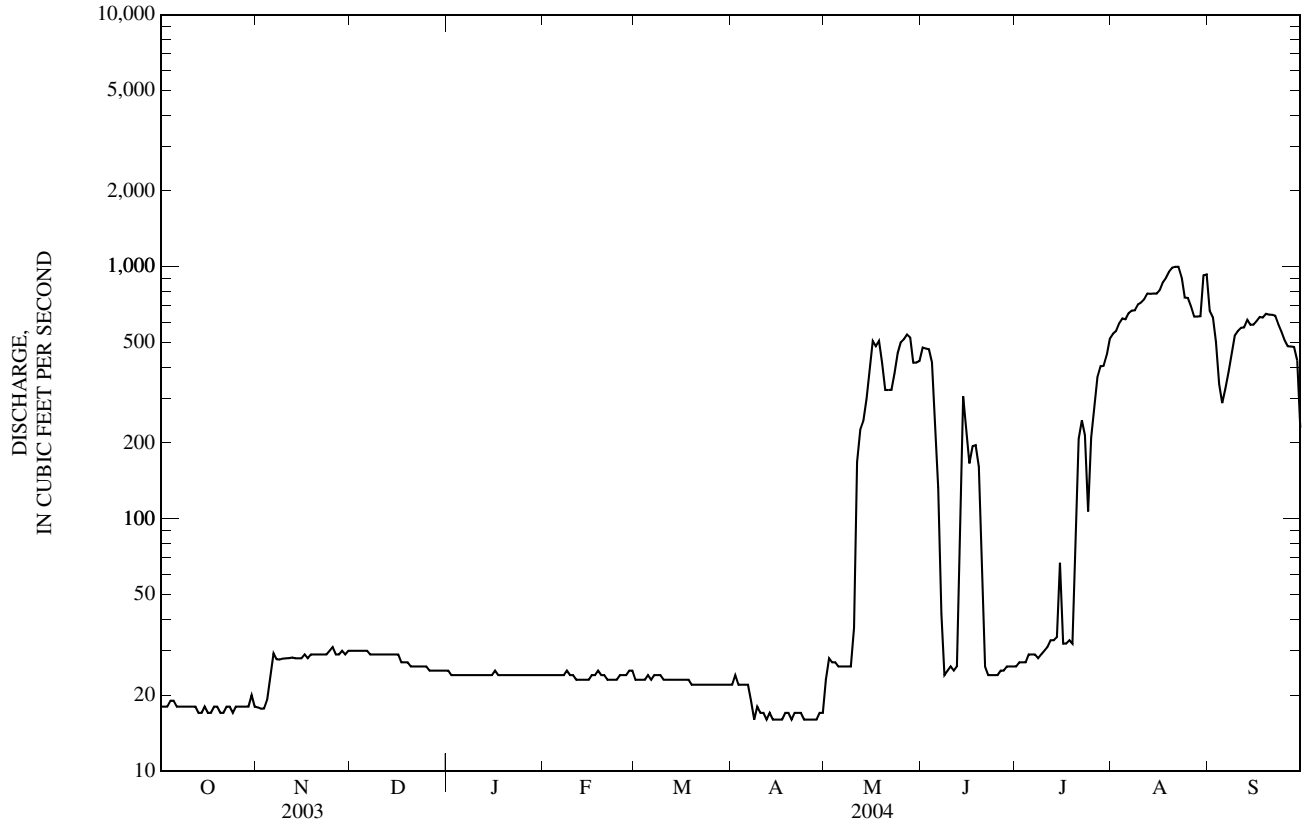
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2004, BY WATER YEAR (WY)

MEAN	134	68.3	68.9	84.8	71.8	59.1	93.6	237	539	797	671	432
MAX	782	467	241	267	219	197	601	831	2,265	1,645	1,027	982
(WY)	(1952)	(1969)	(1972)	(1954)	(1951)	(1951)	(1965)	(1928)	(1918)	(1923)	(1969)	(1976)
MIN	4.16	8.34	13.8	11.0	12.0	0.00	3.59	6.01	10.6	85.6	193	46.3
(WY)	(1941)	(1965)	(1978)	(1931)	(1931)	(1937)	(1941)	(1940)	(1941)	(1941)	(1977)	(2001)

06225000 BULL LAKE CREEK NEAR LENORE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1918 - 2004	
ANNUAL TOTAL	69,003		61,223		--	
ANNUAL MEAN	189		167		271	
HIGHEST ANNUAL MEAN	--		--		427	1969
LOWEST ANNUAL MEAN	--		--		100	1941
HIGHEST DAILY MEAN	982	Aug 24	1,000	Aug 21	3,900	Jun 16, 1918
LOWEST DAILY MEAN	17	Several days	16	Several days	0.00[a]	Feb 28 to Apr 7, 1937
ANNUAL SEVEN-DAY MINIMUM	17	Oct 11	16	Apr 11	0.00[a]	Feb 28, 1937
MAXIMUM PEAK FLOW	--		1,250	Aug 31	6,200[b]	Aug 8, 1951
MAXIMUM PEAK STAGE	--		3.69	Aug 31	7.09	Aug 8, 1951
ANNUAL RUNOFF (AC-FT)	136,900		121,400		196,700	
10 PERCENT EXCEEDS	781		617		800	
50 PERCENT EXCEEDS	29		26		102	
90 PERCENT EXCEEDS	18		18		20	

a Result of regulation.
b From rating curve extended above 2,000 ft^3/s on basis of slope-area measurement of peak flow. Result of automatic spillway gates releasing at Bull Lake Dam.
e Estimated.



06225500 WIND RIVER NEAR CROWHEART, WY

LOCATION.--Lat 43°14'33", long 109°00'35", in NW$^1/_4$ NW$^1/_4$ sec.16, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on right bank 0.9 mi downstream from Bull Lake Creek and 9.0 mi southeast of Crowheart.

DRAINAGE AREA.--1,891 mi^2.

PERIOD OF RECORD.--October 1945 to current year.

REVISED RECORDS.--WSP 1116: 1946-47. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,635 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Bull Lake on Bull Lake Creek. Diversions for irrigation of about 25,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1927, reached a discharge of 13,000 ft^3/s; discharge measurement made by Bureau of Reclamation at site 1.0 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	510	341	e360	e300	e245	e220	360	469	1,270	3,600	1,580	1,530
2	529	365	351	e290	e230	e230	422	462	1,270	3,100	1,560	1,470
3	523	376	325	e260	e240	e240	392	516	1,380	2,640	1,600	1,380
4	515	362	330	e270	e240	e250	345	676	1,640	2,330	1,640	1,390
5	508	353	359	e250	e240	e250	347	924	1,900	2,730	1,630	1,280
6	502	358	332	e230	e240	245	396	1,250	2,100	2,460	1,630	1,280
7	496	369	325	e240	e250	246	424	1,450	2,410	2,150	1,630	1,280
8	491	381	318	e250	e250	292	452	1,500	2,370	2,040	1,620	1,250
9	487	414	300	e260	e245	294	489	1,490	2,460	1,870	1,640	1,300
10	525	390	300	e270	e245	294	459	1,300	2,870	1,810	1,600	1,280
11	508	363	311	e265	e240	283	410	1,330	2,300	1,730	1,600	1,270
12	492	353	320	e260	e230	285	389	1,310	1,750	1,630	1,620	1,250
13	477	342	318	e255	e220	290	394	1,230	1,470	1,570	1,590	1,330
14	475	360	358	e250	e230	295	446	1,180	1,500	1,550	1,580	1,310
15	463	357	319	e250	e240	288	482	1,170	1,440	1,660	1,550	1,310
16	457	357	293	e250	e250	273	455	1,310	1,440	1,810	1,590	1,330
17	458	367	e290	e245	e250	265	424	1,290	1,500	1,730	1,660	1,350
18	451	345	e295	e240	e260	271	421	1,290	1,420	1,660	1,760	1,330
19	442	371	e300	e250	e250	286	408	1,490	1,720	1,550	1,910	1,350
20	436	368	e310	e250	e240	325	374	1,360	1,940	1,520	2,060	1,380
21	426	348	e320	e240	e230	342	367	1,450	1,870	1,640	2,050	1,410
22	417	331	e310	e250	e230	377	355	1,350	1,620	1,610	2,010	1,400
23	413	312	e280	e250	e240	431	349	1,340	1,570	1,870	2,010	1,320
24	406	322	e285	e250	e240	437	340	1,380	1,740	1,830	1,970	1,260
25	396	362	e295	e240	e250	415	360	1,370	1,880	1,650	1,940	1,210
26	368	359	e300	e235	e240	379	341	1,300	2,260	1,580	2,050	1,140
27	367	e370	e290	e240	e250	329	361	1,280	2,460	1,580	1,890	1,120
28	383	e380	e275	e245	e240	289	523	1,330	2,670	1,620	1,780	1,110
29	383	e380	e285	e250	e230	283	610	1,530	2,840	1,590	1,680	1,080
30	427	e370	e290	e250	---	279	518	1,370	3,150	1,550	1,940	829
31	363	---	e290	e250	---	324	---	1,240	---	1,580	1,900	---
TOTAL	14,094	10,826	9,634	7,835	6,985	9,307	12,413	37,937	58,210	59,240	54,270	38,529
MEAN	455	361	311	253	241	300	414	1,224	1,940	1,911	1,751	1,284
MAX	529	414	360	300	260	437	610	1,530	3,150	3,600	2,060	1,530
MIN	363	312	275	230	220	220	340	462	1,270	1,520	1,550	829
AC-FT	27,960	21,470	19,110	15,540	13,850	18,460	24,620	75,250	115,500	117,500	107,600	76,420

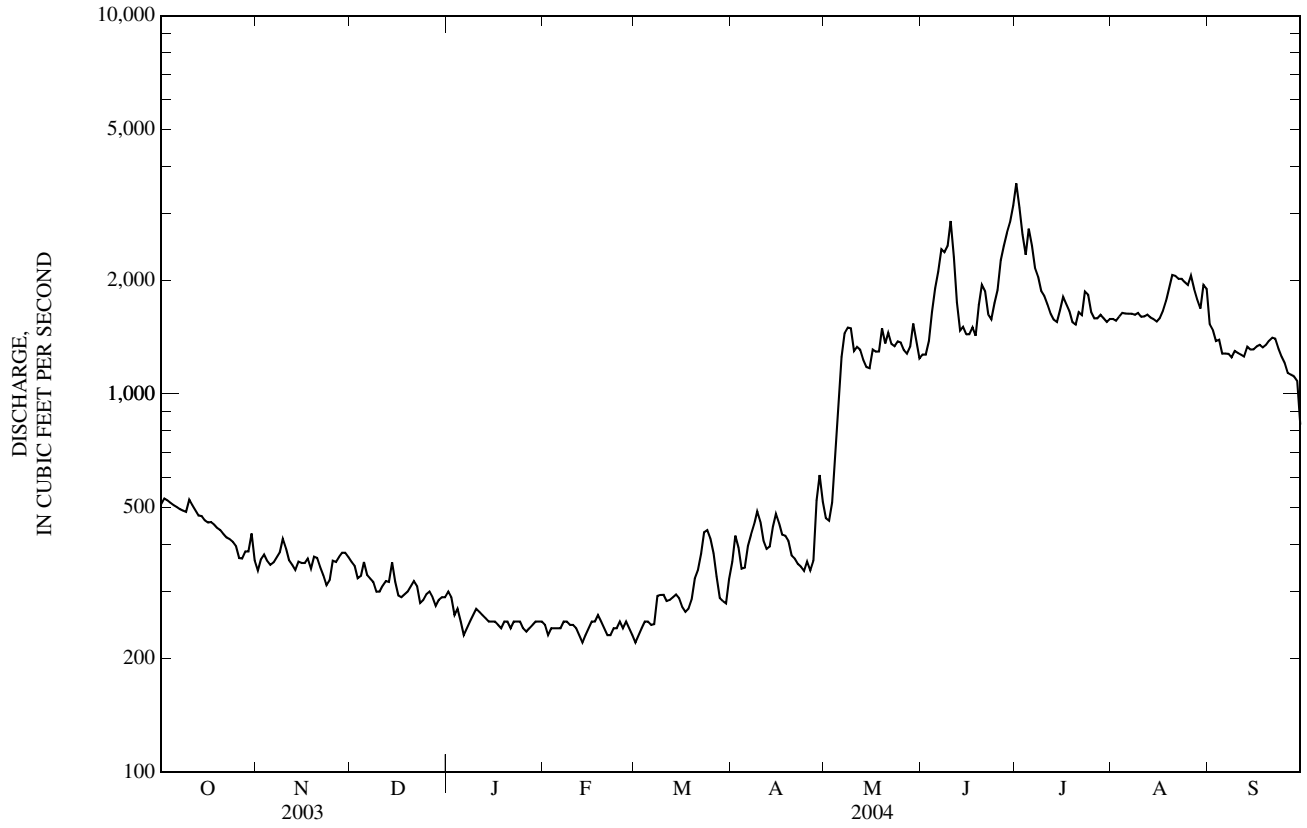
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004, BY WATER YEAR (WY)

MEAN	674	473	381	361	349	359	549	1,754	3,667	2,841	1,659	1,142
MAX	1,415	932	625	560	538	616	1,284	2,938	7,259	5,694	2,483	1,774
(WY)	(1952)	(1969)	(1972)	(1954)	(1951)	(1972)	(1952)	(1956)	(1971)	(1967)	(1951)	(1997)
MIN	371	298	215	179	202	226	309	729	1,466	1,362	853	380
(WY)	(1989)	(1978)	(1982)	(1982)	(1989)	(1977)	(1993)	(1977)	(2001)	(1992)	(1977)	(2001)

06225500 WIND RIVER NEAR CROWHEART, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1946 - 2004	
ANNUAL TOTAL	315,438		319,280		--	
ANNUAL MEAN	864		872		1,187	
HIGHEST ANNUAL MEAN	--		--		1,657	1999
LOWEST ANNUAL MEAN	--		--		658	2001
HIGHEST DAILY MEAN	6,210	May 31	3,600	Jul 1	11,400	Jun 18, 1999
LOWEST DAILY MEAN	218	Feb 24	220	Feb 13,Mar 1	130	Feb 5, 1982
ANNUAL SEVEN-DAY MINIMUM	257	Feb 24	236	Feb 9	143	Dec 30, 1981
MAXIMUM PEAK FLOW	--		3,820	Jul 1	14,300[a]	Jun 13, 1991
MAXIMUM PEAK STAGE	--		8.22	Jul 1	11.23	Jun 19, 1999
ANNUAL RUNOFF (AC-FT)	625,700		633,300		860,100	
10 PERCENT EXCEEDS	1,730		1,840		2,710	
50 PERCENT EXCEEDS	458		434		572	
90 PERCENT EXCEEDS	270		250		290	

a Gage height, 11.04 ft, from floodmarks.
e Estimated.



06226000 WYOMING CANAL NEAR LENORE, WY

LOCATION.--Lat 43°13'45", long 108°53'40", in SE¼ SE¼ sec.17, T.3 N., R.1 W., Fremont County, Hydrologic Unit 10080001, on right bank 3.3 mi downstream from diversion dam on Wind River and 15 mi southeast of Lenore.

PERIOD OF RECORD.--May 1941 to September 1945 (irrigation season only), May 1949 to September 1982, April 1988 to September 2004 (discontinued). No winter record 1977-1978, and 1988 to September 2004. Monthly discharge only from some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 5,560.85 ft above NGVD of 1929. May 1, 1941 to September 30, 1945, nonrecording gage at site 3.2 mi upstream at different datum. May 3, 1949 to October 2, 1952, and April 12 to May 15, 1971, water-stage recorder at site 3.0 mi upstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for October 1, April 1, June 3, 4, 18, 19, and 22-27, which are fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e237	---	---	---	---	---	e20	296	665	979	1,000	1,000
2	452	---	---	---	---	---	112	364	673	920	980	966
3	458	---	---	---	---	---	255	452	705	870	1,010	867
4	468	---	---	---	---	---	258	566	971	851	1,040	893
5	466	---	---	---	---	---	250	707	1,210	803	1,050	803
6	465	---	---	---	---	---	309	979	1,320	779	1,040	780
7	464	---	---	---	---	---	332	1,110	1,350	772	1,060	818
8	461	---	---	---	---	---	366	1,040	1,410	744	1,040	796
9	459	---	---	---	---	---	396	937	1,500	770	1,070	850
10	490	---	---	---	---	---	390	792	1,610	802	1,030	824
11	472	---	---	---	---	---	330	755	1,600	809	1,030	825
12	469	---	---	---	---	---	318	787	1,230	848	1,050	793
13	456	---	---	---	---	---	321	774	853	952	1,030	867
14	457	---	---	---	---	---	363	727	865	934	1,020	851
15	453	---	---	---	---	---	418	694	853	974	1,000	850
16	442	---	---	---	---	---	391	819	845	1,140	1,020	888
17	447	---	---	---	---	---	367	813	923	1,090	1,070	896
18	440	---	---	---	---	---	358	777	806	1,020	1,180	881
19	434	---	---	---	---	---	322	935	1,050	946	1,320	880
20	421	---	---	---	---	---	248	813	1,180	910	1,510	912
21	412	---	---	---	---	---	272	868	1,210	1,040	1,500	947
22	402	---	---	---	---	---	293	793	1,020	1,010	1,440	960
23	---	---	---	---	---	---	296	752	971	1,140	1,460	910
24	---	---	---	---	---	---	299	785	1,080	1,260	1,410	859
25	---	---	---	---	---	---	309	779	1,200	1,070	1,380	849
26	---	---	---	---	---	---	309	725	e1,380	1,020	1,480	783
27	---	---	---	---	---	---	305	696	1,460	1,010	1,330	773
28	---	---	---	---	---	---	391	705	1,450	1,030	1,230	754
29	---	---	---	---	---	---	401	856	1,480	1,020	1,140	750
30	---	---	---	---	---	---	368	776	1,280	987	1,320	547
31	---	---	---	---	---	---	---	650	---	998	1,430	---
TOTAL	---	---	---	---	---	---	9,367	23,522	34,150	29,498	36,670	25,372
MEAN	---	---	---	---	---	---	312	759	1,138	952	1,183	846
MAX	---	---	---	---	---	418	1,110	1,610	1,260	1,510	1,000	
MIN	---	---	---	---	---	20	296	665	744	980	547	
AC-FT	---	---	---	---	---	---	18,580	46,660	67,740	58,510	72,730	50,330

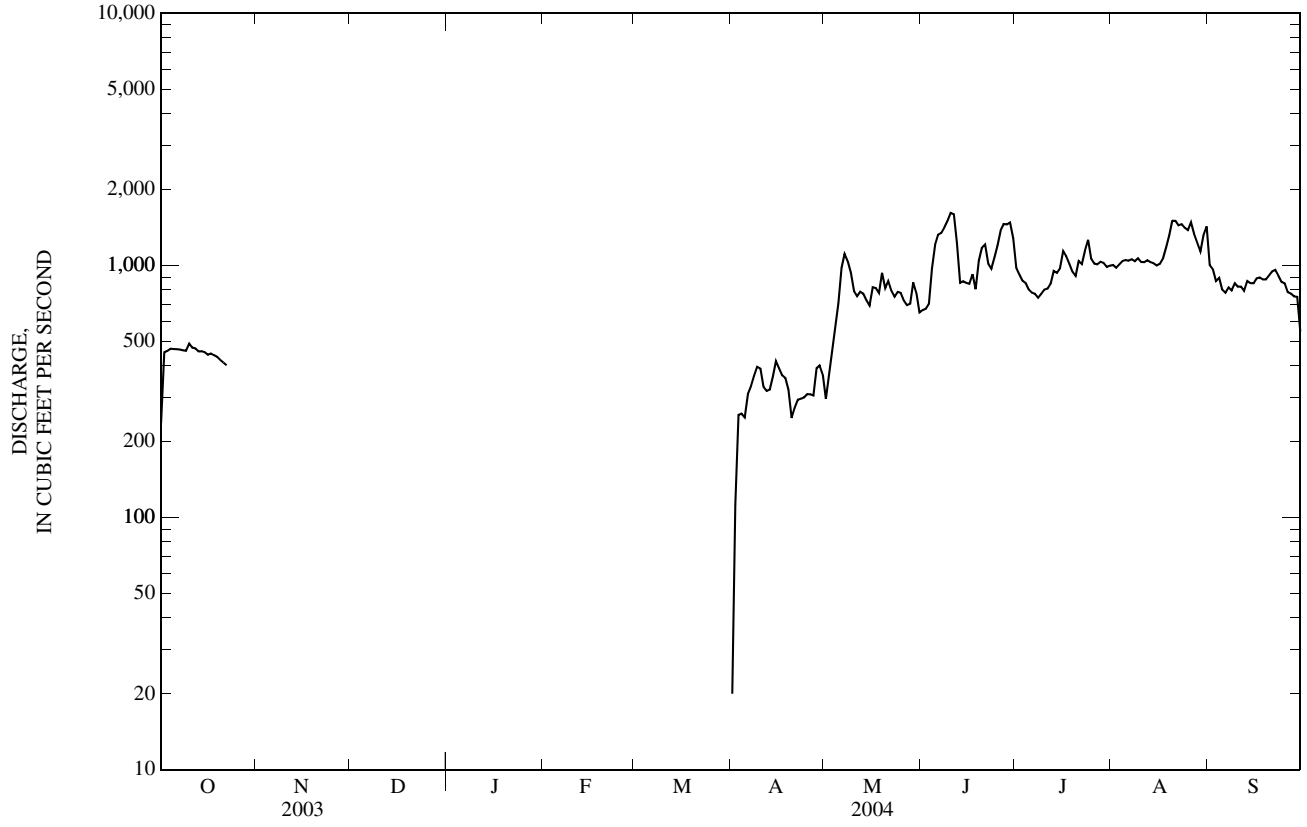
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)*

MEAN	195	184	199	199	201	224	299	720	1,127	1,244	989	702
MAX	430	436	383	345	357	422	440	1,201	1,668	1,736	1,402	1,168
(WY)	(1994)	(1972)	(1958)	(1958)	(1954)	(1972)	(1980)	(2000)	(1990)	(1976)	(1995)	(1997)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	91.2	339	321	587	423	277
(WY)	(1951)	(1951)	(1971)	(1971)	(1971)	(1971)	(1971)	(1942)	(1944)	(1941)	(1941)	(1994)

06226000 WYOMING CANAL NEAR LENORE, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1941 - 2004*	
ANNUAL MEAN	--		540 [a]	
HIGHEST ANNUAL MEAN	--		669 [a]	1972
LOWEST ANNUAL MEAN	--		461 [a]	1975
HIGHEST DAILY MEAN	1,610	Jun 10	1,860	Jun11,12,1990
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days most days
MAXIMUM PEAK FLOW	--		2,060	Jun 5, 1990
MAXIMUM PEAK STAGE	--		13.79	Jun 5, 1990

* For period of operation.
a Water years 1977, 1978, and 1988 to 2004.
e Estimated.



06227596 JOHNSTOWN DITCH AT HEADWORKS, NEAR KINNEAR, WY

LOCATION.--Lat 43°09'02", long 108°43'41", in SW¼ SE¼ NW¼ sec.14, T.2 N., R.1 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank, 450 ft downstream from headgate, 1.6 mi upstream from bridge on State Highway 132, and 2.5 mi west of Kinnear.

PERIOD OF RECORD.--May 1991 to September 1999, May 2002 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,310 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. Flow is diverted from the Wind River for irrigation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	0.00	25	20	24	25
2	---	---	---	---	---	---	---	0.00	25	14	24	25
3	---	---	---	---	---	---	---	0.00	24	10	24	25
4	---	---	---	---	---	---	---	0.00	24	9.2	24	25
5	---	---	---	---	---	---	---	0.00	25	9.1	25	25
6	---	---	---	---	---	---	---	0.00	27	16	25	25
7	---	---	---	---	---	---	---	0.00	30	27	24	25
8	---	---	---	---	---	---	---	0.00	29	24	25	25
9	---	---	---	---	---	---	---	0.00	28	23	25	25
10	---	---	---	---	---	---	---	0.00	30	23	25	25
11	---	---	---	---	---	---	---	0.00	25	22	25	25
12	---	---	---	---	---	---	---	0.00	21	21	25	25
13	---	---	---	---	---	---	---	12.5	22	20	25	25
14	---	---	---	---	---	---	---	18	21	19	25	25
15	---	---	---	---	---	---	---	18	20	22	25	25
16	---	---	---	---	---	---	---	18	20	24	25	25
17	---	---	---	---	---	---	---	18	20	24	25	25
18	---	---	---	---	---	---	---	18	20	24	26	25
19	---	---	---	---	---	---	---	22	20	24	25	25
20	---	---	---	---	---	---	---	26	21	24	25	25
21	---	---	---	---	---	---	---	26	21	23	25	25
22	---	---	---	---	---	---	---	26	20	23	25	25
23	---	---	---	---	---	---	---	26	20	24	25	24
24	---	---	---	---	---	---	---	26	20	24	25	24
25	---	---	---	---	---	---	---	25	19	24	25	24
26	---	---	---	---	---	---	---	25	21	24	25	24
27	---	---	---	---	---	---	---	25	24	24	25	24
28	---	---	---	---	---	---	---	25	25	23	25	24
29	---	---	---	---	---	---	---	26	27	23	24	24
30	---	---	---	---	---	---	---	25	27	23	25	24
31	---	---	---	---	---	---	---	25	---	24	25	---
TOTAL	---	---	---	---	---	---	---	430.50	701	658.3	770	742
MEAN	---	---	---	---	---	---	---	13.9	23.4	21.2	24.8	24.7
MAX	---	---	---	---	---	---	---	26	30	27	26	25
MIN	---	---	---	---	---	---	---	0.00	19	9.1	24	24
AC-FT	---	---	---	---	---	---	---	854	1,390	1,310	1,530	1,470

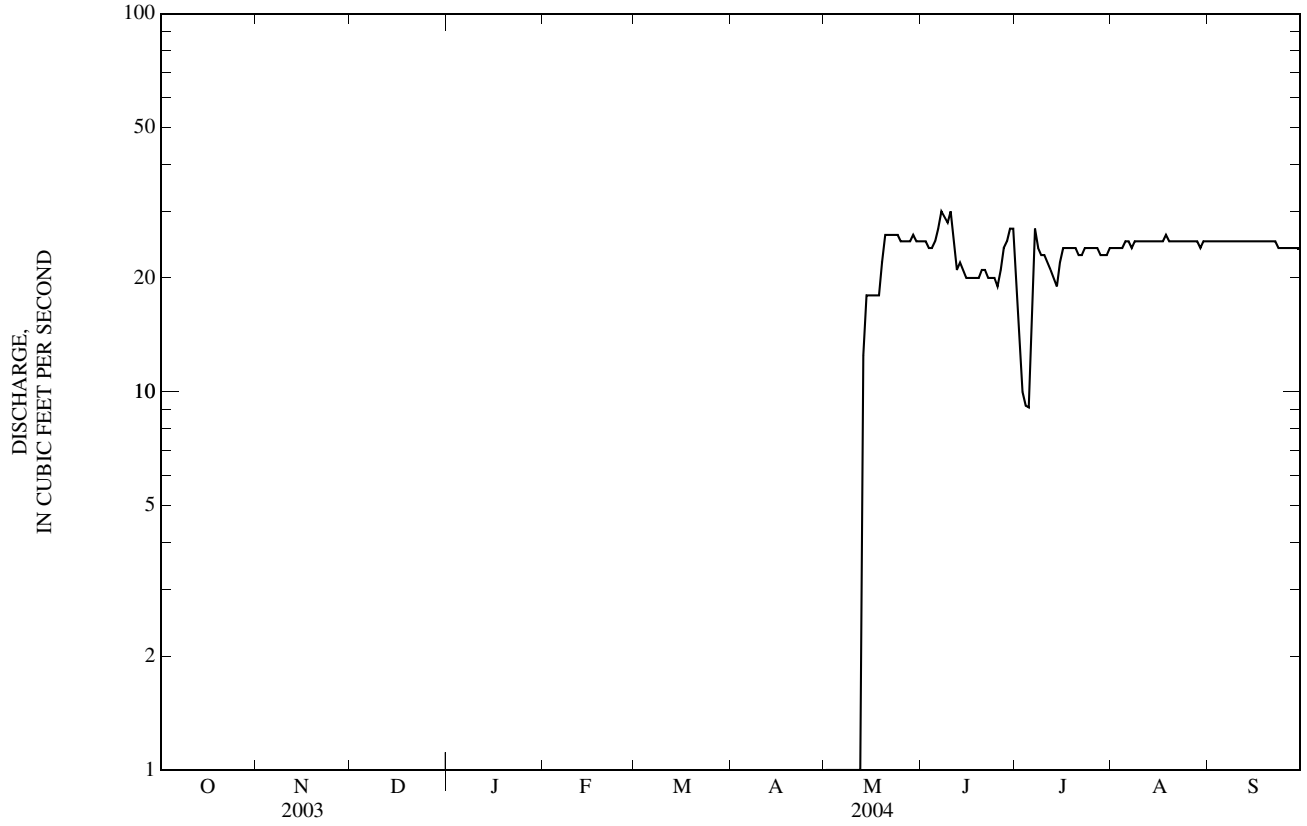
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)*

MEAN	1.25	---	---	---	---	---	---	15.4	23.4	24.8	24.7	20.1
MAX	1.73	---	---	---	---	---	---	26.1	33.6	32.6	33.5	29.5
(WY)	(1993)	---	---	---	---	---	---	(1994)	(1999)	(1999)	(1999)	(2001)
MIN	0.76	---	---	---	---	---	---	6.98	11.5	12.7	17.7	10.9
(WY)	(1994)	---	---	---	---	---	---	(1999)	(1995)	(1992)	(2002)	(1993)

06227596 JOHNSTOWN DITCH AT HEADWORKS, NEAR KINNEAR, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1991 - 2004*	
HIGHEST DAILY MEAN	30	Jun 7,10	48	Jun 25, 1991
LOWEST DAILY MEAN	0.00	May 1-12	0.00	Many days, most years
MAXIMUM PEAK FLOW	35	Jun 10	58	May 30, 2003
MAXIMUM PEAK STAGE	1.95	Jun 10	2.50	May 30, 2003

* For period of operation.



06227600 WIND RIVER NEAR KINNEAR, WY

LOCATION.--Lat 43°08'38", long 108°42'26", in SE¼ SE¼ SW¼ sec.13, T.2 N., R.1 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank, downstream side of bridge on Wyoming State Secondary Highway 132 and 1.6 mi southwest of Kinnear.

DRAINAGE AREA.--2,194 mi^2.

PERIOD OF RECORD.--April 1974 to September 1979 (no winter records), April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,280 ft above NGVD of 1929, from topographic map. April 1974 to September 1979 and March 28, 1991 to June 8, 1997, at site 300 ft upstream on right bank at same datum. June 9, 1997 to April 21, 1998, at present site on right bank 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. Some regulation by Bull Lake beginning in 1938 and Pilot-Butte Reservoir beginning in 1926, combined capacity, 182,000 acre-ft. Diversions upstream from station for irrigation of about 102,100 acres lying both upstream and downstream from station. The Wyoming Canal of the Riverton Project is the major diversion. This diversion began in 1926 and part of it can be returned to the river upstream from station through Pilot Wasteway. Additional wastewater returns to river downstream from station through Fivemile Creek and Muddy Creek.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	292	e370	e320	e240	e220	336	59	404	3,500	346	308
2	104	327	343	e310	e230	e230	257	62	389	2,670	349	315
3	94	335	323	e280	e230	e230	185	62	387	1,840	347	338
4	77	317	296	e290	e240	e240	148	60	384	1,530	352	329
5	71	309	315	e260	e240	e250	136	90	402	2,010	344	319
6	68	301	324	e250	e240	e250	125	134	537	1,960	337	319
7	66	324	343	e260	e240	e250	118	134	923	1,420	337	309
8	63	323	309	e240	e250	e270	116	243	844	1,300	335	278
9	60	363	294	e250	e250	e280	133	369	726	1,100	339	278
10	57	386	287	e260	e240	e290	111	421	1,270	910	329	281
11	54	361	283	e270	e240	e310	103	386	852	753	329	278
12	53	323	286	e260	e230	e320	97	395	472	600	331	278
13	52	306	285	e250	e220	e330	89	329	509	451	328	282
14	50	321	342	e250	e230	337	83	308	478	416	325	284
15	49	329	316	e250	e240	328	77	307	394	430	326	281
16	49	320	258	e240	e250	323	66	307	364	421	328	272
17	48	336	e280	e230	e260	316	67	308	362	402	343	268
18	47	310	e300	e250	e260	303	67	318	373	403	361	262
19	47	330	e300	e250	e250	309	67	334	385	393	343	272
20	46	334	e320	e240	e240	324	121	368	426	364	319	276
21	45	329	e330	e250	e230	344	112	399	449	349	322	273
22	45	287	e320	e250	e230	359	78	395	389	319	325	259
23	161	289	e300	e250	e240	405	73	395	375	431	321	259
24	361	243	e300	e240	e240	439	68	392	372	392	326	241
25	357	312	e310	e230	e250	411	64	391	377	375	336	222
26	341	298	e320	e230	e240	388	61	380	529	355	340	220
27	328	356	e320	e240	e250	329	58	385	720	346	330	229
28	338	362	e320	e250	e240	282	72	392	984	347	323	228
29	339	e390	e310	e250	e230	265	70	436	1,360	343	321	232
30	380	e390	e300	e250	---	256	62	416	1,870	341	320	251
31	345	---	e310	e250	---	301	---	412	---	352	318	---
TOTAL	4,362	9,803	9,614	7,900	6,970	9,489	3,220	9,387	18,306	26,823	10,330	8,241
MEAN	141	327	310	255	240	306	107	303	610	865	333	275
MAX	380	390	370	320	260	439	336	436	1,870	3,500	361	338
MIN	45	243	258	230	220	220	58	59	362	319	318	220
AC-FT	8,650	19,440	19,070	15,670	13,820	18,820	6,390	18,620	36,310	53,200	20,490	16,350

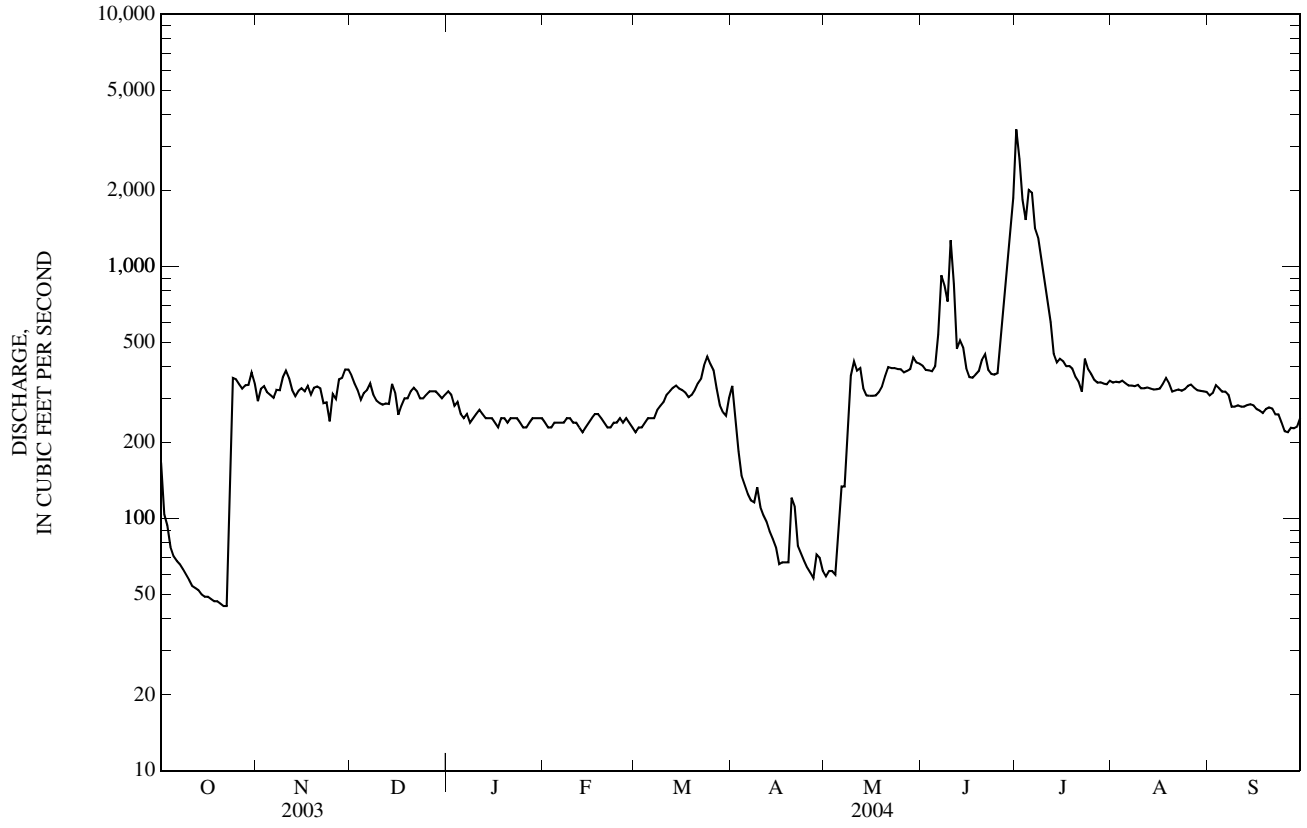
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY)

MEAN	335	389	310	284	286	316	249	934	2,478	1,596	553	393
MAX	850	625	380	360	378	418	758	2,356	6,611	4,802	1,230	564
(WY)	(1998)	(1998)	(1996)	(1996)	(1998)	(1996)	(1974)	(1999)	(1999)	(1995)	(1976)	(1976)
MIN	141	119	228	193	196	194	72.9	283	373	346	325	216
(WY)	(2004)	(2002)	(2002)	(1993)	(2002)	(1992)	(1978)	(2002)	(2001)	(2001)	(2001)	(1977)

06227600 WIND RIVER NEAR KINNEAR, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1974 - 2004*	
ANNUAL TOTAL	147,180		124,445		--	
ANNUAL MEAN	403		340		640	
HIGHEST ANNUAL MEAN	--		--		1,272	1999
LOWEST ANNUAL MEAN	--		--		277	2001
HIGHEST DAILY MEAN	5,920	Jun 1	3,500	Jul 1	11,100	Jun 20, 1999
LOWEST DAILY MEAN	45	Oct 21,22	45	Oct 21,22	28	Apr 24, 1978
ANNUAL SEVEN-DAY MINIMUM	47	Oct 16	47	Oct 16	35	Apr 19, 1978
MAXIMUM PEAK FLOW	--		4,860	Jul 1	13,900[a]	Jun 13, 1991
MAXIMUM PEAK STAGE	--		6.51	Jul 1	8.79[b]	Jun 10, 1997
ANNUAL RUNOFF (AC-FT)	291,900		246,800		463,900	
10 PERCENT EXCEEDS	518		416		959	
50 PERCENT EXCEEDS	310		309		350	
90 PERCENT EXCEEDS	95		78		173	

* For period of operation.
a Gage height, 8.03 ft, from floodmarks.
b From floodmarks, discharge, 11,600 ft^3/s.
e Estimated.



06227810 LEFTHAND DITCH AT HEADWORKS, NEAR RIVERTON, WY

LOCATION.--Lat 43°01'34", long 108°31'12", in NE¼ NE¼ NE¼ sec.33, T.1 N., R.3 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.6 mi downstream from headgates and 6.9 mi west of Riverton.

PERIOD OF RECORD.--May 1991 to September 1999, May 2001 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,060 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. Flow is diverted from Wind River for irrigation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	0.00	30	18	25	15
2	---	---	---	---	---	---	---	0.00	29	29	23	16
3	---	---	---	---	---	---	---	0.00	28	28	22	16
4	---	---	---	---	---	---	---	0.00	28	27	21	16
5	---	---	---	---	---	---	---	0.00	32	28	19	16
6	---	---	---	---	---	---	---	0.00	40	27	17	17
7	---	---	---	---	---	---	---	0.00	55	23	17	17
8	---	---	---	---	---	---	---	0.00	43	22	18	17
9	---	---	---	---	---	---	---	6.4	39	21	22	25
10	---	---	---	---	---	---	---	9.6	41	20	30	33
11	---	---	---	---	---	---	---	5.2	39	19	34	32
12	---	---	---	---	---	---	---	3.9	31	23	33	30
13	---	---	---	---	---	---	---	3.0	32	27	35	29
14	---	---	---	---	---	---	---	2.4	32	23	36	35
15	---	---	---	---	---	---	---	2.1	33	28	36	37
16	---	---	---	---	---	---	---	2.0	35	42	35	36
17	---	---	---	---	---	---	---	1.9	36	44	31	36
18	---	---	---	---	---	---	---	2.1	34	43	33	36
19	---	---	---	---	---	---	---	3.6	31	43	32	35
20	---	---	---	---	---	---	---	5.7	30	42	29	36
21	---	---	---	---	---	---	---	9.4	32	40	28	35
22	---	---	---	---	---	---	---	9.2	29	39	29	32
23	---	---	---	---	---	---	---	9.4	29	36	28	26
24	---	---	---	---	---	---	---	12	29	25	25	18
25	---	---	---	---	---	---	---	15	29	27	21	18
26	---	---	---	---	---	---	---	16	29	27	18	20
27	---	---	---	---	---	---	---	18	28	27	17	22
28	---	---	---	---	---	---	---	21	20	27	16	21
29	---	---	---	---	---	---	---	26	15	25	15	21
30	---	---	---	---	---	---	---	26	13	27	15	22
31	---	---	---	---	---	---	---	28	---	28	15	---
TOTAL	---	---	---	---	---	---	---	237.90	951	905	775	765
MEAN	---	---	---	---	---	---	---	7.67	31.7	29.2	25.0	25.5
MAX	---	---	---	---	---	---	---	28	55	44	36	37
MIN	---	---	---	---	---	---	---	0.00	13	18	15	15
AC-FT	---	---	---	---	---	---	---	472	1,890	1,800	1,540	1,520

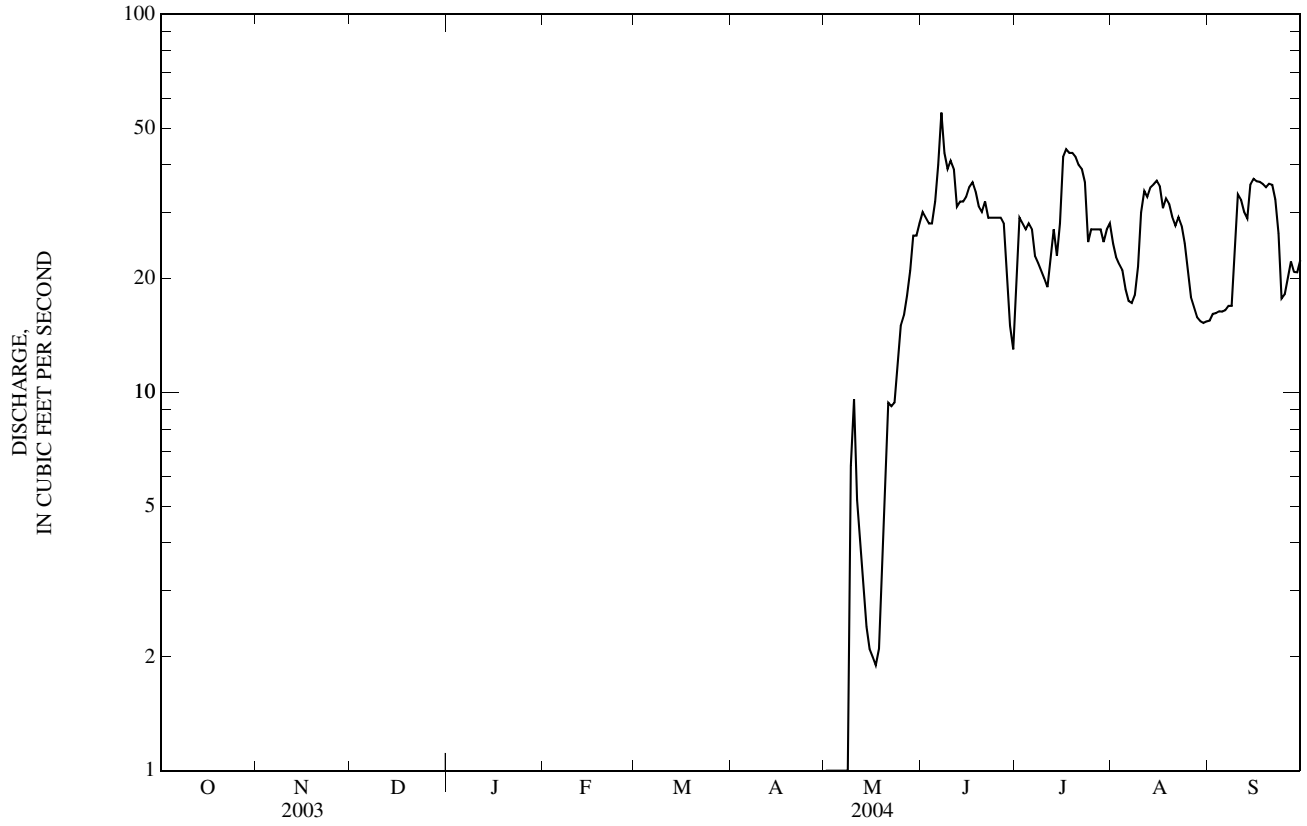
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)*

MEAN	0.60	---	---	---	---	---	0.60	20.4	27.1	28.6	26.6	26.4
MAX	0.87	---	---	---	---	---	0.60	35.3	41.6	44.6	47.7	42.9
(WY)	(1994)	---	---	---	---	---	(1992)	(1992)	(2001)	(1994)	(1994)	(1994)
MIN	0.33	---	---	---	---	---	0.60	7.67	12.8	19.4	8.74	10.3
(WY)	(1993)	---	---	---	---	---	(1992)	(2004)	(1995)	(1993)	(1998)	(1999)

06227810 LEFTHAND DITCH AT HEADWORKS, NEAR RIVERTON, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1991 - 2004*	
HIGHEST DAILY MEAN	55	Jun 7	66	May 25, 1997
LOWEST DAILY MEAN	0.00	May 1-8	0.00	Many days most years
MAXIMUM PEAK FLOW	70	Jun 7	74[a]	Jun 13, 1991, May 24, 1997
MAXIMUM PEAK STAGE	2.86	Jun 7	3.19	Sep 8, 1997

* For period of record.
a Gage height, 2.73 ft in 1991, 3.09 ft in 1997.



06228000 WIND RIVER AT RIVERTON, WY

LOCATION.--Lat 43°00'38", long 108°22'34", in NE¼ NW¼ NW¼ sec.2, T.1 S., R.4 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 20 ft downstream from bridge on State Highway 789, 1.1 mi southeast of post office in Riverton, and 1.5 mi upstream from Little Wind River.

DRAINAGE AREA.--2,309 mi^2.

PERIOD OF RECORD.--May to August 1906, August to December 1907, May to October 1908, May 1911 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as Big Wind River near Arapahoe Agency 1906 and as Big Wind River near Riverton 1907-08.

REVISED RECORDS.--WSP 1509: 1935. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,901.56 ft above NGVD of 1929. See WSP 1729 for history of changes prior to October 13, 1930. October 13, 1930 to April 15, 1968, water-stage recorder at site 280 ft upstream at datum 2.00 ft higher. April 16 to November 17, 1968, water-stage recorder at site 155 ft upstream at datum 2.00 ft higher. November 18, 1968 to July 28, 1970, water-stage recorder at site 20 ft downstream at datum 2.00 ft higher. July 29, 1970 to September 30, 1977, water-stage recorder at site 245 ft downstream at datum 2.00 ft higher. October 1, 1977 to October 23, 1997 at site 245 ft downstream at same datum. U.S. Army Corp of Engineers data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by Bull Lake beginning in 1938 and Pilot Butte Reservoir beginning in 1926, combined capacity, 182,000 acre-ft. Diversions upstream from station for irrigation of about 128,000 acres upstream and downstream from station. The Wyoming Canal of the Riverton project is the major diversion. This diversion began in 1926 and part of it can be returned to the river upstream from station through Pilot wasteway. Additional wastewater returns to river downstream from station through Fivemile Creek and Muddy Creek.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	359	406	e390	e320	e230	e260	367	22	30	2,220	63	47
2	195	416	e370	e310	e220	e250	314	18	27	2,030	59	48
3	145	456	e350	e280	e240	e260	161	16	18	1,490	45	63
4	129	441	e340	e290	e240	e260	103	18	16	1,160	34	91
5	113	430	e340	e260	e250	e270	86	14	17	1,300	37	91
6	111	397	e350	e250	e260	e280	77	16	29	1,670	29	91
7	116	e370	e360	e220	e270	e280	75	14	257	1,130	26	111
8	111	e360	e370	e280	e270	e280	86	30	488	963	28	97
9	106	e370	e360	e260	e270	e300	172	114	291	867	26	79
10	101	e380	e350	e270	e260	e310	143	195	477	649	22	72
11	97	e380	e350	e280	e270	e320	98	85	707	548	24	47
12	94	e370	e340	e270	e260	e330	87	125	66	372	22	39
13	97	e360	e340	e260	e250	e340	82	91	50	201	33	53
14	92	e370	e340	e260	e260	e350	79	76	50	51	24	56
15	92	e370	e360	e250	e270	e360	69	65	35	31	25	66
16	91	e380	e360	e250	e280	e360	61	63	16	47	28	59
17	99	e370	e320	e230	e290	e350	58	59	13	37	35	53
18	90	368	e330	e240	e290	e350	57	43	16	34	61	53
19	84	370	e340	e260	e290	e340	61	38	21	34	72	50
20	86	389	e350	e240	e270	e340	76	32	22	30	46	62
21	84	390	e360	e250	e260	337	125	26	59	27	36	76
22	81	367	e360	e260	e260	314	92	22	26	27	36	73
23	76	345	e360	e250	e270	403	69	26	18	81	36	79
24	400	e320	e330	e240	e270	518	63	25	19	122	38	78
25	447	e350	e340	e230	e280	487	58	23	19	74	51	63
26	449	e340	e320	e230	e290	476	50	23	27	65	55	50
27	428	e350	e330	e240	e280	400	44	20	177	56	66	66
28	427	e360	e330	e250	e290	345	33	20	485	52	58	123
29	447	e370	e320	e250	e270	301	45	28	838	55	55	79
30	e440	e380	e310	e250	---	296	31	34	972	53	53	150
31	e420	---	e320	e240	---	314	---	28	---	56	47	---
TOTAL	6,107	11,325	10,690	7,970	7,710	10,381	2,922	1,409	5,286	15,532	1,270	2,165
MEAN	197	378	345	257	266	335	97.4	45.5	176	501	41.0	72.2
MAX	449	456	390	320	290	518	367	195	972	2,220	72	150
MIN	76	320	310	220	220	250	31	14	13	27	22	39
AC-FT	12,110	22,460	21,200	15,810	15,290	20,590	5,800	2,790	10,480	30,810	2,520	4,290

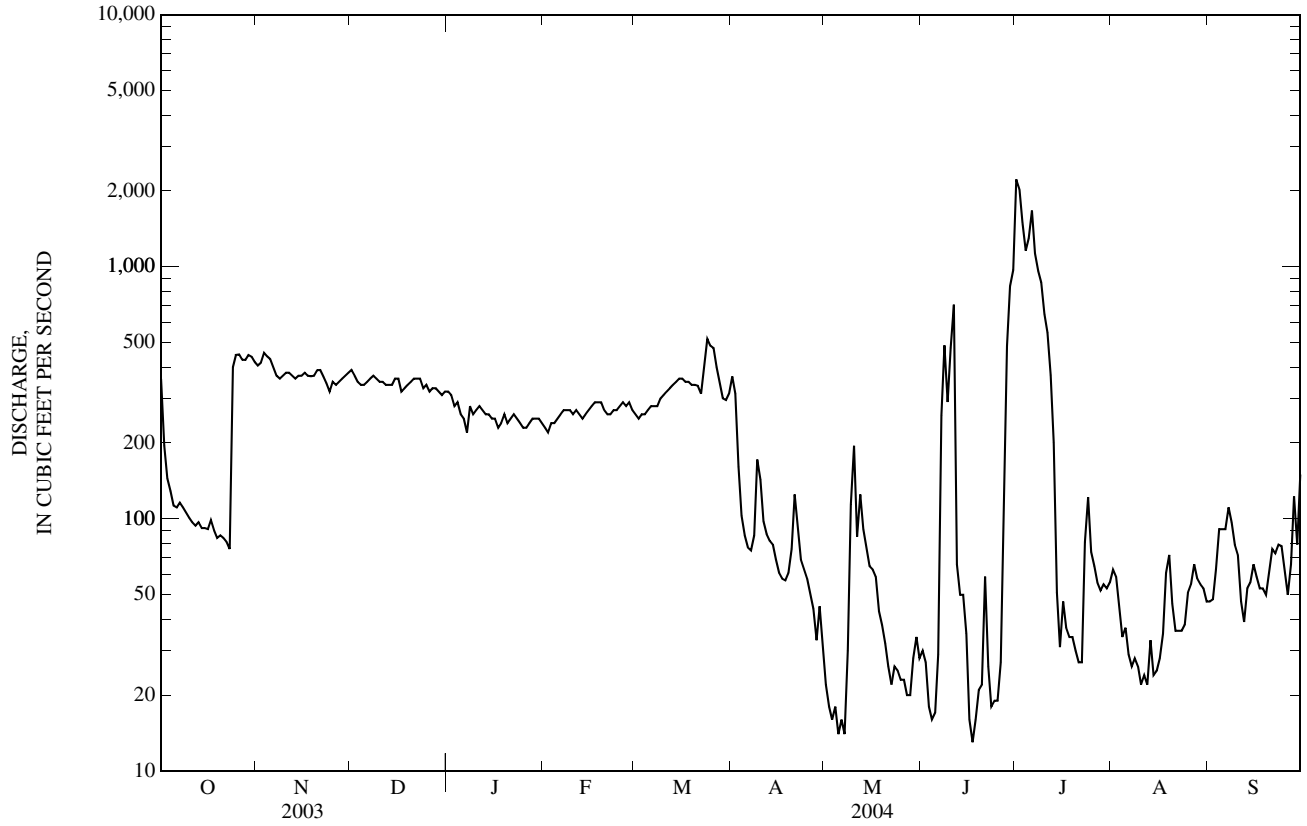
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2004, BY WATER YEAR (WY)

MEAN	583	445	348	328	331	350	400	1,180	2,753	1,682	655	469
MAX	1,500	895	559	539	531	650	1,234	4,618	7,194	5,802	3,052	1,794
(WY)	(1952)	(1969)	(1972)	(1972)	(1948)	(1916)	(1943)	(1928)	(1921)	(1917)	(1930)	(1927)
MIN	149	161	200	151	196	74.9	53.8	45.5	28.0	20.3	26.2	35.7
(WY)	(2001)	(2002)	(1932)	(1938)	(1981)	(1981)	(1989)	(2004)	(2001)	(1994)	(2001)	(1988)

06228000 WIND RIVER AT RIVERTON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1912 - 2004	
ANNUAL TOTAL	111,412		82,767		--	
ANNUAL MEAN	305		226		785	
HIGHEST ANNUAL MEAN	--		--		1,626	1913
LOWEST ANNUAL MEAN	--		--		156	2001
HIGHEST DAILY MEAN	3,940	Jun 1	2,220	Jul 1	11,400	Jun 14, 1935
LOWEST DAILY MEAN	15	May 7	13	Jun 17	9.8	May 28, 1977
ANNUAL SEVEN-DAY MINIMUM	19	Jul 11	17	May 1	12	Jul 13, 1977
MAXIMUM PEAK FLOW	--		2,780[a]	Jul 1	13,300[b]	Jun 15, 1935
MAXIMUM PEAK STAGE	--		9.89[c]	Nov 8	10.86[d]	Jun 10, 1997
ANNUAL RUNOFF (AC-FT)	221,000		164,200		568,500	
10 PERCENT EXCEEDS	492		392		1,930	
50 PERCENT EXCEEDS	294		210		390	
90 PERCENT EXCEEDS	29		27		146	

a Gage height, 6.66 ft.
b Gage height, 10.15 ft, site and datum then in use.
c Backwater from ice.
d Discharge 10,100 ft^3/s, present datum.
e Estimated.



06228350 SOUTH FORK LITTLE WIND RIVER ABOVE WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42°58'06", long 109°02'13", in SE¼ SW¼ SE¼ sec.18, T.1 S., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 1.9 mi upstream from Washakie Dam and 8.0 mi southwest of Fort Washakie.

DRAINAGE AREA.--90.3 mi^2.

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,440 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	16	18	18	13	15	37	83	151	897	156	117
2	25	21	18	18	12	16	48	91	182	690	144	108
3	24	20	17	e17	12	16	37	125	260	576	144	171
4	23	19	16	e18	12	16	35	177	412	541	141	188
5	23	17	e15	e19	12	18	46	260	477	501	133	173
6	23	16	e15	e19	13	15	51	311	603	467	131	155
7	23	16	e16	e20	13	15	58	325	711	441	124	137
8	23	16	e16	e21	14	17	66	343	755	560	112	124
9	22	18	e15	e20	e13	18	68	354	791	527	103	112
10	21	18	e16	e19	e12	19	62	307	776	475	95	100
11	21	19	e15	20	e13	17	69	314	557	436	89	92
12	20	19	e13	19	e11	18	69	217	385	409	85	86
13	19	20	e15	18	e12	17	81	187	290	386	80	124
14	17	21	e16	17	e13	17	88	166	256	362	75	126
15	17	21	e15	17	14	17	77	153	288	357	71	122
16	16	20	e13	17	14	18	63	153	294	335	69	111
17	16	19	e16	16	14	18	57	146	281	304	66	99
18	16	21	e14	16	14	19	54	162	269	279	118	89
19	16	21	e14	16	14	21	50	215	328	264	179	85
20	16	20	e15	15	14	22	46	231	400	263	162	108
21	15	e19	e14	15	13	22	43	258	389	249	138	112
22	15	e16	e15	15	13	27	45	233	349	242	116	109
23	15	e15	e14	15	13	36	49	203	362	344	147	104
24	15	e17	e14	15	13	40	57	182	427	357	166	98
25	15	e18	e14	14	13	39	53	164	476	288	180	93
26	15	18	e15	14	13	33	57	154	528	253	264	88
27	17	17	e16	14	13	27	72	145	609	227	215	85
28	16	17	e15	13	14	25	89	173	775	227	186	87
29	16	18	17	13	15	24	80	239	944	208	159	87
30	15	18	18	13	---	26	80	168	990	186	139	113
31	10	---	18	13	---	30	---	149	---	170	127	---
TOTAL	570	551	478	514	379	678	1,787	6,388	14,315	11,821	4,114	3,403
MEAN	18.4	18.4	15.4	16.6	13.1	21.9	59.6	206	477	381	133	113
MAX	25	21	18	21	15	40	89	354	990	897	264	188
MIN	10	15	13	13	11	15	35	83	151	170	66	85
AC-FT	1,130	1,090	948	1,020	752	1,340	3,540	12,670	28,390	23,450	8,160	6,750

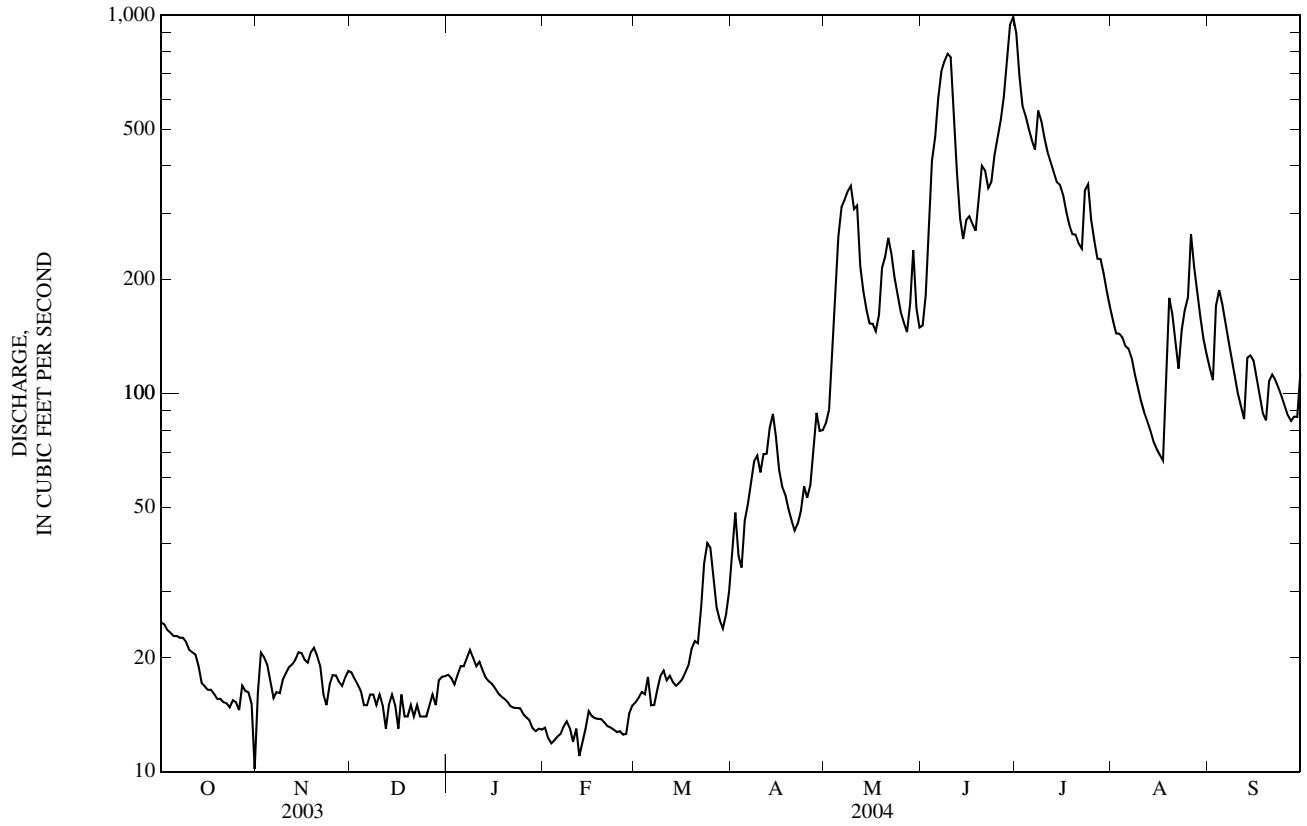
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004, BY WATER YEAR (WY)

MEAN	40.2	27.7	22.3	16.7	14.4	17.5	48.3	253	566	319	105	56.9
MAX	94.3	48.4	34.6	30.9	26.1	34.1	94.6	403	1,067	791	197	113
(WY)	(1983)	(1991)	(1996)	(1997)	(1986)	(1986)	(1987)	(1987)	(1986)	(1995)	(1982)	(2004)
MIN	12.7	12.7	10.4	6.05	6.72	9.60	25.3	111	187	80.5	30.7	20.0
(WY)	(2002)	(2003)	(2003)	(1977)	(1977)	(1977)	(2002)	(1995)	(2001)	(2001)	(1988)	(1988)

06228350 SOUTH FORK LITTLE WIND RIVER ABOVE WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1977 - 2004	
ANNUAL TOTAL	29,994.9		44,998		--	
ANNUAL MEAN	82.2		123		124	
HIGHEST ANNUAL MEAN	--		--		188	1986
LOWEST ANNUAL MEAN	--		--		60.5	2001
HIGHEST DAILY MEAN	951	May 31	990	Jun 30	1,960	Jun 13, 1991
LOWEST DAILY MEAN	8.4	Mar 5,6	10	Oct 31	4.5	Feb 1, 1977
ANNUAL SEVEN-DAY MINIMUM	8.6	Mar 2	12	Jan 30	4.5	Feb 1, 1977
MAXIMUM PEAK FLOW	--		1,110	Jun 29	2,230	Jun 13, 1991
MAXIMUM PEAK STAGE	--		6.44	Jun 29	8.48	Jun 13, 1991
ANNUAL RUNOFF (AC-FT)	59,490		89,250		89,940	
10 PERCENT EXCEEDS	279		350		367	
50 PERCENT EXCEEDS	26		37		36	
90 PERCENT EXCEEDS	11		14		14	

e Estimated.



06228450 SOUTH FORK LITTLE WIND RIVER BELOW WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42°59'04", long 108°59'57", in SW¼ SW¼ SE¼ sec.9, T.1 S., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 0.7 mi downstream from Washakie Reservoir, 2.3 mi upstream from Timmoco Creek, and 6.2 mi west of Fort Washakie.

DRAINAGE AREA.--93.5 mi^2.

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,280 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Flow regulated by Washakie Reservoir.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

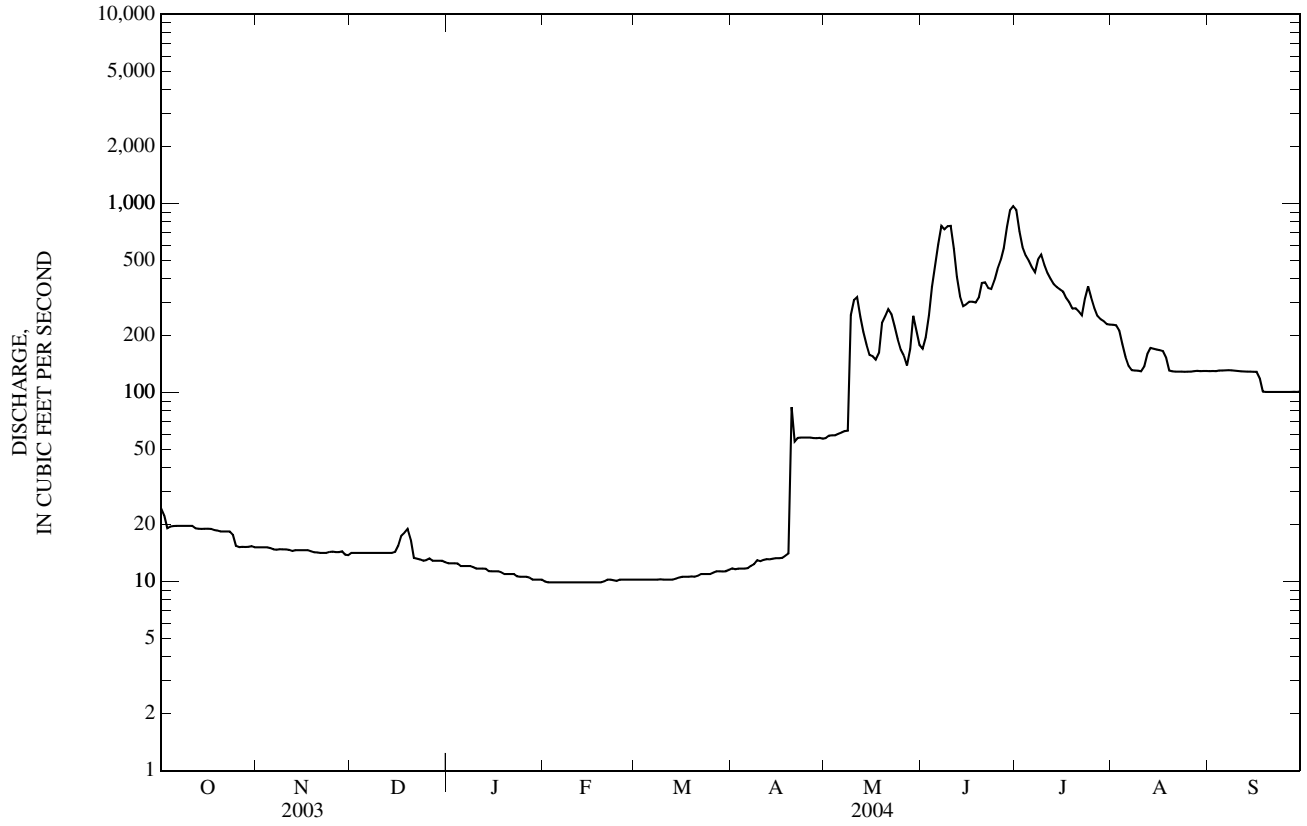
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	15	14	12	10	10	12	58	171	925	228	130
2	22	15	14	12	9.9	10	12	59	196	711	227	130
3	19	15	14	12	9.9	10	12	59	255	589	212	130
4	20	15	14	12	9.9	10	12	59	362	530	180	131
5	20	15	14	12	9.9	10	12	60	468	499	154	131
6	20	15	14	12	9.9	10	12	61	607	459	138	131
7	20	15	14	12	9.9	10	12	62	760	432	131	131
8	20	15	14	12	9.9	10	12	63	731	508	131	131
9	20	15	14	12	9.9	10	13	257	758	537	130	130
10	20	15	14	12	9.9	10	13	309	761	473	129	130
11	20	15	14	12	9.9	10	13	320	576	429	138	130
12	19	15	14	12	9.9	10	13	253	409	399	160	129
13	19	15	14	12	9.9	10	13	210	322	374	172	129
14	19	15	14	11	9.9	10	13	179	286	361	170	129
15	19	15	14	11	9.9	11	13	158	293	351	169	129
16	19	15	16	11	9.9	11	13	155	302	342	167	129
17	19	15	17	11	9.9	11	13	149	302	316	166	119
18	19	14	18	11	9.9	11	14	162	300	299	153	101
19	19	14	19	11	9.9	11	14	233	319	278	131	101
20	18	14	17	11	10	11	84	253	379	279	130	101
21	18	14	13	11	10	11	55	276	382	269	129	101
22	18	14	13	11	10	11	58	260	357	256	129	101
23	18	14	13	11	10	11	58	225	352	314	129	101
24	18	14	13	11	10	11	58	192	392	365	129	101
25	15	14	13	11	10	11	58	169	450	318	129	101
26	15	14	13	11	10	11	58	156	501	280	129	101
27	15	14	13	11	10	11	57	139	581	255	130	101
28	15	14	13	10	10	11	57	170	752	244	130	101
29	15	14	13	10	10	11	58	255	919	239	130	101
30	15	14	13	10	---	11	57	211	967	230	130	101
31	15	---	13	10	---	12	---	179	---	229	130	---
TOTAL	572	437	440	350	288.2	328	899	5,351	14,210	12,090	4,640	3,512
MEAN	18.5	14.6	14.2	11.3	9.94	10.6	30.0	173	474	390	150	117
MAX	24	15	19	12	10	12	84	320	967	925	228	131
MIN	15	14	13	10	9.9	10	12	58	171	229	129	101
AC-FT	1,130	867	873	694	572	651	1,780	10,610	28,190	23,980	9,200	6,970

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

MEAN	42.2	26.1	22.2	18.2	15.0	14.7	30.4	186	510	331	142	80.7
MAX	119	46.0	36.7	34.5	29.0	21.8	71.4	298	897	774	264	146
(WY)	(2003)	(1998)	(1991)	(1997)	(1997)	(1994)	(1994)	(1999)	(1991)	(1995)	(1993)	(1993)
MIN	11.1	4.68	5.19	6.18	7.19	6.65	5.07	65.6	244	126	26.7	17.1
(WY)	(2002)	(1989)	(1989)	(1989)	(1989)	(1991)	(1991)	(2002)	(1992)	(2001)	(2001)	(2001)

06228450 SOUTH FORK LITTLE WIND RIVER BELOW WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004	
ANNUAL TOTAL	28,490.1		43,117.2		--	
ANNUAL MEAN	78.1		118		119	
HIGHEST ANNUAL MEAN	--		--		189	1999
LOWEST ANNUAL MEAN	--		--		58.5	2001
HIGHEST DAILY MEAN	775	Jun 1	967	Jun 30	1,930	Jun 13, 1991
LOWEST DAILY MEAN	9.7	Feb 4	9.9	Feb 2-19	3.5	Mar 17, 1991
ANNUAL SEVEN-DAY MINIMUM	9.9	Feb 4	9.9	Feb 2	3.6	Mar 16, 1991
MAXIMUM PEAK FLOW	--		1,180	Jun 7	2,120	Jun 13, 1991
MAXIMUM PEAK STAGE	--		4.91	Jun 7	6.43	Jun 13, 1991
ANNUAL RUNOFF (AC-FT)	56,510		85,520		85,860	
10 PERCENT EXCEEDS	237		345		314	
50 PERCENT EXCEEDS	20		19		33	
90 PERCENT EXCEEDS	10		10		11	



06228510 RAY CANAL AT HEADWORKS, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 43°00'02", long 108°55'56", in NW¼ SW¼ SW¼ sec.6, T.1 S., R.1 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 160 ft downstream from headgate, 300 ft upstream from culvert on County Road 43, 2.0 mi upstream from Crooked Creek, and 2.4 mi west of Fort Washakie.

PERIOD OF RECORD.--April 1989 to September 1999, April 2001 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,710 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Flow is diverted from the South Fork Little Wind River for irrigation. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation, is given below:

Mar. 23 . . . 27.8

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	24	18	206	324	231	189
2	---	---	---	---	---	---	30	18	225	315	230	190
3	---	---	---	---	---	---	27	17	260	307	226	195
4	---	---	---	---	---	---	25	17	296	297	213	186
5	---	---	---	---	---	---	27	17	319	292	193	186
6	---	---	---	---	---	---	28	28	340	319	182	186
7	---	---	---	---	---	---	28	37	316	334	174	187
8	---	---	---	---	---	---	32	29	271	333	172	185
9	---	---	---	---	---	---	40	35	295	325	169	183
10	---	---	---	---	---	---	36	51	308	308	171	181
11	---	---	---	---	---	---	36	70	297	299	177	179
12	---	---	---	---	---	---	38	73	289	290	191	175
13	---	---	---	---	---	---	39	77	290	283	200	176
14	---	---	---	---	---	---	41	123	291	279	197	170
15	---	---	---	---	---	---	41	145	338	277	194	155
16	---	---	---	---	---	---	38	142	354	275	192	156
17	---	---	---	---	---	---	38	138	352	267	191	172
18	---	---	---	---	---	---	38	145	330	260	190	161
19	---	---	---	---	---	---	37	175	326	261	175	159
20	---	---	---	---	---	---	52	196	344	270	177	143
21	---	---	---	---	---	---	50	207	343	271	177	119
22	---	---	---	---	---	---	50	193	334	267	174	105
23	---	---	---	---	---	---	48	186	330	284	173	106
24	---	---	---	---	---	---	48	200	340	290	172	105
25	---	---	---	---	---	---	48	205	344	273	175	105
26	---	---	---	---	---	---	48	194	348	260	178	105
27	---	---	---	---	---	---	48	175	361	243	174	92
28	---	---	---	---	---	---	47	197	352	239	175	83
29	---	---	---	---	---	---	38	237	347	237	174	80
30	---	---	---	---	---	---	22	223	302	233	187	74
31	---	---	---	---	---	---	---	208	---	232	194	---
TOTAL	---	---	---	---	---	---	1,142	3,776	9,448	8,744	5,798	4,488
MEAN	---	---	---	---	---	---	38.1	122	315	282	187	150
MAX	---	---	---	---	---	---	52	237	361	334	231	195
MIN	---	---	---	---	---	---	22	17	206	232	169	74
AC-FT	---	---	---	---	---	---	2,270	7,490	18,740	17,340	11,500	8,900

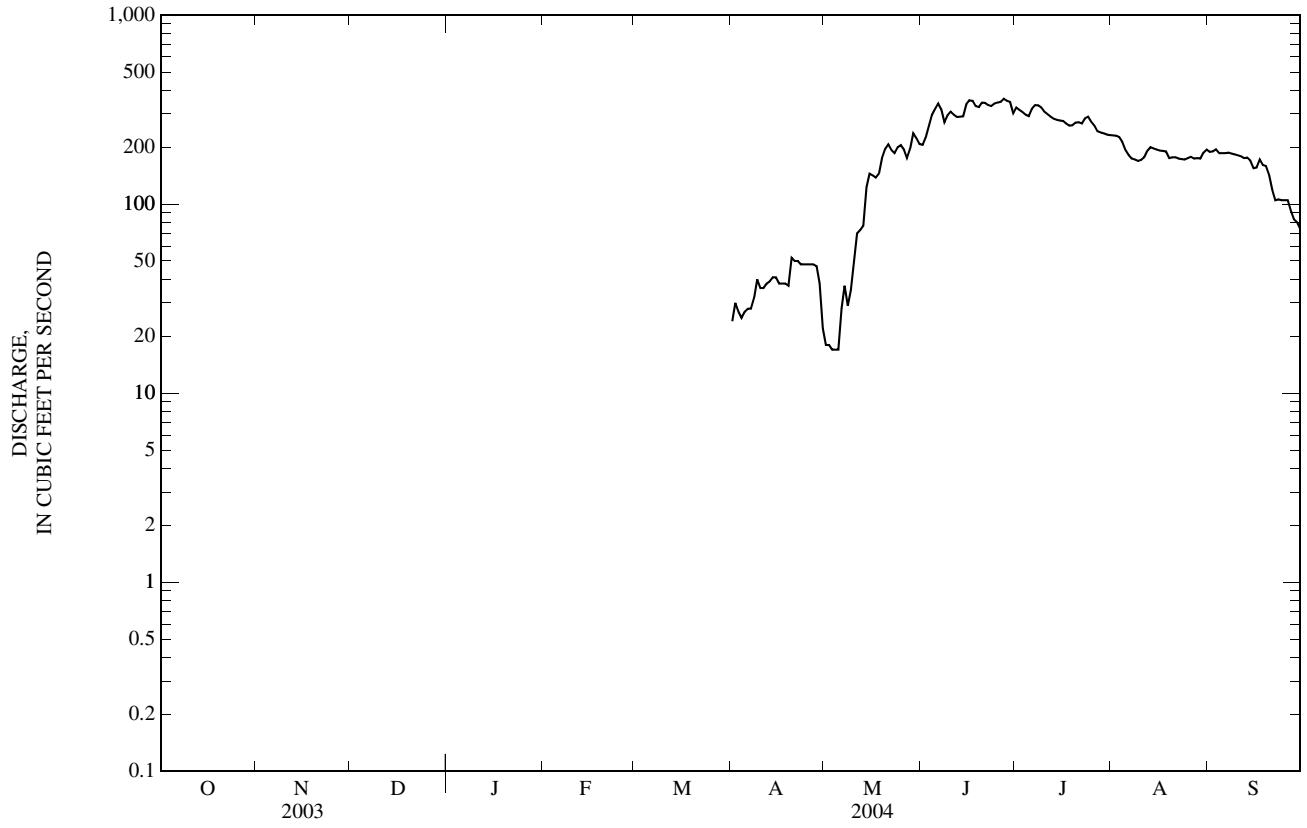
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)*

MEAN	33.4	21.6	---	---	---	---	20.2	109	222	228	155	95.6
MAX	73.2	28.9	---	---	---	---	47.5	199	320	287	241	167
(WY)	(1998)	(1995)	---	---	---	---	(1989)	(1992)	(1990)	(1996)	(1995)	(1997)
MIN	0.81	14.2	---	---	---	---	0.97	21.3	29.5	100	38.5	21.4
(WY)	(1994)	(1993)	---	---	---	---	(1992)	(1991)	(1995)	(1992)	(2001)	(2001)

06228510 RAY CANAL AT HEADWORKS, NEAR FORT WASHAKIE, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1989 - 2004*	
HIGHEST DAILY MEAN	361	Jun 27	390	Jun 29, 1996
LOWEST DAILY MEAN	17	May 3-5	0.00	Apr 1, 1991
MAXIMUM PEAK FLOW	396	Jul 1	446	Jun 12, 1996
MAXIMUM PEAK STAGE	4.00	Jul 1	4.11	Jun 24, 1999

* For period of operation.



06228800 NORTH FORK LITTLE WIND RIVER NEAR FORT WASHAKIE, WY

LOCATION.--Lat 43°01'43", long 109°00'02", in NW¼ SW¼ SE¼ sec.28, T.1 N., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank 0.2 mi upstream from North Fork Diversion Canal and 5.9 mi northeast of Fort Washakie.

DRAINAGE AREA.--112 mi^2.

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,120 ft above NGVD of 1929, from topographic map. Prior to October 21, 1993, at site 2,000 ft upstream at different 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 80 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	e15	e16	e15	e12	e9.5	30	86	179	775	157	143
2	24	e18	e16	e17	e12	e9.0	39	93	187	648	145	136
3	23	e20	e15	e16	e11	e9.5	32	99	209	542	142	202
4	23	e19	e14	e16	e11	e9.5	30	121	289	480	136	219
5	22	e18	e12	e15	e11	e10	37	156	402	434	131	224
6	22	e16	e13	e17	e12	e11	40	191	502	397	128	227
7	22	e15	e14	e18	e12	e10	43	218	607	367	125	216
8	22	e16	e14	e19	e13	11	48	256	645	367	119	201
9	22	e17	e12	e18	e12	15	59	292	648	376	114	181
10	21	e18	e13	e17	e11	20	55	287	663	369	110	163
11	21	e19	e12	e18	e11	19	57	286	598	344	106	148
12	20	e18	e10	e17	e7.8	18	61	254	484	313	101	137
13	19	e19	e12	e16	e9.0	18	68	229	392	288	98	146
14	18	e19	e13	e16	e9.5	19	73	206	328	279	94	152
15	18	e20	e10	e15	e10	20	73	188	293	277	92	157
16	18	e19	e8.0	e15	e11	20	66	174	290	274	91	157
17	17	e18	e11	e15	e11	21	63	159	298	256	88	151
18	17	e19	e10	e14	e12	21	62	160	314	237	99	143
19	16	e20	e11	e14	e12	21	60	197	382	221	111	135
20	16	e19	e11	e15	e11	21	58	208	417	212	113	134
21	16	e17	e12	e14	e10	20	55	273	408	205	111	134
22	15	e16	e13	e14	e9.5	25	55	260	386	203	105	137
23	15	e14	e11	e13	e9.0	37	56	240	350	232	110	136
24	15	e15	e12	e12	e9.2	42	63	215	343	252	117	134
25	15	e16	e13	e11	e9.4	40	59	198	370	255	130	131
26	15	e17	e14	e11	e9.6	34	62	179	424	247	176	128
27	15	e16	e15	e10	e10	28	67	165	479	227	195	124
28	15	e15	e14	e11	e11	23	77	180	642	220	199	122
29	16	e16	e13	e11	e10	21	80	206	753	209	187	119
30	e17	e17	e14	e12	---	22	79	198	808	190	171	130
31	e13	---	e14	e11	---	25	---	188	---	172	155	---
TOTAL	572	521	392.0	453	309.0	629.5	1,707	6,162	13,090	9,868	3,956	4,667
MEAN	18.5	17.4	12.6	14.6	10.7	20.3	56.9	199	436	318	128	156
MAX	24	20	16	19	13	42	80	292	808	775	199	227
MIN	13	14	8.0	10	7.8	9.0	30	86	179	172	88	119
AC-FT	1,130	1,030	778	899	613	1,250	3,390	12,220	25,960	19,570	7,850	9,260

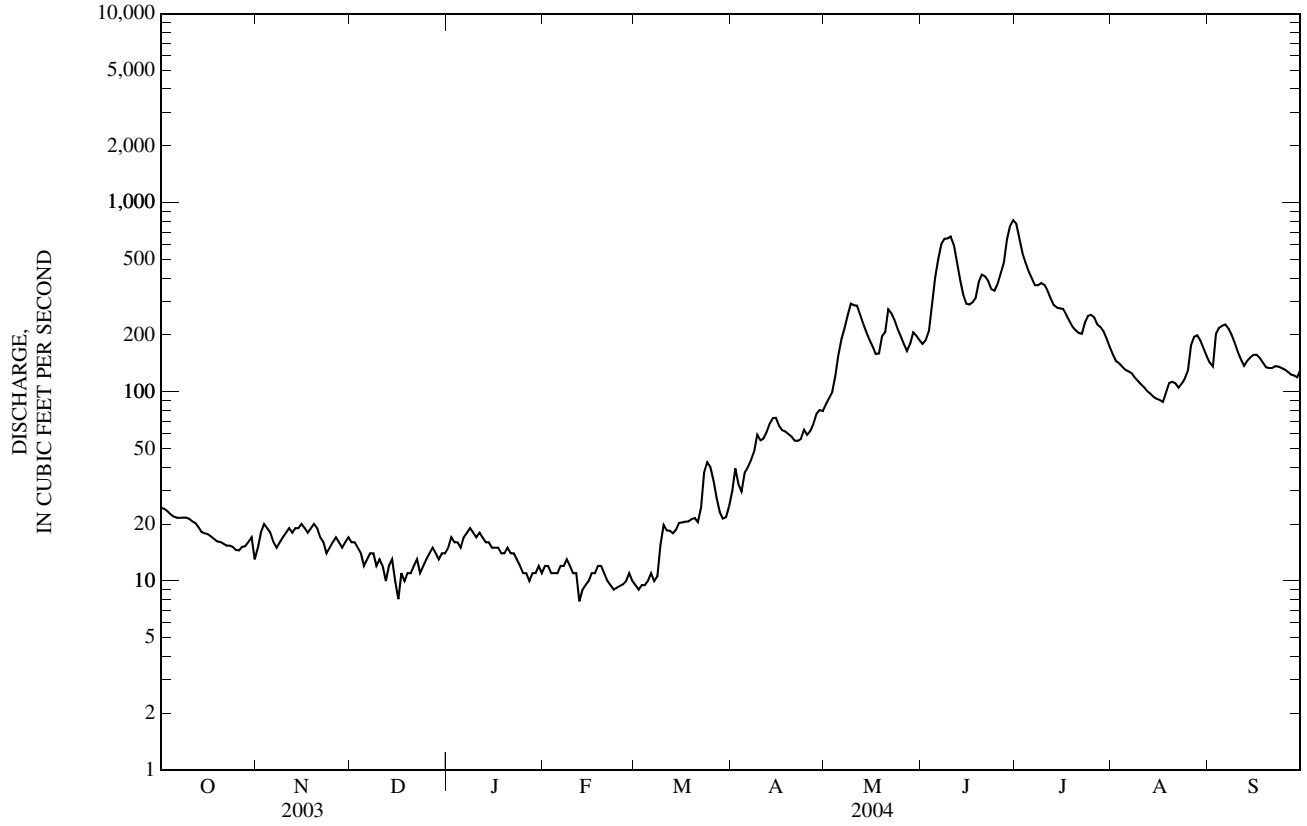
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

MEAN	44.7	31.3	23.3	18.5	17.4	24.7	51.3	264	583	310	114	68.4
MAX	76.1	57.3	50.1	31.9	29.5	38.8	84.5	420	1,091	758	227	156
(WY)	(1999)	(1999)	(1996)	(1996)	(1999)	(1995)	(1994)	(2000)	(1999)	(1995)	(1997)	(2004)
MIN	13.5	14.7	12.6	8.95	8.53	13.1	27.5	141	176	74.9	34.3	24.5
(WY)	(1989)	(1989)	(2004)	(1989)	(1989)	(2001)	(1993)	(2002)	(2001)	(1994)	(2002)	(2001)

06228800 NORTH FORK LITTLE WIND RIVER NEAR FORT WASHAKIE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004	
ANNUAL TOTAL	27,458.7		42,326.5		--	
ANNUAL MEAN	75.2		116		130	
HIGHEST ANNUAL MEAN	--		--		208	1999
LOWEST ANNUAL MEAN	--		--		61.7	2001
HIGHEST DAILY MEAN	877	May 30	808	Jun 30	2,070	Jun 13, 1991
LOWEST DAILY MEAN	8.0	Dec 16	7.8	Feb 12	6.5	Feb 3, 1989
ANNUAL SEVEN-DAY MINIMUM	9.3	Jan 20	9.5	Feb 21	7.4	Feb 2, 1989
MAXIMUM PEAK FLOW	--		830	Jun 30	2,360[a]	Jun 13, 1991
MAXIMUM PEAK STAGE	--		5.99	Jun 30	7.19	Jun 17, 1999
ANNUAL RUNOFF (AC-FT)	54,460		83,950		93,860	
10 PERCENT EXCEEDS	249		294		356	
50 PERCENT EXCEEDS	24		36		42	
90 PERCENT EXCEEDS	11		11		15	

a Gage height, 6.20 ft, site and datum then in use.
e Estimated.



06229900 TROUT CREEK NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42°57'04", long 108°56'54", in SE¼ NW¼ NW¼ sec.25, T.1 S., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, 50 ft upstream of Blue Trail Crossing and 5.0 miles southwest of Fort Washakie.

DRAINAGE AREA.--16.1 mi^2.

PERIOD OF RECORD.--Annual maximum, water years 1961-68, 1970-84. May 1990 to September 1999, April 2002 to current year (no winter records since 1997).

GAGE.--Water-stage recorder. Elevation of gage is 5,935 ft above NGVD of 1929, from topographic map. October 1, 1961 to September 30, 1968, crest-stage gage at site 100 ft downstream at datum 1.05 ft lower. October 1, 1969 to September 30, 1984, crest-stage gage at present site at datum 1.05 ft lower.

REMARKS.--Records good. Results of discharge measurements, in cubic feet per second, made during the period station was not in operation, are given below:

Oct. 14 . . . 3.60

Mar. 23 . . . 4.23

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	4.2	5.6	15	16	7.9	6.1
2	---	---	---	---	---	---	4.4	5.7	15	16	7.8	6.0
3	---	---	---	---	---	---	4.3	6.0	16	15	7.7	6.4
4	---	---	---	---	---	---	4.1	6.5	16	15	7.6	6.2
5	---	---	---	---	---	---	4.1	8.1	17	15	7.5	6.1
6	---	---	---	---	---	---	4.2	11	18	14	7.4	5.9
7	---	---	---	---	---	---	4.2	15	17	14	7.3	5.8
8	---	---	---	---	---	---	4.5	18	16	14	7.3	5.7
9	---	---	---	---	---	---	5.0	20	16	13	7.2	5.6
10	---	---	---	---	---	---	4.6	20	15	12	7.0	5.6
11	---	---	---	---	---	---	4.6	21	15	12	7.0	5.5
12	---	---	---	---	---	---	4.6	20	13	11	6.9	5.5
13	---	---	---	---	---	---	4.6	19	12	11	6.8	5.6
14	---	---	---	---	---	---	4.6	18	11	11	6.8	5.6
15	---	---	---	---	---	---	4.7	17	10	11	6.7	5.5
16	---	---	---	---	---	---	4.8	16	9.9	11	6.7	5.4
17	---	---	---	---	---	---	4.7	15	10	10	6.6	5.3
18	---	---	---	---	---	---	4.8	15	12	9.9	8.0	5.3
19	---	---	---	---	---	---	4.7	16	13	9.7	9.4	5.3
20	---	---	---	---	---	---	4.7	17	12	9.4	7.9	5.3
21	---	---	---	---	---	---	4.8	18	11	9.1	7.4	5.2
22	---	---	---	---	---	---	4.8	18	10	9.0	7.1	5.2
23	---	---	---	---	---	---	4.7	18	9.6	11	7.1	5.2
24	---	---	---	---	---	---	4.9	18	9.2	11	7.0	5.2
25	---	---	---	---	---	---	4.8	17	9.9	10	6.9	5.1
26	---	---	---	---	---	---	4.9	16	10	9.3	6.8	5.1
27	---	---	---	---	---	---	5.0	16	12	9.2	6.8	5.1
28	---	---	---	---	---	---	5.4	16	13	9.3	6.7	5.1
29	---	---	---	---	---	---	5.6	18	14	9.0	6.6	5.1
30	---	---	---	---	---	---	5.7	16	15	8.5	6.4	5.4
31	---	---	---	---	---	---	---	16	---	8.3	6.3	---
TOTAL	---	---	---	---	---	---	141.0	476.9	392.6	353.7	222.6	165.4
MEAN	---	---	---	---	---	---	4.70	15.4	13.1	11.4	7.18	5.51
MAX	---	---	---	---	---	---	5.7	21	18	16	9.4	6.4
MIN	---	---	---	---	---	---	4.1	5.6	9.2	8.3	6.3	5.1
AC-FT	---	---	---	---	---	---	280	946	779	702	442	328

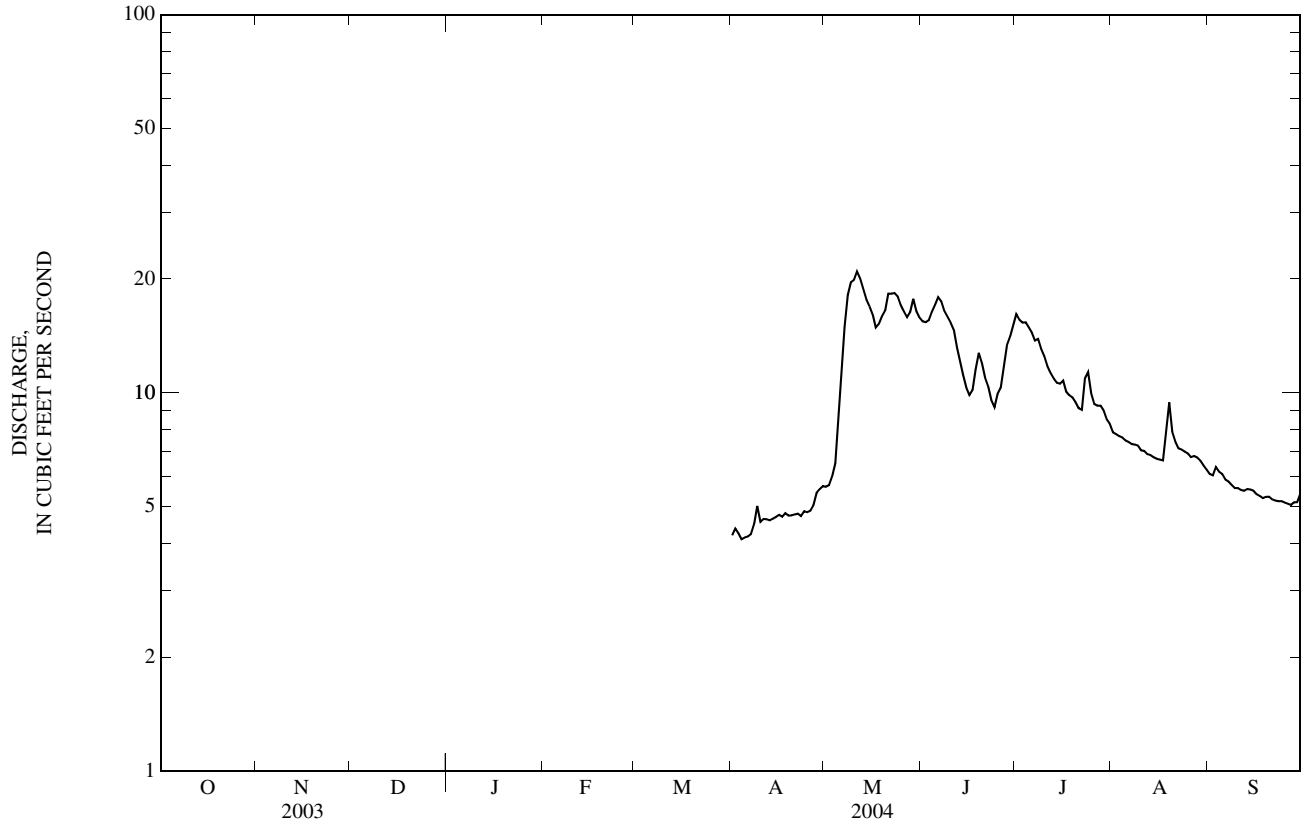
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)*

MEAN	5.79	5.28	4.79	4.57	4.38	4.54	5.55	18.4	39.7	13.4	6.91	5.89
MAX	8.45	7.37	6.26	5.97	5.15	5.52	7.47	32.4	105	37.1	11.3	9.37
(WY)	(1996)	(1996)	(1996)	(1996)	(1996)	(1996)	(1996)	(1991)	(1995)	(1995)	(1995)	(1995)
MIN	3.77	4.12	3.78	3.71	3.44	3.78	4.05	12.3	7.71	4.43	3.65	3.65
(WY)	(1991)	(1991)	(1995)	(1991)	(1991)	(1991)	(1991)	(1992)	(1994)	(1994)	(1994)	(1994)

06229900 TROUT CREEK NEAR FORT WASHAKIE, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1990 - 1996*	
ANNUAL MEAN	--		10.4	
HIGHEST ANNUAL MEAN	--		17.3	1995
LOWEST ANNUAL MEAN	--		5.95	1994
HIGHEST DAILY MEAN	21	May 11	316	Jun 2, 1991
LOWEST DAILY MEAN	4.1	Apr 4,5	3.0	Dec 22, 1990
MAXIMUM PEAK FLOW	22	May 9	500[a]	Jun 2, 1991
MAXIMUM PEAK STAGE	4.79	May 9	7.49	Jun 2, 1991
ANNUAL RUNOFF (AC-FT)	--		7,550	

* For period of operation.
a From rating curve extended above 160 ft^3/s on basis of slope-conveyance computation of peak flow.



06233000 LITTLE POPO AGIE RIVER NEAR LANDER, WY

LOCATION.--Lat 42°43'00", long 108°38'34", in NE¼ SE¼ sec.27, T.32 N., R.99 W., Fremont County, Hydrologic Unit 10080003, on left bank 700 ft downstream from bridge on State Highway 28, 2.5 mi downstream from Red Canyon Creek, and 9.5 mi southeast of post office in Lander.

DRAINAGE AREA.--125 mi^2.

PERIOD OF RECORD.--March 1946 to current year (no winter records since 1971).

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,436.49 ft above NGVD of 1929.

REMARKS.--Records good. Diversions for irrigation of about 540 acres upstream from station. Slight regulation by Christina Lake, capacity, about 3,860 acre-ft. Results of discharge measurements, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 13 . . . 19.2

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	---	---	---	---	---	44	82	155	434	79	54
2	22	---	---	---	---	---	50	87	166	286	78	51
3	21	---	---	---	---	---	42	100	183	243	73	52
4	21	---	---	---	---	---	39	127	210	224	68	54
5	21	---	---	---	---	---	47	165	223	205	63	53
6	21	---	---	---	---	---	50	212	266	189	64	51
7	22	---	---	---	---	---	53	236	295	176	59	48
8	22	---	---	---	---	---	53	248	288	190	56	46
9	21	---	---	---	---	---	61	257	286	178	54	45
10	21	---	---	---	---	---	50	251	298	158	51	43
11	20	---	---	---	---	---	57	254	269	148	49	42
12	19	---	---	---	---	---	58	228	231	136	48	41
13	---	---	---	---	---	---	57	206	198	129	46	44
14	---	---	---	---	---	---	67	183	188	126	45	45
15	---	---	---	---	---	---	70	165	191	127	44	43
16	---	---	---	---	---	---	62	156	187	126	43	42
17	---	---	---	---	---	---	57	148	180	117	42	40
18	---	---	---	---	---	---	59	164	179	111	59	38
19	---	---	---	---	---	---	56	177	188	109	83	38
20	---	---	---	---	---	---	54	194	199	104	80	54
21	---	---	---	---	---	---	54	224	202	101	96	67
22	---	---	---	---	---	---	53	206	182	94	78	77
23	---	---	---	---	---	---	53	191	175	121	77	77
24	---	---	---	---	---	---	55	175	182	172	78	77
25	---	---	---	---	---	---	56	161	220	144	79	76
26	---	---	---	---	---	---	58	146	213	130	87	73
27	---	---	---	---	---	---	66	137	480	119	80	70
28	---	---	---	---	---	---	80	159	381	109	77	74
29	---	---	---	---	---	---	85	199	305	101	69	75
30	---	---	---	---	---	---	83	171	322	92	63	81
31	---	---	---	---	---	37	---	158	---	84	57	---
TOTAL	---	---	---	---	---	---	1,729	5,567	7,042	4,783	2,025	1,671
MEAN	---	---	---	---	---	---	57.6	180	235	154	65.3	55.7
MAX	---	---	---	---	---	---	85	257	480	434	96	81
MIN	---	---	---	---	---	---	39	82	155	84	42	38
AC-FT	---	---	---	---	---	---	3,430	11,040	13,970	9,490	4,020	3,310

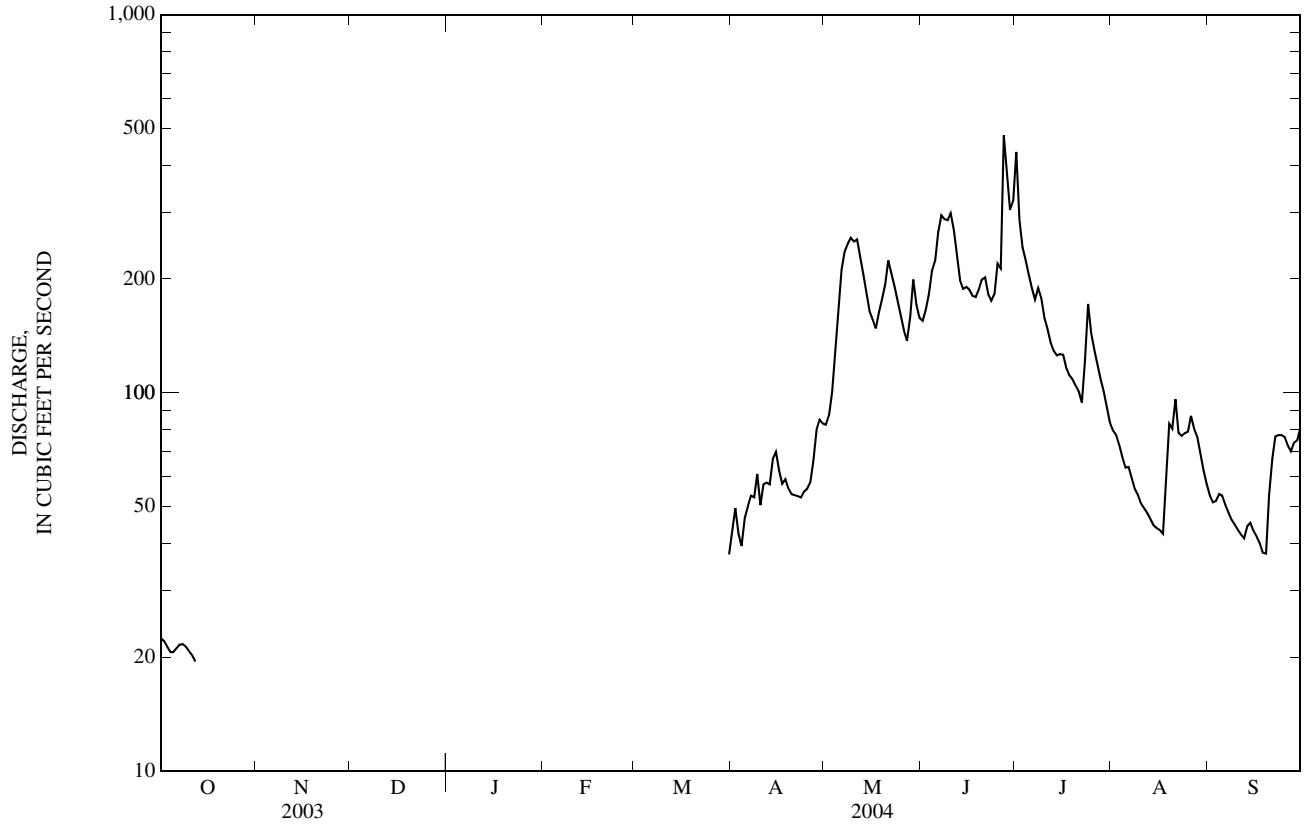
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004, BY WATER YEAR (WY)*

MEAN	35.6	29.7	25.6	23.4	23.7	24.6	48.1	199	330	133	55.4	46.2
MAX	50.7	41.8	35.8	32.9	42.5	33.9	109	398	856	404	98.6	114
(WY)	(1972)	(1951)	(1951)	(1948)	(1962)	(1948)	(1987)	(1980)	(1986)	(1995)	(1950)	(1973)
MIN	22.5	21.4	17.5	13.9	17.4	18.8	24.4	73.5	73.4	32.2	21.9	19.7
(WY)	(1961)	(1963)	(1960)	(1963)	(1960)	(1957)	(2002)	(2002)	(1977)	(2001)	(1960)	(2002)

06233000 LITTLE POPO AGIE RIVER NEAR LANDER, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1946 - 2004*	
ANNUAL MEAN	--		80.4	
HIGHEST ANNUAL MEAN	--		131	1965
LOWEST ANNUAL MEAN	--		37.0	1960
HIGHEST DAILY MEAN	480	Jun 27	1,590	Jun 16, 1963
LOWEST DAILY MEAN	19	Oct 12	12	Several days, 1960,1963
MAXIMUM PEAK FLOW	732	Jun 27	2,010	Jun 16, 1963
MAXIMUM PEAK STAGE	4.53	Jun 27	6.64	Jun 16, 1963
ANNUAL RUNOFF (AC-FT)	--		58,230	

* For period of operation.



06235500 LITTLE WIND RIVER NEAR RIVERTON, WY

LOCATION.--Lat 42°59'51", long 108°22'29", in NE¼ NW¼ sec.11, T.1 S., R.4 E., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 1.8 mi upstream from mouth and 1.9 mi southeast of Riverton.

DRAINAGE AREA.--1,904 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1941 to current year. Prior to October 1958, published as Popo Agie River near Riverton.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,901.84 ft above NGVD of 1929. Prior to September 19, 1956, at site 600 ft downstream at same datum. U.S. Army Corp of Engineers 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 62,900 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	e135	e175	e135	e155	e210	219	701	480	3,830	434	350
2	152	142	e170	e140	e145	e200	245	635	448	3,440	382	313
3	157	e145	e165	e135	e145	e200	265	625	507	2,670	351	302
4	151	e155	e166	e125	e145	e195	261	733	655	2,180	314	378
5	142	e160	e160	e120	e155	e200	254	934	1,030	2,020	280	454
6	142	e160	e150	e110	e155	e210	259	1,240	1,480	1,760	260	430
7	142	e160	e155	e115	e150	e230	261	1,420	2,130	1,530	220	409
8	139	e155	e165	e125	e150	e240	279	1,550	2,580	1,390	203	376
9	133	e165	e155	e140	e145	e250	448	1,700	2,680	1,660	177	359
10	129	e170	e150	e140	e145	e260	637	e1,940	2,820	1,520	156	338
11	127	e175	e145	e135	e140	e260	533	e1,840	2,550	1,330	123	322
12	126	e180	e150	e135	e135	e267	504	1,740	1,770	1,140	118	305
13	129	e180	e155	e130	e125	e280	479	1,470	1,260	998	116	293
14	129	e175	e160	e135	e140	e280	430	1,290	994	897	117	313
15	129	e185	e165	e140	e140	e300	423	1,060	847	833	115	310
16	129	e180	e150	e135	e145	e320	407	906	817	854	107	317
17	133	e175	e155	e135	e160	e400	387	798	832	794	99	318
18	138	e180	e160	e135	e170	e600	e379	649	977	704	145	293
19	139	e185	e155	e125	e175	725	355	715	1,180	637	873	265
20	136	e185	e145	e135	e175	719	339	884	1,340	582	604	233
21	136	e175	e150	e140	e170	400	341	1,090	1,450	544	529	280
22	132	e160	e145	e135	e165	341	361	1,200	1,330	486	503	348
23	129	e140	e140	e130	e170	325	348	1,060	1,220	557	448	385
24	129	e150	e135	e140	e180	316	345	910	1,200	850	512	383
25	126	e160	e135	e140	e195	322	378	738	1,350	878	479	385
26	126	e165	e140	e138	e210	325	382	600	1,670	783	495	385
27	127	e160	e145	e130	e220	315	377	496	2,140	721	542	373
28	129	e165	e145	e140	e220	297	383	449	3,090	657	524	381
29	129	e170	e135	e145	e210	278	547	590	3,330	624	491	390
30	136	e180	e125	e155	---	247	590	688	3,570	560	444	468
31	e120	---	e130	e160	---	219	---	558	---	493	400	---
TOTAL	4,165	4,972	4,676	4,178	4,735	9,731	11,416	31,209	47,727	37,922	10,561	10,456
MEAN	134	166	151	135	163	314	381	1,007	1,591	1,223	341	349
MAX	157	185	175	160	220	725	637	1,940	3,570	3,830	873	468
MIN	120	135	125	110	125	195	219	449	448	486	99	233
AC-FT	8,260	9,860	9,270	8,290	9,390	19,300	22,640	61,900	94,670	75,220	20,950	20,740

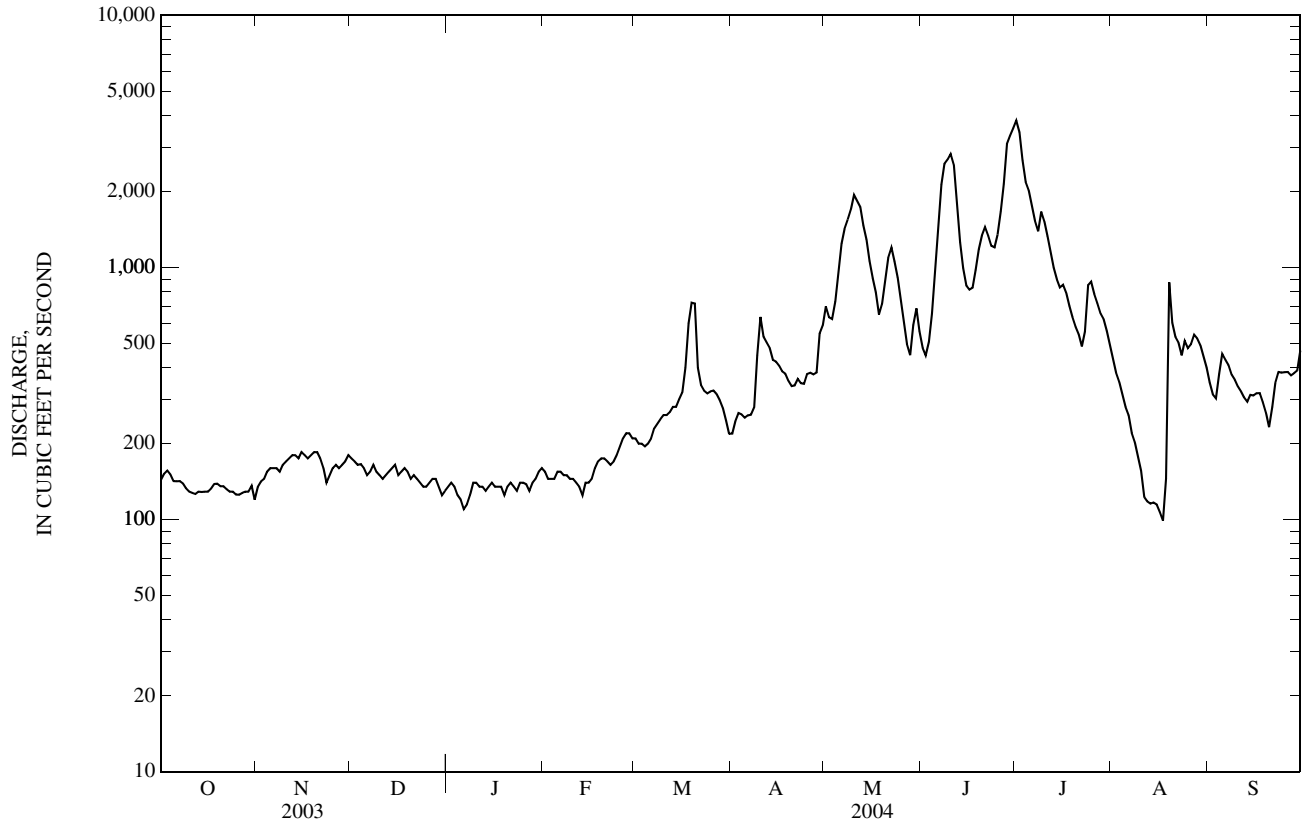
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)

MEAN	317	278	211	186	208	268	366	1,095	2,336	978	263	255
MAX	728	501	351	302	728	579	1,044	2,351	5,109	3,345	699	1,323
(WY)	(1983)	(1974)	(1974)	(1974)	(1962)	(1998)	(1973)	(1958)	(1983)	(1995)	(1965)	(1973)
MIN	73.5	122	129	95.0	123	177	148	203	233	84.4	22.1	33.0
(WY)	(2002)	(2002)	(1959)	(1961)	(1959)	(2001)	(1989)	(2002)	(2001)	(2001)	(2001)	(2001)

06235500 LITTLE WIND RIVER NEAR RIVERTON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004	
ANNUAL TOTAL	93,837		181,748		--	
ANNUAL MEAN	257		497		564	
HIGHEST ANNUAL MEAN	--		--		1,021	1983
LOWEST ANNUAL MEAN	--		--		175	2001
HIGHEST DAILY MEAN	2,390	Jun 1	3,830	Jul 1	12,800	Jun 17, 1963
LOWEST DAILY MEAN	39	Aug 7	99	Aug 17	17	Aug 30, 2001
ANNUAL SEVEN-DAY MINIMUM	44	Aug 3	114	Aug 11	18	Aug 27, 2001
MAXIMUM PEAK FLOW	--		4,120	Jul 1	14,700	Jun 17, 1963
MAXIMUM PEAK STAGE	--		6.41	Jul 1	10.85	Jun 17, 1963
ANNUAL RUNOFF (AC-FT)	186,100		360,500		408,600	
10 PERCENT EXCEEDS	556		1,250		1,400	
50 PERCENT EXCEEDS	160		260		260	
90 PERCENT EXCEEDS	83		133		140	

e Estimated.



06235500 LITTLE WIND RIVER NEAR RIVERTON, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-58, 1960-64, 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
DEC											
30...	1050	187	630	12.8	106	7.8	825	-1.0	.0	E3	E20
MAR											
12...	1340	267	630	12.2	101	8.3	817	8.0	.0	E3	E10
JUN											
29...	0945	3,200	642	7.0	84	7.9	240	20.0	15.5	250	530
AUG											
30...	1505	420	625	9.0	123	8.4	607	29.5	20.5	64	120

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY

LOCATION.--Lat 43°07'45", long 108°13'24", in SE¼ SE¼ SE¼ sec.24, T.2 N., R.5 E., Fremont County, Hydrologic Unit 10080001, on left bank 5.3 mi upstream from Boysen Reservoir and 9.4 mi southwest of Shoshoni.

DRAINAGE AREA.--4,390 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,775 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by Bull Lake, Pilot Butte Reservoir, and several small reservoirs, combined capacity, 190,000 acre-ft, and diversions for irrigation of about 191,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	547	e540	e600	e460	e420	e510	575	661	553	5,640	603	525
2	414	e500	e590	e455	e390	e500	563	635	519	5,600	548	479
3	351	e500	e560	e430	e390	e500	533	584	528	4,280	509	473
4	328	e480	e550	e420	e420	e490	456	634	618	3,400	469	557
5	302	e470	e580	e390	e450	e520	413	753	916	3,210	442	669
6	294	e450	e550	e360	e460	e540	403	1,020	1,370	3,370	415	656
7	289	e440	e560	e380	e470	e540	402	1,260	2,140	2,770	376	633
8	282	e450	e580	e410	e470	e540	430	1,350	2,920	2,330	357	601
9	274	e460	e560	e430	e460	e580	603	1,560	2,790	2,490	338	536
10	265	e500	e530	e430	e450	e600	778	1,820	2,870	2,190	297	522
11	262	e580	e490	e440	e440	e620	650	1,720	3,250	1,880	271	489
12	261	e600	e520	e430	e420	e640	591	1,720	1,990	1,540	258	486
13	261	e640	e540	e430	e400	e660	578	1,460	1,370	1,220	253	487
14	258	e660	e540	e440	e430	e680	521	1,250	1,080	987	248	503
15	257	e660	e560	e440	e440	e700	508	1,030	902	892	244	514
16	256	670	e550	e450	e450	e720	492	846	833	925	244	511
17	260	633	e520	e450	e480	e800	471	764	811	899	243	513
18	264	605	e540	e460	e490	e1,000	454	648	908	799	304	487
19	262	606	e550	e440	e490	e1,100	452	628	1,170	743	960	472
20	261	633	e550	e450	e470	e850	432	743	1,340	687	834	456
21	262	641	e560	e440	e460	749	469	883	1,570	646	695	486
22	258	598	e560	e450	e460	665	490	1,030	1,450	602	693	551
23	254	497	e550	e460	e470	696	448	935	1,290	822	640	589
24	422	e380	e520	e440	e490	759	440	810	1,250	1,000	667	598
25	552	e400	e520	e400	e510	761	451	714	1,360	1,090	689	581
26	559	e430	e490	e400	e530	754	450	614	1,690	976	677	562
27	545	e460	e470	e400	e550	708	439	533	2,270	875	759	562
28	538	e500	e470	e410	e560	645	425	485	3,440	817	729	675
29	554	e520	e460	e420	e520	590	551	536	3,960	762	700	637
30	595	e560	e440	e430	---	563	604	707	4,270	716	644	727
31	e560	---	e450	e440	---	553	---	620	---	649	581	---
TOTAL	11,047	16,063	16,510	13,285	13,440	20,533	15,072	28,953	51,428	54,807	15,687	16,537
MEAN	356	535	533	429	463	662	502	934	1,714	1,768	506	551
MAX	595	670	600	460	560	1,100	778	1,820	4,270	5,640	960	727
MIN	254	380	440	360	390	490	402	485	519	602	243	456
AC-FT	21,910	31,860	32,750	26,350	26,660	40,730	29,900	57,430	102,000	108,700	31,120	32,800

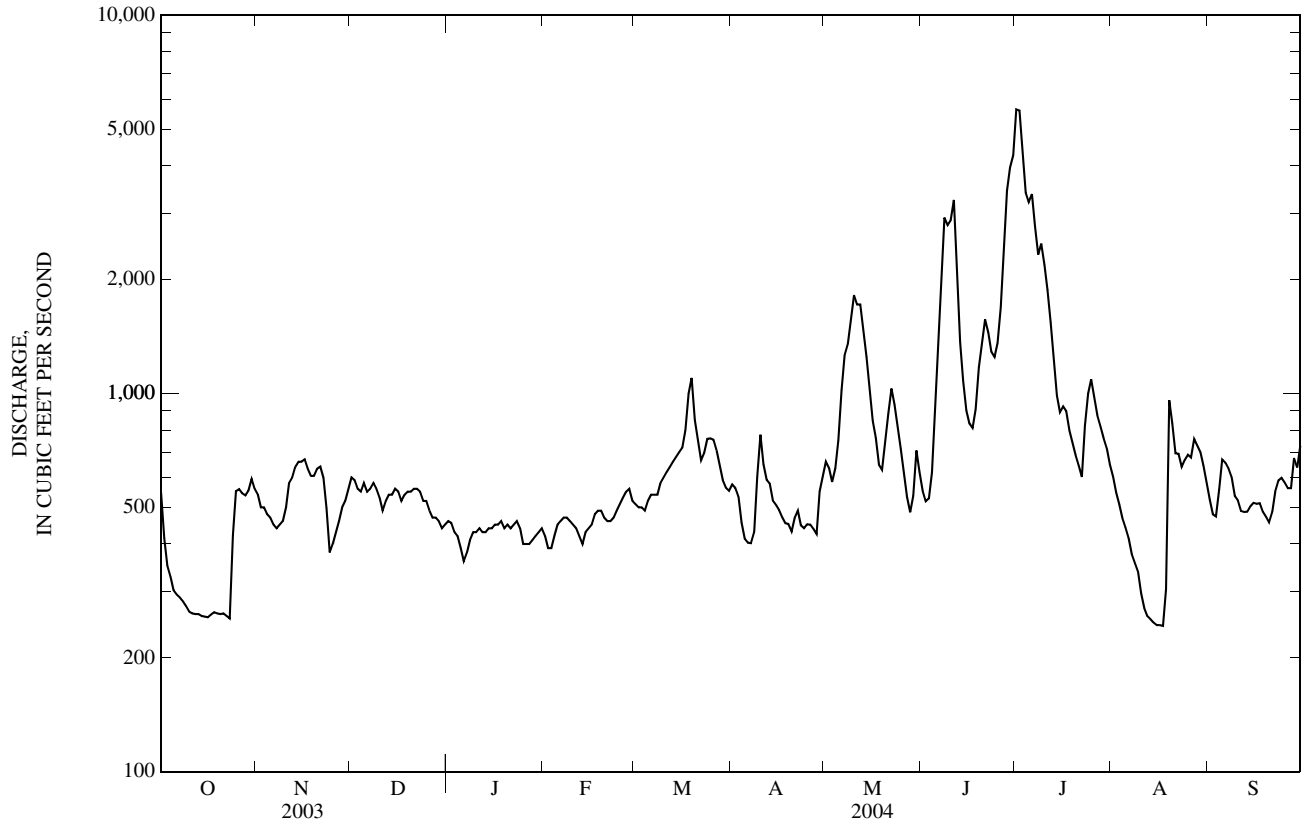
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

MEAN	692	729	554	521	530	674	594	1,578	4,120	1,834	584	531
MAX	1,455	1,212	719	665	755	1,096	1,074	4,175	9,432	6,650	1,696	860
(WY)	(1999)	(1999)	(1996)	(1996)	(1996)	(1998)	(1999)	(1999)	(1999)	(1995)	(1997)	(1997)
MIN	309	300	427	356	324	472	347	325	342	163	130	252
(WY)	(2002)	(2002)	(2001)	(1993)	(2002)	(2002)	(2002)	(2002)	(2001)	(2001)	(2001)	(2001)

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	217,945		273,362		--	
ANNUAL MEAN	597		747		1,102	
HIGHEST ANNUAL MEAN	--		--		2,063	1999
LOWEST ANNUAL MEAN	--		--		372	2001
HIGHEST DAILY MEAN	5,940	Jun 1	5,640	Jul 1	17,900	Jun 14, 1991
LOWEST DAILY MEAN	164	Aug 1	243	Aug 17	113	Aug 29, 2001
ANNUAL SEVEN-DAY MINIMUM	177	Jul 31	252	Aug 11	121	Aug 27, 2001
MAXIMUM PEAK FLOW	--		6,330	Jul 2	18,700	Jun 14, 1991
MAXIMUM PEAK STAGE	--		5.54	Jul 2	9.31	Jun 14, 1991
ANNUAL RUNOFF (AC-FT)	432,300		542,200		798,200	
10 PERCENT EXCEEDS	916		1,270		2,000	
50 PERCENT EXCEEDS	476		549		590	
90 PERCENT EXCEEDS	220		387		306	

e Estimated.



06244500 FIVEMILE CREEK ABOVE WYOMING CANAL, NEAR PAVILLION, WY

LOCATION.--Lat 43°18'05", long 108°42'08", in SE¼ SW¼ SE¼ sec.24, T.4 N., R.1 E., Fremont County, Hydrologic Unit 10080005, on left bank 1,700 ft upstream from Wyoming Canal siphon and 4.0 mi north of Pavillion.

DRAINAGE AREA.--118 mi^2.

PERIOD OF RECORD.--October 1949 to September 1975, October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,500 ft above NGVD of 1929, from topographic map. August 27, 1948 to March 28, 1950, at site 0.2 mi downstream at different datum. March 29, 1950 to April 23, 1974 at site 325 ft downstream at present datum. April 24, 1974 to September 30, 1975, at site 25 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by reservoir system about 10.5 mi upstream. Diversion for irrigation of about 320 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1948 reached a stage of about 6.1 ft, discharge, 2,600 ft^3/s, on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	5.8	e7.8	e5.4	e6.0	e9.0	7.3	8.1	3.9	5.2	0.87	e8.4
2	5.2	6.7	e7.7	e5.6	e5.8	e8.8	8.6	7.3	3.7	8.8	0.65	e8.0
3	5.2	6.8	e7.6	e5.4	e5.6	e8.6	8.8	6.7	3.6	7.1	0.72	8.0
4	5.1	7.8	e7.7	e5.0	e5.8	e9.0	7.8	6.5	3.4	4.8	e0.94	7.8
5	5.2	e7.1	e7.4	e4.8	e6.2	e9.4	7.4	6.2	3.2	5.4	e0.92	7.9
6	5.4	e7.8	e7.3	e4.7	e6.4	e9.4	7.4	5.9	3.0	9.0	e0.96	5.9
7	5.3	e7.2	e7.4	e4.8	e6.8	e9.8	8.9	5.8	2.7	19	e1.0	4.9
8	5.2	e7.4	e7.6	e4.9	e7.2	e11	9.7	5.7	2.4	5.8	e0.94	4.5
9	5.1	e7.6	e7.6	e5.0	e7.4	e12	13	5.4	2.1	4.0	e0.90	4.1
10	5.1	e7.8	e7.4	e5.4	e7.6	e14	13	5.2	2.0	3.4	e0.84	3.8
11	6.0	e8.2	e7.0	e5.2	e7.4	20	9.8	5.2	1.6	2.9	e0.80	3.7
12	6.7	e8.8	e6.8	e5.2	e6.7	14	8.4	5.5	1.7	2.2	e0.78	3.9
13	6.0	9.2	e6.4	e5.0	e6.3	13	7.9	6.6	1.7	1.8	e0.74	4.3
14	5.9	8.4	e6.2	e5.2	e6.1	12	7.6	7.3	1.6	1.6	e0.70	4.4
15	6.2	7.0	e6.8	e5.2	e6.5	13	7.0	6.9	1.5	1.7	e0.68	4.0
16	6.3	7.8	e7.0	e5.4	e6.8	13	6.7	6.3	1.5	2.7	e0.66	3.6
17	6.3	7.4	e6.8	e5.4	e7.0	15	6.9	5.8	2.6	2.7	e0.64	4.1
18	6.2	7.8	e6.5	e5.4	e7.5	14	7.7	5.5	5.0	1.8	e3.0	3.7
19	6.2	8.0	e6.2	e5.6	e8.0	13	9.3	5.3	6.7	1.0	e7.0	3.9
20	6.1	9.6	e5.8	e5.6	e8.2	12	8.6	5.3	7.2	0.64	e10	4.5
21	6.1	7.6	e6.0	e5.6	e8.0	10	7.4	6.4	5.8	0.48	e13	5.3
22	6.1	e6.0	e5.8	e5.8	e8.0	9.9	7.1	6.5	4.3	0.41	e9.0	5.5
23	6.4	e6.6	e5.3	e5.6	e8.3	9.6	7.1	6.0	3.5	2.8	e7.4	5.7
24	6.5	e6.4	e5.2	e5.8	e8.6	9.3	7.1	5.5	3.0	3.7	e10	5.7
25	6.4	e6.8	e5.4	e6.0	e8.7	9.0	7.2	5.3	3.5	3.4	e9.2	5.6
26	6.7	e6.9	e5.6	e5.8	e9.0	8.4	7.2	5.2	8.1	2.6	e8.8	5.5
27	6.9	e7.0	e5.8	e5.6	e9.4	7.9	6.6	4.9	7.3	2.0	e8.6	6.7
28	6.8	e7.0	e5.6	e5.6	e9.4	7.5	6.7	4.6	5.9	3.0	e10	24
29	6.6	e7.0	e5.4	e6.0	e9.3	7.2	7.8	4.4	5.4	2.5	e12	17
30	7.3	e7.2	e5.3	e6.4	---	7.3	8.5	4.2	5.1	1.9	e10	14
31	6.4	---	e5.0	e6.2	---	7.5	---	4.0	---	1.1	e9.0	---
TOTAL	185.9	222.7	201.4	168.6	214.0	333.6	244.5	179.5	113.0	115.43	140.74	198.4
MEAN	6.00	7.42	6.50	5.44	7.38	10.8	8.15	5.79	3.77	3.72	4.54	6.61
MAX	7.3	9.6	7.8	6.4	9.4	20	13	8.1	8.1	19	13	24
MIN	5.0	5.8	5.0	4.7	5.6	7.2	6.6	4.0	1.5	0.41	0.64	3.6
AC-FT	369	442	399	334	424	662	485	356	224	229	279	394

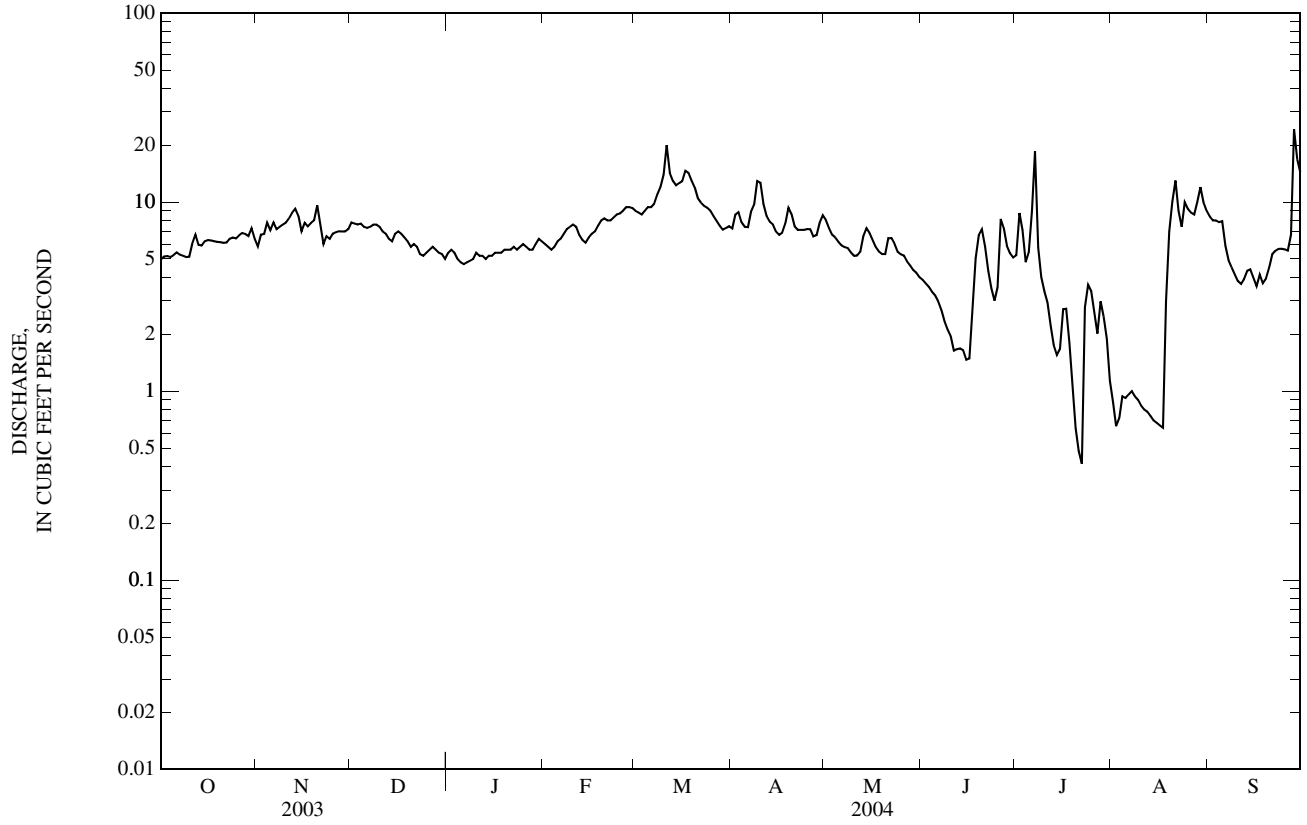
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2004, BY WATER YEAR (WY)

MEAN	3.27	3.66	2.68	2.74	4.20	6.10	5.02	5.40	5.69	2.16	1.14	2.96
MAX	6.98	10.2	6.69	8.04	10.6	13.3	8.97	53.4	48.8	17.8	7.53	14.5
(WY)	(1994)	(1992)	(1993)	(2003)	(1991)	(1993)	(2002)	(1991)	(1991)	(1997)	(1997)	(1973)
MIN	0.00	0.00	0.00	0.00	0.00	0.27	0.10	0.38	0.04	0.00	0.00	0.00
(WY)	(1955)	(1955)	(1953)	(1951)	(1956)	(1954)	(1954)	(1955)	(1952)	(1956)	(1954)	(1952)

06244500 FIVEMILE CREEK ABOVE WYOMING CANAL, NEAR PAVILLION, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1950 - 2004	
ANNUAL TOTAL	2,047.07		2,317.77		--	
ANNUAL MEAN	5.61		6.33		3.74	
HIGHEST ANNUAL MEAN	--		--		12.4	1991
LOWEST ANNUAL MEAN	--		--		0.25	1955
HIGHEST DAILY MEAN	12	Several days	24	Sep 28	273	Sep 20, 1950
LOWEST DAILY MEAN	0.04	Jul 21	0.41	Jul 22	0.00	Oct 1, 1949
ANNUAL SEVEN-DAY MINIMUM	0.05	Jul 15	0.71	Aug 11	0.00	Dec 4, 1949
MAXIMUM PEAK FLOW	--		39	Sep 28	1,750[a]	Sep 6, 1951
MAXIMUM PEAK STAGE	--		2.51	Sep 28	5.60[b]	Sep 6, 1951
ANNUAL RUNOFF (AC-FT)	4,060		4,600		2,710	
10 PERCENT EXCEEDS	8.6		9.3		7.8	
50 PERCENT EXCEEDS	6.2		6.2		2.5	
90 PERCENT EXCEEDS	0.52		2.2		0.00	

a From rating curve extended above 350 ft^3/s.
b From floodmarks.
e Estimated.



06253000 FIVEMILE CREEK NEAR SHOSHONI, WY

LOCATION.--Lat 43°13'20", long 108°13'06", in NW¼ SW¼ sec.19, T.3 N., R.6 E., Fremont County, Hydrologic Unit 10080005, on right bank 1.2 mi upstream from normal high-water line of Boysen Reservoir at elevation 4,725 ft and 5.0 mi west of Shoshoni.

DRAINAGE AREA.--418 mi^2, of which 133 mi^2 probably is noncontributing.

PERIOD OF RECORD.--May 1941 to September 1942, August 1948 to September 1983, October 1988 to current year.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,750 ft above NGVD of 1929, from topographic map. May 10, 1941 to September 30, 1942, nonrecording gage at site 1.0 mi downstream at different datum. August 28, 1948 to September 30, 1983, at same site and 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. Natural flow of stream affected by regulation from reservoir system in the headwaters, diversions for irrigation, and return flow from irrigated areas.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 24, 1923, discharge, 3,500 ft^3/s, from estimate provided by Bureau of Reclamation, gage height not determined.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	64	54	e43	e48	e46	37	137	198	274	235	245
2	97	65	e54	e43	e47	e44	36	137	205	243	247	240
3	95	62	e53	e44	e45	e43	37	128	215	239	235	277
4	94	62	e50	e44	e47	e40	36	120	187	229	233	301
5	104	e58	e52	e42	e48	e38	34	163	169	248	232	308
6	103	62	e54	e41	e49	e40	43	150	172	232	245	309
7	98	e60	e55	e40	e48	e44	54	137	172	229	e244	278
8	91	e60	53	e41	e47	e50	158	137	171	217	e240	269
9	88	e60	51	e43	e46	55	134	141	197	189	e240	264
10	86	e59	e51	e44	e44	62	137	141	199	211	236	254
11	83	e58	e52	e44	e42	60	107	146	202	200	222	251
12	84	59	e54	e45	e40	61	100	127	191	188	215	242
13	83	57	e56	e46	e42	59	84	163	185	162	209	266
14	82	58	e56	e46	e43	57	82	172	166	185	224	246
15	79	58	e58	e46	e44	58	98	153	146	181	220	268
16	78	57	e60	e44	e44	59	96	138	166	186	207	267
17	78	58	e64	e45	e45	63	99	140	189	169	223	283
18	77	57	e64	e46	e47	59	104	141	195	158	234	265
19	76	60	e62	e45	e50	55	107	168	216	168	294	259
20	73	57	e60	e46	e50	51	92	182	226	188	283	266
21	72	57	e58	e47	e49	49	74	199	253	212	297	280
22	72	55	e57	e48	e48	48	85	192	246	187	279	281
23	72	e54	e54	e46	e48	46	114	202	222	206	294	251
24	71	e53	e52	e45	e49	45	109	184	198	224	275	233
25	69	e52	e50	e43	e50	44	116	187	195	210	273	234
26	68	e50	e50	e42	e53	44	123	196	189	217	286	235
27	69	e52	e50	e43	e54	42	134	198	194	222	278	241
28	70	e54	e50	e45	e50	41	141	195	209	e230	280	296
29	68	e56	e47	e46	e48	41	149	188	233	e240	268	308
30	67	55	e46	e47	---	40	136	193	257	232	265	333
31	66	---	e45	e48	---	38	---	194	---	227	261	---
TOTAL	2,511	1,729	1,672	1,378	1,365	1,522	2,856	5,049	5,963	6,503	7,774	8,050
MEAN	81.0	57.6	53.9	44.5	47.1	49.1	95.2	163	199	210	251	268
MAX	104	65	64	48	54	63	158	202	257	274	297	333
MIN	66	50	45	40	40	38	34	120	146	158	207	233
AC-FT	4,980	3,430	3,320	2,730	2,710	3,020	5,660	10,010	11,830	12,900	15,420	15,970

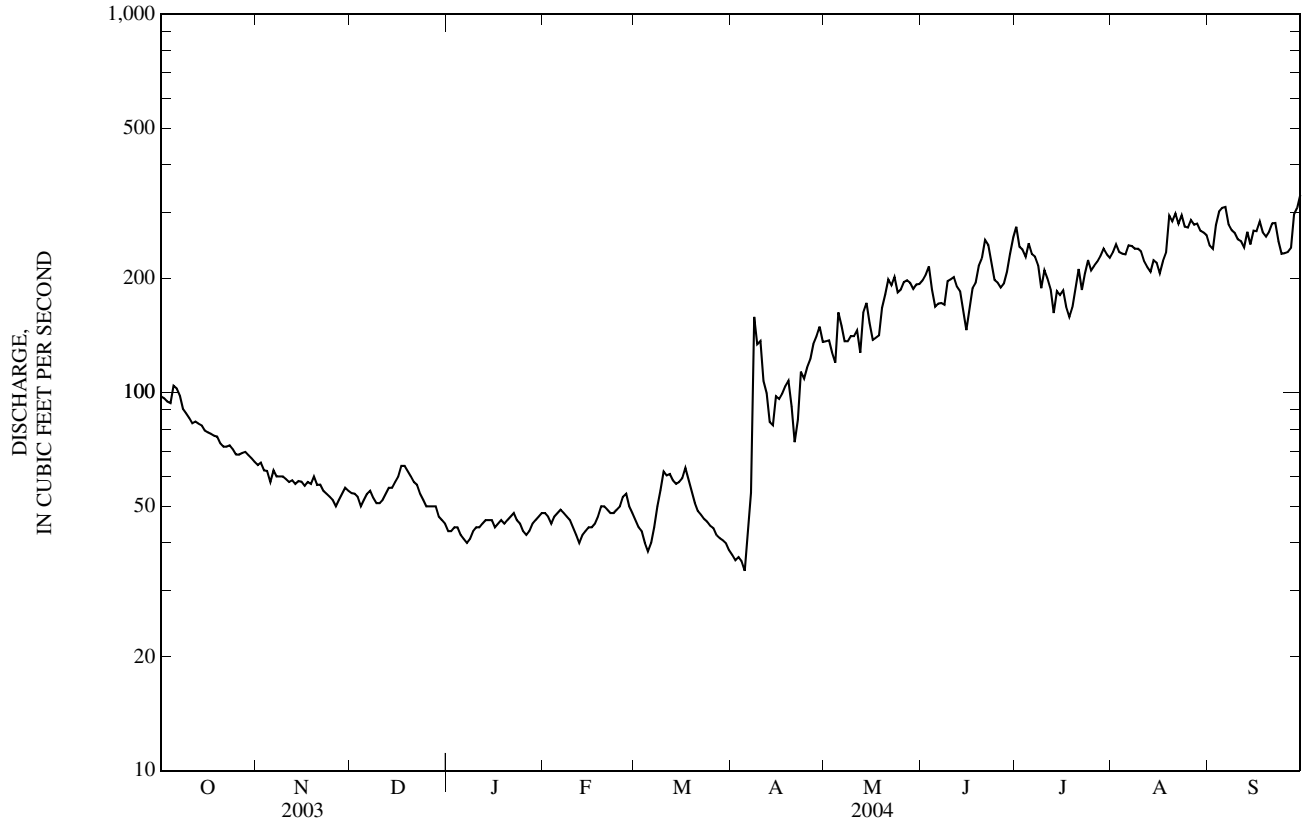
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)

MEAN	143	78.6	58.5	50.3	48.2	52.4	82.1	178	274	323	329	284
MAX	298	135	114	89.9	79.5	87.2	201	275	442	524	525	527
(WY)	(2000)	(1998)	(1998)	(1998)	(1959)	(1963)	(1999)	(1999)	(1976)	(1983)	(1983)	(1999)
MIN	18.0	14.8	8.25	2.60	6.24	17.8	12.7	28.1	97.4	141	139	88.4
(WY)	(1942)	(1942)	(1942)	(1942)	(1942)	(1942)	(1942)	(1942)	(1941)	(1977)	(1977)	(1941)

06253000 FIVEMILE CREEK NEAR SHOSHONI, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004	
ANNUAL TOTAL	45,313		46,372		--	
ANNUAL MEAN	124		127		160	
HIGHEST ANNUAL MEAN	--		--		253	1999
LOWEST ANNUAL MEAN	--		--		54.8	1942
HIGHEST DAILY MEAN	301	Jun 25	333	Sep 30	964	Sep 11, 1973
LOWEST DAILY MEAN	28	Feb 25	34	Apr 5	1.0	Jan 4, 1942
ANNUAL SEVEN-DAY MINIMUM	34	Feb 21	37	Mar 30	1.4	Jan 1, 1942
MAXIMUM PEAK FLOW	--		384[a]	Sep 30	3,390[b]	Jun 15, 1962
MAXIMUM PEAK STAGE	--		4.79[c]	Jan 7	9.61[c]	Dec 27, 1954
ANNUAL RUNOFF (AC-FT)	89,880		91,980		116,100	
10 PERCENT EXCEEDS	237		252		359	
50 PERCENT EXCEEDS	91		84		101	
90 PERCENT EXCEEDS	44		44		40	

a Gage height, 3.43 ft, stage raising, peak 388 ft^3/s occurred Oct 1, 2004.
b Gage height, 7.85 ft.
c Backwater from ice.
e Estimated.



06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY

LOCATION.--Lat 43°25'30", long 108°10'42", in NW¼ SW¼ sec.9, T.5 N., R.6 E., Fremont County, Hydrologic Unit 10080005, on right bank 0.6 mi downstream from Boysen Dam and 13 mi north of Shoshoni.

DRAINAGE AREA.--7,701 mi^2.

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,608.58 ft above NGVD of 1929. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records fair. Flow regulated by Boysen Reservoir since October 1951. Natural flow also affected by Bull Lake, Pilot Butte Reservoir, and several small reservoirs, combined capacity, 190,000 acre-ft, and diversions for irrigation of about 196,000 acres upstream from station.

COOPERATION.--Station operated and data provided by Bureau of Reclamation from April 1998; record computed and reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

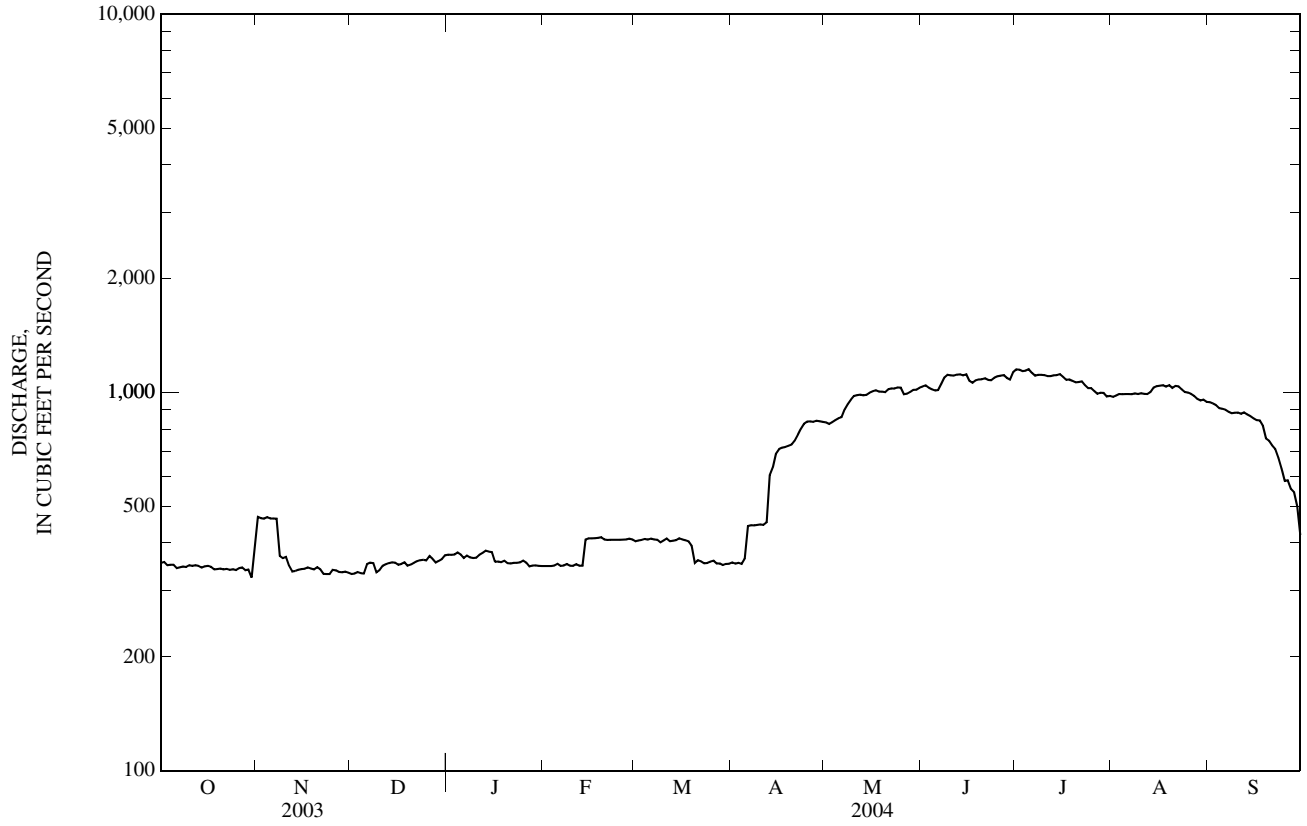
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	354	469	331	373	348	405	355	834	1,040	1,150	974	943
2	356	465	332	372	348	406	353	826	1,040	1,150	982	935
3	349	464	335	373	348	408	355	835	1,030	1,140	991	926
4	350	468	333	378	349	410	352	845	1,020	1,140	990	909
5	350	464	332	373	352	408	364	854	1,010	1,150	990	906
6	343	464	352	365	348	411	444	861	1,020	1,130	991	901
7	345	464	355	370	349	409	446	901	1,050	1,110	990	890
8	347	370	354	366	352	408	445	932	1,100	1,110	994	882
9	346	365	335	365	348	402	447	957	1,110	1,110	991	884
10	349	368	339	366	348	406	448	979	1,110	1,110	996	885
11	348	348	348	372	351	411	447	984	1,110	1,100	992	878
12	349	336	351	376	348	405	454	987	1,110	1,110	991	886
13	348	337	354	382	348	405	604	984	1,120	1,110	1,000	875
14	344	340	356	379	408	407	635	986	1,110	1,110	1,030	866
15	347	341	355	378	412	411	689	999	1,120	1,120	1,040	855
16	348	342	350	357	411	409	709	1,010	1,070	1,100	1,040	845
17	346	345	352	357	412	407	715	1,010	1,060	1,080	1,050	844
18	341	342	355	356	413	404	718	1,010	1,080	1,080	1,040	818
19	341	341	348	359	414	393	722	1,010	1,080	1,070	1,050	756
20	342	345	351	354	409	354	729	1,000	1,080	1,060	1,030	745
21	341	341	354	353	408	360	746	1,020	1,090	1,070	1,040	724
22	342	331	358	355	408	358	773	1,030	1,080	1,070	1,040	709
23	340	331	360	355	408	353	802	1,020	1,080	1,050	1,020	671
24	341	331	361	356	408	354	827	1,030	1,090	1,030	1,000	630
25	339	340	360	360	408	357	838	1,030	1,100	1,030	1,000	584
26	343	339	369	355	408	359	839	990	1,110	1,010	992	586
27	345	335	363	347	409	353	836	993	1,110	992	979	556
28	339	335	355	349	411	353	842	1,000	1,090	999	963	545
29	340	336	359	349	409	350	840	1,020	1,080	998	953	500
30	324	334	363	348	---	352	837	1,020	1,130	977	958	420
31	392	---	371	348	---	352	---	1,030	---	980	944	---
TOTAL	10,729	11,131	10,891	11,246	11,093	11,980	18,611	29,987	32,430	33,446	31,041	23,354
MEAN	346	371	351	363	383	386	620	967	1,081	1,079	1,001	778
MAX	392	469	371	382	414	411	842	1,030	1,130	1,150	1,050	943
MIN	324	331	331	347	348	350	352	826	1,010	977	944	420
AC-FT	21,280	22,080	21,600	22,310	22,000	23,760	36,910	59,480	64,320	66,340	61,570	46,320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

MEAN	1,151	1,123	1,119	1,056	1,021	1,098	1,221	1,471	2,253	2,443	1,491	1,272
MAX	2,846	2,086	2,005	2,208	2,202	2,035	2,259	4,314	7,252	8,816	2,789	2,502
(WY)	(1983)	(1959)	(1959)	(1958)	(1958)	(1997)	(1998)	(1999)	(1991)	(1967)	(1997)	(1973)
MIN	299	298	301	299	210	213	389	777	980	935	909	703
(WY)	(2003)	(2003)	(1989)	(1989)	(1952)	(1952)	(1952)	(1952)	(1992)	(1992)	(1992)	(2002)

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951 - 2004	
ANNUAL TOTAL	224,821		235,939		--	
ANNUAL MEAN	616		645		1,384	
HIGHEST ANNUAL MEAN	--		--		2,349	1983
LOWEST ANNUAL MEAN	--		--		603	2003
HIGHEST DAILY MEAN	1,230	Jun 1	1,150	Jul 1,2,5	13,200	Jul 7, 1967
LOWEST DAILY MEAN	284	Feb 20,21	324	Oct 30	4.7	Apr 3, 1962
ANNUAL SEVEN-DAY MINIMUM	290	Feb 15	333	Nov 29	106	Oct 12, 1951
MAXIMUM PEAK FLOW	--		1,350	Aug 20	13,500	Jul 7, 1967
MAXIMUM PEAK STAGE	--		4.99	Aug 20	13.35	Jul 7, 1967
ANNUAL RUNOFF (AC-FT)	445,900		468,000		1,003,000	
10 PERCENT EXCEEDS	1,110		1,080		2,150	
50 PERCENT EXCEEDS	365		444		1,130	
90 PERCENT EXCEEDS	307		343		596	



06260400 SOUTH FORK OWL CREEK BELOW ANCHOR RESERVOIR, WY

LOCATION.--Lat43°39'57", long 108°47'34", in sec.25, T.43 N., R.100 W., Hot Springs County, Hydrologic Unit 10080007, on left bank 1.6 mi downstream from Anchor Dam and 30 mi west of Thermopolis.

DRAINAGE AREA.--131 mi^2.

PERIOD OF RECORD.--April 1959 to September 2004 (no winter records since 1988) (discontinued).

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,120 ft above NGVD of 1929, from topographic map. Wyoming State Engineer's Office data collection platform with satellite telemetry at station.

REMARKS.--Records good. Flow regulated by Anchor Dam. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	9.3	0.37	12	21	17	18
2	---	---	---	---	---	---	8.3	0.45	16	83	16	17
3	---	---	---	---	---	---	7.5	8.3	28	87	15	19
4	---	---	---	---	---	---	6.7	24	43	82	15	24
5	---	---	---	---	---	---	5.4	37	48	79	13	22
6	---	---	---	---	---	---	2.0	43	64	76	13	20
7	---	---	---	---	---	---	3.4	47	61	76	12	18
8	---	---	---	---	---	---	2.8	55	56	49	11	17
9	---	---	---	---	---	---	0.02	62	52	40	11	16
10	---	---	---	---	---	---	0.00	56	59	40	10	15
11	---	---	---	---	---	---	0.00	42	49	37	10	14
12	---	---	---	---	---	---	0.00	30	38	34	9.8	13
13	---	---	---	---	---	---	0.00	21	29	32	9.1	13
14	---	---	---	---	---	---	1.6	15	26	30	8.7	14
15	---	---	---	---	---	---	1.7	11	28	30	8.3	14
16	---	---	---	---	---	---	0.15	10	32	35	8.2	12
17	---	---	---	---	---	---	0.00	9.1	28	30	7.6	12
18	---	---	---	---	---	---	0.00	8.9	23	26	9.2	11
19	---	---	---	---	---	---	0.00	16	20	24	10	10
20	---	---	---	---	---	---	0.00	21	21	22	11	12
21	---	---	---	---	---	---	0.00	22	22	21	15	12
22	---	---	---	---	---	---	0.00	21	21	19	12	8.6
23	---	---	---	---	---	---	0.00	18	22	33	29	6.1
24	---	---	---	---	---	---	0.00	14	27	38	25	6.4
25	---	---	---	---	---	---	0.00	14	32	32	18	6.4
26	---	---	---	---	---	---	0.00	12	40	27	25	6.4
27	---	---	---	---	---	---	0.00	11	41	25	24	6.5
28	---	---	---	---	---	---	4.4	12	46	25	22	6.6
29	---	---	---	---	---	---	3.2	16	51	24	19	15
30	---	---	---	---	---	---	1.1	15	36	20	18	24
31	---	---	---	---	---	---	---	13	---	18	18	---
TOTAL	---	---	---	---	---	---	57.57	685.12	1,071	1,215	449.9	409.0
MEAN	---	---	---	---	---	---	1.92	22.1	35.7	39.2	14.5	13.6
MAX	---	---	---	---	---	---	9.3	62	64	87	29	24
MIN	---	---	---	---	---	---	0.00	0.37	12	18	7.6	6.1
AC-FT	---	---	---	---	---	---	114	1,360	2,120	2,410	892	811

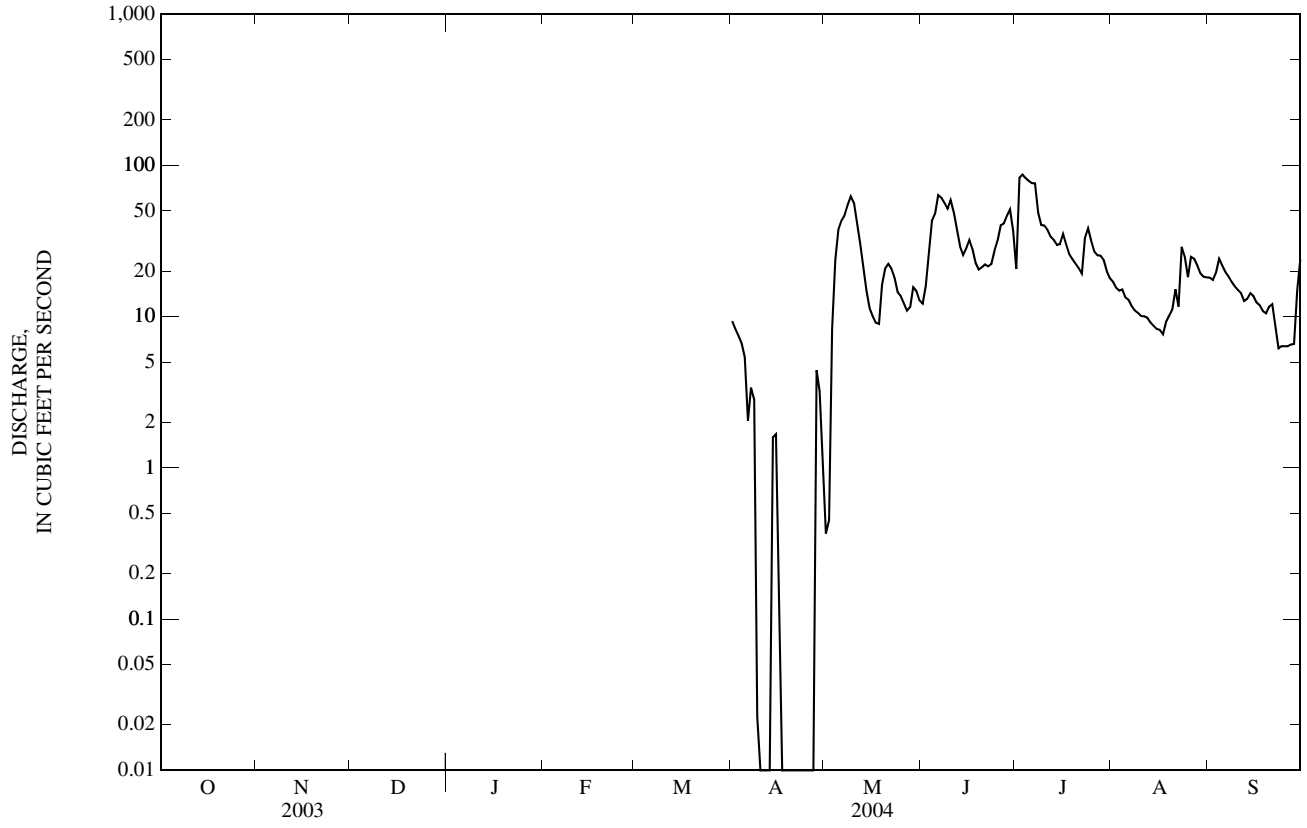
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2004, BY WATER YEAR (WY)*

MEAN	7.40	2.71	0.98	0.40	0.71	2.06	8.43	47.0	96.4	55.5	24.9	12.7
MAX	20.5	8.90	3.86	2.39	2.82	8.66	30.2	90.1	226	124	79.4	37.1
(WY)	(1983)	(1982)	(1982)	(1981)	(1988)	(1960)	(1987)	(1974)	(1986)	(1982)	(1995)	(1992)
MIN	2.49	0.01	0.00	0.00	0.00	0.00	0.00	14.3	17.2	4.67	3.62	2.52
(WY)	(1965)	(1962)	(1961)	(1960)	(1960)	(1961)	(1991)	(1981)	(2001)	(1994)	(2001)	(2000)

06260400 SOUTH FORK OWL CREEK BELOW ANCHOR RESERVOIR, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1959 - 2004*	
ANNUAL MEAN	--		22.1	
HIGHEST ANNUAL MEAN	--		35.9	1986
LOWEST ANNUAL MEAN	--		11.3	1985
HIGHEST DAILY MEAN	87	Jul 3	357	Jun 18, 1999
LOWEST DAILY MEAN	0.00	Several days	0.00	Several days, most years
MAXIMUM PEAK FLOW	92	Jul 2	373[a]	May 26, 1967
MAXIMUM PEAK STAGE	2.85	Ju2	4.22	Jun 17, 1999
ANNUAL RUNOFF (AC-FT)			16,050	

* For period of operation.
a Gage height, 3.64 ft.



06264700 BIGHORN RIVER AT LUCERNE, WY

LOCATION.--Lat 43°44'10", long 108°09'38", in SE$^1/_4$ sec.32, T.44 N., R.94 W., Hot Springs County, Hydrologic Unit 10080007, at bridge on Black Mountain road, 0.7 mi upstream from Kirby Creek, 0.8 mi east of Lucerne, and 1.0 mi downstream from Owl Creek.

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
OCT													
28...	0900	359	652	9.9	102	8.0	899	8.0	9.5	<.04	<.06	<.008	<.02
FEB													
24...	1735	423	648	13.3	131	8.6	890	7.0	7.5	<.04	E.04	E.005	E.01
MAY													
11...	0920	1,000	648	8.5	95	8.3	817	15.0	13.0	<.04	<.06	<.008	<.02
12...	1720	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
17...	0900	1,020	654	7.3	95	8.2	656	25.0	20.5	<.04	<.06	<.008	<.02

Date	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
OCT		
28...	38	59
FEB		
24...	E8	E6
MAY		
11...	48	--
12...	--	29
AUG		
17...	70	120

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06265337 COTTONWOOD CREEK AT HIGH ISLAND RANCH, NEAR HAMILTON DOME, WY

LOCATION.--Lat 43°45'46", long 108°40'34", in SW¼ NE¼ SE¼ sec.24, T.44 N., R.99 W., Hot Springs County, Hydrologic Unit 10080007, on right bank 15 ft upstream from county bridge, 5.2 miles west of Hamilton Dome, and 12 miles south of Grass Creek.

DRAINAGE AREA.--81.4 mi^2.

PERIOD OF RECORD.--May 1977 to September 1978 (discharge measurements and water quality only), April 1993 to current year. Prior to April 1993, published as Cottonwood Creek at county bridge, near Hamilton Dome.

GAGE.--Water-stage recorder. Elevation of gage is 5,677 ft above NGVD of 1929, from topographic map. Prior to September 9, 1996, at site 9 ft downstream at datum 3.00 ft higher. Wyoming State Engineer's Office data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for March 9-31, September 20-30, and those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
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	3.6	3.8	3.3	38	2.7	0.22
2	0.00	0.00	0.00	0.00	0.00	0.00	4.1	3.6	3.6	21	2.1	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	2.7	4.8	3.3	16	2.0	3.8
4	0.00	0.00	0.00	0.00	0.00	0.00	2.3	6.0	3.3	31	2.0	4.2
5	0.00	0.00	0.00	0.00	0.00	0.00	3.0	6.8	4.2	11	1.9	2.2
6	0.00	0.00	0.00	0.00	0.00	0.00	3.6	6.1	2.8	7.2	1.7	1.8
7	0.00	0.00	0.00	0.00	0.00	0.00	3.3	5.8	3.3	6.4	1.3	1.3
8	0.00	0.00	0.00	0.00	0.00	0.00	2.9	4.5	3.6	5.7	1.0	0.95
9	0.00	0.00	0.00	0.00	0.00	2.5	4.1	4.3	3.7	5.3	1.0	0.50
10	0.05	0.00	0.00	0.00	0.00	3.6	2.1	3.6	4.2	5.5	1.1	0.00
11	0.11	0.00	0.00	0.00	0.00	3.1	2.9	3.3	9.2	4.7	1.1	0.01
12	0.00	0.00	0.00	0.00	0.00	3.0	3.8	6.5	7.4	4.3	0.74	0.00
13	0.02	0.00	0.00	0.00	0.00	2.0	4.0	6.3	5.9	4.0	0.40	0.04
14	0.05	0.00	0.00	0.00	0.00	2.7	5.1	5.4	4.2	4.1	0.14	0.69
15	0.00	0.00	0.00	0.00	0.00	1.5	4.7	5.5	1.7	4.9	0.00	1.2
16	0.00	0.00	0.00	0.00	0.00	1.0	3.3	5.9	3.8	4.7	0.00	0.94
17	0.05	0.00	0.00	0.00	0.00	1.1	2.7	5.1	5.5	3.3	0.00	0.25
18	0.28	0.00	0.00	0.00	0.43	1.5	3.3	5.1	5.0	2.9	0.52	0.00
19	0.48	0.00	0.00	0.00	0.00	2.3	2.5	7.3	5.1	2.2	1.1	0.00
20	0.93	0.00	0.00	0.00	0.00	1.9	2.2	7.4	5.8	3.5	0.93	0.39
21	1.1	0.00	0.00	0.00	0.00	2.0	1.8	8.4	2.8	2.9	1.4	2.2
22	1.5	0.00	0.00	0.00	0.00	2.3	1.6	8.3	1.5	2.5	1.0	2.3
23	1.8	0.00	0.00	0.00	0.00	3.0	1.2	7.1	2.8	9.6	3.1	2.1
24	1.9	0.00	0.00	0.00	0.00	2.6	1.4	6.8	4.0	6.4	1.7	1.7
25	0.69	0.00	0.00	0.00	0.00	3.5	2.1	6.5	5.2	4.8	1.3	1.2
26	0.05	0.00	0.00	0.00	0.00	3.7	1.5	5.6	10	4.2	1.3	0.82
27	0.00	0.00	0.00	0.00	0.00	3.2	1.5	4.4	7.6	4.6	2.8	0.97
28	0.08	0.00	0.00	0.00	0.00	1.9	3.2	4.6	9.3	4.7	2.0	2.6
29	1.2	0.00	0.00	0.00	0.00	1.5	3.2	5.4	13	4.7	1.3	1.7
30	0.72	0.00	0.00	0.00	---	2.0	3.8	5.6	31	3.7	0.97	4.1
31	0.04	---	0.00	0.00	---	2.8	---	3.9	---	3.2	0.88	---
TOTAL	11.05	0.00	0.00	0.00	0.43	54.70	87.5	173.7	176.1	237.0	39.48	38.18
MEAN	0.36	0.00	0.00	0.00	0.01	1.76	2.92	5.60	5.87	7.65	1.27	1.27
MAX	1.9	0.00	0.00	0.00	0.43	3.7	5.1	8.4	31	38	3.1	4.2
MIN	0.00	0.00	0.00	0.00	0.00	0.00	1.2	3.3	1.5	2.2	0.00	0.00
AC-FT	22	0.00	0.00	0.00	0.9	108	174	345	349	470	78	76

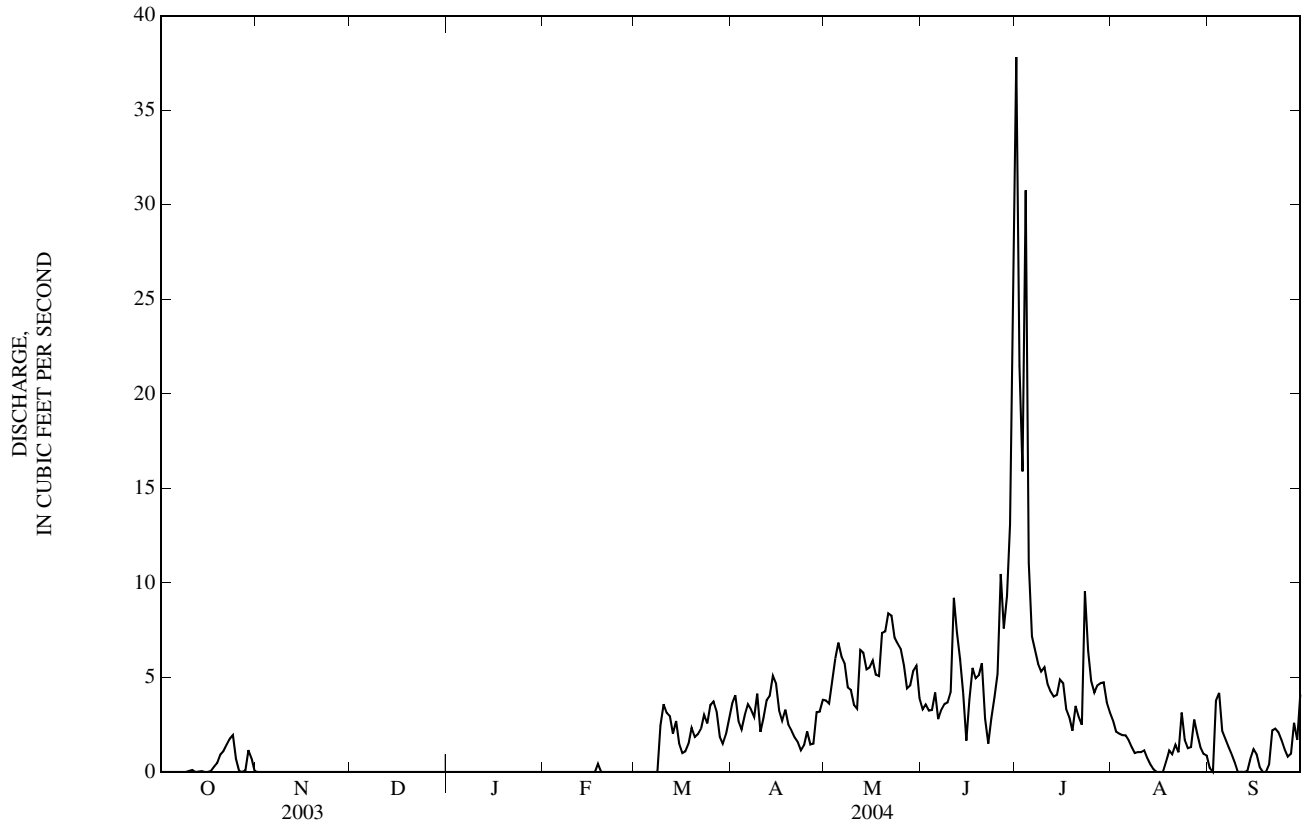
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2004, BY WATER YEAR (WY)

MEAN	3.87	2.12	0.93	0.75	1.12	6.05	10.8	31.3	40.4	12.4	3.81	3.29
MAX	14.7	6.91	2.96	2.83	3.30	26.9	30.2	84.1	142	30.6	8.95	9.11
(WY)	(1999)	(1994)	(1998)	(1997)	(1996)	(1998)	(1999)	(1999)	(1997)	(1997)	(1998)	(1998)
MIN	0.14	0.00	0.00	0.00	0.00	1.18	2.92	4.03	2.05	1.01	0.00	0.00
(WY)	(2002)	(2002)	(2001)	(2001)	(2001)	(2002)	(2004)	(2001)	(2002)	(2000)	(2001)	(2000)

06265337 COTTONWOOD CREEK AT HIGH ISLAND RANCH, NEAR HAMILTON DOME, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1993 - 2004	
ANNUAL TOTAL	1,544.97		818.14		--	
ANNUAL MEAN	4.23		2.24		8.03	
HIGHEST ANNUAL MEAN	--		--		21.0	1997
LOWEST ANNUAL MEAN	--		--		1.85	2002
HIGHEST DAILY MEAN	42	May 27	38	Jul 1	895	Jun 11, 1997
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days, most years
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Most years
MAXIMUM PEAK FLOW	--		923	Jul 4	3,410[a]	Jul 10, 2001
MAXIMUM PEAK STAGE	--		7.11[b]	Jul 4	10.76[b]	Jul 10, 2001
ANNUAL RUNOFF (AC-FT)	3,060		1,620		5,820	
10 PERCENT EXCEEDS	15		5.5		20	
50 PERCENT EXCEEDS	0.00		1.0		2.0	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From rating curve extended above 1,060 ft^3/s on basis of slope-area determination of peak flow.
b From floodmarks.



06274300 BIGHORN RIVER AT BASIN, WY

LOCATION.--Lat 44°23'00", long 108°02'08", in SE¼ NW¼ NE¼ sec.21, T.51 N., R.93 W., Big Horn County, Hydrologic Unit 10080007, on left bank 10 ft downstream from county bridge on E Street, 0.2 mi northeast of Big Horn County Courthouse in Basin, and 1.8 mi downstream from Antelope Creek.

DRAINAGE AREA.--13,223 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,821.29 ft above NGVD of 1929. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for October 14-20, June 16-23, and those for estimated daily discharges, which are poor. Diversions for irrigation of about 226,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	675	554	e700	e400	e600	e600	547	768	780	1,020	754	578
2	576	614	e650	e540	e550	e600	547	703	718	1,740	675	584
3	559	660	e600	e500	e520	e610	574	673	669	1,300	637	639
4	547	666	e600	e430	e500	e620	590	600	746	1,120	622	771
5	552	e650	e550	e380	e540	e700	602	578	1,060	1,090	661	914
6	560	e620	e600	e400	e580	e720	549	734	1,390	1,310	644	926
7	551	e620	e680	e400	e550	e760	554	943	1,540	1,290	633	869
8	536	e620	e650	e400	e550	e820	582	1,200	1,390	1,060	618	752
9	542	e620	e600	e480	e560	e850	642	1,300	1,380	941	585	696
10	561	e610	e550	e580	e570	766	1,040	1,170	1,350	904	501	662
11	572	e610	e500	e620	e550	740	929	1,020	1,290	859	512	649
12	607	600	e510	e600	e540	706	742	1,100	1,170	830	490	677
13	633	567	e520	e600	e540	695	628	1,050	1,060	721	484	678
14	724	588	e580	e600	e500	672	570	855	952	686	470	724
15	594	573	e600	e620	e520	669	614	723	782	707	456	751
16	591	578	e570	e610	e550	671	632	634	716	740	465	891
17	600	574	e550	e600	e600	669	648	636	724	872	471	800
18	597	567	e540	e580	e650	665	645	590	715	793	505	803
19	602	566	e540	e600	e700	658	663	612	721	730	559	802
20	594	566	e550	e580	e680	654	662	780	762	696	564	819
21	588	568	e540	e580	e650	631	607	860	860	667	588	1,240
22	595	e450	e500	e600	e500	610	565	950	827	647	579	1,160
23	601	e350	e480	e580	e550	613	572	942	732	812	686	1,040
24	600	e300	e500	e560	e600	599	552	890	724	1,500	638	971
25	589	e300	e500	e540	e700	590	556	832	772	1,490	620	935
26	589	e450	e500	e520	e750	583	558	728	832	1,180	585	894
27	602	e550	e500	e500	e700	591	529	672	815	1,040	593	843
28	587	e600	e480	e480	e680	586	516	589	814	954	601	837
29	555	e650	e440	e520	e640	580	676	572	780	923	619	850
30	555	e750	e420	e540	---	577	796	776	755	931	614	854
31	576	---	e400	e580	---	571	---	863	---	840	603	---
TOTAL	18,210	16,991	16,900	16,520	17,120	20,376	18,887	25,343	27,826	30,393	18,032	24,609
MEAN	587	566	545	533	590	657	630	818	928	980	582	820
MAX	724	750	700	620	750	850	1,040	1,300	1,540	1,740	754	1,240
MIN	536	300	400	380	500	571	516	572	669	647	456	578
AC-FT	36,120	33,700	33,520	32,770	33,960	40,420	37,460	50,270	55,190	60,280	35,770	48,810

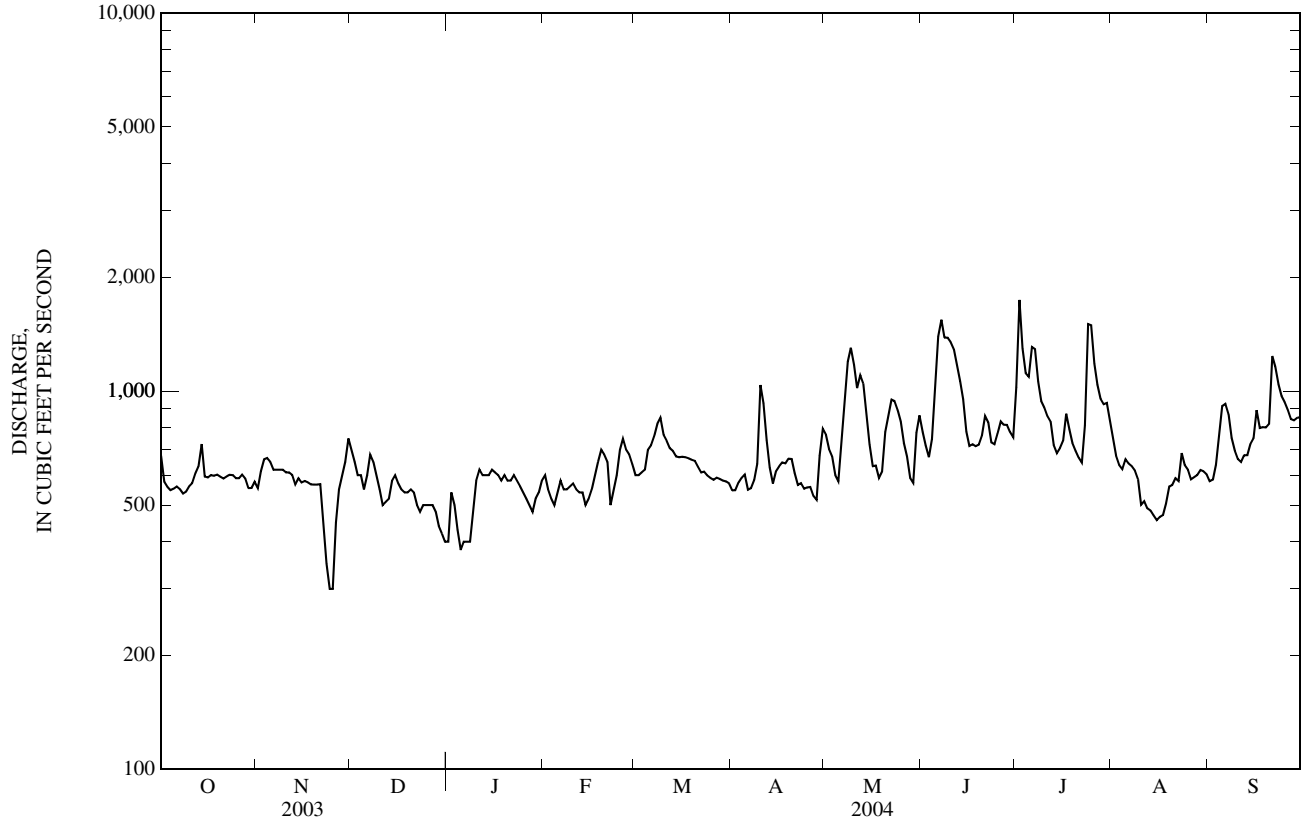
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2004, BY WATER YEAR (WY)

MEAN	1,430	1,327	1,217	1,137	1,182	1,431	1,336	2,294	3,669	2,175	1,080	1,236
MAX	2,346	2,439	1,933	1,975	1,772	2,753	2,929	6,252	11,210	8,574	2,627	2,326
(WY)	(1984)	(1984)	(1985)	(1992)	(1997)	(1998)	(1998)	(1999)	(1991)	(1995)	(1997)	(1998)
MIN	582	564	522	533	504	634	574	690	928	357	380	531
(WY)	(2003)	(2003)	(2003)	(2004)	(1989)	(1989)	(2003)	(2002)	(2004)	(1988)	(2002)	(2002)

06274300 BIGHORN RIVER AT BASIN, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1984 - 2004	
ANNUAL TOTAL	266,924		251,207		--	
ANNUAL MEAN	731		686		1,626	
HIGHEST ANNUAL MEAN	--		--		2,913	1999
LOWEST ANNUAL MEAN	--		--		686	2004
HIGHEST DAILY MEAN	3,770	May 30	1,740	Jul 2	16,600	Jun 8, 1991
LOWEST DAILY MEAN	300	Nov 24,25	300.	Nov 24,25	276	Jul 27, 1988
ANNUAL SEVEN-DAY MINIMUM	381	Aug 11	424.	Nov 21	292	Jul 24, 1988
MAXIMUM PEAK FLOW	--		2,070[a]	Jul 2	19,500	Jun 7, 1991
MAXIMUM PEAK STAGE	--		5.48[b]	Nov 28	10.49	Jun 7, 1991
ANNUAL RUNOFF (AC-FT)	529,400		498,300		1,178,000	
10 PERCENT EXCEEDS	1,200		942		2,800	
50 PERCENT EXCEEDS	586		616		1,250	
90 PERCENT EXCEEDS	448		504		589	

a Gage height, 4.27 ft.
b Backwater from ice.
e Estimated.



06274300 BIGHORN RIVER AT BASIN, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
OCT													
28...	1140	595	660	10.9	108	8.4	1,080	11.0	8.5	<.04	.27	<.008	<.02
JAN													
28...	1125	481	661	10.9	86	7.9	1,070	-15.0	.0	.09	.53	E.004	<.02
MAY													
11...	1200	1,020	659	8.7	99	8.4	630	19.0	14.5	<.04	.56	.037	E.02
12...	1620	1,180	--	--	--	--	--	--	--	--	--	--	--
AUG													
17...	1120	482	663	10.8	139	8.5	968	25.5	20.5	<.04	.49	.008	<.02

Date	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)	Suspended sediment discharge, tons/d (80155)
OCT				
28...	58	69	74	119
JAN				
28...	37	43	130	169
MAY				
11...	390	--	339	934
12...	--	570	--	--
AUG				
17...	270	220	78	102

< -- Less than
E -- Estimated value

06276500 GREYBULL RIVER AT MEETEETSE, WY

LOCATION.--Lat 44°09'20", long 108°52'35", in sec.4, T.48 N., R.100 W., Park County, Hydrologic Unit 10080009, on right bank at Meeteetse, 0.3 mi upstream from bridge on State Highway 120, and 3.0 mi upstream from Meeteetse Creek.

DRAINAGE AREA.--681 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June to December 1897, April to October 1903 (gage heights and discharge measurements only), July 1920 to current year (no winter records since 1971). Partial records only for some periods prior to 1931, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1923(M), 1924, 1925(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,739.42 ft above NGVD of 1929. See WSP 1916 for history of changes prior to April 28, 1938. April 28, 1938 to May 24, 1961, at site on left bank at datum 2.00 ft higher. May 25, 1961 to May 9, 1967, at site 100 ft downstream at present datum. Wyoming State Engineers data collection platform with satellite telemetry at station.

REMARKS.--Records fair. Some regulation by Sunshine Reservoir beginning May 1940, capacity, 52,990 acre-ft, and Lower Sunshine Reservoir beginning December 1972, capacity, 58,900 acre-ft. Diversions for irrigation of about 10,600 acres upstream from station. Several diversions upstream from station for irrigation downstream from station. Result of discharge measurements, in cubic feet per second, made during the period when station was not in operation, are given below:

Oct. 3 . . . 69.3

Mar. 24 . . . 39.1

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	26	111	197	750	246	164
2	---	---	---	---	---	---	34	132	218	591	233	220
3	---	---	---	---	---	---	30	161	260	509	233	258
4	---	---	---	---	---	---	25	198	371	537	222	268
5	---	---	---	---	---	---	21	257	469	582	221	252
6	---	---	---	---	---	---	19	276	546	487	201	241
7	---	---	---	---	---	---	18	298	572	455	189	231
8	---	---	---	---	---	---	18	293	525	463	180	224
9	---	---	---	---	---	---	55	299	546	527	173	213
10	---	---	---	---	---	---	76	248	695	595	175	197
11	---	---	---	---	---	---	76	259	391	575	164	194
12	---	---	---	---	---	---	73	214	302	550	153	191
13	---	---	---	---	---	---	71	180	286	537	143	200
14	---	---	---	---	---	---	137	168	279	517	137	200
15	---	---	---	---	---	---	118	150	335	570	137	186
16	---	---	---	---	---	---	94	140	370	559	132	177
17	---	---	---	---	---	---	85	122	279	515	133	174
18	---	---	---	---	---	---	90	131	267	497	160	172
19	---	---	---	---	---	---	89	182	255	501	148	169
20	---	---	---	---	---	---	86	162	291	496	179	195
21	---	---	---	---	---	---	82	174	309	470	179	184
22	---	---	---	---	---	---	79	164	323	476	158	168
23	---	---	---	---	---	---	78	149	379	526	226	162
24	---	---	---	---	---	---	80	142	448	408	185	155
25	---	---	---	---	---	---	80	146	467	343	181	149
26	---	---	---	---	---	---	79	131	532	331	221	148
27	---	---	---	---	---	---	92	125	530	341	212	155
28	---	---	---	---	---	---	123	151	557	363	190	173
29	---	---	---	---	---	---	107	221	603	316	175	161
30	---	---	---	---	---	---	98	193	739	284	170	176
31	---	---	---	---	---	---	---	190	---	263	163	---
TOTAL	---	---	---	---	---	---	2,139	5,767	12,341	14,934	5,619	5,757
MEAN	---	---	---	---	---	---	71.3	186	411	482	181	192
MAX	---	---	---	---	---	---	137	299	739	750	246	268
MIN	---	---	---	---	---	---	18	111	197	263	132	148
AC-FT	---	---	---	---	---	---	4,240	11,440	24,480	29,620	11,150	11,420

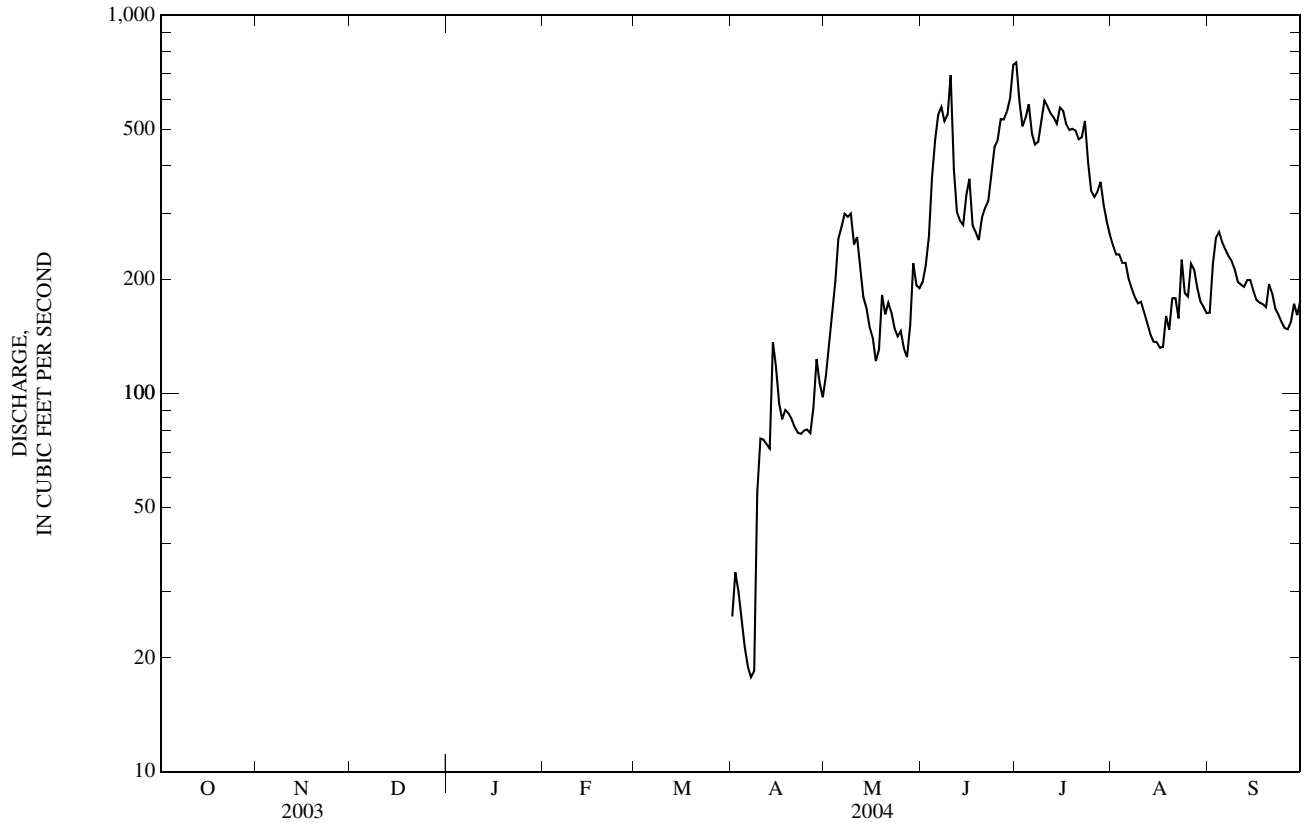
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2004, BY WATER YEAR (WY)*

MEAN	167	107	78.3	64.5	63.7	77.3	130	559	1,134	791	484	267
MAX	593	248	134	105	104	117	441	1,422	3,185	2,219	1,704	662
(WY)	(1924)	(1942)	(1931)	(1943)	(1962)	(1942)	(1952)	(1924)	(1957)	(1965)	(1941)	(1941)
MIN	72.5	52.8	45.0	27.0	33.9	35.1	26.8	154	284	188	137	84.2
(WY)	(1956)	(1956)	(1970)	(1963)	(1960)	(1963)	(1978)	(1978)	(1934)	(1934)	(1940)	(1939)

06276500 GREYBULL RIVER AT MEETEETSE, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1921 - 2004*	
ANNUAL MEAN	--		333	
HIGHEST ANNUAL MEAN	--		566	1957
LOWEST ANNUAL MEAN	--		130	1940
HIGHEST DAILY MEAN	750	Jul 1	6,770	Jun 6, 1957
LOWEST DAILY MEAN	18	Apr 7,8	13	Apr 18, 1989
MAXIMUM PEAK FLOW	1,010	Jun 30	13,600[a]	Jun 15, 1963
MAXIMUM PEAK STAGE	2.60	Jun 30	9.20[b]	Jun 15, 1963
ANNUAL RUNOFF (AC-FT)	--		241,200	

* For period of operation.
a From rating curve extended above 4,600 ft^3/s on basis of velocity-area study.
b From floodmarks.



06276500 GREYBULL RIVER AT MEETEETSE, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC													
19...	0800	32	628	10.1	84	8.1	746	-7.0	.0	<1	E3	5	.43
JAN													
29...	1215	33	614	12.6	107	8.1	664	2.0	.0	E1	E2	2	.18
MAY													
12...	1250	225	622	10.3	100	8.3	206	3.0	5.5	E5	E17	16	9.7
AUG													
19...	0725	149	630	8.6	98	7.3	283	11.5	12.5	190	180	36	14

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06278300 SHELL CREEK ABOVE SHELL RESERVOIR, WY

LOCATION.--Lat 44°30'29", long 107°24'11", in sec.1, T.52 N., R.88 W., Big Horn County, Hydrologic Unit 10080010, Bighorn National Forest, on right bank 0.2 mi upstream from Shell Reservoir, 1.1 mi downstream from Buckley Creek, 6.0 mi southeast of Shell Creek ranger station, and 19 mi east of Shell.

DRAINAGE AREA.--23.1 mi^2.

PERIOD OF RECORD.--October 1956 to current year. Prior to October 1969, published as Shell Creek above Shell Creek Reservoir.

REVISED RECORD.--WSP 1629: 1958. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,050 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversions upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	e4.0	4.9	4.2	2.7	3.0	4.1	e12	48	115	18	7.5
2	5.8	e4.2	5.0	4.3	2.6	2.9	4.8	e14	49	80	17	7.6
3	5.7	e4.4	5.2	4.1	2.6	2.9	5.2	e20	82	62	16	12
4	5.6	e4.6	5.4	4.1	2.6	2.9	5.8	e23	161	56	16	11
5	5.5	e4.8	5.3	4.1	2.6	2.9	e6.4	47	208	83	15	9.8
6	5.4	e4.6	5.3	4.0	2.6	2.8	e7.6	117	243	93	14	9.0
7	5.3	e5.0	5.2	4.1	2.6	2.8	e8.0	e150	198	66	13	8.4
8	5.3	e5.4	5.2	4.0	2.6	2.8	e7.4	176	168	55	12	7.9
9	5.2	6.2	5.1	3.9	2.7	2.8	e7.0	154	153	49	12	7.5
10	5.3	6.6	4.7	3.8	2.8	2.9	e6.6	111	140	43	12	7.3
11	5.2	6.4	4.7	3.7	2.8	2.7	e7.0	156	109	39	11	7.1
12	5.1	6.5	e4.6	3.6	2.8	2.7	e7.6	103	90	35	11	6.7
13	5.8	6.4	4.4	3.5	2.8	2.8	8.2	66	75	34	10	10
14	5.5	6.3	4.3	3.5	2.7	2.7	8.9	51	66	31	9.7	10
15	5.8	6.0	4.2	3.4	2.7	2.7	e8.5	44	66	39	9.2	10
16	5.6	5.7	4.4	3.3	2.7	2.9	e8.5	46	65	48	8.8	9.3
17	5.9	5.6	4.3	3.2	2.7	2.9	8.9	47	55	42	8.8	8.7
18	6.3	5.8	4.1	3.2	2.7	2.9	e9.0	71	50	35	11	8.0
19	6.0	5.6	4.0	3.2	2.7	e2.8	e8.5	143	46	30	9.9	9.3
20	5.8	5.4	3.9	3.3	2.7	e2.9	8.6	127	45	28	10	16
21	5.7	5.7	3.8	3.2	2.6	3.0	8.5	123	45	26	9.2	17
22	5.5	5.9	3.7	3.1	2.5	3.1	e8.0	103	40	26	8.8	15
23	5.4	5.4	3.6	3.2	2.5	e3.0	e7.6	89	47	30	9.0	15
24	e5.0	5.1	3.6	3.2	2.5	e2.8	e7.4	74	56	30	8.2	15
25	e4.8	5.0	3.6	3.0	2.5	e3.1	e7.6	56	61	28	9.4	14
26	5.4	4.9	e3.8	2.9	2.6	3.3	e8.0	47	54	25	11	13
27	5.5	5.0	e4.2	2.8	2.8	3.3	e9.5	44	47	22	11	14
28	5.7	5.0	e4.4	2.8	3.0	3.2	e11	60	48	27	9.9	14
29	e4.8	5.0	e4.6	2.8	3.0	3.2	e10	105	71	24	9.0	13
30	e4.2	4.9	4.7	2.8	---	3.4	e11	67	63	21	8.4	13
31	e3.8	---	4.4	2.8	---	3.6	---	54	---	19	7.9	---
TOTAL	167.7	161.4	138.6	107.1	77.7	91.7	235.2	2,500	2,649	1,341	346.2	326.1
MEAN	5.41	5.38	4.47	3.45	2.68	2.96	7.84	80.6	88.3	43.3	11.2	10.9
MAX	6.3	6.6	5.4	4.3	3.0	3.6	11	176	243	115	18	17
MIN	3.8	4.0	3.6	2.8	2.5	2.7	4.1	12	40	19	7.9	6.7
AC-FT	333	320	275	212	154	182	467	4,960	5,250	2,660	687	647

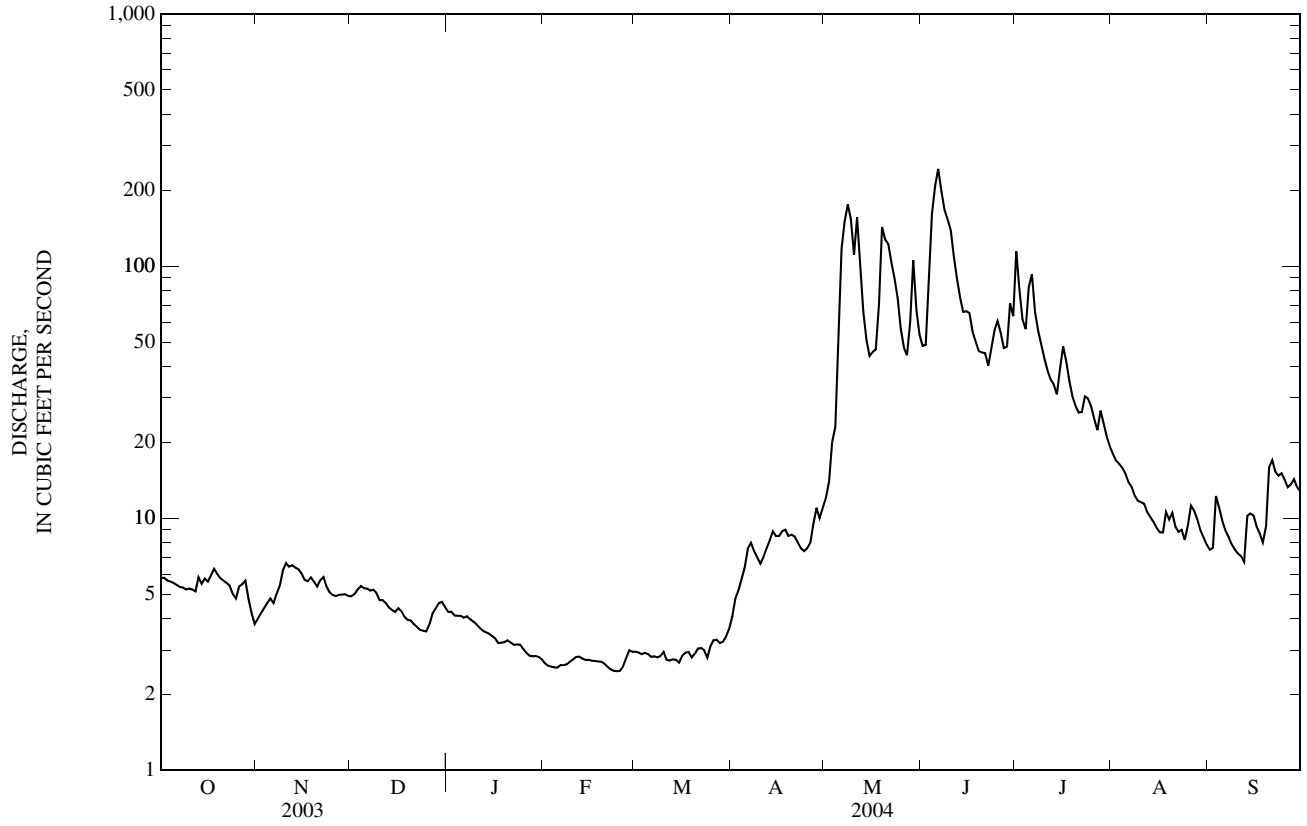
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2004, BY WATER YEAR (WY)

MEAN	8.30	5.76	3.78	2.71	2.24	2.15	5.74	104	198	46.7	12.8	9.61
MAX	17.6	11.2	7.18	4.50	3.68	3.76	28.4	289	353	188	45.6	44.9
(WY)	(1962)	(1962)	(1995)	(1995)	(1998)	(1999)	(1987)	(1958)	(1968)	(1975)	(1968)	(1968)
MIN	3.10	2.91	1.95	1.55	1.09	1.14	1.23	15.2	48.9	11.5	3.66	2.77
(WY)	(1989)	(1976)	(1970)	(1980)	(1980)	(1961)	(1970)	(1975)	(1994)	(2001)	(2001)	(1988)

06278300 SHELL CREEK ABOVE SHELL RESERVOIR, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1957 - 2004	
ANNUAL TOTAL	9,683.8		8,141.7		--	
ANNUAL MEAN	26.5		22.2		33.4	
HIGHEST ANNUAL MEAN	--		--		50.2	1968
LOWEST ANNUAL MEAN	--		--		17.9	2001
HIGHEST DAILY MEAN	645	May 29	243	Jun 6	1,010	Jun 15, 1963
LOWEST DAILY MEAN	1.7	Jan 12	2.5	Feb 22-25	0.60	Mar 7, 1967
ANNUAL SEVEN-DAY MINIMUM	1.8	Jan 11	2.6	Feb 20	0.90	Jan 27, 1980
MAXIMUM PEAK FLOW	--		359	Jun 6	1,870[a]	Jun 15, 1963
MAXIMUM PEAK STAGE	--		4.29	Jun 6	7.84[b]	Jun 15, 1963
ANNUAL RUNOFF (AC-FT)	19,210		16,150		24,220	
10 PERCENT EXCEEDS	62		65		93	
50 PERCENT EXCEEDS	5.6		6.4		5.7	
90 PERCENT EXCEEDS	2.2		2.8		2.0	

a From rating curve extended above 725 ft^3/s on basis of velocity study.
b From floodmarks.
e Estimated.



06278500 SHELL CREEK NEAR SHELL, WY

LOCATION.--Lat 44°33'54", long 107°42'44", in SE¼ SW¼ sec.17, T.53 N., R.90 W., Big Horn County, Hydrologic Unit 10080010, on right bank 0.9 mi upstream from White Creek and 5.0 mi northeast of Shell.

DRAINAGE AREA.--145 mi^2.

PERIOD OF RECORD.--October 1940 to current year (no winter records since 1971). Prior to December 1940, monthly discharge only, published in WSP 1309.

REVISED RECORDS.--WSP 1239: 1941, 1945(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,370.05 ft above NGVD of 1929. Wyoming State Engineer's data collection platform with satellite telemetry at station.

REMARKS.--Records good. Some regulation by two small reservoirs, capacity, 3,650 acre-ft. Diversions upstream from station for irrigation of about 80 acres downstream from station. Results of discharge measurement, in cubic feet per second, made during the periods when station was not in operation, is given below:

Oct. 3 . . . 48.8

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	30	38	132	165	89	81
2	---	---	---	---	---	---	32	68	126	158	89	80
3	---	---	---	---	---	---	31	80	130	132	89	86
4	---	---	---	---	---	---	31	96	192	122	88	84
5	---	---	---	---	---	---	36	138	264	147	86	82
6	---	---	---	---	---	---	38	170	283	175	84	80
7	---	---	---	---	---	---	40	238	300	144	83	79
8	---	---	---	---	---	---	38	292	248	125	82	78
9	---	---	---	---	---	---	35	279	233	114	85	76
10	---	---	---	---	---	---	29	217	220	107	85	74
11	---	---	---	---	---	---	31	257	222	100	85	73
12	---	---	---	---	---	---	28	222	198	94	84	72
13	---	---	---	---	---	---	31	163	179	90	83	76
14	---	---	---	---	---	---	34	136	155	87	82	76
15	---	---	---	---	---	---	35	122	144	88	81	75
16	---	---	---	---	---	---	32	120	142	108	80	73
17	---	---	---	---	---	---	32	116	137	106	80	72
18	---	---	---	---	---	---	33	127	132	94	83	70
19	---	---	---	---	---	---	31	189	127	86	84	72
20	---	---	---	---	---	---	31	214	120	80	83	86
21	---	---	---	---	---	---	30	208	107	77	82	82
22	---	---	---	---	---	---	29	196	110	106	89	80
23	---	---	---	---	---	---	29	178	113	108	92	82
24	---	---	---	---	---	---	31	165	121	104	90	78
25	---	---	---	---	---	29	31	144	129	99	92	75
26	---	---	---	---	---	29	32	128	129	98	93	72
27	---	---	---	---	---	30	38	119	120	96	87	73
28	---	---	---	---	---	27	49	122	112	100	84	75
29	---	---	---	---	---	26	40	167	125	96	83	59
30	---	---	---	---	---	27	38	168	128	93	82	52
31	---	---	---	---	---	28	---	143	---	91	82	---
TOTAL	---	---	---	---	---	---	1,005	5,020	4,878	3,390	2,641	2,273
MEAN	---	---	---	---	---	---	33.5	162	163	109	85.2	75.8
MAX	---	---	---	---	---	---	49	292	300	175	93	86
MIN	---	---	---	---	---	---	28	38	107	77	80	52
AC-FT	---	---	---	---	---	---	1,990	9,960	9,680	6,720	5,240	4,510

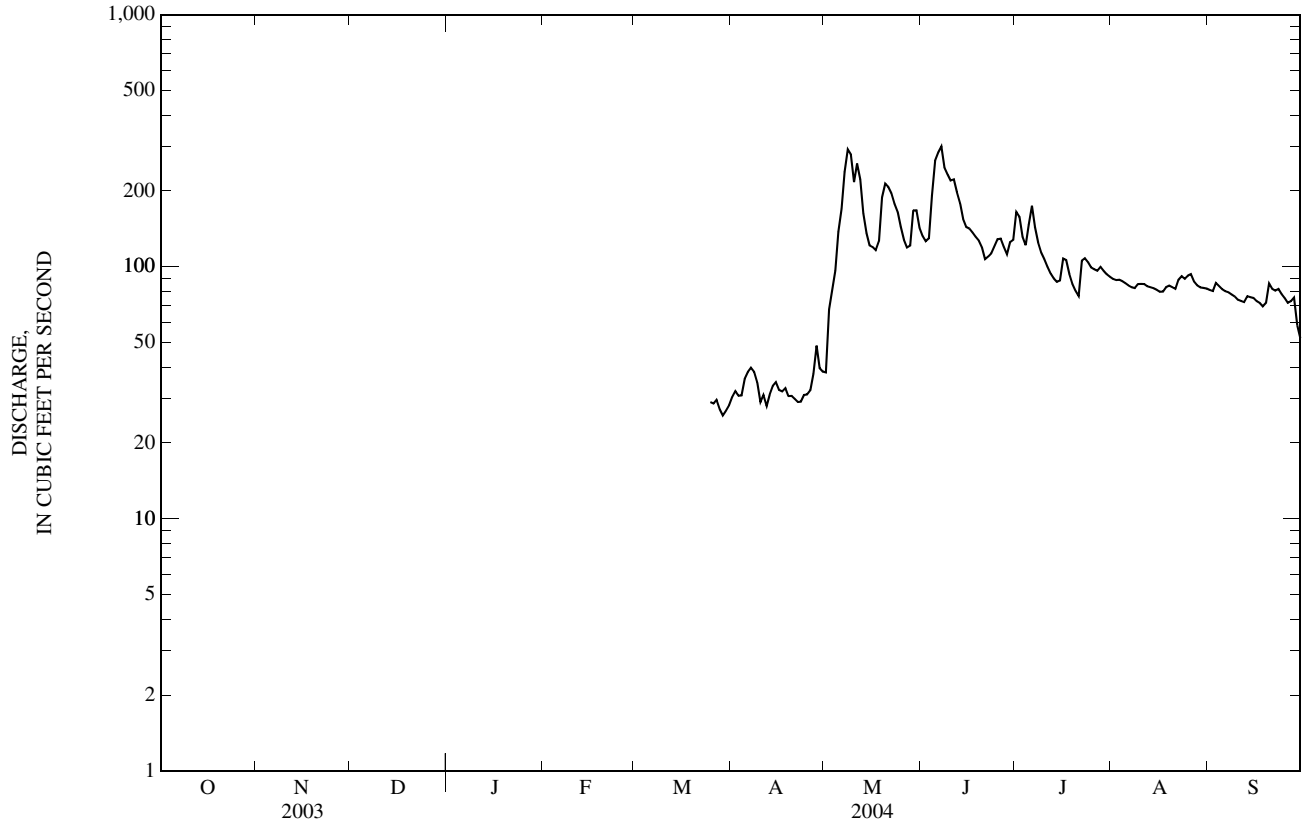
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)*

MEAN	57.0	47.2	41.5	36.9	35.2	35.1	49.9	270	489	167	98.8	77.4
MAX	95.2	76.4	60.4	48.7	44.6	48.0	138	553	990	473	158	134
(WY)	(1942)	(1969)	(1969)	(1948)	(1947)	(1946)	(1946)	(1988)	(1968)	(1975)	(1979)	(1968)
MIN	35.3	31.5	30.0	28.3	26.9	25.9	29.0	80.4	116	69.2	57.7	36.0
(WY)	(1955)	(1955)	(1941)	(1967)	(1961)	(1961)	(1961)	(1995)	(2001)	(1961)	(1966)	(1954)

06278500 SHELL CREEK NEAR SHELL, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1941 - 2004*	
ANNUAL MEAN	--		119	
HIGHEST ANNUAL MEAN	--		160	1968
LOWEST ANNUAL MEAN	--		77.3	1966
HIGHEST DAILY MEAN	300	Jun 78	1,980	Jun 4, 1968
LOWEST DAILY MEAN	26	Mar 29	13	Apr 10, 1989
MAXIMUM PEAK FLOW	350	Jun 7	3,020	Jun 24, 1945
MAXIMUM PEAK STAGE	3.32	Jun 7	7.49	Jun 24, 1945
ANNUAL RUNOFF (AC-FT)	--		85,900	

* For period of operation.
a From rating curve extended above 1,600 ft^3/s.



06279500 BIGHORN RIVER AT KANE, WY

LOCATION.--Lat 44°45'31", long 108°10'51", in NW¼ NE¼ SW¼ sec.9, T.55 N., R.94 W., Big Horn County, Hydrologic Unit 10080010, on right bank 180 ft upstream from Bighorn Canyon National Recreation Area boundary, 0.5 mi upstream from normal high-water line of Bighorn Lake at elevation 3,660 ft, 1.3 mi upstream from Five Springs Creek, and 5.9 mi south of Kane.

DRAINAGE AREA.--15,762 mi^2. Area at site used prior to May 17, 1956, 15,846 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to current year.

REVISED RECORDS.--WSP 1309: 1929(M). WSP 1509: 1929. WSP 1709: Drainage area. WDR WY-02-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,660 ft above NGVD of 1929, from topographic map. August 29, 1928 to April 25, 1932, nonrecording gage, and April 25, 1932 to May 16, 1956, water-stage recorder at site 12.5 mi downstream at different datum. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by Boysen Reservoir since October 1951. Diversions for irrigation of about 376,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1923, 14.8 ft, September 30, 1923, site and datum in use April 1932 to May 1956.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	696	699	e850	e500	712	e700	647	858	1,020	855	848	678
2	696	699	e800	e650	702	e700	627	797	896	1,780	793	669
3	603	789	e750	e600	626	e750	638	751	822	1,550	743	701
4	572	e750	e750	e500	612	e750	636	705	811	1,260	699	780
5	573	e700	e700	e450	654	e800	646	642	1,020	1,160	700	894
6	574	e710	e680	e390	658	e800	619	693	1,420	1,310	723	956
7	572	e710	e750	e450	675	e850	557	955	1,620	1,510	666	955
8	552	e720	e790	454	662	e900	597	1,240	1,640	1,300	644	883
9	534	e720	e700	553	674	e930	596	1,480	1,450	1,080	633	848
10	539	e740	e700	683	687	e1,000	843	1,430	1,420	1,000	583	798
11	554	e760	e650	739	e660	e840	1,140	1,190	1,460	946	531	765
12	583	759	e600	733	e650	834	874	1,300	1,370	e850	520	786
13	592	720	e600	711	643	826	778	1,330	1,260	e800	493	812
14	670	725	e650	709	577	804	684	1,110	1,170	e750	500	837
15	673	720	e700	715	590	802	666	955	1,030	757	486	891
16	658	718	e700	727	651	800	684	843	927	e770	502	1,020
17	658	723	e650	719	707	805	704	795	913	e850	525	961
18	665	721	e650	692	750	788	705	797	936	e950	533	926
19	663	717	e600	666	792	781	697	749	928	834	590	942
20	658	745	e650	670	e790	777	730	859	923	796	642	972
21	648	e750	e650	700	e750	768	667	1,050	978	752	677	1,130
22	641	e600	e630	710	e700	732	628	1,140	1,010	729	659	1,430
23	651	e500	e620	687	e600	734	589	1,170	936	771	725	1,190
24	651	e350	e600	681	e700	733	596	1,100	852	1,260	764	1,130
25	647	e400	e620	e660	e800	719	583	1,010	879	1,870	742	1,060
26	639	e500	e620	e650	e900	710	595	922	917	1,380	704	1,040
27	663	e600	e620	e640	e800	702	590	852	953	1,170	698	989
28	676	e650	e600	e620	e800	702	564	799	929	1,060	711	1,030
29	682	e700	e580	596	e750	685	632	747	897	965	729	1,040
30	692	e800	e560	636	---	670	812	897	902	989	730	1,050
31	698	---	e550	690	---	657	---	1,070	---	969	719	---
TOTAL	19,573	20,395	20,570	19,581	20,272	24,049	20,324	30,236	32,289	33,023	20,212	28,163
MEAN	631	680	664	632	699	776	677	975	1,076	1,065	652	939
MAX	698	800	850	739	900	1,000	1,140	1,480	1,640	1,870	848	1,430
MIN	534	350	550	390	577	657	557	642	811	729	486	669
AC-FT	38,820	40,450	40,800	38,840	40,210	47,700	40,310	59,970	64,050	65,500	40,090	55,860

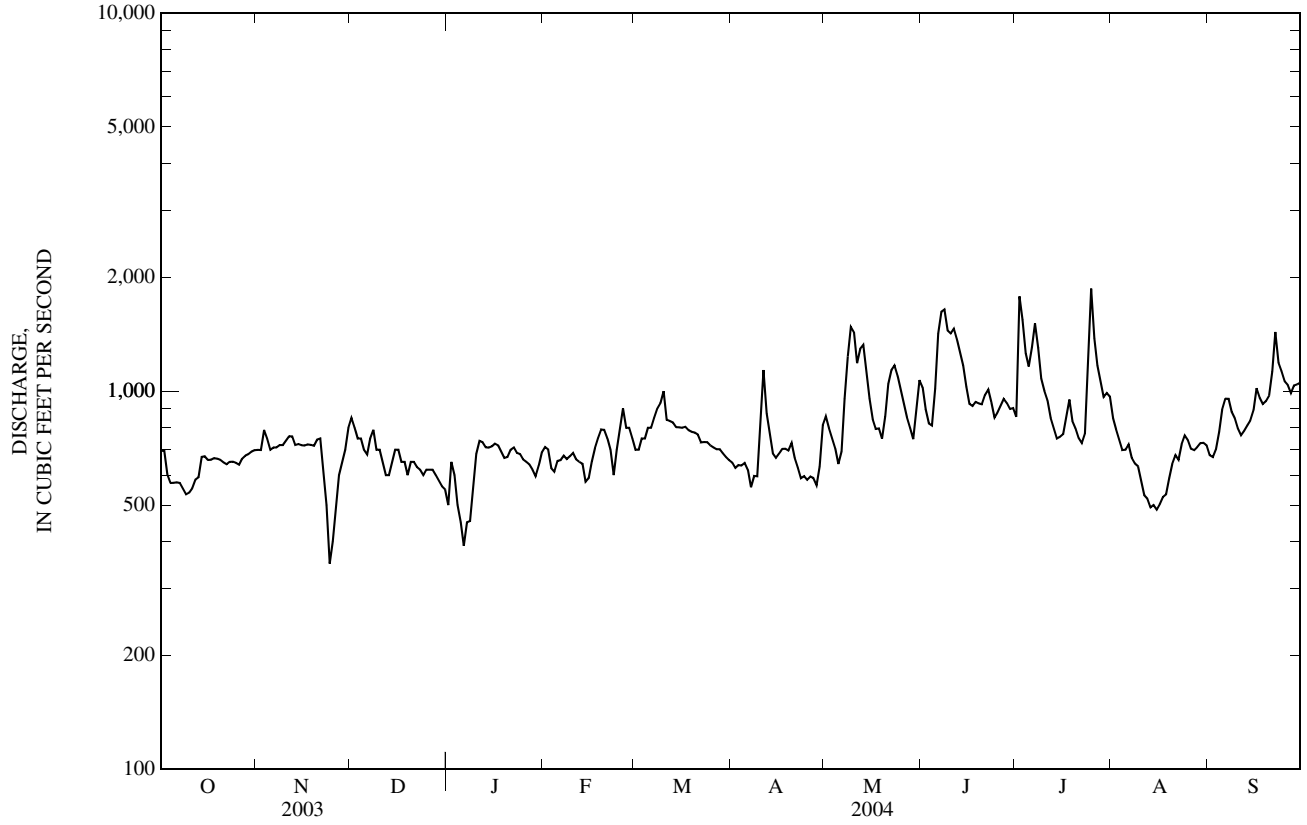
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)

MEAN	1,773	1,647	1,437	1,349	1,514	1,799	1,778	3,121	5,687	3,085	1,422	1,507
MAX	3,994	2,871	2,506	2,871	3,164	3,171	3,454	7,505	14,680	11,650	6,388	3,673
(WY)	(1983)	(1984)	(1983)	(1972)	(1983)	(1972)	(1943)	(1947)	(1944)	(1967)	(1930)	(1973)
MIN	524	680	627	580	550	740	677	744	1,032	501	305	386
(WY)	(1936)	(2004)	(1961)	(1937)	(1933)	(1989)	(2004)	(2002)	(1934)	(1961)	(1940)	(1935)

06279500 BIGHORN RIVER AT KANE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1930 - 2004*	
ANNUAL TOTAL	326,467		288,687		--	
ANNUAL MEAN	894		789		2,176	
HIGHEST ANNUAL MEAN	--		--		3,524	1947
LOWEST ANNUAL MEAN	--		--		781	2002
HIGHEST DAILY MEAN	5,080	May 31	1,870	Jul 25	24,800	Jun 15, 1935
LOWEST DAILY MEAN	350	Nov 24	350	Nov 24	179	Jul 22, 1934
ANNUAL SEVEN-DAY MINIMUM	434	Aug 12	485	Jan 3	184	Jul 18, 1934
MAXIMUM PEAK FLOW	--		2,150	Jul 2	25,200[a]	Jun 16, 1935
MAXIMUM PEAK STAGE	--		2.70	Jul 2	11.10[a]	Jun 16, 1935
ANNUAL RUNOFF (AC-FT)	647,500		572,600		1,577,000	
10 PERCENT EXCEEDS	1,560		1,070		3,900	
50 PERCENT EXCEEDS	700		720		1,600	
90 PERCENT EXCEEDS	556		587		740	

* August 1928 to September 1929 not included in computations, monthly only for selected months.
a Site and datum then in use.
e Estimated.



06279500 BIGHORN RIVER AT KANE, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--1947-1977, 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
OCT													
28...	1430	680	660	10.9	107	8.3	1,140	12.0	8.0	<.04	.34	<.008	<.02
JAN													
28...	1425	583	663	11.4	90	8.0	1,180	-8.0	.0	.08	.56	<.008	<.02
MAY													
11...	1450	1,110	664	8.7	101	8.2	635	20.5	15.5	<.04	.56	.021	E.01
12...	1510	1,270	--	--	--	--	--	--	--	--	--	--	--
AUG													
17...	1350	518	672	8.9	115	8.0	1,040	28.0	21.5	<.04	<.06	<.008	<.02

Date	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)	Suspended sediment discharge, tons/d (80155)
OCT				
28...	E16	30	81	149
JAN				
28...	44	62	81	128
MAY				
11...	290	--	474	1,420
12...	--	250	--	--
AUG				
17...	71	90	47	66

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY

LOCATION.--Lat 44'30°48", long 109'58°22", Park County, Hydrologic Unit 10080012, Shoshone National Forest, on right bank 0.3 mi upstream from mouth and 0.8 mi northwest of Pahaska.

DRAINAGE AREA.--19.1 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1989 to September 1993, March 2001 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,760 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	---	---	---	---	---	16	25	38	77	22	26
2	9.1	---	---	---	---	---	16	34	40	72	22	29
3	8.7	---	---	---	---	---	14	42	46	68	21	27
4	8.5	---	---	---	---	---	16	52	57	67	20	26
5	8.6	---	---	---	---	---	19	66	79	62	20	24
6	8.6	---	---	---	---	---	22	73	109	57	19	23
7	8.5	---	---	---	---	---	25	77	116	55	19	22
8	8.6	---	---	---	---	---	28	76	110	53	18	22
9	8.3	---	---	---	---	---	25	67	110	51	18	22
10	10	---	---	---	---	---	21	56	112	50	17	21
11	8.6	---	---	---	---	---	20	51	102	48	17	20
12	8.4	---	---	---	---	---	22	45	98	46	17	20
13	8.2	---	---	---	---	---	27	39	92	44	16	25
14	8.0	---	---	---	---	---	30	35	88	42	16	24
15	---	---	---	---	---	---	28	34	91	41	16	22
16	---	---	---	---	---	---	25	34	88	40	16	25
17	---	---	---	---	---	5.7	24	33	83	38	16	24
18	---	---	---	---	---	5.9	21	37	79	52	16	22
19	---	---	---	---	---	6.7	20	36	74	54	16	23
20	---	---	---	---	---	6.7	19	32	73	36	16	28
21	---	---	---	---	---	7.6	18	35	70	33	17	24
22	---	---	---	---	---	8.8	17	37	71	33	26	23
23	---	---	---	---	---	9.4	16	37	78	30	30	25
24	---	---	---	---	---	10	16	34	83	28	19	29
25	---	---	---	---	---	12	16	31	86	27	52	27
26	---	---	---	---	---	11	20	30	86	26	39	27
27	---	---	---	---	---	9.3	28	34	91	25	33	27
28	---	---	---	---	---	8.5	32	40	92	25	29	27
29	---	---	---	---	---	8.3	26	41	87	24	28	26
30	---	---	---	---	---	8.8	24	38	80	23	27	27
31	---	---	---	---	---	12	---	38	---	22	26	---
TOTAL	---	---	---	---	---	---	651	1,339	2,509	1,349	684	737
MEAN	---	---	---	---	---	---	21.7	43.2	83.6	43.5	22.1	24.6
MAX	---	---	---	---	---	---	32	77	116	77	52	29
MIN	---	---	---	---	---	---	14	25	38	22	16	20
AC-FT	---	---	---	---	---	---	1,290	2,660	4,980	2,680	1,360	1,460

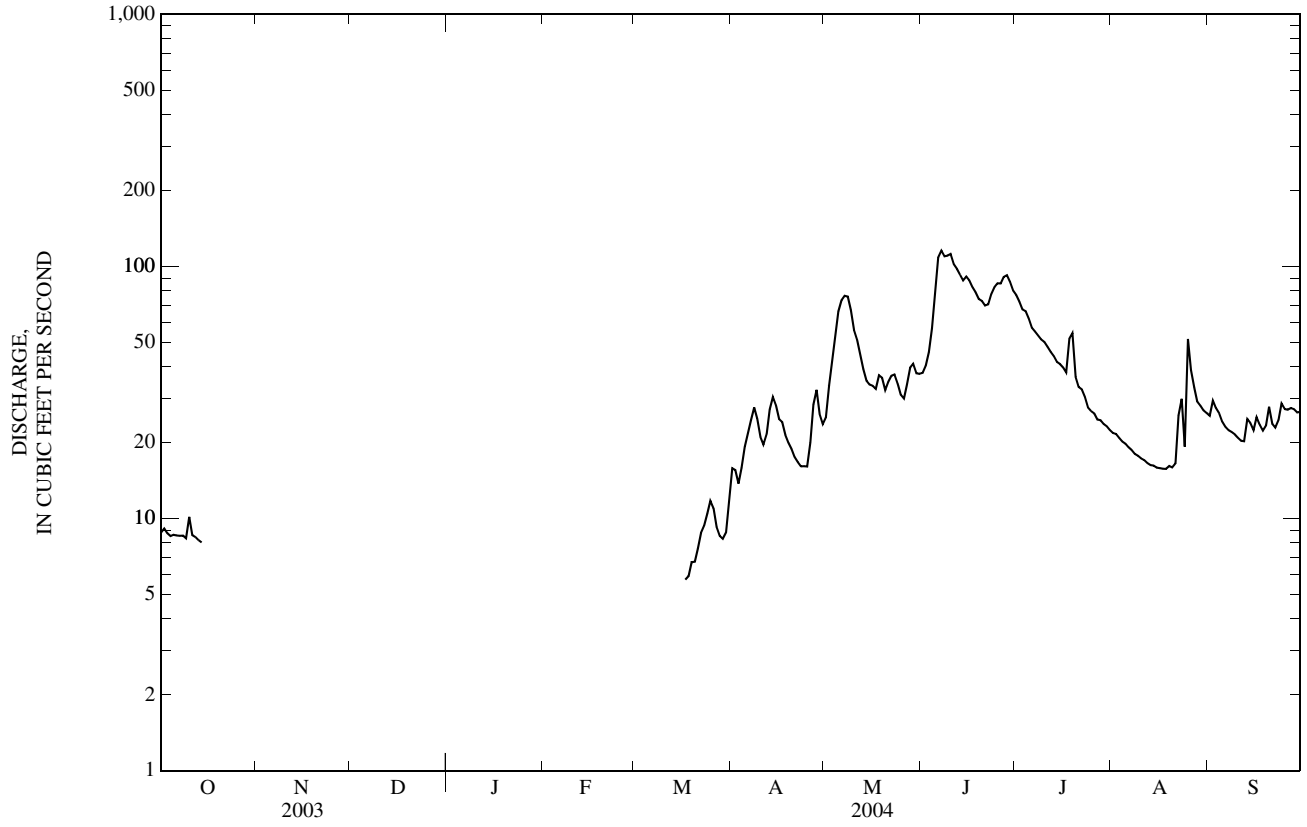
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)*

MEAN	---	---	---	---	---	---	13.8	62.3	114	49.3	17.5	12.7
MAX	---	---	---	---	---	---	21.7	107	155	80.9	30.7	24.6
(WY)	---	---	---	---	---	---	(2004)	(2001)	(1991)	(1993)	(1993)	(2004)
MIN	---	---	---	---	---	---	6.49	36.0	59.8	22.5	9.57	7.83
(WY)	---	---	---	---	---	---	(1991)	(1990)	(1992)	(2001)	(2001)	(2001)

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1989 - 2004*	
HIGHEST DAILY MEAN	116	Jun 7	294	May 29, 2003
LOWEST DAILY MEAN	5.7	Mar 17	3.7	Mar 20, 1993
MAXIMUM PEAK FLOW	284	Jul 18	355	May 29, 2003
MAXIMUM PEAK STAGE	2.35	Jul 18	2.74	Jun 12, 1991

* For period of operation.



06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1989 to September 1993, March 2001 to current year (no winter records).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1989 to September 1993, March 2001 to current year (no winter records).
pH: June 1989 to September 1993, March 2001 to current year (no winter records).
WATER TEMPERATURE: July 1989 to September 1993, March 2001 to current year (no winter records).
DISSOLVED OXYGEN: March 2001 to current year (no winter records).
SUSPENDED-SEDIMENT DISCHARGE: March 1989 to September 1993, March 2001 to current year (no winter records).
INSTRUMENTATION: Water-quality monitor and sediment pumping sampler.

REMARKS.--Specific conductance records excellent October 5-14, March 16 to August 4, August 21 to September 30; good October 1-4, August 5-17; and fair August 18-20. pH records excellent. Water temperature records good. Dissolved oxygen records excellent October 1-14; and poor March 17 to April 18. Water-temperature records represent water temperature at sensor within 0.2°C.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 112 microsiemens per centimeter at 25°C (µS/cm), May 5, 1990; minimum recorded, 25 µS/cm, September 20, 2002.
pH: Maximum recorded, 9.2, July 17, 1991; minimum recorded, 6.5, July 22, 1992.
WATER TEMPERATURE: Maximum recorded, 14.9°C, August 8, 1990; minimum recorded, 0.0°C, on many days during March and April most years.
DISSOLVED OXYGEN: Maximum recorded 11.9 mg/L, June 13, 2001; minimum recorded, 6.0 mg/L, October 7, 2003.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 533 mg/L, August 25, 2004; minimum daily mean, 0.0 mg/L, September 27-30, 1989.
SEDIMENT LOADS: Maximum daily, 169 tons, May 31, 2002; minimum daily, 0 tons, September 27-30, 1989 and March 20 to April 25, June 26, 27, July 4-7, August 2-4, 6-11, July 14 to September 5, and September 8-30, 2001.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 95 µS/cm, March 17; minimum recorded, 30 µS/cm, July 19.
pH: Maximum recorded, 8.3, May 1, 14; minimum recorded, 6.7, July 18.
WATER TEMPERATURE: Maximum recorded, 13.8°C, August 2, minimum recorded, 0.1°C, May 10, 11.
DISSOLVED OXYGEN: Maximum recorded, 12.7 mg/L, August 18; minimum recorded, 6.0 October 7.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 533 mg/L, August 25; minimum daily mean, 1 mg/L, many days.
SEDIMENT LOADS: Maximum daily, 99 tons, August 25; minimum daily, 0.06 tons, April 22, 23.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
MAR													
17...	1000	5.7	595	11.0	101	8.1	75	4.0	1.5	29	7.87	2.21	.71
APR													
05...	1330	18	593	10.3	100	7.8	66	13.5	3.5	22	5.99	1.67	.72
19...	1300	22	594	9.9	96	7.6	67	10.5	3.5	22	5.79	1.72	.67
MAY													
04...	1300	48	595	10.4	109	7.9	56	19.5	6.5	18	4.92	1.34	.55
17...	1300	33	595	11.0	112	8.1	60	13.0	5.5	19	5.24	1.45	.60
27...	1300	33	592	10.8	112	8.1	59	13.5	6.0	20	5.41	1.47	.65
JUN													
17...	1300	90	600	10.2	106	7.7	52	18.0	6.5	17	4.55	1.25	.46
29...	1300	81	576	9.4	101	7.6	48	20.0	6.5	15	4.27	1.10	.43
JUL													
08...	1230	53	594	10.1	108	7.7	52	20.0	7.5	16	4.47	1.18	.49
29...	1300	24	596	9.8	110	7.8	65	21.5	9.5	21	5.78	1.48	.49
AUG													
20...	1230	16	599	10.2	111	8.0	75	15.5	8.5	23	6.41	1.72	.56
SEP													
13...	1330	24	593	9.8	101	7.9	70	7.5	6.0	--	--	--	--

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
MAR													
17...	.9	10.8	44	48	.56	<.2	26.7	4.1	82	.11	1.27	83	E.07
APR													
05...	.6	6.71	39	32	.62	<.2	21.5	2.6	65	.08	2.99	62	E.06
19...	.6	6.25	38	32	.63	<.2	22.1	3.0	60	.09	4.01	68	.11
MAY													
04...	.5	4.59	35	26	.54	<.2	20.0	2.6	51	.08	7.66	59	E.07
17...	.5	5.48	38	30	.54	<.2	22.2	2.4	56	.08	5.29	59	E.06
27...	.6	5.62	37	30	.47	<.2	21.5	2.3	56	.08	5.29	59	.11
JUN													
17...	.5	4.56	37	26	.37	<.2	19.5	2.0	49	.06	9.97	41	E.07
29...	.5	4.37	38	24	.28	<.2	17.4	1.9	44	.06	9.11	42	<.10
JUL													
08...	.5	4.70	38	27	.30	<.2	19.4	1.9	49	.07	7.43	52	E.06
29...	.6	5.85	38	34	.29	<.2	22.8	2.2	59	.09	4.14	64	--
AUG													
20...	.6	6.88	39	38	.40	<.2	24.5	.7	64	.10	3.18	74	<.10
SEP													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	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)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)
MAR													
17...	E.07	<.04	E.05	<.008	.05	.059	.058	E1	<.20	.8	4	<.06	26
APR													
05...	.13	E.03	1.40	.008	<.02	.043	.053	--	--	--	--	--	--
19...	E.07	E.00	.18	<.008	.03	.033	.039	5	<.20	.5	4	<.06	10
MAY													
04...	.22	<.04	.18	<.008	.03	.032	.051	--	--	--	--	--	--
17...	E.09	E.02	.08	<.008	.03	.032	.035	32	<.20	.7	4	<.06	10
27...	.11	<.04	<.06	<.008	.02	.029	.040	--	--	--	--	--	--
JUN													
17...	.10	<.04	E.04	<.008	.03	.033	E.043	5	<.20	.4	4	<.06	E6
29...	<.10	<.04	<.06	<.008	.02	.027	.037	--	--	--	--	--	--
JUL													
08...	.14	<.04	<.06	<.008	.02	.030	.042	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
20...	E.07	<.04	<.06	<.008	.03	.041	.051	3	<.20	.6	5	<.06	13
SEP													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	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)
MAR													
17...	<.04	<.8	.026	.4	E4	<.08	.6	E.1	1.2	.20	<.4	<.2	36.4
APR													
05...	--	--	--	--	8	--	--	E.4	--	--	--	--	--
19...	<.04	<.8	.030	.6	E6	<.08	E.4	.3	.6	.22	<.4	<.2	39.8
MAY													
04...	--	--	--	--	11	--	--	E.6	--	--	--	--	--
17...	<.04	E.5	.040	.5	24	<.08	E.4	.7	.4	.20	<.4	<.2	35.9
JUN													
17...	<.04	E.5	.022	.6	E5	<.08	E.3	.3	.4	.15	<.4	<.2	33.9
29...	--	--	--	--	E3	--	--	<.8	--	--	--	--	--
JUL													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	<6	--	--	1.6	--	--	--	--	--
AUG													
20...	<.04	E.7	.027	E.3	E5	<.08	E.6	1.1	.7	.14	<.4	<.2	45.0
SEP													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

Date	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
MAR				
17...	<.04	5.8	5.8	.05
APR				
05...	--	--	--	--
19...	<.04	4.1	.8	.04
MAY				
04...	--	--	--	--
17...	<.04	4.1	1.7	E.03
27...	--	--	--	--
JUN				
17...	<.04	3.3	2.3	<.04
29...	--	--	--	--
JUL				
08...	--	--	--	--
29...	--	--	--	--
AUG				
20...	<.04	4.3	<.6	E.03
SEP				
13...	--	--	--	--

< -- Less than
E -- Estimated value

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	90	86	89	---	---	---	---	---	---	---	---	---
2	90	87	89	---	---	---	---	---	---	---	---	---
3	89	84	87	---	---	---	---	---	---	---	---	---
4	90	88	89	---	---	---	---	---	---	---	---	---
5	90	88	89	---	---	---	---	---	---	---	---	---
6	90	88	89	---	---	---	---	---	---	---	---	---
7	90	87	88	---	---	---	---	---	---	---	---	---
8	88	87	88	---	---	---	---	---	---	---	---	---
9	88	87	88	---	---	---	---	---	---	---	---	---
10	88	84	85	---	---	---	---	---	---	---	---	---
11	86	85	86	---	---	---	---	---	---	---	---	---
12	87	85	86	---	---	---	---	---	---	---	---	---
13	85	84	84	---	---	---	---	---	---	---	---	---
14	86	84	85	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	70	64	69	68	62	67
2	---	---	---	---	---	---	72	64	68	64	50	60
3	---	---	---	---	---	---	73	70	72	60	53	58
4	---	---	---	---	---	---	70	69	70	59	47	55
5	---	---	---	---	---	---	69	60	67	54	46	51
6	---	---	---	---	---	---	66	60	64	52	46	50
7	---	---	---	---	---	---	65	61	64	51	44	49
8	---	---	---	---	---	---	65	61	63	50	45	48
9	---	---	---	---	---	---	67	63	64	51	47	50
10	---	---	---	---	---	---	68	67	67	52	50	52
11	---	---	---	---	---	---	70	68	69	54	51	52
12	---	---	---	---	---	---	70	64	69	57	54	55
13	---	---	---	---	---	---	66	58	64	58	55	56
14	---	---	---	---	---	---	63	58	62	59	55	57
15	---	---	---	---	---	---	66	62	64	60	57	58
16	---	---	---	---	---	---	67	65	66	61	59	60
17	---	---	---	95	92	94	68	66	66	62	59	60
18	---	---	---	94	91	93	69	67	68	60	55	59
19	---	---	---	93	87	90	70	68	69	60	56	59
20	---	---	---	94	90	92	70	69	70	60	58	60
21	---	---	---	94	89	92	72	69	71	60	57	59
22	---	---	---	93	88	91	73	70	71	59	56	58
23	---	---	---	92	87	90	74	71	73	58	57	57
24	---	---	---	91	86	89	73	70	71	60	58	59
25	---	---	---	87	82	84	75	71	73	61	59	60
26	---	---	---	83	81	82	74	63	71	61	60	61
27	---	---	---	83	82	83	65	56	63	61	58	60
28	---	---	---	85	82	83	65	56	61	58	58	58
29	---	---	---	86	83	84	68	65	66	59	57	58
30	---	---	---	84	80	83	68	66	67	60	59	59
31	---	---	---	80	70	76	---	---	---	61	59	60
MONTH	---	---	---	---	---	---	75	56	67	68	44	57

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	61	59	60	49	48	49	71	69	70	71	70	70
2	60	56	59	49	48	49	73	70	71	71	55	67
3	58	50	55	50	49	49	73	72	72	71	67	69
4	53	47	51	50	49	50	75	72	73	72	69	70
5	49	43	47	51	50	50	75	74	74	72	71	72
6	45	40	43	52	51	52	75	74	75	73	71	72
7	43	40	42	53	52	53	78	75	77	73	72	73
8	43	41	43	52	49	51	78	70	75	74	72	73
9	44	41	43	52	51	51	79	56	70	75	73	74
10	45	43	43	53	52	52	77	63	70	75	74	74
11	47	45	46	54	52	53	76	69	72	76	74	75
12	49	47	48	55	53	53	82	70	75	76	69	72
13	51	49	50	55	54	54	82	73	78	70	66	68
14	51	50	51	56	55	56	78	70	74	72	69	71
15	53	50	52	57	56	56	85	73	82	73	70	72
16	51	50	50	58	57	57	86	61	74	72	67	70
17	53	51	52	59	57	58	86	77	81	72	68	71
18	54	52	53	59	37	57	85	80	84	73	71	72
19	54	53	54	58	30	50	80	69	72	74	65	71
20	54	53	53	59	56	57	77	69	74	69	64	67
21	54	53	53	61	56	58	77	66	76	71	56	63
22	53	50	52	61	57	59	74	48	66	58	56	57
23	50	48	50	61	55	58	72	53	63	69	55	59
24	49	48	48	63	56	59	74	71	73	69	63	68
25	48	48	48	65	57	60	73	46	58	69	66	69
26	49	47	48	65	58	61	66	54	63	70	68	69
27	48	43	47	66	59	62	67	61	66	70	68	69
28	48	46	47	67	62	64	69	67	68	70	69	69
29	49	47	48	68	64	66	70	69	69	70	69	70
30	49	48	48	69	67	68	70	69	70	70	69	69
31	---	---	---	70	69	69	71	69	70	---	---	---
MONTH	61	40	49	70	30	56	86	46	72	76	55	70

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	8.1	7.9
18	---	---	---	---	---	---	---	---	---	---	8.1	8.0
19	---	---	---	---	---	---	---	---	---	---	8.1	8.0
20	---	---	---	---	---	---	---	---	---	---	8.1	8.0
21	---	---	---	---	---	---	---	---	---	---	8.1	8.0
22	---	---	---	---	---	---	---	---	---	---	8.1	8.0
23	---	---	---	---	---	---	---	---	---	---	8.1	8.0
24	---	---	---	---	---	---	---	---	---	---	8.1	8.0
25	---	---	---	---	---	---	---	---	---	---	8.0	8.0
26	---	---	---	---	---	---	---	---	---	---	8.0	7.9
27	---	---	---	---	---	---	---	---	---	---	8.0	8.0
28	---	---	---	---	---	---	---	---	---	---	8.0	8.0
29	---	---	---	---	---	---	---	---	---	---	8.0	7.9
30	---	---	---	---	---	---	---	---	---	---	8.0	7.9
31	---	---	---	---	---	---	---	---	---	---	8.0	7.9
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	7.8	8.3	7.8	8.0	7.7	7.8	7.6	7.9	7.7	7.9	7.8
2	7.9	7.8	8.2	7.7	8.0	7.7	7.8	7.6	7.9	7.7	7.9	7.7
3	8.0	7.9	8.1	7.7	8.0	7.6	7.8	7.6	8.0	7.7	7.9	7.8
4	8.0	7.8	8.0	7.5	7.9	7.6	7.8	7.6	7.9	7.7	8.0	7.8
5	7.9	7.6	7.8	7.5	7.8	7.5	7.8	7.6	8.0	7.7	7.9	7.8
6	7.7	7.6	7.8	7.5	7.7	7.5	7.8	7.6	8.0	7.7	7.9	7.8
7	7.8	7.6	7.8	7.5	7.8	7.5	7.8	7.6	8.0	7.8	8.0	7.8
8	7.7	7.6	7.8	7.5	7.8	7.6	7.8	7.5	8.0	7.8	8.0	7.8
9	7.7	7.6	7.8	7.5	7.8	7.6	7.7	7.5	8.0	7.8	8.0	7.8
10	7.7	7.6	7.8	7.5	7.7	7.6	7.7	7.6	8.0	7.8	7.9	7.8
11	7.8	7.6	7.8	7.6	7.8	7.7	7.8	7.6	8.0	7.8	7.9	7.8
12	7.8	7.6	7.8	7.6	7.8	7.7	7.8	7.6	8.0	7.8	8.0	7.8
13	7.8	7.6	7.8	7.6	7.8	7.7	7.8	7.6	8.0	7.8	8.0	7.8
14	7.8	7.6	7.8	7.6	7.8	7.7	7.8	7.6	8.0	7.8	8.0	7.9
15	7.8	7.6	8.0	7.6	7.8	7.7	7.8	7.6	8.0	7.8	8.0	7.9
16	7.8	7.6	8.0	7.7	7.8	7.7	7.8	7.6	8.0	7.8	8.0	7.8
17	7.8	7.6	8.2	7.7	7.9	7.7	7.8	7.6	8.0	7.8	8.0	7.8
18	7.8	7.7	8.1	7.7	7.9	7.8	7.9	6.7	8.0	7.8	8.1	7.8
19	---	---	8.0	7.7	7.8	7.7	7.6	6.9	8.0	7.8	8.0	7.9
20	8.0	7.8	8.0	7.7	7.8	7.7	7.7	7.5	8.0	7.8	8.0	7.8
21	8.0	7.8	8.1	7.7	7.8	7.7	7.8	7.5	8.0	7.8	8.0	7.8
22	8.1	7.8	8.1	7.7	7.8	7.7	7.8	7.6	8.0	7.5	8.0	7.9
23	8.1	7.8	8.0	7.7	7.9	7.7	7.8	7.6	7.9	7.7	8.0	7.8
24	8.2	7.8	8.0	7.7	7.9	7.7	7.8	7.6	8.0	7.8	8.0	7.8
25	8.2	7.8	8.1	7.7	7.8	7.7	7.8	7.6	7.9	7.6	7.9	7.8
26	8.2	7.7	8.0	7.7	7.8	7.6	7.8	7.6	7.9	7.6	7.9	7.8
27	8.2	7.7	8.1	7.7	7.8	7.6	7.8	7.7	7.9	7.7	8.0	7.8
28	8.0	7.8	8.0	7.7	7.8	7.6	7.9	7.7	7.9	7.7	8.0	7.8
29	8.1	7.8	7.9	7.7	7.8	7.6	7.9	7.7	7.9	7.7	8.0	7.8
30	8.2	7.8	7.9	7.7	7.7	7.5	7.9	7.7	7.9	7.7	8.0	7.8
31	---	---	8.0	7.7	---	---	7.9	7.7	7.9	7.8	---	---
MONTH	8.2	7.6	8.3	7.5	8.0	7.5	7.9	6.7	8.0	7.5	8.1	7.7
YEAR	8.3	6.7										

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.5	2.4	4.5	---	---	---	---	---	---	---	---	---
2	6.8	3.7	5.3	---	---	---	---	---	---	---	---	---
3	5.1	2.5	3.9	---	---	---	---	---	---	---	---	---
4	5.1	2.0	3.6	---	---	---	---	---	---	---	---	---
5	5.7	2.6	4.2	---	---	---	---	---	---	---	---	---
6	6.3	2.9	4.7	---	---	---	---	---	---	---	---	---
7	6.9	3.5	5.3	---	---	---	---	---	---	---	---	---
8	7.2	4.9	6.0	---	---	---	---	---	---	---	---	---
9	6.9	4.1	5.7	---	---	---	---	---	---	---	---	---
10	6.5	2.8	4.8	---	---	---	---	---	---	---	---	---
11	3.8	1.8	2.9	---	---	---	---	---	---	---	---	---
12	5.1	3.6	4.3	---	---	---	---	---	---	---	---	---
13	3.9	2.6	3.4	---	---	---	---	---	---	---	---	---
14	4.0	1.7	2.9	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	4.3	1.7	2.7	7.5	1.3	4.2
2	---	---	---	---	---	---	3.2	1.8	2.4	8.5	2.0	4.8
3	---	---	---	---	---	---	4.2	1.7	2.8	7.8	3.2	5.0
4	---	---	---	---	---	---	4.2	1.5	2.9	9.0	2.6	4.9
5	---	---	---	---	---	---	4.6	1.5	2.8	8.6	3.1	5.2
6	---	---	---	---	---	---	4.5	1.3	2.8	8.4	3.4	5.3
7	---	---	---	---	---	---	4.9	2.5	3.5	8.7	2.8	5.1
8	---	---	---	---	---	---	4.9	2.4	3.5	7.8	2.8	5.0
9	---	---	---	---	---	---	3.2	0.5	1.8	7.4	3.4	5.0
10	---	---	---	---	---	---	3.9	0.1	1.9	7.5	2.8	4.9
11	---	---	---	---	---	---	4.4	0.1	2.3	5.6	3.1	4.2
12	---	---	---	---	---	---	5.5	0.9	3.1	3.9	1.7	2.6
13	---	---	---	---	---	---	6.0	1.2	3.4	4.6	1.2	2.6
14	---	---	---	---	---	---	5.1	1.8	3.3	4.4	1.1	2.6
15	---	---	---	---	---	---	3.8	1.3	2.6	7.4	1.7	4.3
16	---	---	---	---	---	---	4.9	1.1	2.9	4.6	2.8	3.7
17	---	---	---	1.7	1.5	1.6	4.2	1.1	2.7	8.4	1.7	4.7
18	---	---	---	1.7	1.4	1.6	3.1	1.9	2.5	6.0	3.9	4.9
19	---	---	---	1.8	1.4	1.7	5.0	1.5	3.2	5.8	2.8	4.2
20	---	---	---	2.1	1.0	1.6	3.6	1.3	2.4	5.0	2.7	3.9
21	---	---	---	2.2	1.4	1.9	4.8	0.3	2.4	7.2	2.7	4.7
22	---	---	---	2.5	1.3	2.0	4.8	0.5	2.7	6.2	3.1	4.5
23	---	---	---	2.6	1.7	2.2	6.1	0.6	3.4	4.6	3.0	3.7
24	---	---	---	2.8	1.6	2.3	4.6	1.4	3.1	4.9	1.9	3.4
25	---	---	---	2.8	1.4	2.2	6.4	0.8	3.5	6.1	2.5	4.2
26	---	---	---	2.6	1.6	2.1	7.7	1.8	4.6	4.6	3.2	3.8
27	---	---	---	2.0	0.9	1.5	7.9	2.1	4.7	7.9	3.8	5.6
28	---	---	---	2.2	0.8	1.5	4.4	1.4	3.0	6.8	4.5	5.5
29	---	---	---	2.6	0.2	1.5	4.3	0.7	2.2	5.0	3.1	4.0
30	---	---	---	3.1	0.7	2.0	6.7	0.3	3.3	4.5	2.4	3.3
31	---	---	---	3.7	1.1	2.4	---	---	---	7.8	2.9	5.0
MONTH	---	---	---	---	---	---	7.9	0.1	2.9	9.0	1.1	4.3

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.8	3.5	6.1	10.0	4.6	7.0	13.6	6.5	10.1	10.6	5.1	7.9
2	9.8	3.0	6.2	8.4	4.6	6.6	13.8	7.9	10.7	9.6	7.1	8.1
3	11.0	3.4	6.8	9.2	4.3	6.6	12.6	8.1	10.4	7.4	4.0	5.5
4	10.0	4.8	6.9	8.6	5.6	6.9	13.0	6.7	9.9	8.4	5.0	6.5
5	10.2	3.9	6.5	9.2	4.9	6.7	13.0	7.5	10.3	8.1	4.0	6.0
6	9.6	4.4	6.5	10.7	4.6	7.3	11.9	6.7	9.5	8.6	4.0	6.3
7	9.4	4.2	6.2	10.7	5.0	7.7	12.5	5.6	9.1	8.9	3.7	6.3
8	8.9	3.9	5.8	10.7	4.5	7.3	12.5	5.6	9.2	9.4	4.1	6.8
9	9.0	4.1	6.1	10.3	3.9	7.1	12.3	5.9	9.3	9.4	4.7	7.0
10	5.4	3.3	4.4	11.7	5.1	8.2	12.8	6.0	9.5	8.7	4.5	6.7
11	5.3	3.2	4.0	12.1	5.4	8.5	12.2	5.8	9.2	9.5	4.4	6.9
12	7.2	3.2	4.8	12.7	5.1	8.7	12.1	5.2	8.9	9.3	5.3	7.4
13	7.4	3.8	5.3	9.3	5.8	7.8	12.4	5.6	9.2	7.8	5.4	6.3
14	9.5	3.5	6.1	13.2	6.0	9.4	12.8	6.2	9.6	5.6	4.3	5.0
15	9.6	3.4	6.2	11.8	7.8	9.5	12.6	6.5	9.6	6.4	3.9	5.0
16	5.9	4.1	4.9	11.9	6.6	9.1	12.0	7.6	10	7.9	5.1	6.2
17	8.0	2.4	4.9	11.2	6.6	9.1	11.5	9.0	10.4	8.9	4.2	6.3
18	7.1	3.9	5.2	11.0	7.0	9.1	11.0	7.7	9.5	9.1	5.7	7.4
19	9.2	4.3	6.1	12.6	7.6	9.4	11.7	8.0	9.7	7.4	5.2	6.3
20	7.1	4.5	5.6	12.5	7.0	9.3	10.8	6.5	8.8	5.7	4.2	4.9
21	9.4	2.9	5.8	13.4	7.1	9.9	11.3	6.7	9.0	5.4	2.1	3.7
22	9.6	3.2	6.1	11.2	7.4	9.2	10.3	7.3	8.9	4.4	2.7	3.6
23	10.3	4.1	6.8	11.4	7.0	9.0	9.1	6.8	7.5	6.3	3.9	4.9
24	8.2	4.3	6.3	12.7	5.9	9.1	9.2	4.8	7.0	7.7	4.2	5.7
25	8.1	4.4	6.2	12.9	6.0	9.5	8.0	5.5	6.5	7.1	3.3	5.1
26	8.6	4.2	6.3	12.6	7.2	9.7	7.2	4.6	5.7	7.7	3.3	5.5
27	8.3	5.3	6.3	12.8	6.5	9.5	9.3	4.8	6.6	7.8	5.1	6.4
28	9.2	4.4	6.4	13.0	7.5	9.9	8.9	4.4	6.6	7.8	5.5	6.5
29	9.8	4.7	6.7	12.7	6.2	9.4	10.4	5.5	7.8	7.3	3.8	5.6
30	8.0	5.5	6.6	12.4	5.9	9.3	10.6	5.1	7.7	7.1	5.6	6.3
31	---	---	---	13.4	6.3	9.9	10.7	5.0	7.9	---	---	---
MONTH	11.0	2.4	5.9	13.4	3.9	8.6	13.8	4.4	8.8	10.6	2.1	6.1
YEAR	13.8	0.1	5.7									

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.9	9.6	10.3	---	---	---	---	---	---	---	---	---
2	10.5	9.5	10	---	---	---	---	---	---	---	---	---
3	10.9	9.9	10.4	---	---	---	---	---	---	---	---	---
4	11.0	10.0	10.5	---	---	---	---	---	---	---	---	---
5	10.8	9.9	10.3	---	---	---	---	---	---	---	---	---
6	10.8	9.7	10.2	---	---	---	---	---	---	---	---	---
7	10.5	9.5	10.0	---	---	---	---	---	---	---	---	---
8	10.2	9.5	9.8	---	---	---	---	---	---	---	---	---
9	10.3	9.5	9.9	---	---	---	---	---	---	---	---	---
10	10.6	9.6	10.0	---	---	---	---	---	---	---	---	---
11	11.1	10.4	10.7	---	---	---	---	---	---	---	---	---
12	10.5	10.0	10.3	---	---	---	---	---	---	---	---	---
13	10.8	10.3	10.6	---	---	---	---	---	---	---	---	---
14	11.1	10.3	10.7	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	10.8	10.1	10.5	---	---	---
2	---	---	---	---	---	---	10.9	10.5	10.8	---	---	---
3	---	---	---	---	---	---	10.9	10.1	10.6	---	---	---
4	---	---	---	---	---	---	10.9	10.1	10.5	---	---	---
5	---	---	---	---	---	---	10.9	10.2	10.6	---	---	---
6	---	---	---	---	---	---	11.1	10.2	10.7	---	---	---
7	---	---	---	---	---	---	10.8	10.2	10.5	---	---	---
8	---	---	---	---	---	---	10.7	10.1	10.4	---	---	---
9	---	---	---	---	---	---	11.4	10.5	11.0	---	---	---
10	---	---	---	---	---	---	11.6	10.5	11.0	---	---	---
11	---	---	---	---	---	---	11.5	10.3	10.9	---	---	---
12	---	---	---	---	---	---	11.2	10.0	10.6	---	---	---
13	---	---	---	---	---	---	11.1	9.8	10.5	---	---	---
14	---	---	---	---	---	---	10.8	10.0	10.4	---	---	---
15	---	---	---	---	---	---	11.0	10.3	10.6	---	---	---
16	---	---	---	---	---	---	11.0	10.0	10.5	---	---	---
17	---	---	---	11.1	10.9	11.0	10.8	10.0	10.4	---	---	---
18	---	---	---	11.0	10.7	10.9	10.6	10.3	10.4	---	---	---
19	---	---	---	10.9	10.7	10.8	---	---	---	---	---	---
20	---	---	---	11.1	10.8	11.0	---	---	---	---	---	---
21	---	---	---	11.0	10.7	10.8	---	---	---	---	---	---
22	---	---	---	10.9	10.6	10.7	---	---	---	---	---	---
23	---	---	---	10.8	10.5	10.6	---	---	---	---	---	---
24	---	---	---	10.8	10.4	10.5	---	---	---	---	---	---
25	---	---	---	10.9	10.4	10.6	---	---	---	---	---	---
26	---	---	---	10.8	10.5	10.6	---	---	---	---	---	---
27	---	---	---	11.0	10.7	10.9	---	---	---	---	---	---
28	---	---	---	11.2	10.8	11.0	---	---	---	---	---	---
29	---	---	---	11.3	10.6	10.9	---	---	---	---	---	---
30	---	---	---	11.2	10.4	10.7	---	---	---	---	---	---
31	---	---	---	11.0	10.2	10.6	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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	8.8	---	---	---	---	---	---	---	---
2	9.1	---	---	---	---	---	---	---	---
3	8.7	---	---	---	---	---	---	---	---
4	8.5	---	---	---	---	---	---	---	---
5	8.6	---	---	---	---	---	---	---	---
6	8.6	---	---	---	---	---	---	---	---
7	8.5	---	---	---	---	---	---	---	---
8	8.6	---	---	---	---	---	---	---	---
9	8.3	---	---	---	---	---	---	---	---
10	10	---	---	---	---	---	---	---	---
11	8.6	---	---	---	---	---	---	---	---
12	8.4	---	---	---	---	---	---	---	---
13	8.2	---	---	---	---	---	---	---	---
14	8.0	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---
	JANUARY			FEBRUARY			MARCH		
1	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	5.7	---	---
18	---	---	---	---	---	---	5.9	---	---
19	---	---	---	---	---	---	6.7	---	---
20	---	---	---	---	---	---	6.7	---	---
21	---	---	---	---	---	---	7.6	---	---
22	---	---	---	---	---	---	8.8	---	---
23	---	---	---	---	---	---	9.4	---	---
24	---	---	---	---	---	---	10	---	---
25	---	---	---	---	---	---	12	---	---
26	---	---	---	---	---	---	11	---	---
27	---	---	---	---	---	---	9.3	---	---
28	---	---	---	---	---	---	8.5	---	---
29	---	---	---	---	---	---	8.3	---	---
30	---	---	---	---	---	---	8.8	2	0.04
31	---	---	---	---	---	---	12	4	0.13
TOTAL	---	---	---	---	---	---	---	---	---

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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	16	7	0.34	25	3	0.23	38	4	0.36
2	16	12	0.50	34	7	0.68	40	5	0.51
3	14	5	0.19	42	9	1.1	46	5	0.63
4	16	4	0.15	52	14	2.2	57	5	0.87
5	19	3	0.13	66	24	5.1	79	10	2.2
6	22	3	0.17	73	26	5.8	109	22	6.7
7	25	3	0.21	77	21	4.8	116	23	7.1
8	28	4	0.30	76	21	4.5	110	19	5.5
9	25	4	0.27	67	11	2.0	110	15	4.6
10	21	3	0.18	56	8	1.2	112	14	4.4
11	20	3	0.16	51	7	0.96	102	10	2.8
12	22	3	0.17	45	8	0.94	98	8	2.1
13	27	4	0.28	39	8	0.87	92	5	1.4
14	30	5	0.41	35	6	0.56	88	4	1.1
15	28	4	0.27	34	6	0.53	91	5	1.3
16	25	2	0.13	34	7	0.64	88	4	0.98
17	24	4	0.23	33	2	0.22	83	3	0.71
18	21	3	0.16	37	6	0.59	79	2	0.48
19	20	2	0.10	36	5	0.52	74	2	0.47
20	19	3	0.14	32	5	0.41	73	2	0.44
21	18	2	0.09	35	4	0.40	70	2	0.44
22	17	1	0.06	37	4	0.40	71	2	0.40
23	16	1	0.06	37	4	0.40	78	2	0.49
24	16	2	0.09	34	3	0.28	83	3	0.67
25	16	2	0.09	31	3	0.27	86	4	0.83
26	20	3	0.16	30	3	0.27	86	5	1.1
27	28	4	0.36	34	4	0.34	91	10	2.7
28	32	8	0.70	40	4	0.48	92	12	2.9
29	26	6	0.43	41	4	0.46	87	9	2.0
30	24	3	0.18	38	3	0.31	80	4	0.91
31	---	---	---	38	3	0.30	---	---	---
TOTAL	651	---	6.71	1,339	---	37.76	2,509	---	57.09
		JULY			AUGUST			SEPTEMBER	
1	77	3	0.70	22	11	0.65	26	18	1.2
2	72	3	0.49	22	13	0.77	29	155	15
3	68	3	0.55	21	12	0.68	27	76	5.6
4	67	2	0.42	20	11	0.60	26	18	1.3
5	62	2	0.36	20	10	0.52	24	16	1.1
6	57	1	0.17	19	7	0.38	23	13	0.79
7	55	2	0.36	19	9	0.47	22	11	0.68
8	53	3	0.37	18	13	0.65	22	10	0.57
9	51	2	0.31	18	14	0.69	22	9	0.52
10	50	4	0.53	17	12	0.55	21	8	0.48
11	48	4	0.58	17	11	0.53	20	8	0.43
12	46	5	0.56	17	9	0.41	20	8	0.43
13	44	3	0.37	16	8	0.37	25	13	0.86
14	42	3	0.34	16	8	0.35	24	11	0.72
15	41	3	0.38	16	11	0.47	22	4	0.28
16	40	2	0.23	16	10	0.43	25	5	0.38
17	38	2	0.21	16	10	0.43	24	6	0.36
18	52	168	75	16	11	0.45	22	5	0.27
19	54	330	61	16	14	0.62	23	8	0.51
20	36	76	7.6	16	9	0.39	28	9	0.65
21	33	39	3.5	17	15	0.93	24	6	0.35
22	33	32	2.8	26	63	5.0	23	4	0.25
23	30	33	2.7	30	73	6.0	25	6	0.41
24	28	19	1.4	19	41	2.1	29	10	0.81
25	27	17	1.2	52	533	99	27	8	0.58
26	26	15	1.1	39	151	17	27	7	0.52
27	25	20	1.4	33	57	5.2	27	7	0.51
28	25	28	1.8	29	28	2.2	27	e6	e0.41
29	24	19	1.2	28	23	1.8	26	4	0.31
30	23	11	0.69	27	20	1.4	27	6	0.45
31	22	11	0.68	26	18	1.3	---	---	---
TOTAL	1,349	---	169.00	684	---	152.34	737	---	36.73

06279940 NORTH FORK SHOSHONE RIVER AT WAPITI, WY

LOCATION.--Lat 44°28'10", long 109°25'49", in SE¼ NW¼ NW¼ sec.19, T.52 N., R.104 W., Park County, Hydrologic Unit 10080012, on left bank 1,000 ft downstream from bridge on U.S. Highway 14-20, 0.3 mi upstream from Jim Creek, and 0.3 mi downstream from Wapiti.

DRAINAGE AREA.--699 mi^2.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,580 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion for irrigation of about 1,500 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 9, 1981, at station 06280000 North Fork Shoshone River near Wapiti, 4.2 mi downstream, reached a discharge of 20,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	203	e155	170	163	e115	e110	620	500	851	2,060	546	608
2	200	e145	156	146	e105	e105	627	629	912	2,020	525	714
3	200	e135	165	e120	e100	e105	440	892	1,120	1,870	519	847
4	197	e130	157	e110	e105	e105	539	1,060	1,680	1,880	503	900
5	200	e130	132	e100	e105	e100	613	1,460	2,310	1,830	487	776
6	204	e120	170	e110	e110	e100	734	1,690	3,090	1,570	474	679
7	204	e140	171	e120	e115	e98	771	1,800	3,480	1,570	452	621
8	205	145	159	e135	e105	125	749	1,860	3,300	1,590	432	581
9	203	186	145	e160	e105	155	674	1,700	3,210	1,390	412	548
10	227	192	116	149	e105	201	540	1,440	3,720	1,390	399	526
11	248	176	144	139	e105	183	508	1,450	2,800	1,360	385	498
12	218	165	146	138	e100	201	469	1,170	2,210	1,280	366	477
13	210	150	160	128	e96	217	590	986	1,820	1,220	352	608
14	210	181	167	132	e100	189	709	881	1,610	1,160	343	668
15	206	171	142	134	e105	169	619	819	1,680	1,270	333	650
16	206	170	127	130	e115	162	515	796	1,730	1,160	322	597
17	209	170	138	133	113	159	498	759	1,460	1,070	346	612
18	221	164	117	127	122	169	486	812	1,430	1,030	425	574
19	208	168	108	130	124	233	455	941	1,370	1,420	431	540
20	202	187	149	139	e110	276	429	854	1,460	1,060	628	810
21	197	166	179	140	e105	310	401	892	1,390	974	402	661
22	196	155	152	133	e100	419	399	907	1,530	925	543	611
23	194	e125	125	132	e105	484	366	929	1,840	867	811	603
24	190	e120	118	137	e110	530	398	883	2,150	779	541	691
25	176	e115	163	134	e120	538	360	804	2,150	741	1,410	697
26	173	e110	162	e125	125	421	387	764	2,210	717	1,620	640
27	182	e120	151	e135	122	344	562	776	2,210	712	1,020	643
28	189	e125	141	e110	119	289	740	957	2,210	689	872	617
29	438	e165	153	114	117	270	563	1,030	2,120	623	766	586
30	261	186	156	115	---	394	493	929	2,480	593	710	617
31	161	---	158	e115	---	508	---	872	---	567	656	---
TOTAL	6,538	4,567	4,597	4,033	3,183	7,669	16,254	32,242	61,533	37,387	18,031	19,200
MEAN	211	152	148	130	110	247	542	1,040	2,051	1,206	582	640
MAX	438	192	179	163	125	538	771	1,860	3,720	2,060	1,620	900
MIN	161	110	108	100	96	98	360	500	851	567	322	477
AC-FT	12,970	9,060	9,120	8,000	6,310	15,210	32,240	63,950	122,100	74,160	35,760	38,080

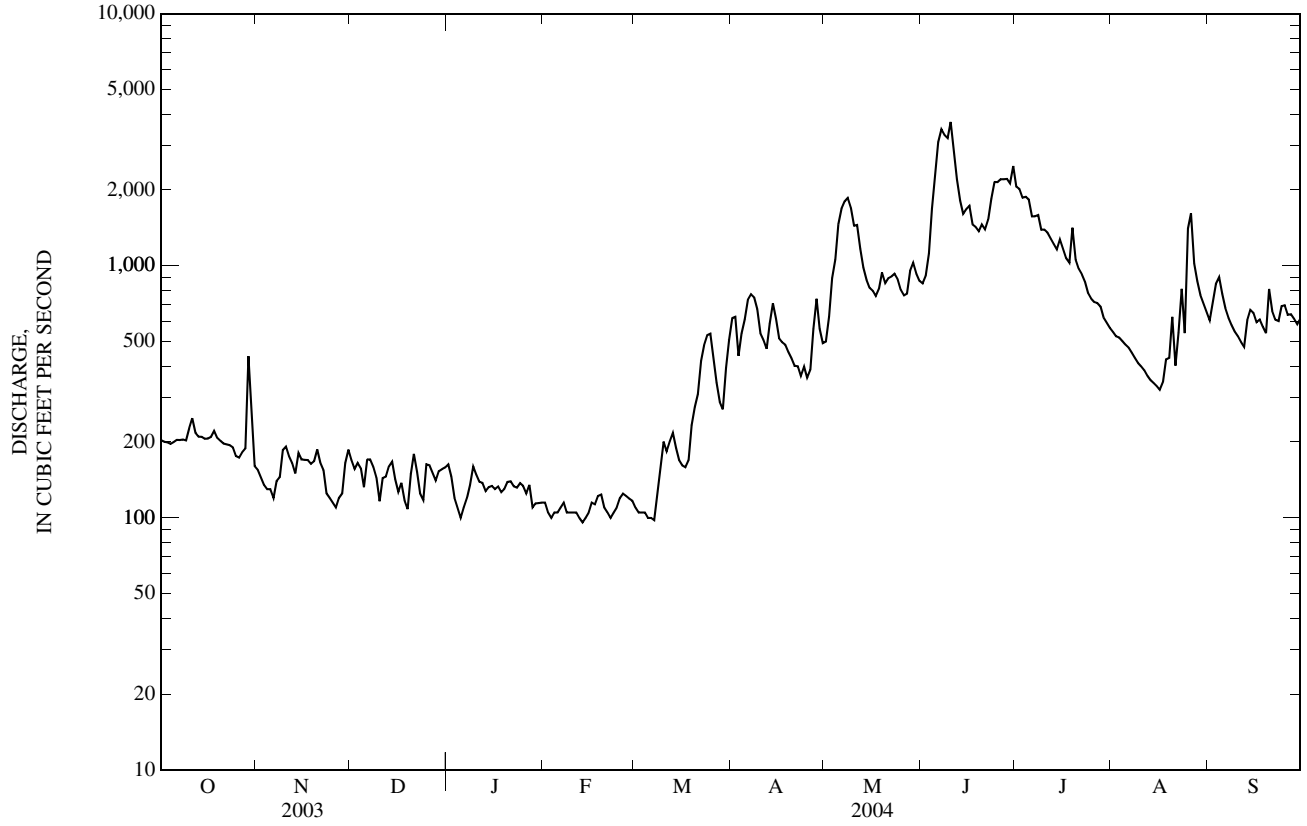
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

MEAN	250	200	155	141	140	202	525	1,993	3,446	1,795	564	339
MAX	330	304	283	199	184	294	792	3,459	6,251	3,130	1,015	640
(WY)	(1998)	(1997)	(1996)	(1997)	(1997)	(1997)	(1990)	(1997)	(1997)	(1996)	(1997)	(2004)
MIN	183	139	124	107	98.6	114	282	1,040	1,506	595	249	170
(WY)	(2002)	(2003)	(2003)	(2001)	(2001)	(2002)	(1993)	(2004)	(2001)	(1994)	(1994)	(1994)

06279940 NORTH FORK SHOSHONE RIVER AT WAPITI, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	291,741		215,234		--	
ANNUAL MEAN	799		588		814	
HIGHEST ANNUAL MEAN	--		--		1,324	1997
LOWEST ANNUAL MEAN	--		--		502	2001
HIGHEST DAILY MEAN	8,550	May 30	3,720	Jun 10	8,940	Jun 10, 1997
LOWEST DAILY MEAN	80	Jan 10,Feb 24	96	Feb 13	60	Dec 25, 2002
ANNUAL SEVEN-DAY MINIMUM	103	Jan 6	102	Feb 8	81	Dec 19, 1996
MAXIMUM PEAK FLOW	--		4,350	Jun 10	11,200	May 30, 2003
MAXIMUM PEAK STAGE	--		6.33	Jun 10	9.54[a]	Jun 13, 1991
ANNUAL RUNOFF (AC-FT)	578,700		426,900		589,800	
10 PERCENT EXCEEDS	2,330		1,460		2,460	
50 PERCENT EXCEEDS	221		376		262	
90 PERCENT EXCEEDS	120		115		130	

a Discharge 9,640 ft^3/s.
e Estimated.



06280300 SOUTH FORK SHOSHONE RIVER NEAR VALLEY, WY

LOCATION.--Lat 44°12'30", long 109°33'15", in NE¼ NE¼ sec.24, T.49 N., R.106 W., Park County, Hydrologic Unit 10080013, Shoshone National Forest, on left bridge abutment of U.S. Forest Service bridge, 0.4 mi downstream from Boulder Creek, 3.2 mi northeast of Valley, and 34 mi southwest of Cody.

DRAINAGE AREA.--297 mi^2.

PERIOD OF RECORD.--October 1956 to September 1958, October 1959 to current year.

REVISED RECORDS.--WRD WY 1974: 1963.

GAGE.--Water-stage recorder. Elevation of gage is 6,200 ft above NGVD of 1929, from topographic map. Prior to November 22, 1961, at site 75 ft upstream at same datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair. Diversions for irrigation of about 450 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	83	90	77	64	68	162	169	288	1,090	329	220
2	132	72	86	78	71	66	164	190	324	965	312	221
3	130	63	89	70	56	66	136	244	437	834	299	291
4	129	65	89	62	62	65	139	343	716	923	291	315
5	127	61	84	61	66	62	175	481	1,020	1,190	284	276
6	126	57	92	82	66	61	204	532	1,340	892	273	244
7	124	55	95	57	66	57	228	599	1,410	922	259	231
8	125	56	92	66	69	68	186	606	1,360	907	250	221
9	124	64	89	78	68	72	181	547	1,610	786	241	210
10	125	82	82	78	63	80	156	486	1,790	868	235	206
11	123	86	85	75	63	77	152	472	1,010	787	227	199
12	122	85	80	73	56	77	148	374	718	720	213	194
13	122	84	79	72	57	77	169	326	604	661	207	214
14	120	91	86	75	58	73	192	302	593	635	205	217
15	119	92	83	74	60	71	170	282	742	771	202	214
16	120	94	65	77	63	68	151	288	798	659	195	205
17	120	94	67	73	66	67	146	249	606	619	195	196
18	118	92	63	68	70	70	143	327	604	590	211	187
19	117	92	65	68	71	77	137	395	573	665	207	191
20	115	98	79	73	67	91	133	415	682	582	265	214
21	114	93	88	67	63	105	129	425	651	530	219	199
22	114	87	84	64	60	135	129	391	726	576	215	191
23	112	79	70	69	62	164	125	356	942	706	320	188
24	110	63	71	73	66	175	131	323	1,080	541	255	188
25	100	59	83	74	70	162	124	297	1,070	477	362	186
26	101	58	87	70	71	136	128	277	1,300	443	361	182
27	103	65	82	68	72	116	159	293	1,260	422	312	181
28	104	66	73	70	73	108	196	346	1,130	430	272	203
29	114	82	69	72	71	101	169	358	1,170	389	251	191
30	103	93	72	75	---	114	161	323	1,160	369	240	208
31	83	---	73	74	---	138	---	301	---	344	231	---
TOTAL	3,632	2,311	2,492	2,213	1,890	2,867	4,723	11,317	27,714	21,293	7,938	6,383
MEAN	117	77.0	80.4	71.4	65.2	92.5	157	365	924	687	256	213
MAX	136	98	95	82	73	175	228	606	1,790	1,190	362	315
MIN	83	55	63	57	56	57	124	169	288	344	195	181
AC-FT	7,200	4,580	4,940	4,390	3,750	5,690	9,370	22,450	54,970	42,230	15,750	12,660

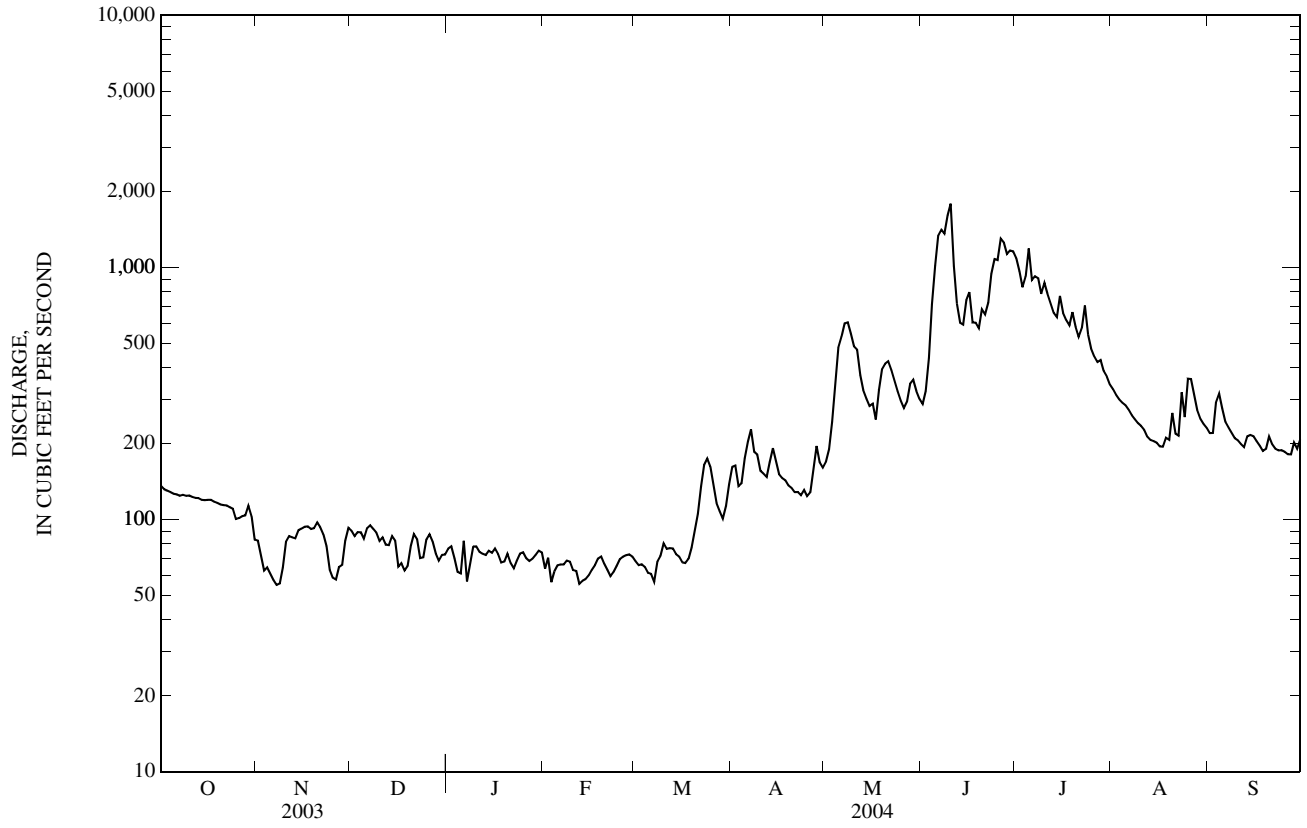
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2004, BY WATER YEAR (WY)

MEAN	154	107	82.6	76.4	72.4	79.8	164	739	1,703	1,097	368	210
MAX	244	147	109	100	93.8	128	341	1,387	2,920	2,287	834	341
(WY)	(1983)	(1985)	(1966)	(1997)	(1962)	(1986)	(1962)	(1958)	(1997)	(1975)	(1982)	(1982)
MIN	92.5	70.6	56.2	55.2	54.8	59.8	69.6	252	828	308	127	110
(WY)	(1989)	(1980)	(1989)	(1989)	(1989)	(1975)	(1970)	(1977)	(2001)	(1988)	(2001)	(1988)

06280300 SOUTH FORK SHOSHONE RIVER NEAR VALLEY, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1957 - 2004	
ANNUAL TOTAL	131,106		94,773		--	
ANNUAL MEAN	359		259		405	
HIGHEST ANNUAL MEAN	--		--		609	1997
LOWEST ANNUAL MEAN	--		--		221	1977
HIGHEST DAILY MEAN	3,900	May 31	1,790	Jun 10	6,100	Jun 9, 1981
LOWEST DAILY MEAN	47	Feb 9	55	Nov 7	31	Dec 21, 1998
ANNUAL SEVEN-DAY MINIMUM	51	Feb 5	60	Feb 10	40	Dec 18, 1990
MAXIMUM PEAK FLOW	--		2,480	Jun 10	10,000	Jun 9, 1981
MAXIMUM PEAK STAGE	--		7.21	Jun 10	9.24[a]	Jun 9, 1981
ANNUAL RUNOFF (AC-FT)	260,000		188,000		293,700	
10 PERCENT EXCEEDS	1,130		662		1,230	
50 PERCENT EXCEEDS	124		134		138	
90 PERCENT EXCEEDS	63		66		67	

a From floodmarks.



06281000 SOUTH FORK SHOSHONE RIVER ABOVE BUFFALO BILL RESERVOIR, WY

LOCATION.--Lat 44°25'09", long 109°15'26", in lot 5, SE¼ NE¼ SE¼ sec. 5, T.51 N., R.103 W., Park County, Hydrologic Unit 10080013, on right bank at old diversion structure 0.2 miles downstream from Cody Canal diversion, 1 mile upstream from normal pool of Buffalo Bill Reservoir at elevation 5,364 ft, and 12.5 miles southwest of Cody.

DRAINAGE AREA.--585 mi^2.

PERIOD OF RECORD.--May to November 1903, May 1905 to September 1908, January 1921 to September 1926, October 1973 to current year (gage heights only June to September 1908). No winter records 1906, 1908, 1922. Published as "at Marquette" 1903, 1905-8, and as Shoshone River above Shoshone Reservoir 1921-26.

REVISED RECORDS.--WSP 1309: 1907.

GAGE.--Water-stage recorder. Elevation of gage is 5,410 ft above NGVD of 1929, from topographic map. April 26 to November 30, 1903, and May 1905 to May 30, 1908, nonrecording gages at sites within about 6.0 mi downstream at different datums. Prior to October 3, 1989, recording gage at site 1.1 mile downstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for daily dischargeds less than 1.0 ft^3/s and those for estimated daily discharges, which are poor. Diversions for irrigation of about 11,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	120	128	107	e95	105	232	13	3.4	945	38	0.65
2	1.9	121	126	109	e100	102	252	11	3.5	887	1.5	12
3	1.8	107	124	99	e90	100	209	19	32	738	1.5	73
4	1.7	103	127	e90	e95	98	201	65	218	802	1.3	108
5	1.5	105	124	e90	e100	95	234	199	689	1,010	1.3	69
6	1.4	97	125	e110	e100	97	261	247	1,260	830	1.2	64
7	1.4	95	131	e90	e100	91	315	291	1,490	808	1.1	51
8	1.3	95	128	e95	e105	94	272	313	1,320	692	1.1	21
9	1.4	93	126	e110	e105	102	264	257	1,360	518	1.1	0.83
10	1.3	104	120	e110	e100	108	226	166	2,030	554	1.1	0.12
11	1.3	115	119	e105	e100	105	221	164	1,170	530	1.1	0.09
12	1.9	119	114	e105	e95	106	202	80	694	489	1.1	0.04
13	8.6	119	113	e100	e95	107	154	33	451	470	1.1	0.30
14	29	123	118	e105	e95	103	149	7.7	377	433	1.1	0.80
15	35	126	119	e105	e100	102	136	4.1	531	518	1.2	5.3
16	35	129	101	e110	e100	99	108	3.7	620	479	1.2	0.61
17	44	130	103	e105	e110	99	88	3.2	435	404	1.2	0.36
18	61	133	101	e100	e115	101	48	3.3	393	355	1.3	0.27
19	61	130	100	e100	117	106	34	59	363	372	1.3	0.28
20	59	140	111	e105	107	121	27	50	458	321	73	24
21	58	133	112	e100	104	134	18	102	451	264	15	24
22	58	126	114	e95	102	165	9.1	68	497	268	2.6	3.8
23	60	107	106	e95	101	225	6.0	45	679	458	56	1.2
24	89	108	103	e100	104	250	7.1	23	850	277	76	1.2
25	114	97	104	e105	105	250	5.4	10	776	196	58	0.89
26	108	98	113	e100	106	210	3.8	5.3	944	177	196	0.71
27	112	102	110	e95	106	185	10	4.4	931	163	91	0.69
28	118	107	89	e95	110	165	27	17	879	158	86	12
29	140	123	96	e100	108	153	19	35	956	120	59	21
30	156	133	102	e105	---	159	9.6	17	976	87	51	35
31	133	---	101	e105	---	189	---	7.6	---	64	12	---
TOTAL	1,497.3	3,438	3,508	3,145	2,970	4,126	3,748.0	2,323.3	21,836.9	14,387	835.4	532.14
MEAN	48.3	115	113	101	102	133	125	74.9	728	464	26.9	17.7
MAX	156	140	131	110	117	250	315	313	2,030	1,010	196	108
MIN	1.3	93	89	90	90	91	3.8	3.2	3.4	64	1.1	0.04
AC-FT	2,970	6,820	6,960	6,240	5,890	8,180	7,430	4,610	43,310	28,540	1,660	1,060

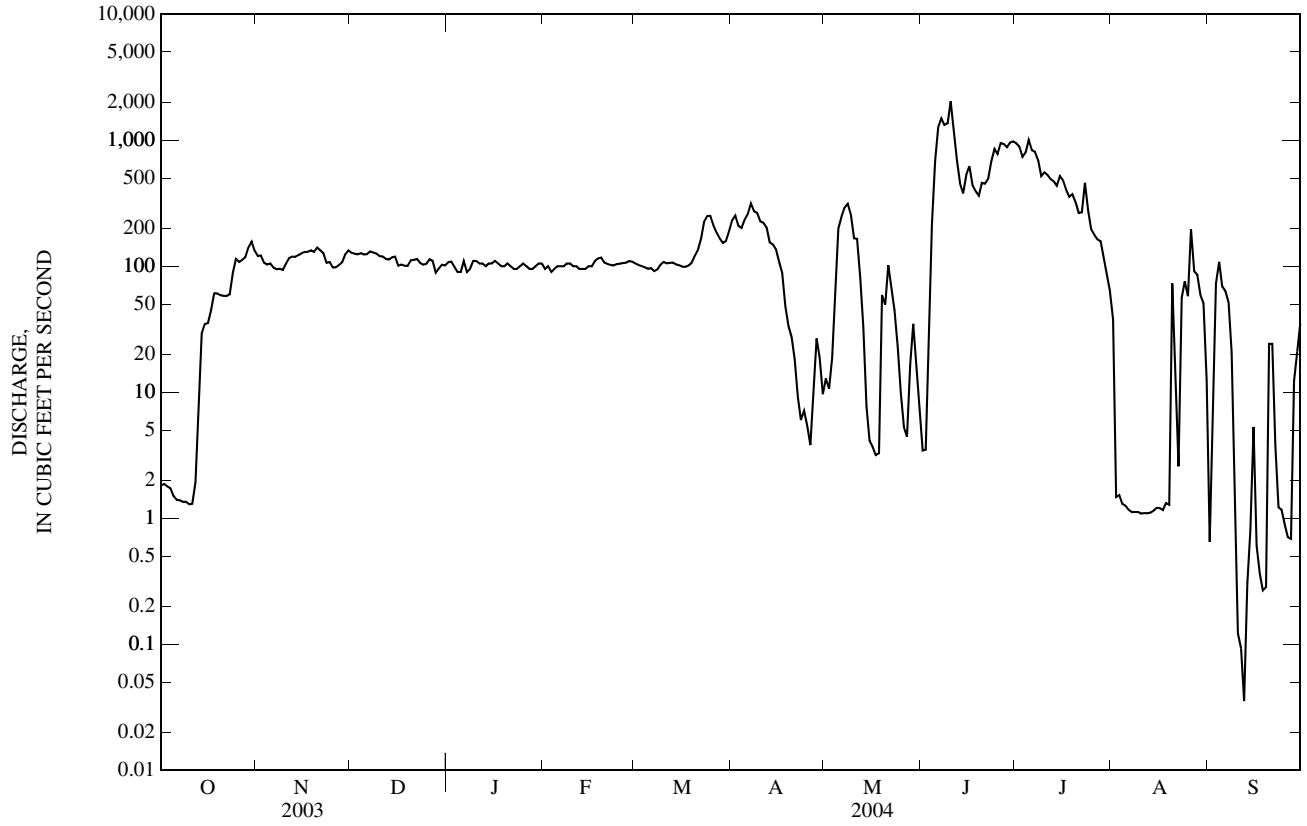
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2004, BY WATER YEAR (WY)

MEAN	104	152	116	103	100	113	186	670	1,690	1,013	175	79.2
MAX	407	268	167	158	145	174	387	1,281	3,813	3,033	1,083	381
(WY)	(1924)	(1924)	(1998)	(1997)	(1998)	(1986)	(1925)	(1991)	(1997)	(1907)	(1907)	(1907)
MIN	18.0	71.2	54.5	51.9	72.9	76.8	52.9	74.9	495	18.9	0.74	0.04
(WY)	(1979)	(1980)	(1925)	(1995)	(1985)	(1924)	(2001)	(2004)	(1994)	(1994)	(2001)	(1992)

06281000 SOUTH FORK SHOSHONE RIVER ABOVE BUFFALO BILL RESERVOIR, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1903 - 2004	
ANNUAL TOTAL	117,079.8		62,347.04		--	
ANNUAL MEAN	321		170		366	
HIGHEST ANNUAL MEAN	--		--		705	1907
LOWEST ANNUAL MEAN	--		--		148	2001
HIGHEST DAILY MEAN	5,010	May 31	2,030	Jun 10	7,370	Jun 9, 1981
LOWEST DAILY MEAN	1.3	Oct 8,10,11	0.04	Sep 12	0.00	Several days 1992-93
ANNUAL SEVEN-DAY MINIMUM	1.4	Oct 5	1.0	Sep 10	0.00	Sep 15, 1992
MAXIMUM PEAK FLOW	--		2,480	Jun 10	9,960	Jun 9, 1981
MAXIMUM PEAK STAGE	--		7.00	Jun 10	9.41[a]	Jun 9, 1981
ANNUAL RUNOFF (AC-FT)	232,200		123,700		265,300	
10 PERCENT EXCEEDS	1,080		453		1,110	
50 PERCENT EXCEEDS	105		102		119	
90 PERCENT EXCEEDS	6.3		1.4		17	

a Site and datum then in use.
e Estimated.



06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY

LOCATION.--Lat 44°31'00", long 109°05'50", in lot 71, NE¼ sec.3, T.52 N., R.102 W., Park County, Hydrologic Unit 10080014, on left bank 0.5 mi downstream from Trail Creek, 1.0 mi west of Cody city limits, and 5.5 mi downstream from Buffalo Bill Reservoir.

DRAINAGE AREA.--1,538 mi^2. Area at site prior to October 1, 1949, 1,502 mi^2.

PERIOD OF RECORD.--January 1921 to September 2004 (discontinued). Prior to October 1944, published as "below Shoshone Reservoir".

GAGE.--Water-stage recorder. Elevation of gage is 4,900 ft above NGVD of 1929, from topographic map. Prior to October 1, 1949, at site 2.5 mi upstream at different datum. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records good. Flow completely regulated by Buffalo Bill Reservoir. Diversions upstream from station for irrigation of about 56,100 acres, of which about 37,900 acres are downstream from station. Diversion, 2.1 mi upstream, to Heart Mountain Canal began in 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since construction of Buffalo Bill Reservoir in 1909, 18,700 ft^3/s, June 15, 1918, by computation of flow over Corbett Dam, 10 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	716	202	211	171	159	155	169	1,160	835	934	978	859
2	717	201	210	171	160	153	170	1,170	868	915	971	864
3	718	202	210	171	159	167	170	1,180	905	910	948	869
4	718	201	209	172	159	170	170	1,180	928	918	975	864
5	718	202	210	172	159	164	171	1,180	925	920	997	854
6	711	200	190	170	158	163	171	1,180	910	952	1,000	856
7	714	205	186	169	159	164	170	1,180	960	977	1,000	825
8	715	209	185	168	160	164	170	1,180	966	1,020	997	816
9	716	208	186	167	159	166	172	1,180	976	1,020	995	820
10	718	205	185	167	160	163	171	1,180	1,050	1,030	977	821
11	718	204	181	167	160	161	172	1,140	1,010	1,020	994	824
12	717	203	173	168	162	161	329	1,140	1,000	1,030	1,010	803
13	716	202	171	168	160	165	534	1,120	963	1,060	1,000	817
14	669	202	170	166	162	166	794	1,120	977	1,050	1,020	805
15	654	203	171	166	161	163	865	1,110	977	1,060	1,030	777
16	598	205	172	164	160	157	853	1,100	926	1,050	1,020	725
17	370	209	171	163	160	163	940	1,060	902	1,040	1,010	685
18	188	211	171	164	162	163	949	1,060	905	1,050	1,010	686
19	148	207	170	164	163	161	1,090	1,040	907	1,050	1,020	689
20	148	208	170	164	163	163	1,090	1,010	902	1,060	1,020	690
21	144	207	170	163	163	164	1,140	973	895	1,050	1,020	693
22	144	209	172	162	163	164	1,160	971	907	1,050	1,020	634
23	171	208	171	162	162	160	1,160	975	905	1,040	1,020	597
24	199	207	167	161	161	159	1,160	970	902	1,040	985	556
25	199	210	166	162	161	166	1,150	944	956	1,010	991	552
26	199	209	166	162	162	165	1,160	914	949	1,010	989	563
27	199	208	166	162	163	165	1,160	943	955	997	910	560
28	201	207	166	161	164	165	1,160	882	951	1,010	899	535
29	204	209	168	160	164	167	1,170	884	941	983	889	545
30	203	212	171	161	---	169	1,170	842	937	966	899	555
31	202	---	172	160	---	170	---	838	---	974	849	---
TOTAL	14,152	6,175	5,557	5,128	4,668	5,066	20,910	32,806	28,090	31,196	30,443	21,739
MEAN	457	206	179	165	161	163	697	1,058	936	1,006	982	725
MAX	718	212	211	172	164	170	1,170	1,180	1,050	1,060	1,030	869
MIN	144	200	166	160	158	153	169	838	835	910	849	535
AC-FT	28,070	12,250	11,020	10,170	9,260	10,050	41,470	65,070	55,720	61,880	60,380	43,120

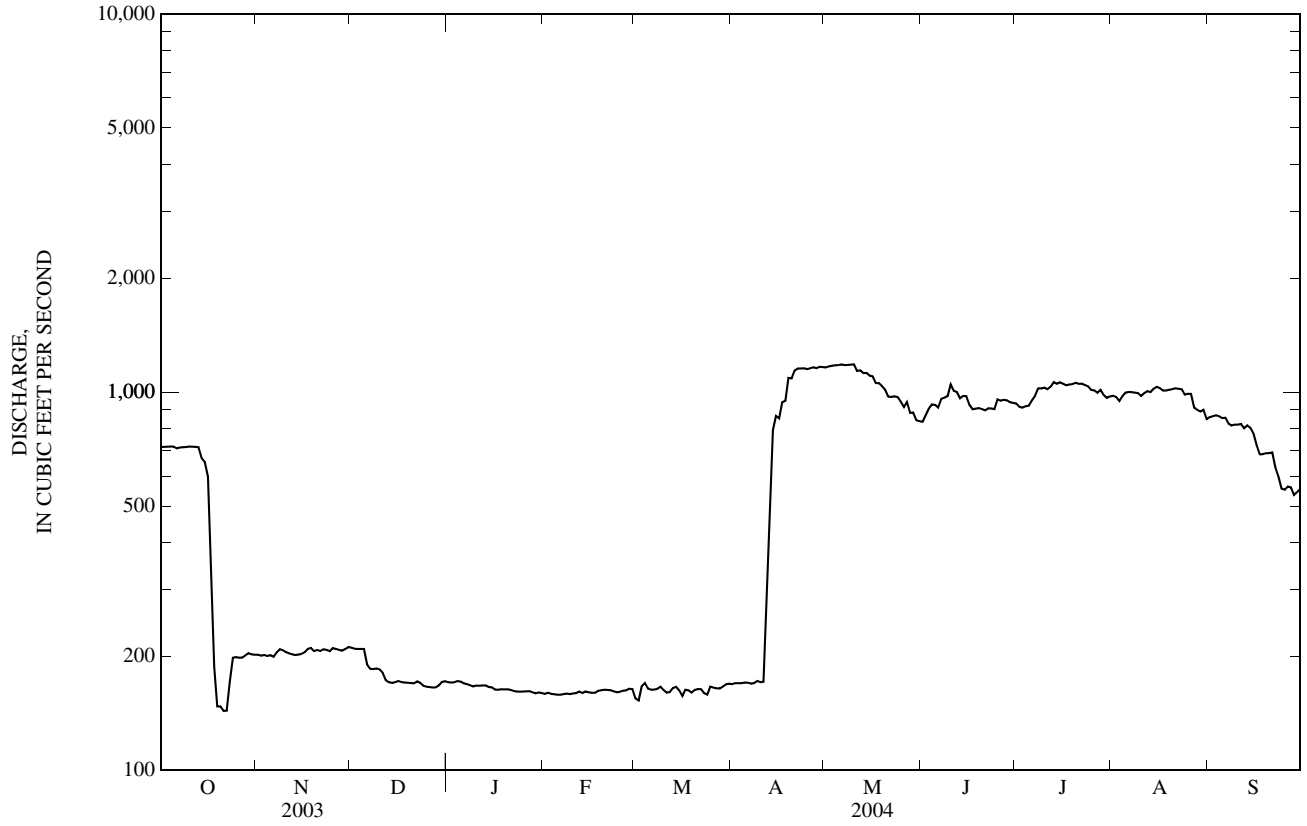
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2004, BY WATER YEAR (WY)*

MEAN	664	510	508	478	476	506	832	1,434	2,403	2,503	1,293	933
MAX	1,198	966	944	894	904	1,638	3,013	3,162	6,440	6,556	3,397	2,113
(WY)	(1953)	(1952)	(1951)	(1952)	(1997)	(1997)	(1997)	(1997)	(1943)	(1943)	(1958)	(1958)
MIN	187	128	111	115	65.4	72.5	113	827	807	1,006	685	582
(WY)	(1989)	(1989)	(1989)	(1989)	(1959)	(1959)	(1959)	(1995)	(1992)	(2004)	(1977)	(1988)

06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1943 - 2004*	
ANNUAL TOTAL	258,648		205,930		--	
ANNUAL MEAN	709		563		1,048[a]	
HIGHEST ANNUAL MEAN	--		--		1,764	1943
LOWEST ANNUAL MEAN	--		--		556	1988
HIGHEST DAILY MEAN	6,310	Jun 19	1,180	May 3-10	15,100	Jun 9, 1981
LOWEST DAILY MEAN	144	Oct 21,22	144	Oct 21,22	59	Nov 19, 1933#
ANNUAL SEVEN-DAY MINIMUM	163	Oct 18	159	Feb 1	64	Jan 21, 1959
MAXIMUM PEAK FLOW	--		1,530	Jul 20	17,300	Jun 9, 1981#
MAXIMUM PEAK STAGE	--		5.35	Jul 20	11.57	Jun 9, 1981
ANNUAL RUNOFF (AC-FT)	513,000		408,500		759,200	
10 PERCENT EXCEEDS	1,150		1,050		1,820	
50 PERCENT EXCEEDS	575		554		833	
90 PERCENT EXCEEDS	171		162		257	

* For period of record following Heart Mountain Diversion, see REMARKS.
\# For period of record through 2004.
a Average discharge (water years 1922-1942) prior to Heart Mountain Diversion 1,256 ft^3/s.



06284500 BITTER CREEK NEAR GARLAND, WY

LOCATION.--Lat 44°45'13", long 108°35'29", in SW¼ SW¼ SW¼ sec.7, T.55 N., R.97 W., Big Horn County, Hydrologic Unit 10080014, 100 ft downstream from bridge on county road, 1.0 mi upstream from mouth, 4.0 mi southeast of Garland, and 5.0 mi southwest of Byron.

DRAINAGE AREA.--80.5 mi^2.

PERIOD OF RECORD.--Water years 1951-53, 1958-61, 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1969 to September 1983.
WATER TEMPERATURES: July 1969 to September 1983.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
OCT													
29...	0715	49	642	8.7	89	8.2	1,140	4.0	8.5	<.04	4.67	.015	<.02
JAN													
28...	1710	26	651	13.3	107	8.5	1,350	1.0	.0	.26	5.74	.033	.10
MAY													
11...	1825	319	656	9.6	104	8.1	609	12.0	12.0	<.04	2.27	E.005	.08
12...	1425	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
17...	1740	310	662	8.7	103	8.0	648	24.0	16.5	<.04	2.23	E.007	.06

Date	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
OCT		
29...	500	1,000
JAN		
28...	120	130
MAY		
11...	260	--
12...	--	310
AUG		
17...	280	300

< -- Less than
E -- Estimated value

06285100 SHOSHONE RIVER NEAR LOVELL, WY

LOCATION.--Lat 44°50'19", long 108°26'04", in NW¼ NE¼ NE¼ sec.17, T.56 N., R.96 W., Big Horn County, Hydrologic Unit 10080014, on left bank 20 ft downstream from bridge on County Road 9 and 1.5 mi west of Lovell.

DRAINAGE AREA.--2,350 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,850 ft above NGVD of 1929, from topographic map. Prior to October 1, 1976, at site 500 ft downstream, at datum 2.00 ft higher. October 1, 1976 to September 30, 1980, at site 500 ft downstream, at datum 1.00 ft higher. October 1, 1981 to November 13, 1986, at site 500 ft downstream at same datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Buffalo Bill Reservoir. Natural flow of stream affected by storage reservoirs, power development, diversions upstream from station for irrigation of about 143,000 acres, of which about 8,000 acres are downstream from station, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	492	505	431	328	e300	e290	294	173	409	412	e300	510
2	487	497	426	331	e290	e290	307	205	325	417	e280	477
3	510	495	423	e320	e300	e280	306	224	252	387	e280	575
4	507	501	426	e310	e300	e290	264	238	228	407	e260	716
5	503	494	430	e300	e310	e290	258	244	207	472	e340	689
6	514	473	428	e280	e310	e290	251	229	207	403	e360	670
7	485	487	429	e300	e310	e290	277	248	194	358	e380	643
8	581	470	405	e300	e310	e300	149	238	194	318	e400	548
9	656	469	398	e320	e300	e300	101	263	230	308	e440	487
10	689	466	395	e310	e300	e310	212	318	338	278	e420	417
11	725	470	403	e310	e290	e310	193	322	589	298	e380	419
12	740	464	405	e300	e280	e290	156	349	559	307	399	443
13	754	454	388	e300	e290	e280	238	453	588	224	414	514
14	745	456	366	e300	e290	e280	103	487	581	e280	414	527
15	697	449	364	e290	e290	e280	327	521	553	e260	444	547
16	800	446	377	e290	e290	281	329	478	541	e300	455	507
17	760	445	387	e290	e290	285	282	420	520	e280	405	476
18	932	443	373	e290	e300	288	326	384	530	e280	420	447
19	696	442	354	e290	e320	293	304	414	537	e300	408	468
20	616	454	346	e290	e300	285	287	451	527	e340	411	600
21	606	444	351	e290	e290	278	254	467	554	e320	436	652
22	615	433	317	e290	e290	280	212	459	472	e300	510	648
23	621	448	320	e290	e290	285	232	529	446	e420	699	591
24	608	475	322	e300	e280	286	206	551	417	e400	521	541
25	597	480	353	e310	e290	287	191	566	382	e440	486	514
26	520	489	308	e300	e300	287	190	532	434	e500	539	486
27	540	492	306	e280	e300	293	153	497	419	e400	726	471
28	539	478	312	e280	e290	289	166	490	436	e340	667	488
29	541	397	314	e290	e290	293	227	439	373	e320	665	445
30	539	442	300	e300	---	293	218	480	349	e320	661	467
31	511	---	318	e320	---	292	---	456	---	e300	605	---
TOTAL	19,126	13,958	11,475	9,299	8,590	8,965	7,013	12,125	12,391	10,689	14,125	15,983
MEAN	617	465	370	300	296	289	234	391	413	345	456	533
MAX	932	505	431	331	320	310	329	566	589	500	726	716
MIN	485	397	300	280	280	278	101	173	194	224	260	417
AC-FT	37,940	27,690	22,760	18,440	17,040	17,780	13,910	24,050	24,580	21,200	28,020	31,700

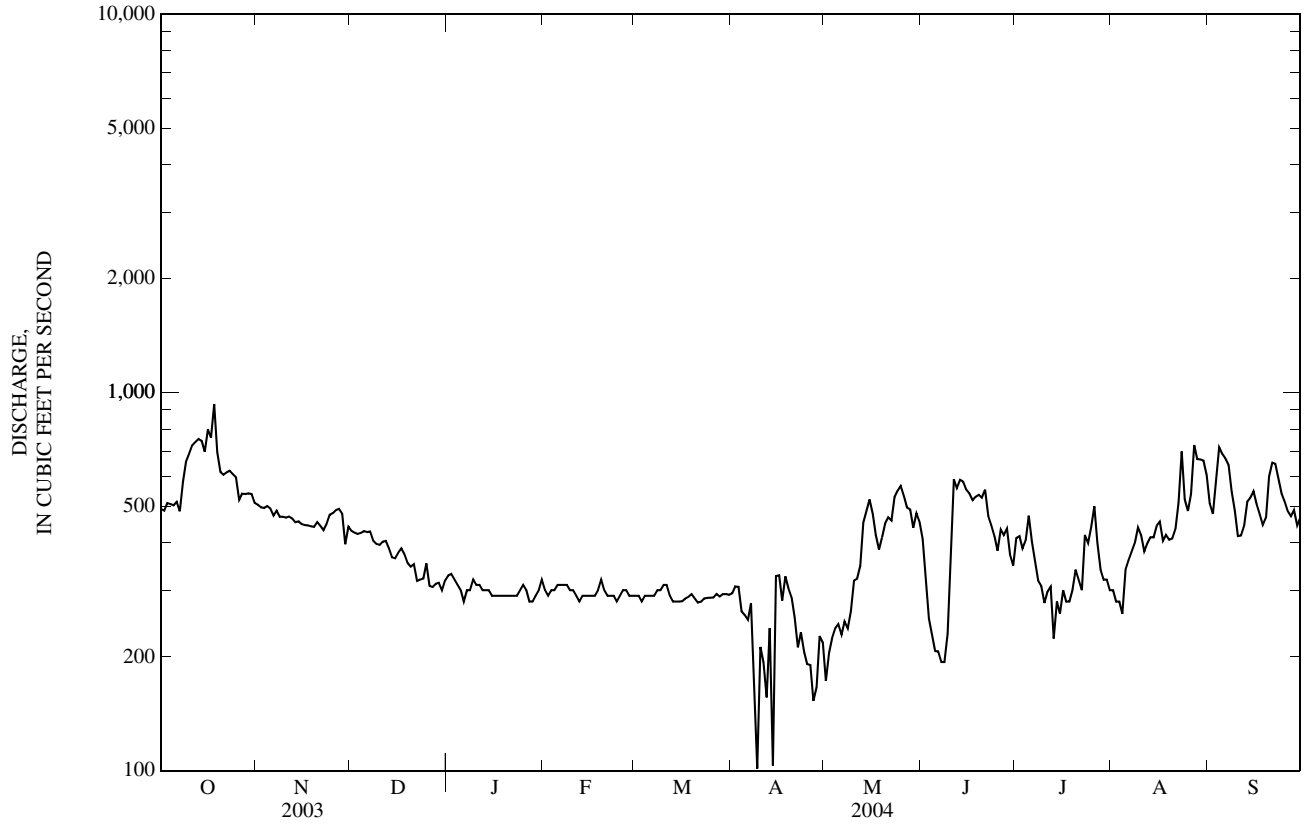
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2004, BY WATER YEAR (WY)

MEAN	751	699	631	565	586	656	774	854	1,822	1,678	719	762
MAX	1,251	1,146	1,168	1,065	1,139	1,951	3,353	2,925	4,935	4,686	1,305	1,354
(WY)	(1972)	(1969)	(1969)	(1973)	(1973)	(1997)	(1997)	(1996)	(1981)	(1982)	(1982)	(1991)
MIN	369	297	306	226	228	243	234	193	203	149	207	245
(WY)	(1989)	(1986)	(1995)	(1991)	(1989)	(1995)	(2004)	(1977)	(1977)	(1977)	(1977)	(1977)

06285100 SHOSHONE RIVER NEAR LOVELL, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1967 - 2004	
ANNUAL TOTAL	201,702		143,739		--	
ANNUAL MEAN	553		393		875	
HIGHEST ANNUAL MEAN	--		--		1,659	1997
LOWEST ANNUAL MEAN	--		--		356	2002
HIGHEST DAILY MEAN	6,380	Jun 20	932	Oct 18	15,200	Jun 10, 1981
LOWEST DAILY MEAN	51	Apr 14	101	Apr 9	27	May 31, 1977
ANNUAL SEVEN-DAY MINIMUM	85	Apr 10	165	Apr 8	48	May 30, 1977
MAXIMUM PEAK FLOW	--		1,240[a]	Oct 18	16,400[b]	Jun 10, 1981
MAXIMUM PEAK STAGE	--		8.17[c]	Jan 8	11.27	Jun 13, 2001
ANNUAL RUNOFF (AC-FT)	400,100		285,100		634,100	
10 PERCENT EXCEEDS	738		569		1,400	
50 PERCENT EXCEEDS	408		365		646	
90 PERCENT EXCEEDS	270		260		310	

a Gage height, 5.88 ft.
b Gage height, 9.16 ft, site then in use, at present datum.
c Backwater from ice.
e Estimated.



06285100 SHOSHONE RIVER NEAR LOVELL, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-97, October 1999 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1966 to September 1983.
WATER TEMPERATURES: October 1966 to September 1983.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
OCT													
28...	1630	519	652	12.4	126	8.5	973	11.5	9.0	<.04	1.58	.012	<.02
JAN													
28...	1620	217	657	12.2	97	8.2	1,190	8.0	.0	.06	1.52	E.007	<.02
MAY													
11...	1700	362	661	9.6	107	8.2	721	12.0	13.5	.05	1.42	.032	.05
12...	1440	385	--	--	--	--	--	--	--	--	--	--	--
AUG													
17...	1600	440	675	10.3	127	8.4	738	23.0	19.5	<.04	1.51	.010	.02

Date	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
OCT		
28...	21	E30
JAN		
28...	E13	E14
MAY		
11...	600	--
12...	--	600
AUG		
17...	390	330

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT

LOCATION.--Lat 45°19'00", long 107°55'05", in NW¼ NW¼ NE¼ sec.16, T.6 S., R.31 E., Big Horn County, Hydrologic Unit 10080015, on right bank 800 ft downstream from Yellowtail Dam, 1,500 ft downstream from Lime Kiln Creek, 14 mi southwest of St. Xavier, and at river mile 83.9.

DRAINAGE AREA.--19,667 mi^2. Area at site used prior to April 16, 1963, 19,626 mi^2.

PERIOD OF RECORD.--October 1934 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,158.38 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to April 16, 1963, and June 13, 1964 to March 31, 1965, water-stage recorder at site 1.2 mi upstream at different datum; April 1, 1965 to July 31, 1966, water-stage recorder at site 1,300 ft downstream at present datum. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records fair. Figures of discharge given herein are sum of river flow and flow of Bighorn Canal. Some regulation by 14 reservoirs in Wyoming with combined capacity of 1,400,000 acre-ft and complete regulation by Bighorn Lake since November 3, 1965. Diversions for irrigation of about 375,000 acres upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,640	1,490	1,430	1,500	1,470	1,530	1,630	1,630	1,500	1,820	1,790	1,410
2	1,630	1,490	1,460	1,500	1,480	1,530	1,630	1,630	1,540	1,660	1,790	1,400
3	1,620	1,490	1,550	1,500	1,470	1,540	1,650	1,640	1,570	1,660	1,790	1,380
4	1,600	1,490	1,580	1,500	1,470	1,540	1,620	1,680	1,620	1,660	1,760	1,360
5	1,590	1,470	1,600	1,500	1,470	1,540	1,610	1,720	1,640	1,650	1,760	1,280
6	1,570	1,470	1,620	1,500	1,480	1,550	1,600	1,740	1,640	1,670	1,740	1,270
7	1,520	1,470	1,640	1,500	1,470	1,550	1,600	1,740	1,640	1,670	1,710	1,390
8	1,400	1,460	1,660	1,540	1,470	1,550	1,600	1,750	1,630	1,670	1,710	1,470
9	1,350	1,460	1,680	1,570	1,470	1,560	1,580	1,740	1,750	1,660	1,690	1,470
10	1,300	1,460	1,640	1,600	1,470	1,560	1,570	1,730	1,980	1,670	1,680	1,460
11	1,280	1,460	1,500	1,630	1,470	1,560	1,570	1,760	1,920	1,670	1,670	1,450
12	1,270	1,460	1,500	1,660	1,470	1,560	1,560	1,780	1,900	1,710	1,650	1,440
13	1,270	1,460	1,500	1,690	1,480	1,560	1,550	1,770	1,900	1,760	1,640	1,430
14	1,250	1,460	1,500	1,730	1,480	1,570	1,540	1,780	1,880	1,760	1,630	1,430
15	1,240	1,460	1,500	1,770	1,480	1,570	1,520	1,760	1,900	1,750	1,620	1,520
16	1,230	1,460	1,500	1,800	1,490	1,580	1,520	1,780	1,880	1,780	1,610	1,560
17	1,220	1,460	1,500	1,840	1,490	1,580	1,510	1,760	1,840	1,800	1,580	1,550
18	1,250	1,460	1,500	1,870	1,490	1,580	1,490	1,770	1,860	1,800	1,580	1,540
19	1,860	1,450	1,510	1,910	1,490	1,590	1,490	1,770	1,850	1,790	1,560	1,520
20	1,710	1,450	1,500	1,940	1,500	1,590	1,550	1,770	1,850	1,800	1,520	1,490
21	1,520	1,450	1,500	1,980	1,500	1,590	1,560	1,760	1,860	1,790	1,520	1,420
22	1,360	1,450	1,500	2,020	1,510	1,590	1,660	1,760	1,870	1,790	1,510	1,390
23	1,440	1,450	1,490	2,060	1,500	1,600	1,650	1,750	1,850	1,790	1,490	1,370
24	1,480	1,440	1,500	2,100	1,510	1,600	1,690	1,750	1,780	1,790	1,470	1,360
25	1,510	1,440	1,500	2,140	1,510	1,600	1,690	1,730	1,830	1,790	1,480	1,360
26	1,500	1,440	1,500	1,960	1,510	1,610	1,690	1,620	1,850	1,790	1,450	1,350
27	1,500	1,440	1,500	1,500	1,520	1,610	1,700	1,510	1,860	1,800	1,410	1,340
28	1,500	1,440	1,500	1,500	1,520	1,610	1,750	1,500	1,860	1,800	1,400	1,330
29	1,500	1,430	1,500	1,490	1,530	1,620	1,790	1,500	1,860	1,800	1,360	1,320
30	1,500	1,430	1,500	1,480	---	1,620	1,780	1,500	1,860	1,790	1,330	1,320
31	1,490	---	1,500	1,480	---	1,630	---	1,500	---	1,790	1,320	---
TOTAL	45,100	43,740	47,360	52,760	43,170	48,870	48,350	52,580	53,770	54,130	49,220	42,380
MEAN	1,455	1,458	1,528	1,702	1,489	1,576	1,612	1,696	1,792	1,746	1,588	1,413
MAX	1,860	1,490	1,680	2,140	1,530	1,630	1,790	1,780	1,980	1,820	1,790	1,560
MIN	1,220	1,430	1,430	1,480	1,470	1,530	1,490	1,500	1,500	1,650	1,320	1,270
AC-FT	89,460	86,760	93,940	104,600	85,630	96,930	95,900	104,300	106,700	107,400	97,630	84,060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2004, BY WATER YEAR (WY)

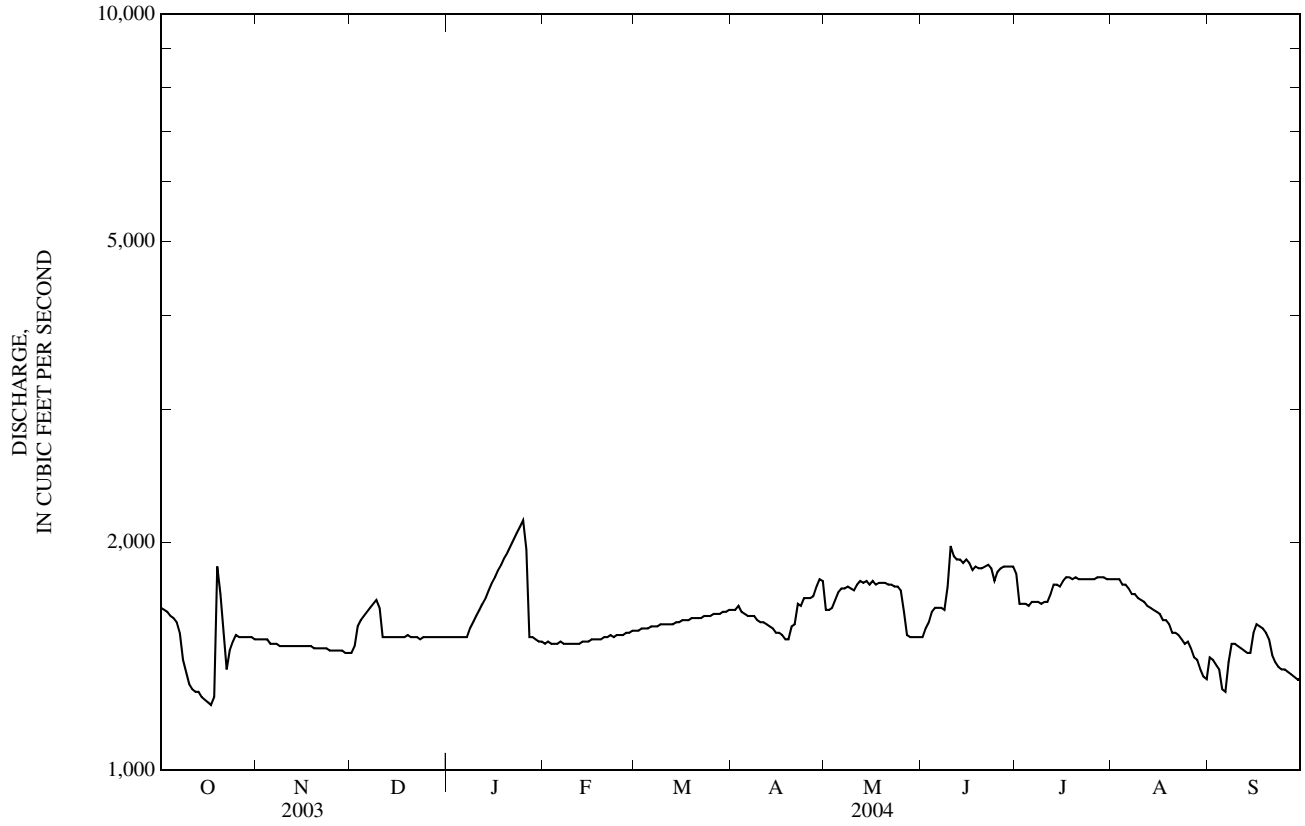
MEAN	2,911	2,867	2,686	2,560	2,624	2,869	2,854	3,767	6,904	5,412	2,847	2,690
MAX	5,142	5,151	4,999	5,267	4,384	4,809	6,675	8,744	17,900	18,890	6,784	4,544
(WY)	(1972)	(1983)	(1968)	(1968)	(1976)	(1976)	(1972)	(1947)	(1935)	(1967)	(1997)	(1973)
MIN	1,224	856	1,095	1,090	888	327	678	900	1,078	1,144	1,260	1,074
(WY)	(1978)	(1966)	(1935)	(1935)	(1936)	(1966)	(1966)	(1966)	(1966)	(1960)	(1966)	(1966)

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1935 - 2004	
ANNUAL TOTAL	568,680		581,430		--	
ANNUAL MEAN	1,558		1,589		3,417	
HIGHEST ANNUAL MEAN	--		--		5,059	1947
LOWEST ANNUAL MEAN	--		--		1,565	1966
HIGHEST DAILY MEAN	2,120	Jul 22	2,140	Jan 25	37,400	Jun 16, 1935
LOWEST DAILY MEAN	1,220	Oct 17-24	1,220	Oct 17	112	Apr 2, 1967
ANNUAL SEVEN-DAY MINIMUM	1,250	Oct 12	1,250	Oct 12	195	Mar 25, 1970
MAXIMUM PEAK FLOW	--		2,270 [a]	Jan 26	37,400	Jun 16, 1935
MAXIMUM PEAK STAGE	--		60.63[b]	Oct 18	--	
ANNUAL RUNOFF (AC-FT)	1,128,000		1,153,000		2,476,000	
10 PERCENT EXCEEDS	1,940		1,800		5,710	
50 PERCENT EXCEEDS	1,500		1,560		2,790	
90 PERCENT EXCEEDS	1,280		1,430		1,500	

SUMMARY STATISTICS	WATER YEARS 1935 - 1961*		WATER YEARS 1967-2004**	
ANNUAL MEAN	3,426		3,435	
HIGHEST ANNUAL MEAN	5,059	1947	4,839	1996
LOWEST ANNUAL MEAN	1,706	1961	1,649	2002
HIGHEST DAILY MEAN	37,400	Jun 16 1935	24,800	Jul 6, 1967
LOWEST DAILY MEAN	300	Dec 20 1951	112[c]	Apr 2, 1967
ANNUAL SEVEN-DAY MINIMUM	656	Dec 25 1934	518	Mar 25,1970
MAXIMUM PEAK FLOW	37,400	Jun 19 1935	25,300	Jul 5, 1967
ANNUAL RUNOFF (AC-FT)	2,482,000		2,489,000	
10 PERCENT EXCEEDS	6,640		5,480	
50 PERCENT EXCEEDS	2,450		3,100	
90 PERCENT EXCEEDS	1,370		1,740	

* Prior to construction of Yellowtail Dam.
** After completion of Yellowtail Dam.
a Gage height, 60.10 ft.
b Backwater from algae.
c Result of discharge measurement.



06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT

LOCATION.--Lat 45°00'25", long 107°36'52", in SW¼ NW¼ sec.36, T.9 S., R.33 E., Bighorn County, Hydrologic Unit 10080016, on right bank 20 ft downstream from county bridge, 0.5 mi north of Wyoming-Montana State line, 1 mi downstream from West Fork, 13 mi southwest of Wyola, and at river mile 115.2.

DRAINAGE AREA.--182 mi^2.

PERIOD OF RECORD.--March 1939 to current year. Prior to October 1940, published as Little Horn River at State Line, near Wyola.

REVISED RECORDS.--WSP 1729: Drainage area. WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,350 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of 163 acres upstream from station. Station operated and record by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	67	62	54	60	57	62	73	130	113	69	53
2	75	67	61	51	60	55	64	74	129	108	69	53
3	74	70	61	39	60	56	61	82	134	106	69	57
4	74	71	61	28	62	56	62	99	148	105	72	57
5	74	57	58	30	63	55	67	128	153	115	69	55
6	73	57	63	31	61	56	69	148	167	108	68	53
7	73	61	61	45	61	57	73	165	167	101	66	53
8	73	65	61	67	61	58	73	185	155	98	64	52
9	73	74	59	73	60	58	70	181	152	96	64	52
10	74	73	55	71	58	59	65	164	152	93	64	52
11	73	73	60	67	57	57	67	169	157	91	64	52
12	74	71	49	63	60	56	64	154	160	89	61	51
13	74	70	63	61	60	58	65	136	149	87	61	58
14	72	70	62	60	59	56	68	126	140	85	60	56
15	75	69	61	61	58	57	69	121	135	86	60	54
16	74	69	57	60	57	57	66	121	136	85	59	52
17	73	69	59	60	57	56	68	118	133	82	59	52
18	72	68	54	60	59	57	70	130	131	80	59	50
19	72	67	57	61	59	59	67	150	129	79	59	50
20	72	69	57	60	56	59	66	152	124	78	59	60
21	72	65	56	59	55	58	67	154	123	77	59	57
22	71	39	56	59	55	59	65	155	119	79	59	55
23	72	41	56	60	56	60	65	150	118	81	59	55
24	70	61	56	60	56	62	66	145	131	77	58	57
25	68	64	56	56	56	62	64	133	121	75	58	54
26	72	63	57	49	56	62	65	129	118	73	65	52
27	72	67	56	54	56	63	71	129	116	72	63	53
28	73	66	54	64	58	61	82	141	113	81	59	57
29	78	65	48	64	57	59	76	156	112	74	57	53
30	67	63	47	63	---	59	74	140	111	72	55	52
31	64	---	51	60	---	60	---	136	---	70	54	---
TOTAL	2,248	1,951	1,774	1,750	1,693	1,804	2,031	4,244	4,063	2,716	1,921	1,617
MEAN	72.5	65.0	57.2	56.5	58.4	58.2	67.7	137	135	87.6	62.0	53.9
MAX	78	74	63	73	63	63	82	185	167	115	72	60
MIN	64	39	47	28	55	55	61	73	111	70	54	50
AC-FT	4,460	3,870	3,520	3,470	3,360	3,580	4,030	8,420	8,060	5,390	3,810	3,210

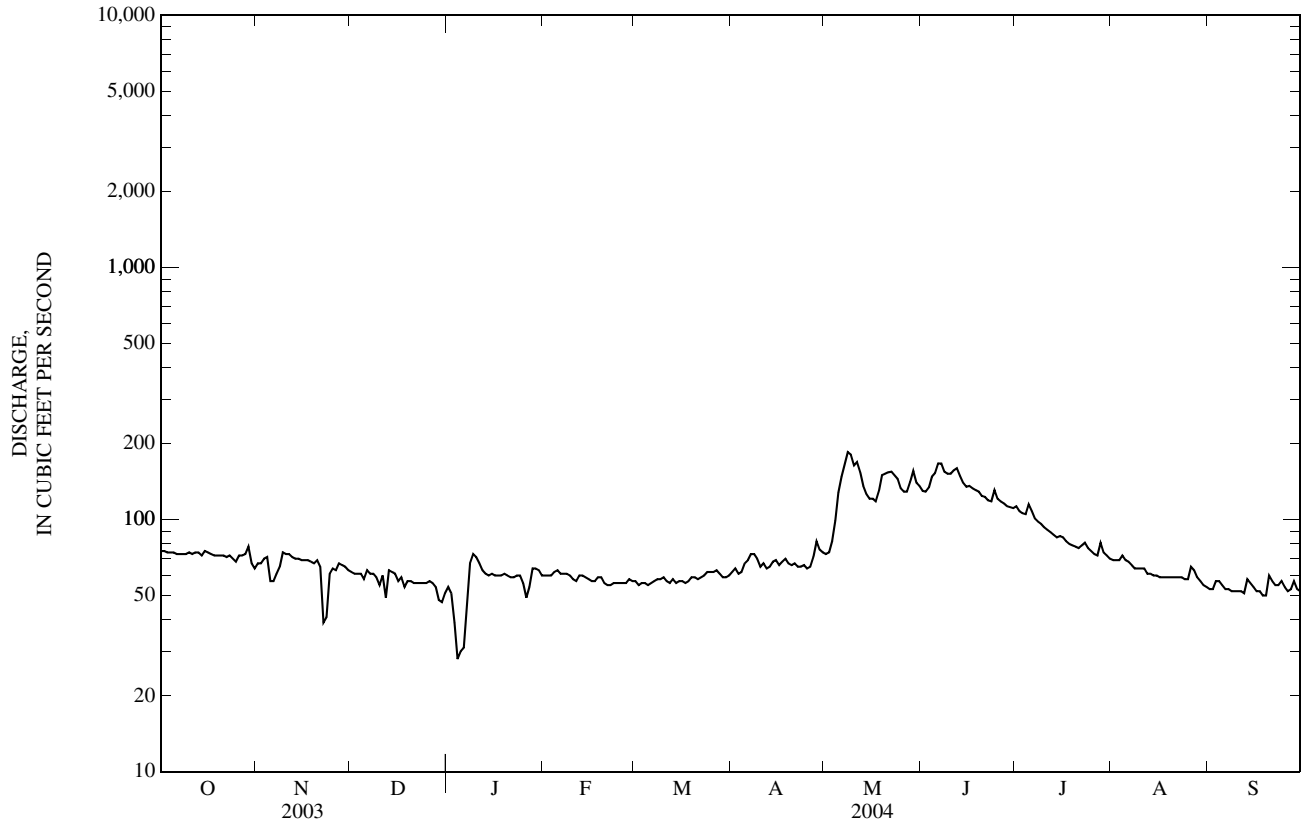
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

MEAN	86.1	75.2	67.5	62.6	61.3	61.5	84.6	321	510	216	122	97.0
MAX	120	104	91.2	84.9	88.0	86.4	172	533	1,125	689	228	151
(WY)	(1976)	(1942)	(1976)	(1946)	(1946)	(1946)	(1946)	(1977)	(1975)	(1975)	(1975)	(1975)
MIN	57.6	52.3	46.8	43.6	40.2	46.8	50.7	127	135	87.6	62.0	53.9
(WY)	(2003)	(2003)	(2002)	(1963)	(2003)	(2003)	(1961)	(1953)	(2004)	(2004)	(2004)	(2004)

06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1940 - 2004	
ANNUAL TOTAL	44,899		27,812		--	
ANNUAL MEAN	123		76.0		147	
HIGHEST ANNUAL MEAN	--		--		253	1975
LOWEST ANNUAL MEAN	--		--		76.0	2004
HIGHEST DAILY MEAN	1,180	May 31	185	May 8	2,340	Jun 4, 1944
LOWEST DAILY MEAN	20	Feb 24,25	28	Jan 4	18	Feb 2, 1989
ANNUAL SEVEN-DAY MINIMUM	30	Feb 22	40	Jan 1	27	Dec 18, 1983
MAXIMUM PEAK FLOW	--		215	May 8	2,730 [a]	Jun 3, 1944
MAXIMUM PEAK STAGE	--		2.36	May 8	5.93[b]	Jun 9, 1944
ANNUAL RUNOFF (AC-FT)	89,060		55,170		106,700	
10 PERCENT EXCEEDS	255		130		330	
50 PERCENT EXCEEDS	74		64		82	
90 PERCENT EXCEEDS	45		54		56	

a Gage height, 4.97 ft, from rating curve extended above 1,400 ft^3/s.
b Result of log jam.



06289600 WEST PASS CREEK NEAR PARKMAN, WY

LOCATION.--Lat 44°59'16", long 107°28'56", in NE¼ NE¼ SE¼ sec.21, T.58 N., R.88 W., Sheridan County, Hydrologic Unit 10080016, on right bank, anchored to concrete headwall of culvert on county road and 7.6 mi northwest of Parkman.

DRAINAGE AREA.--15.4 mi^2.

PERIOD OF RECORD.--October 1982 to current year (no winter records water years 1985-87).

GAGE.--Water-stage recorder. Elevation of gage is 4,540 ft above NGVD of 1929, from topographic map. Prior to April 2, 1985, at site 100 ft north (on abandoned channel) at datum 4.28 ft lower. April 2, 1985 to March 27, 1986, at site 300 ft upstream at datum 0.95 ft higher. April 2, 1985 to September 30, 1998, at same site at datum 1.00 ft lower. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.3	5.5	e5.5	e6.0	4.7	5.7	5.7	7.0	5.6	4.5	3.8
2	5.9	6.3	5.4	e5.4	e5.5	4.3	5.9	5.8	7.0	5.4	4.5	3.9
3	5.6	5.9	5.4	e5.2	e5.5	4.5	5.9	5.9	7.0	5.4	4.6	4.0
4	5.7	e5.8	e5.2	e4.8	e6.0	4.5	5.9	6.3	7.0	5.5	4.6	3.8
5	5.5	e5.7	e5.2	e4.8	e6.0	4.5	5.9	6.3	6.6	7.9	4.5	3.8
6	5.5	e5.7	e5.5	e5.5	e6.0	4.4	6.0	6.4	6.6	5.8	4.5	3.8
7	5.5	e5.8	e5.7	e6.5	e5.4	5.0	6.0	6.5	6.7	5.5	4.5	3.8
8	5.5	e5.8	5.7	e7.0	e5.0	7.4	6.1	6.9	6.5	5.4	4.4	3.9
9	5.5	e5.9	e5.5	e7.5	e5.0	7.1	6.1	7.5	6.5	5.4	4.6	3.8
10	5.6	e5.9	e5.2	e7.5	e5.0	5.9	6.1	8.2	6.6	5.5	4.6	3.9
11	5.7	5.9	e5.1	e7.5	e6.5	5.1	6.1	8.9	7.9	5.4	4.6	3.8
12	5.9	5.9	e5.0	e6.5	5.5	5.3	5.9	9.4	6.8	5.3	4.5	3.8
13	5.9	5.9	e5.1	5.9	5.5	5.8	5.9	9.5	6.7	5.4	4.5	4.2
14	5.9	6.0	e5.2	5.4	4.5	5.0	5.9	9.5	6.6	5.3	4.3	4.1
15	5.8	6.0	e5.2	5.4	4.2	5.3	6.0	9.3	6.4	5.6	4.0	4.0
16	5.7	5.9	e5.1	5.3	4.2	5.3	6.2	9.0	6.3	5.5	4.0	4.0
17	5.7	5.9	5.4	5.2	4.2	5.8	6.5	8.6	6.1	5.4	4.2	3.9
18	5.7	5.9	e5.3	e5.1	5.3	6.2	6.7	8.4	6.1	5.1	4.1	3.9
19	5.8	5.8	e5.4	5.1	5.8	6.6	6.3	7.7	5.8	5.1	4.1	3.9
20	5.8	e5.9	5.5	5.1	4.6	5.5	6.2	7.6	6.3	5.1	4.1	4.8
21	5.9	e5.9	5.5	e5.0	4.4	5.3	6.4	7.5	6.2	5.0	4.0	4.2
22	6.0	5.9	5.3	e5.0	4.4	5.3	6.5	7.5	6.1	5.1	4.0	4.1
23	6.0	5.9	5.3	5.0	4.3	5.3	6.5	8.0	6.0	5.2	3.9	4.1
24	5.9	5.9	5.3	5.1	4.5	5.6	6.3	8.0	6.2	5.1	3.9	4.1
25	5.9	5.9	5.3	4.3	4.5	5.4	6.3	7.7	6.1	5.1	4.0	4.1
26	5.9	5.7	e5.2	e4.1	4.4	5.4	6.3	7.6	6.0	5.1	3.8	4.0
27	5.9	5.6	e4.5	e5.0	4.5	5.6	6.2	7.7	5.8	5.0	3.7	4.1
28	6.0	4.7	e2.5	e5.5	4.8	5.2	6.4	7.4	5.5	5.1	3.9	4.1
29	7.4	5.6	e3.7	e6.5	4.3	5.3	6.3	7.3	5.5	4.4	3.9	4.1
30	6.5	5.5	e6.5	e7.0	---	5.5	6.0	7.2	5.5	3.9	3.9	4.2
31	6.3	---	e6.0	e6.5	---	5.6	---	7.0	---	4.4	3.9	---
TOTAL	181.7	174.8	161.7	175.2	145.8	167.7	184.5	236.3	191.4	164.0	130.6	120.0
MEAN	5.86	5.83	5.22	5.65	5.03	5.41	6.15	7.62	6.38	5.29	4.21	4.00
MAX	7.4	6.3	6.5	7.5	6.5	7.4	6.7	9.5	7.9	7.9	4.6	4.8
MIN	5.5	4.7	2.5	4.1	4.2	4.3	5.7	5.7	5.5	3.9	3.7	3.8
AC-FT	360	347	321	348	289	333	366	469	380	325	259	238

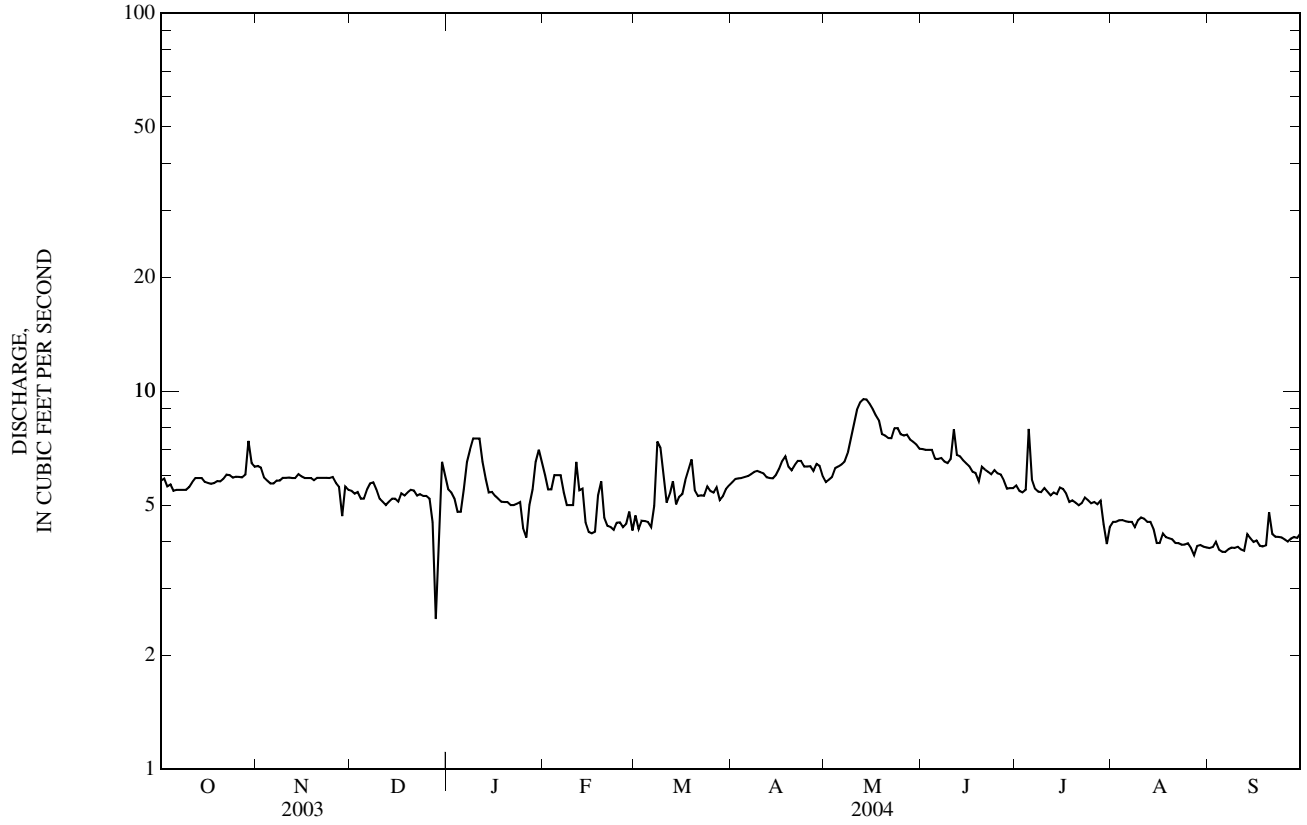
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)*

MEAN	7.53	7.18	6.37	6.21	6.02	7.29	12.8	31.6	23.6	12.4	8.46	7.50
MAX	9.95	9.30	9.02	8.10	7.98	10.5	25.2	79.9	60.6	26.9	14.9	11.6
(WY)	(1996)	(1996)	(1996)	(1996)	(1996)	(1997)	(1994)	(1995)	(1995)	(1995)	(1995)	(1995)
MIN	4.61	4.42	4.64	4.25	4.02	5.41	6.15	7.62	6.38	5.21	4.21	4.00
(WY)	(2002)	(2002)	(2003)	(1988)	(1989)	(2004)	(2004)	(2004)	(2004)	(1985)	(2004)	(2004)

06289600 WEST PASS CREEK NEAR PARKMAN, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004*	
ANNUAL TOTAL	3,995.6		2,033.7		--	
ANNUAL MEAN	10.9		5.56		11.9	
HIGHEST ANNUAL MEAN	--		--		21.2	1995
LOWEST ANNUAL MEAN	--		--		5.56	2004
HIGHEST DAILY MEAN	57	May 30	9.5	May 13,14	291	May 9, 1995
LOWEST DAILY MEAN	2.5	Dec 28	2.5	Dec 28	0.00[a]	Dec 25, 1998
ANNUAL SEVEN-DAY MINIMUM	4.3	Feb 21	3.8	Sep 4	0.81	Feb 3, 1989
MAXIMUM PEAK FLOW	--		11[b]	Mar 8	340	May 9, 1995
MAXIMUM PEAK STAGE	--		2.50[c]	Jan 8	4.76[d]	Apr 28, 1984
ANNUAL RUNOFF (AC-FT)	7,930		4,030		8,590	
10 PERCENT EXCEEDS	26		7.0		23	
50 PERCENT EXCEEDS	6.3		5.5		7.7	
90 PERCENT EXCEEDS	4.7		4.1		5.2	

* For period of operation.
a Result of channel blockage or diversion upstream.
b Gage height, 1.68 ft.
c Backwater from ice.
d Back water from ice, site and datum then in use.
e Estimated.



06289820 EAST PASS CREEK NEAR DAYTON, WY

LOCATION.--Lat 44°59'26", long 107°25'20", in NE¼ SE¼ NE¼ sec.24, T.58 N., R.88 W., Sheridan County, Hydrologic Unit 10080016, on right bank 0.4 mi downstream from bridge on Sheridan County Road 144, 5.0 mi northwest of Parkman, and 11.2 mi northwest of Dayton.

DRAINAGE AREA.--21.7 mi^2.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,405 ft above NGVD of 1929, from topographic map. October 1982 to August 1995, at site 270 ft upstream at different datum. August 1995 to April 1996, at site 0.3 mi downstream at different 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. Several small reservoirs upstream from station, combined capacity, 415 acre-ft, for irrigation. Diversions for irrigation of about 2,900 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.1	5.3	e5.3	e7.0	6.3	8.1	6.2	6.2	5.4	3.8	3.5
2	5.9	6.1	5.3	e5.3	e6.5	5.9	8.0	6.0	5.9	4.5	3.5	3.6
3	5.8	6.0	5.2	e5.2	e6.5	6.1	8.0	5.8	5.7	3.0	3.5	4.4
4	5.7	5.8	e5.2	e4.9	e6.9	6.0	8.1	6.0	5.7	6.0	3.5	4.5
5	5.6	e5.6	e5.1	e5.0	7.1	6.1	8.1	7.1	5.5	7.3	3.3	4.3
6	5.7	e5.6	5.7	e6.0	7.0	e6.3	8.1	8.5	5.4	4.0	3.1	4.3
7	5.4	e5.7	5.6	e7.0	6.3	e6.4	8.4	9.2	5.4	4.0	3.2	4.2
8	5.1	e5.7	5.6	e8.0	5.9	8.0	8.3	10	5.4	4.0	3.2	4.5
9	4.9	5.8	5.3	8.1	e5.8	8.6	8.4	10	5.4	3.6	3.2	4.4
10	5.0	5.8	e5.2	8.3	e5.8	8.9	8.1	13	5.5	3.9	3.3	4.4
11	4.9	e5.8	e5.0	7.9	e8.0	7.8	8.0	12	e6.4	6.2	3.2	4.4
12	4.7	5.8	e5.0	7.7	e7.0	7.6	7.8	12	e6.2	6.1	3.2	4.4
13	4.6	5.7	e5.2	7.6	e6.9	8.2	7.7	11	e6.0	6.0	3.2	5.0
14	4.2	5.8	e5.2	7.3	e6.4	7.5	7.6	9.6	e6.0	6.1	3.1	4.9
15	4.1	5.8	e5.2	7.1	e6.1	7.7	7.6	8.3	e5.9	6.0	3.0	5.0
16	4.1	5.7	e5.0	7.0	5.8	7.6	7.4	8.0	6.0	5.9	3.1	4.8
17	5.2	5.8	e5.3	6.4	5.7	8.0	7.1	7.6	6.1	4.8	3.0	4.6
18	5.8	5.6	5.3	e6.3	6.7	8.6	7.7	7.4	6.2	4.7	3.1	4.5
19	5.9	5.6	5.2	6.3	8.1	9.3	7.6	7.3	6.2	4.7	3.2	4.6
20	5.9	e5.8	5.2	6.3	7.1	8.5	7.4	7.4	6.4	4.6	3.1	6.0
21	6.1	e6.0	5.1	e6.2	6.6	8.0	7.4	7.7	6.2	4.5	3.1	5.5
22	6.1	e5.6	5.1	e6.2	6.4	7.8	7.4	7.8	6.0	4.4	3.1	5.2
23	6.0	e6.0	5.2	6.3	6.3	8.1	7.1	8.0	6.0	5.0	3.1	5.2
24	6.1	e6.4	e5.2	6.3	6.2	8.4	6.9	8.1	6.2	5.0	3.2	5.1
25	6.1	6.1	e5.2	e6.0	6.3	8.4	7.0	7.6	5.9	4.6	3.5	5.0
26	6.1	6.0	e5.2	e5.6	6.3	8.4	6.5	7.3	5.8	4.3	3.6	5.0
27	6.1	5.7	e5.2	e6.0	6.3	8.9	5.7	7.0	5.8	4.2	3.5	5.2
28	6.1	5.5	e5.2	e6.0	6.9	8.4	6.5	6.9	5.8	4.7	3.4	5.2
29	7.6	5.8	e5.2	e8.0	6.8	8.3	6.8	6.7	5.6	4.2	3.3	5.1
30	6.6	5.5	e5.3	e9.0	---	8.0	6.3	6.7	5.0	4.1	3.5	5.2
31	6.1	---	e5.3	e8.0	---	8.1	---	6.5	---	4.0	3.4	---
TOTAL	173.3	174.2	162.3	206.6	190.7	240.2	225.1	252.7	175.8	149.8	101.5	142.0
MEAN	5.59	5.81	5.24	6.66	6.58	7.75	7.50	8.15	5.86	4.83	3.27	4.73
MAX	7.6	6.4	5.7	9.0	8.1	9.3	8.4	13	6.4	7.3	3.8	6.0
MIN	4.1	5.5	5.0	4.9	5.7	5.9	5.7	5.8	5.0	3.0	3.0	3.5
AC-FT	344	346	322	410	378	476	446	501	349	297	201	282

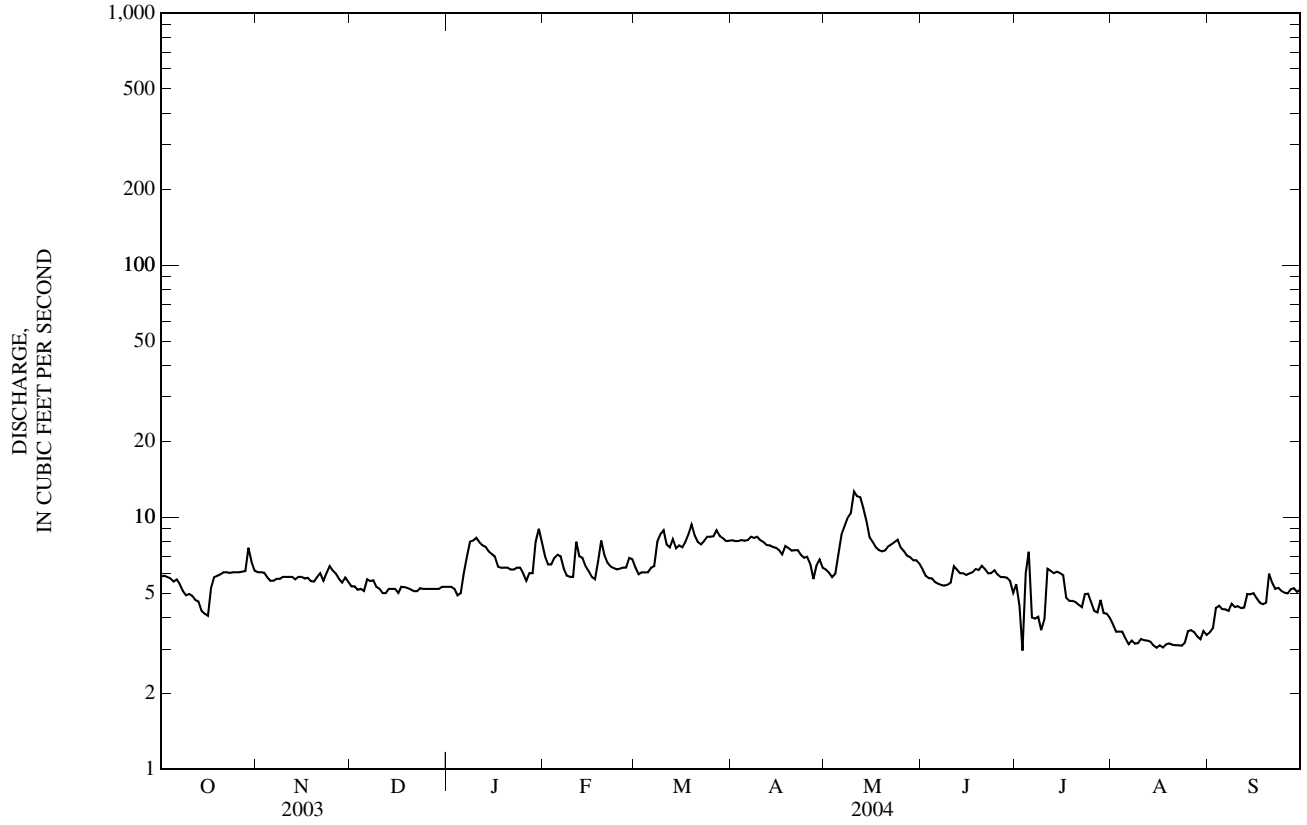
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

MEAN	8.49	8.63	8.19	8.38	8.31	9.70	15.9	41.3	33.4	12.3	6.91	7.03
MAX	13.9	11.4	10.5	10.5	10.6	14.2	32.4	90.8	82.8	32.9	14.8	14.8
(WY)	(1996)	(1996)	(1996)	(1996)	(1996)	(1997)	(1994)	(1995)	(1995)	(1992)	(1993)	(1995)
MIN	5.41	5.81	5.24	6.35	6.06	7.29	7.50	8.15	5.86	4.83	2.73	3.92
(WY)	(2003)	(2004)	(2004)	(2003)	(2003)	(1990)	(2004)	(2004)	(2004)	(2004)	(1988)	(2002)

06289820 EAST PASS CREEK NEAR DAYTON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	4,496.4		2,194.2			
ANNUAL MEAN	12.3		6.00		14.1	
HIGHEST ANNUAL MEAN	--				23.6	1984
LOWEST ANNUAL MEAN	--				6.00	2004
HIGHEST DAILY MEAN	99	May 30	13	May 10	304	May 9, 1995
LOWEST DAILY MEAN	3.0	Aug 4,11-14	3.0	Several days	0.84[a]	Nov 14, 2002
ANNUAL SEVEN-DAY MINIMUM	3.1	Aug 9	3.1	Aug 14	1.9	Sep 10, 2002
MAXIMUM PEAK FLOW			13[b]	May 10	511[c]	May 9, 1995
MAXIMUM PEAK STAGE			7.15[d]	Dec 28	9.00[f]	Feb 6, 1996
ANNUAL RUNOFF (AC-FT)	8,920		4,350		10,190	
10 PERCENT EXCEEDS	30		8.1		27	
50 PERCENT EXCEEDS	6.1		5.9		9.0	
90 PERCENT EXCEEDS	5.0		4.0		5.5	

a The result of pumping upstream.
b Gage height, 5.64 ft.
c Gage height, 4.47 ft, site and datum then in use, from rating curve extended above 221 ft^3/s.
d Backwater from ice.
e Estimated.
f Ice jam, site and datum then in use.



06290000 PASS CREEK NEAR WYOLA, MT

LOCATION.--Lat 45°03'23", long 107°21'19",in NE¼ NE¼ SE¼ sec.13, T.9S., R.35 E., Big Horn County, Hydrologic Unit 10080016, on right bank 125 ft downstream from bridge on U.S. Highway 87, 2.0 mi downstream from Twin Creek, 5.5 mi south of Wyola, and at river mile 10.2.

DRAINAGE AREA.--111 mi^2. Drainage area at site used prior to September 30, 1956, 119 mi^2.

PERIOD OF RECORD.--June 1935 to September 1956 (no winter records prior to 1939), October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,920 ft above NGVD of 1929, from topographic map. December 21, 1950 to September 30, 1956, water-stage recorder, and June 4, 1935 to December 20, 1950, nonrecording gage at site 0.3 mi upstream at different datum. Flow is equivalent. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 2,500 acres upstream of station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e12	11	e13	e9.0	e11	e9.0	18	12	9.2	7.0	1.9	e1.0
2	e12	9.5	e13	e4.0	e11	e8.0	19	11	6.4	6.9	1.8	e0.80
3	e12	12	e12	e3.0	e10	e8.0	19	10	3.4	5.4	1.7	e0.80
4	e12	9.3	e12	e2.0	e10	e8.0	19	7.4	3.1	6.1	1.8	e0.80
5	e11	4.1	e12	e1.0	e10	e8.0	18	7.4	2.6	7.2	1.8	e1.0
6	e11	3.8	e12	e2.0	e10	e8.0	18	8.3	1.3	9.2	e1.5	e1.5
7	e11	3.9	e13	e3.0	e10	e8.0	18	8.4	1.3	8.7	e1.0	e1.5
8	e11	3.8	e12	e4.0	e10	e9.0	18	8.1	0.94	7.4	e0.80	e1.5
9	e12	3.5	e12	e10	e10	e10	18	9.7	1.1	7.3	e1.0	e1.6
10	e13	3.7	e11	e11	e10	e10	15	11	0.97	7.8	e0.90	e1.5
11	e13	3.5	e11	e11	e10	e10	16	12	8.5	6.4	e0.80	e1.5
12	e13	3.3	e11	e11	e10	e10	14	8.8	14	7.2	e0.90	e1.5
13	e13	2.9	e11	e10	e9.0	e9.0	15	12	11	5.9	e1.0	e1.0
14	e13	3.2	e11	e10	e9.0	e9.0	14	13	10	5.3	e1.0	e0.80
15	e13	3.0	e11	e10	e9.0	e9.0	13	12	9.3	4.4	e1.0	e0.90
16	e13	2.9	e11	e10	e9.0	e10	13	11	7.9	4.5	e0.90	e1.0
17	e13	2.9	e11	e10	e9.0	21	13	12	6.9	5.0	e0.80	e1.5
18	e13	2.3	e11	e10	e9.0	43	13	8.9	6.3	3.6	e0.70	e1.5
19	e13	1.7	e11	e10	e9.0	52	13	8.4	8.8	2.4	e0.80	e1.5
20	e13	2.0	e10	e10	e9.0	51	13	8.4	9.2	1.5	e1.0	e1.0
21	e13	2.3	e10	e9.0	e9.0	32	12	9.6	10	1.7	e1.0	e1.0
22	e13	e1.6	e10	e9.0	e9.0	27	12	8.5	9.4	1.3	e1.0	e1.0
23	e13	e1.3	e10	e9.0	e9.0	25	12	12	9.8	1.3	e0.90	e1.0
24	e13	e1.5	e10	e9.0	e9.0	24	11	13	6.6	2.8	e0.90	e1.0
25	e13	e1.7	e10	e7.0	e9.0	24	11	12	6.7	2.4	e0.80	e1.5
26	e13	e2.0	e10	e3.0	e9.0	23	9.5	11	5.6	2.5	e0.80	e1.5
27	e13	e5.0	e10	e8.0	e9.0	23	7.5	10	6.1	2.4	e0.90	e1.5
28	e13	e10	e10	e12	e9.0	22	6.9	9.6	5.8	3.5	e1.0	e1.0
29	e14	e12	e9.0	e11	e9.0	21	14	9.5	5.8	4.1	e1.0	e1.5
30	16	e13	e9.0	e11	---	20	14	9.8	5.7	3.4	e1.0	e1.5
31	13	---	e9.0	e11	---	19	---	10	---	2.8	e1.0	---
TOTAL	394	142.7	338.0	250.0	275.0	570.0	426.9	314.8	193.71	147.4	33.40	36.70
MEAN	12.7	4.76	10.9	8.06	9.48	18.4	14.2	10.2	6.46	4.75	1.08	1.22
MAX	16	13	13	12	11	52	19	13	14	9.2	1.9	1.6
MIN	11	1.3	9.0	1.0	9.0	8.0	6.9	7.4	0.94	1.3	0.70	0.80
AC-FT	781	283	670	496	545	1,130	847	624	384	292	66	73

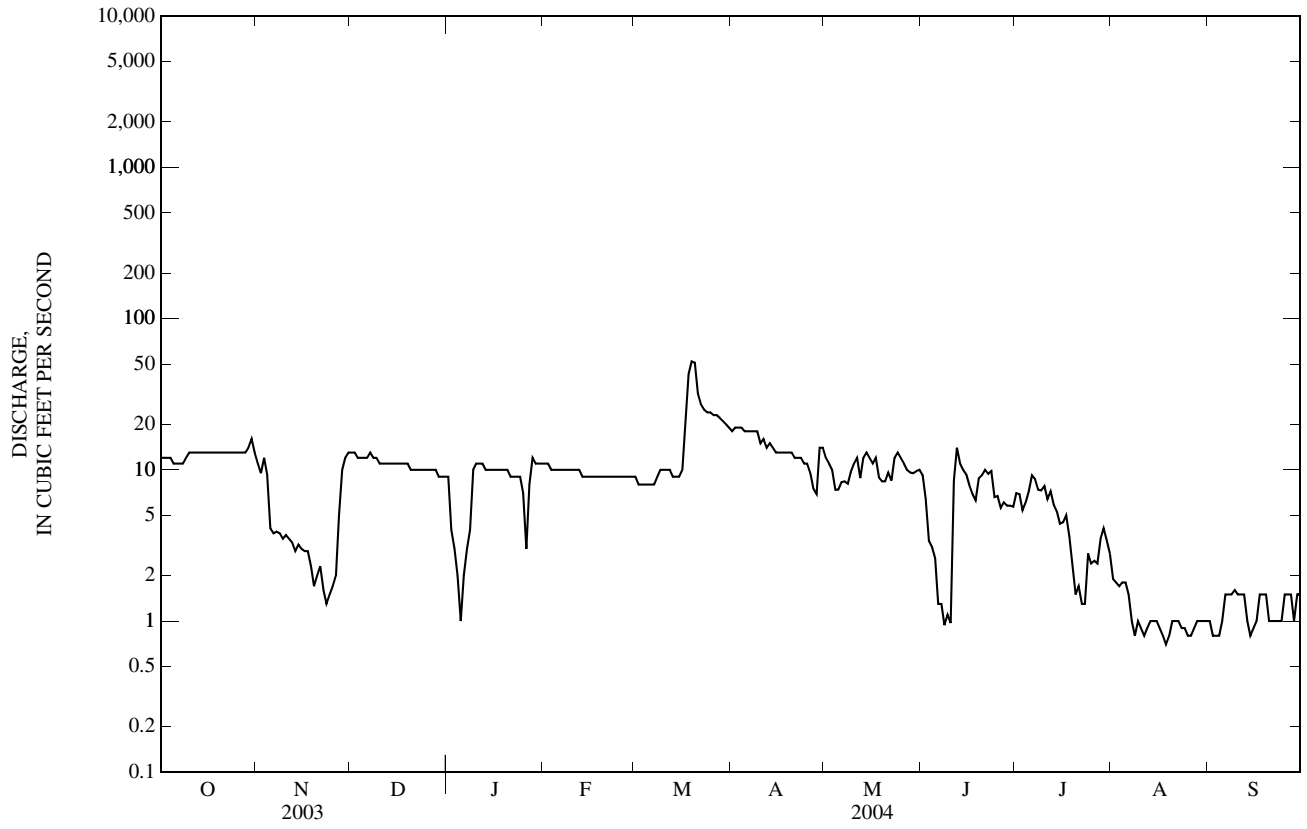
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)*

MEAN	17.3	18.0	16.5	17.6	24.7	38.4	50.5	99.1	86.0	28.7	12.7	13.1
MAX	27.8	27.9	33.6	32.3	57.8	115	106	324	375	92.6	38.5	29.1
(WY)	(1945)	(1946)	(1943)	(1984)	(1948)	(1947)	(1994)	(1984)	(1944)	(1944)	(1944)	(1944)
MIN	5.73	4.76	5.73	6.55	9.48	8.81	14.2	10.2	6.46	4.75	1.08	1.22
(WY)	(1955)	(2004)	(2002)	(2001)	(2004)	(2002)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)

06290000 PASS CREEK NEAR WYOLA, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004*	
ANNUAL TOTAL	11,643.6		3,122.61		--	
ANNUAL MEAN	31.9		8.53		35.2	
HIGHEST ANNUAL MEAN	--		--		76.8	1944
LOWEST ANNUAL MEAN	--		--		8.53	2004
HIGHEST DAILY MEAN	218	May 11	52	Mar 19	1,120	Jun 20, 1947
LOWEST DAILY MEAN	1.3	Nov 23	0.70	Aug 18	0.00	Sep 1, 2002
ANNUAL SEVEN-DAY MINIMUM	1.7	Nov 19	0.89	Aug 13	0.00	Sep 1, 2002
MAXIMUM PEAK FLOW	--		59 [a]	Mar 19	1,150 [b]	Jun 4, 1944
MAXIMUM PEAK STAGE	--		Unknown		6.96	May 9, 1995
ANNUAL RUNOFF (AC-FT)	23,100		6,190		25,520	
10 PERCENT EXCEEDS	98		13		76	
50 PERCENT EXCEEDS	12		9.0		20	
90 PERCENT EXCEEDS	3.9		1.0		8.0	

* For period of operation.
a Gage height, 2.28 ft.
b Gage height, 4.83 ft, from rating extended above 400 ft^3/s.
e Estimated.



06297500 HIGHLINE DITCH NEAR DAYTON, WY

LOCATION.--Lat 44°51'11", long 107°18'14", in NE¼ SE¼ SE¼ sec. 2, T.56 N., R87 W., Sheridan County, Hydrologic Unit 10090101, on right bank 0.8 mi downstream from diversion from Tongue River and 2.3 mi southwest of Dayton.

PERIOD OF RECORD.--September 1920 to September 1923, June 1941 to current year (no winter records water years 1941-44, 1982, 1991, 1994-95, 1997 to current year).

GAGE.--Water-stage recorder. Elevation of gage is 4,100 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow diverted from Tongue River for irrigation. Prior to water year 2002, figures for this station were included in 06298000 Tongue River near Dayton, WY.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e2.5	24	29	11	29	20
2	---	---	---	---	---	---	e4.0	24	28	11	29	20
3	---	---	---	---	---	---	e4.0	24	28	11	29	20
4	---	---	---	---	---	---	e4.0	25	28	11	29	20
5	---	---	---	---	---	---	e4.0	26	29	11	29	20
6	---	---	---	---	---	---	e6.0	27	29	11	29	20
7	---	---	---	---	---	---	e9.0	28	29	11	29	20
8	---	---	---	---	---	---	e9.0	32	29	11	28	20
9	---	---	---	---	---	---	e9.0	32	29	11	28	e20
10	---	---	---	---	---	---	e9.0	31	29	11	28	e20
11	---	---	---	---	---	---	e9.0	32	24	11	28	e20
12	---	---	---	---	---	---	e11	31	21	17	28	e20
13	---	---	---	---	---	---	e13	29	20	20	27	e20
14	---	---	---	---	---	---	13	29	20	20	27	e20
15	---	---	---	---	---	---	13	29	20	20	27	e20
16	---	---	---	---	---	---	13	29	20	20	26	e20
17	---	---	---	---	---	---	13	29	20	20	20	e20
18	---	---	---	---	---	---	13	29	20	20	17	e16
19	---	---	---	---	---	---	12	29	20	21	17	e7.0
20	---	---	---	---	---	---	14	29	20	23	17	e7.0
21	---	---	---	---	---	---	17	29	16	27	17	e7.0
22	---	---	---	---	---	---	17	29	11	30	17	e7.0
23	---	---	---	---	---	---	18	29	11	30	17	e7.0
24	---	---	---	---	---	---	23	29	11	30	14	6.9
25	---	---	---	---	---	---	22	29	11	30	10	6.9
26	---	---	---	---	---	---	23	29	11	30	11	6.7
27	---	---	---	---	---	---	23	28	11	30	14	6.7
28	---	---	---	---	---	---	24	28	11	30	20	6.9
29	---	---	---	---	---	---	24	29	11	30	20	6.9
30	---	---	---	---	---	---	24	29	11	30	20	6.7
31	---	---	---	---	---	---	---	29	---	29	20	---
TOTAL	---	---	---	---	---	---	399.5	885	607	628	701	438.7
MEAN	---	---	---	---	---	---	13.3	28.5	20.2	20.3	22.6	14.6
MAX	---	---	---	---	---	---	24	32	29	30	29	20
MIN	---	---	---	---	---	---	2.5	24	11	11	10	6.7
AC-FT	---	---	---	---	---	---	792	1,760	1,200	1,250	1,390	870

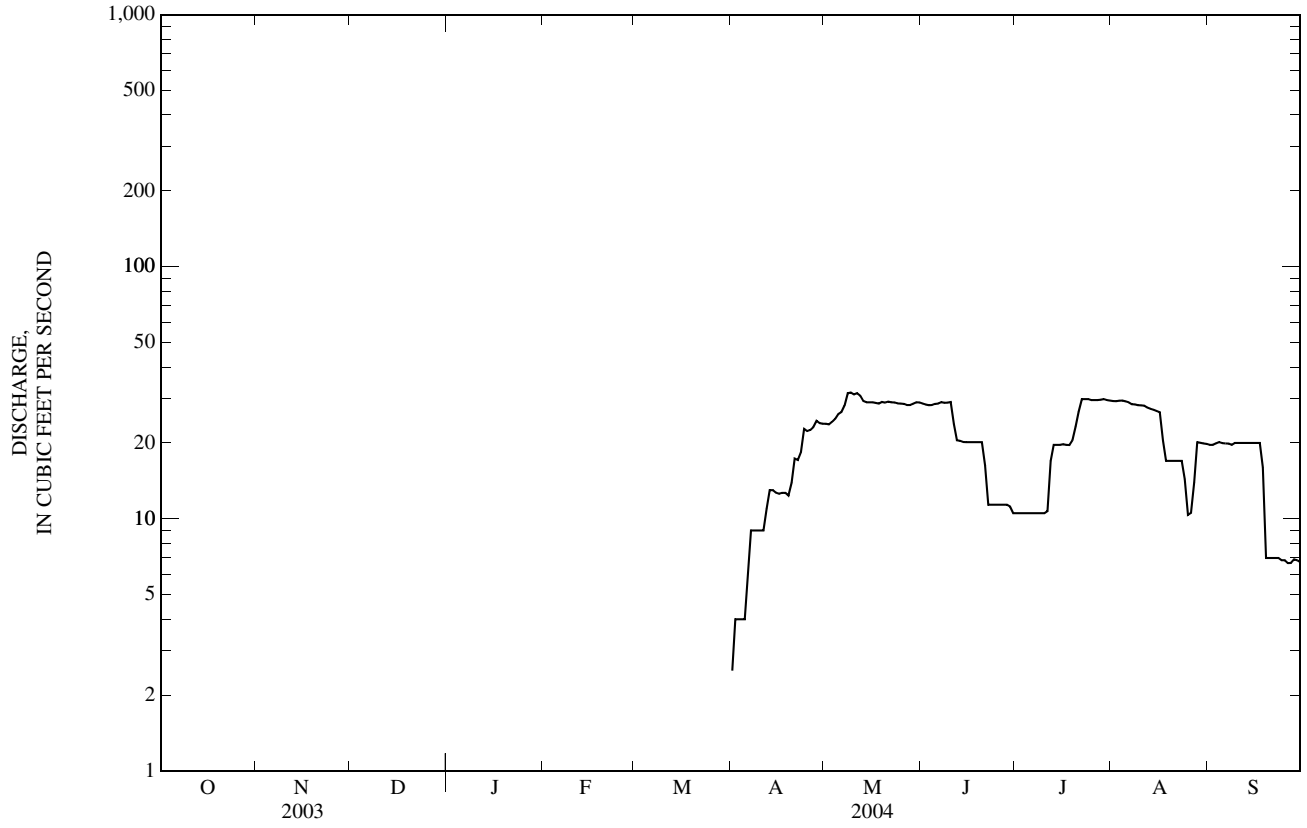
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2004, BY WATER YEAR (WY)*

MEAN	5.44	0.29	0.00	0.00	0.00	0.00	0.65	7.38	17.2	19.3	19.6	14.8
MAX	20.7	5.00	0.00	0.00	0.00	0.01	13.3	28.5	30.5	30.9	27.6	23.7
(WY)	(1955)	(1944)	(1921)	(1921)	(1921)	(1989)	(2004)	(2004)	(1996)	(1996)	(1983)	(1952)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.82	8.33	3.16
(WY)	(1921)	(1921)	(1921)	(1921)	(1921)	(1921)	(1922)	(1922)	(1957)	(1992)	(1923)	(1923)

06297500 HIGHLINE DITCH NEAR DAYTON, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1920 - 2004*	
HIGHEST DAILY MEAN	32	May 8,9,11	35	Jun 13, 1979
LOWEST DAILY MEAN	2.5	Apr 1	0.00	Many days, each year

* For period of operation.
e Estimated.



06298000 TONGUE RIVER NEAR DAYTON, WY

LOCATION.--Lat 44°50'58", long 107°18'14", in NE¼ NE¼ NE¼ sec.11, T.56 N., R.87 W., Sheridan County, Hydrologic Unit 10090101, on left bank 0.5 mi upstream from Crystal Draw, 0.6 mi downstream from intake of Highline Ditch, and 2.5 mi southwest of Dayton.

DRAINAGE AREA.--206 mi^2.

PERIOD OF RECORD.--October 1918 to September 1929, October 1940 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1921.

GAGE.--Water-stage recorder. Elevation of gage is 4,060 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Small diversion upstream from station for Dayton municipal supply. Prior to water year 2002, figures of adjustments for diversion by Highline Ditch near Dayton were included with this station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	37	48	52	e34	38	62	91	152	134	46	34
2	64	39	47	43	e32	34	68	94	142	124	44	33
3	61	43	46	33	38	36	58	117	140	116	47	38
4	63	47	44	35	38	38	65	155	155	115	50	40
5	62	41	38	40	38	34	87	211	172	127	44	37
6	60	45	49	44	38	34	93	262	178	130	42	35
7	60	45	48	46	37	33	106	261	195	115	41	34
8	59	45	48	e55	39	40	105	258	177	108	40	33
9	58	47	44	54	38	41	90	245	173	103	39	32
10	58	49	38	51	38	44	63	213	174	98	39	31
11	55	51	44	46	35	37	73	233	189	94	40	32
12	61	50	39	44	36	39	58	211	185	85	38	30
13	63	49	48	43	38	41	77	177	165	82	37	36
14	55	51	50	43	38	35	92	167	152	81	36	38
15	61	50	48	42	38	41	94	164	146	80	34	39
16	60	50	47	42	37	40	86	162	145	89	34	36
17	60	50	48	40	37	39	92	157	144	79	40	34
18	60	48	46	40	39	39	95	158	141	77	45	38
19	60	49	48	41	39	43	81	183	137	72	44	41
20	58	49	49	42	36	42	85	176	132	66	43	53
21	57	43	48	39	32	43	80	193	142	62	45	64
22	57	30	47	41	34	45	71	189	136	62	42	56
23	56	35	44	42	34	50	67	175	135	72	41	56
24	54	52	46	42	37	54	76	172	150	69	43	58
25	47	48	47	37	37	56	63	161	142	59	45	56
26	59	49	48	e30	37	54	71	152	139	55	54	51
27	62	48	45	e34	37	59	94	147	142	54	58	54
28	61	49	39	e34	39	54	127	148	129	65	44	74
29	64	52	39	e36	37	46	92	167	126	63	39	57
30	42	50	41	e37	---	46	86	175	122	57	37	52
31	30	---	48	e39	---	55	---	164	---	50	35	---
TOTAL	1,789	1,391	1,409	1,287	1,067	1,330	2,457	5,538	4,557	2,643	1,306	1,302
MEAN	57.7	46.4	45.5	41.5	36.8	42.9	81.9	179	152	85.3	42.1	43.4
MAX	64	52	50	55	39	59	127	262	195	134	58	74
MIN	30	30	38	30	32	33	58	91	122	50	34	30
AC-FT	3,550	2,760	2,790	2,550	2,120	2,640	4,870	10,980	9,040	5,240	2,590	2,580

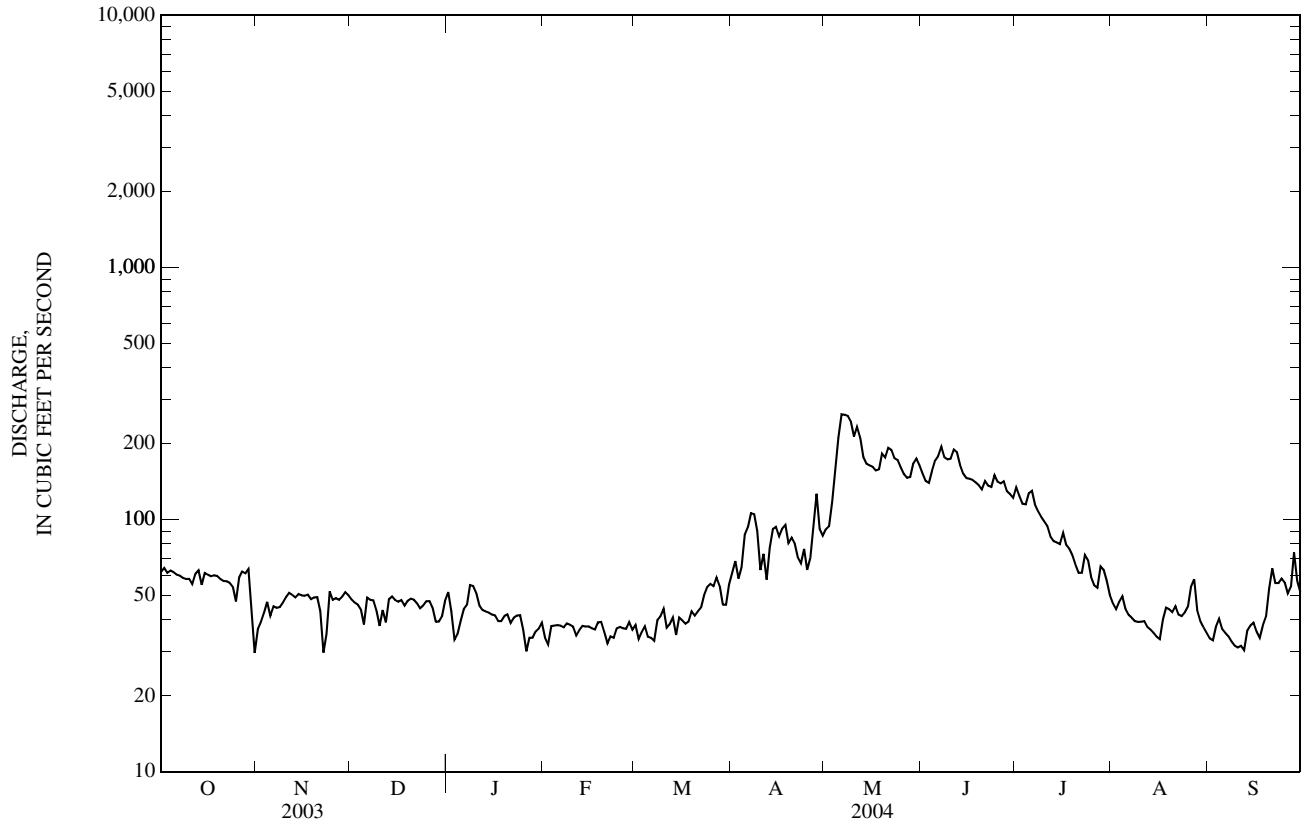
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2004, BY WATER YEAR (WY)

MEAN	81.2	67.2	60.4	55.3	52.0	51.4	108	512	682	237	109	83.3
MAX	284	155	108	88.9	80.8	72.0	354	1,048	1,482	767	244	163
(WY)	(1924)	(1924)	(1924)	(1924)	(1924)	(1924)	(1926)	(1926)	(1978)	(1975)	(1927)	(1968)
MIN	49.6	41.1	38.0	36.1	34.1	37.5	44.2	179	138	68.1	42.1	42.8
(WY)	(1955)	(1941)	(2002)	(1941)	(1941)	(2002)	(1975)	(2004)	(2001)	(2001)	(2004)	(1966)

06298000 TONGUE RIVER NEAR DAYTON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1919 - 2004	
ANNUAL TOTAL	48,165		26,076		--	
ANNUAL MEAN	132		71.2		176	
HIGHEST ANNUAL MEAN	--		--		316	1924
LOWEST ANNUAL MEAN	--		--		71.2	2004
HIGHEST DAILY MEAN	1,190	May 30	262	May 6	2,590	Jun 5, 1968
LOWEST DAILY MEAN	20	Jan 10	30	Several days	18	Nov 29, 1919
ANNUAL SEVEN-DAY MINIMUM	35	Feb 18	32	Sep 6	31	Nov 9, 1940
MAXIMUM PEAK FLOW	--		315	May 6	3,400	Jun 3, 1944
MAXIMUM PEAK STAGE	--		2.89	May 6	6.45	Jun 3, 1944
ANNUAL RUNOFF (AC-FT)	95,540		51,720		127,600	
10 PERCENT EXCEEDS	342		152		470	
50 PERCENT EXCEEDS	60		50		72	
90 PERCENT EXCEEDS	39		36		47	

e Estimated.



06299500 WOLF CREEK AT WOLF, WY

LOCATION.--Lat 44°46'21", long 107°14'01", in NE¼ SW¼ NW¼ sec.4, T.55 N., R.86 W., Sheridan County, Hydrologic Unit 10090101, on left bank at Wolf and 0.5 mi downstream from Red Canyon Creek.

DRAINAGE AREA.--37.8 mi^2.

PERIOD OF RECORD.--January 1945 to current year (no winter records since 1971). Monthly discharge for January to March 1945, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 4,525 ft above NGVD of 1929, from topographic map. Prior to May 26, 1945, nonrecording gage at same site and datum.

REMARKS.--Records fair. No diversion upstream from station. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation is given below:

Oct. 3 . . . 6.74

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by the Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	8.9	14	31	26	11	6.7
2	---	---	---	---	---	---	10	15	29	22	11	6.6
3	---	---	---	---	---	---	8.2	19	29	19	11	7.4
4	---	---	---	---	---	---	8.6	23	30	19	12	7.7
5	---	---	---	---	---	---	11	32	30	22	11	7.2
6	---	---	---	---	---	---	11	37	29	21	10	7.0
7	---	---	---	---	---	---	13	40	29	18	10	6.8
8	---	---	---	---	---	---	13	44	27	17	9.8	6.4
9	---	---	---	---	---	---	12	45	27	16	9.8	6.1
10	---	---	---	---	---	---	10	43	27	15	9.6	5.9
11	---	---	---	---	---	---	11	45	32	15	9.3	6.1
12	---	---	---	---	---	---	9.5	42	32	14	8.9	6.0
13	---	---	---	---	---	---	11	36	27	14	8.7	6.6
14	---	---	---	---	---	---	12	37	26	14	8.7	7.1
15	---	---	---	---	---	---	12	36	24	14	8.4	7.6
16	---	---	---	---	---	---	12	35	25	16	8.2	7.3
17	---	---	---	---	---	---	12	34	26	14	8.4	6.6
18	---	---	---	---	---	---	14	33	26	14	8.3	6.1
19	---	---	---	---	---	---	13	36	26	14	8.2	5.9
20	---	---	---	---	---	---	12	34	25	13	7.6	7.3
21	---	---	---	---	---	---	13	41	26	12	8.3	8.8
22	---	---	---	---	---	---	12	38	23	13	7.6	7.7
23	---	---	---	---	---	---	12	36	22	16	7.8	7.4
24	---	---	---	---	---	---	12	36	26	15	7.4	7.8
25	---	---	---	---	---	---	11	33	24	13	7.3	7.9
26	---	---	---	---	---	---	12	32	23	12	8.3	7.1
27	---	---	---	---	---	---	15	31	26	12	9.3	8.5
28	---	---	---	---	---	---	19	32	22	15	8.4	15
29	---	---	---	---	---	---	15	34	21	14	7.7	9.2
30	---	---	---	---	---	---	14	33	20	13	7.3	7.9
31	---	---	---	---	---	---	---	32	---	12	7.0	---
TOTAL	---	---	---	---	---	---	359.2	1,058	790	484	276.3	221.7
MEAN	---	---	---	---	---	---	12.0	34.1	26.3	15.6	8.91	7.39
MAX	---	---	---	---	---	---	19	45	32	26	12	15
MIN	---	---	---	---	---	---	8.2	14	20	12	7.0	5.9
AC-FT	---	---	---	---	---	---	712	2,100	1,570	960	548	440

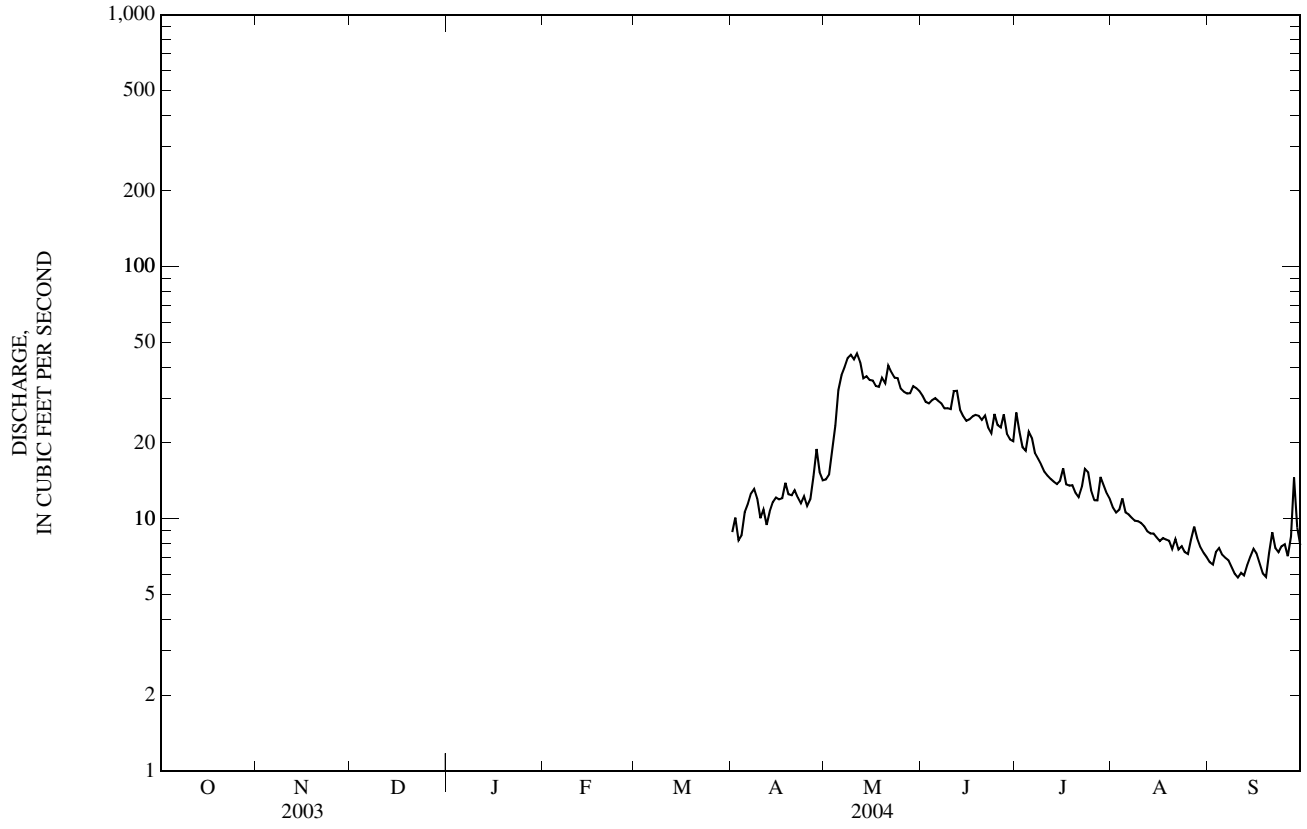
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004, BY WATER YEAR (WY)*

MEAN	8.77	6.98	5.69	4.73	4.48	4.96	14.2	93.4	127	36.2	14.6	9.89
MAX	14.2	9.97	7.46	6.07	5.64	9.27	37.4	179	287	95.2	30.8	23.0
(WY)	(1969)	(1952)	(1969)	(1962)	(1962)	(1972)	(1994)	(1978)	(1975)	(1975)	(1951)	(1968)
MIN	6.46	5.73	3.83	2.80	3.15	3.65	6.39	25.1	18.9	10.3	5.54	5.29
(WY)	(1957)	(1961)	(1950)	(1950)	(1957)	(1957)	(1958)	(2001)	(2001)	(2001)	(2001)	(2001)

06299500 WOLF CREEK AT WOLF, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1946 - 2004*	
ANNUAL MEAN	--		29.3	
HIGHEST ANNUAL MEAN	--		45.0	1964
LOWEST ANNUAL MEAN	--		13.8	1960
HIGHEST DAILY MEAN	45	May 9,11	601	Jun 9, 1964
LOWEST DAILY MEAN	5.9	Sep 10,19	1.8	Feb 26, 1947
MAXIMUM PEAK FLOW	50	May 93	1,130[a]	Jun 15, 1963
MAXIMUM PEAK STAGE	1.64	May 9	4.60	Jun 15, 1963
ANNUAL RUNOFF (AC-FT)	--		21,220	

* For period of operation.
a From rating curve extended above 500 ft^3/s.



06299980 TONGUE RIVER AT MONARCH, WY

LOCATION.--Lat 44°54'01", long 107°01'13", in NW¼ NW¼ SE¼ sec.20, T.57 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, on right bank at county bridge, 0.4 mi downstream from South Dry Creek, and 0.9 mi east of Monarch.

DRAINAGE AREA.--478 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to September 2004.

GAGE.--Water-stage recorder. Elevation of gage is 3,620 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. Numerous diversions for irrigation upstream from station. Results of discharge measurements, in cubic feet per second, made when the station was not in operation, are given below:

Apr. 20. . . 98.6

Apr. 27. . . 57.1

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	79	160	151	49	23
2	---	---	---	---	---	---	---	71	143	165	41	27
3	---	---	---	---	---	---	---	79	129	143	42	25
4	---	---	---	---	---	---	---	103	130	136	56	35
5	---	---	---	---	---	---	---	154	145	213	54	44
6	---	---	---	---	---	---	---	219	153	222	45	40
7	---	---	---	---	---	---	---	244	167	176	45	36
8	---	---	---	---	---	---	---	235	157	154	44	34
9	---	---	---	---	---	---	---	232	151	141	42	33
10	---	---	---	---	---	---	---	209	158	132	48	28
11	---	---	---	---	---	---	---	209	215	125	50	28
12	---	---	---	---	---	---	---	219	225	119	46	28
13	---	---	---	---	---	---	---	192	191	95	41	35
14	---	---	---	---	---	---	---	168	165	86	39	37
15	---	---	---	---	---	---	---	154	150	81	36	40
16	---	---	---	---	---	---	---	152	146	89	36	44
17	---	---	---	---	---	---	---	153	154	86	35	45
18	---	---	---	---	---	---	---	150	152	75	38	42
19	---	---	---	---	---	---	---	168	155	67	39	49
20	---	---	---	---	---	---	---	163	153	64	35	55
21	---	---	---	---	---	---	---	187	158	57	33	78
22	---	---	---	---	---	---	---	204	164	52	30	78
23	---	---	---	---	---	---	---	224	148	66	36	78
24	---	---	---	---	---	---	---	206	149	88	31	80
25	---	---	---	---	---	---	---	189	167	82	30	76
26	---	---	---	---	---	---	---	177	154	67	30	72
27	---	---	---	---	---	---	---	167	155	55	39	70
28	---	---	---	---	---	---	---	158	146	59	48	83
29	---	---	---	---	---	---	---	155	130	55	42	92
30	---	---	---	---	---	---	---	186	127	59	36	77
31	---	---	---	---	---	---	---	174	---	53	27	---
TOTAL	---	---	---	---	---	---	---	5,380	4,697	3,213	1,243	1,512
MEAN	---	---	---	---	---	---	---	174	157	104	40.1	50.4
MAX	---	---	---	---	---	---	---	244	225	222	56	92
MIN	---	---	---	---	---	---	---	71	127	52	27	23
AC-FT	---	---	---	---	---	---	---	10,670	9,320	6,370	2,470	3,000

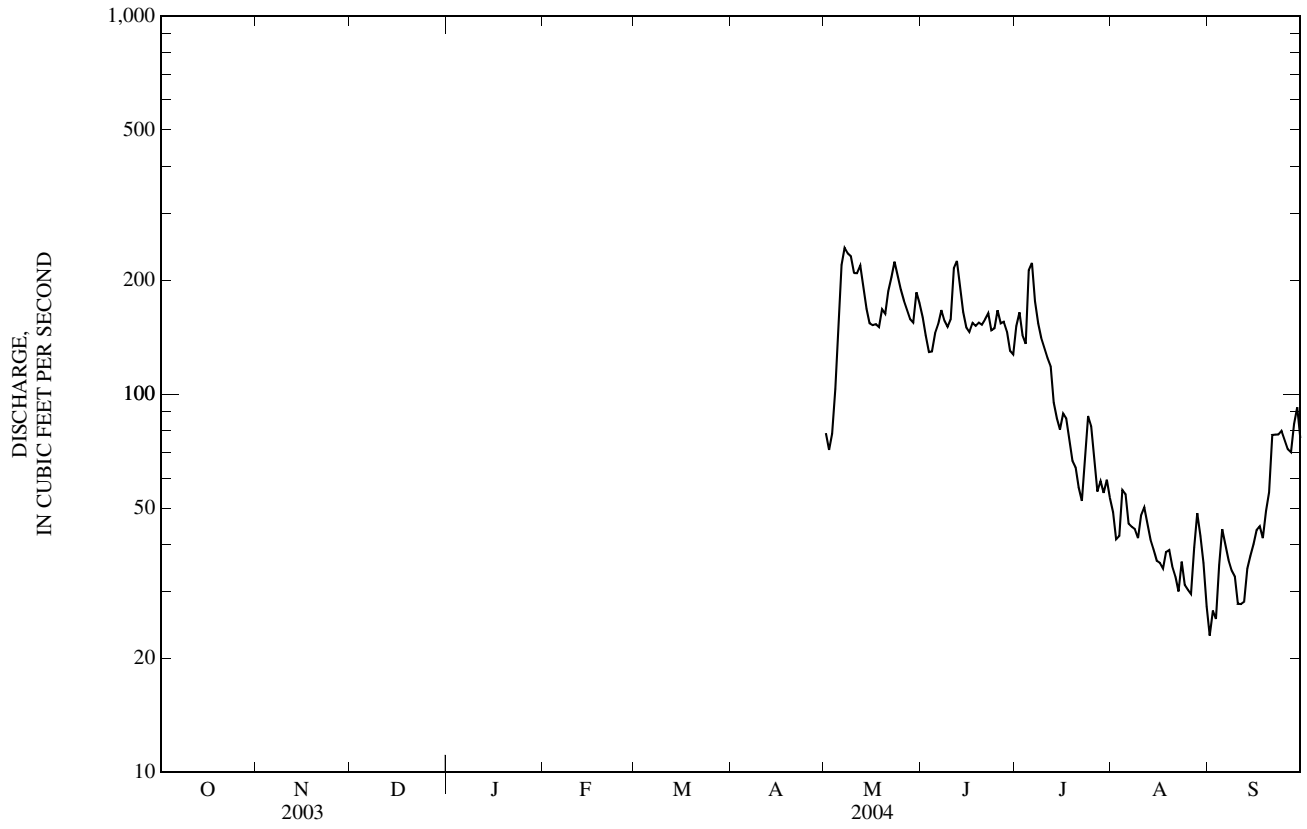
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2004, BY WATER YEAR (WY)*

MEAN	---	---	---	---	---	---	---	174	157	104	40.1	50.4
MAX	---	---	---	---	---	---	---	174	157	104	40.1	50.4
(WY)	---	---	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	---	---	---	---	---	---	---	174	157	104	40.1	50.4
(WY)	---	---	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)

06299980 TONGUE RIVER AT MONARCH, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*	
HIGHEST DAILY MEAN	244	May 7
LOWEST DAILY MEAN	23	Sep 1
MAXIMUM PEAK FLOW	293	May 7
MAXIMUM PEAK STAGE	3.16	May 7

* For period of operation.



06299980 TONGUE RIVER AT MONARCH, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-80, 1982-83, January 2004 to September 2004.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 2004 to September 2004.

INSTRUMENTATION.--Conductance probe installed in late April 2004.

REMARKS.--Seasonal specific conductance records are rated excellent. Missing specific conductance data for May 5-8 are due to equipment problems. Water quality samples and record provided by the Montana District.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 582 microsiemens/cm, Sept. 4, 2004; minimum, 242microsiemens/cm, May 12, 2004. 2003.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: During period of seasonal operation, maximum, 582 microsiemens/cm, Sept. 4; minimum, 242 microsiemens/cm, May 12.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
JAN													
20...	1630	62	672	10.7	83	8.1	414	2.0	0.0	210	50.9	19.8	1.12
FEB													
04...	0830	59	665	12.6	99	8.1	440	-10.0	0.0	220	52.9	21.1	1.22
24...	0845	66	667	12.4	97	8.1	432	-0.5	0.0	220	51.2	21.7	1.84
MAR													
08...	1430	64	678	11.0	85	8.2	421	14.0	0.0	230	53.5	23.1	1.50
23...	0800	67	665	10.0	93	8.4	456	4.0	6.5	230	54.5	23.1	1.82
APR													
14...	1615	102	661	10.0	107	8.5	368	24.0	12.0	180	45.0	17.3	1.34
27...	1030	57	667	10.6	117	8.5	416	25.0	13.5	200	47.8	19.3	1.64
MAY													
13...	1830	183	678	13.4	129	8.6	263	10.5	8.5	130	32.1	12.5	1.22
26...	0830	174	661	8.8	92	8.2	316	12.0	11.0	150	36.0	15.1	1.25
JUN													
10...	0815	147	661	7.9	93	8.1	297	17.0	16.0	150	35.7	14.3	1.09
22...	0830	169	670	8.5	94	8.2	343	16.0	14.0	170	39.2	16.5	1.43
JUL													
14...	1645	88	669	11.3	163	8.8	366	36.5	27.0	170	36.2	18.4	1.28
27...	0800	56	668	6.1	77	8.3	393	18.0	20.0	180	38.3	20.8	1.47
AUG													
18...	1525	41	674	11.4	148	8.7	535	24.0	22.0	240	44.9	30.8	2.13
24...	0950	30	666	8.8	105	8.4	499	20.5	17.0	230	44.8	29.7	2.28
SEP													
15...	1500	41	667	12.0	136	8.7	503	25.0	15.0	250	49.6	30.2	2.21
27...	1530	71	678	9.4	103	8.4	396	13.0	14.0	190	44.1	20.2	1.28

06299980 TONGUE RIVER AT MONARCH, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, water, fltrd fxd end lab, mg/L as CaCO3 (29801)	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)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
JAN													
20...	.3	8.91	165	1.82	<.2	7.07	42.3	231	.31	38.3	74	7	1.2
FEB													
04...	.3	10.3	166	2.07	<.2	7.20	47.6	243	.33	38.7	78	10	1.6
24...	.3	10.7	176	2.22	<.2	6.48	53.2	253	.34	45.0	80	2	.36
MAR													
08...	.4	13.5	181	2.10	<.2	5.78	54.3	262	.36	45.3	83	2	.35
23...	.4	14.8	179	2.42	.2	4.83	67.5	277	.38	50.0	58	28	5.1
APR													
14...	.3	9.42	157	2.10	<.2	4.84	36.9	212	.29	58.3	91	11	3.0
27...	.3	11.1	167	2.09	.2	4.92	44.3	232	.32	35.8	94	12	1.9
MAY													
13...	.2	6.59	116	1.20	<.2	7.50	25.5	157	.21	77.4	94	14	6.9
26...	.3	7.78	134	1.40	<.2	6.35	29.1	178	.24	83.4	96	31	15
JUN													
10...	.3	7.58	135	1.04	<.2	5.79	25.6	172	.23	68.3	94	14	5.6
22...	.3	10.0	150	1.45	<.2	5.88	33.3	198	.27	90.4	92	17	7.8
JUL													
14...	.4	11.1	147	1.40	.2	3.92	39.0	200	.27	47.5	88	10	2.4
27...	.4	12.4	167	1.66	.2	5.48	45.6	226	.31	34.2	97	7	1.1
AUG													
18...	.5	18.2	206	2.03	.2	6.96	68.2	297	.40	32.9	97	10	1.1
24...	.5	18.5	209	1.79	.3	7.32	69.3	300	.41	24.3	98	6	.49
SEP													
15...	.5	18.7	206	1.82	.2	6.82	69.9	303	.41	33.5	94	6	.66
27...	.3	10.4	175	1.23	.2	5.50	41.3	229	.31	43.9	93	5	.96

Date	Time	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)	Total nitrogen, water, unfltrd mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)
FEB													
04...	0830	E.008	.143	.002	.23	<.006	.004	<2	20	.3	<2	44	44
MAR													
08...	1430	<.010	E.008	E.001	.14	<.006	.009	<2	29	.3	<2	37	39
APR													
14...	1615	<.010	<.016	<.002	.23	<.006	.023	E1	91	.4	E1	43	43
27...	1030	<.010	<.016	<.002	.24	<.006	.027	<2	120	.5	<2	46	48
MAY													
13...	1830	E.005	<.016	E.001	.27	.015	.047	3	146	.4	<2	31	31
26...	0830	<.010	E.009	<.002	.18	E.003	.041	2	272	.3	<2	35	41
JUN													
10...	0815	E.005	<.016	E.001	.16	E.005	.027	E1	109	.4	E1	36	37
22...	0830	<.010	<.016	<.002	.24	E.005	.033	E1	134	.3	<2	37	38
JUL													
27...	0800	<.010	<.016	<.002	.26	<.006	.017	2	80	.7	<2	46	46
AUG													
24...	0950	<.010	<.016	<.002	.28	<.006	.019	<2	76	.7	<2	50	53

E--Estimated.

06299980 TONGUE RIVER AT MONARCH, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)
FEB													
04...	<.06	<.06	30	<.04	<.04	1	.8	1.8	8	60	<.08	E.04	8.3
MAR													
08...	<.06	<.06	44	<.04	<.04	<1	1.1	.7	44	90	<.08	<.06	9.7
APR													
14...	<.06	<.06	30	<.04	<.04	3	.7	1.1	23	220	E.05	.19	6.0
27...	<.06	<.06	38	<.04	<.04	<1	1.1	1.3	20	230	<.08	.25	8.5
MAY													
13...	<.06	<.06	21	<.04	<.04	2	.8	.9	31	280	<.08	.23	5.4
26...	<.06	E.03	26	<.04	<.04	3	.8	1.3	22	470	<.08	.44	6.8
JUN													
10...	<.06	<.06	25	<.04	<.04	<1	1.0	.9	33	270	.16	.25	6.3
22...	<.06	<.06	30	<.04	<.04	<1	1.1	1.4	24	240	<.08	.23	8.4
JUL													
27...	<.06	<.06	41	<.04	<.04	<1	1.5	1.6	17	160	<.08	.17	12.6
AUG													
24...	<.06	<.06	60	<.04	<.04	<1	1.1	1.5	20	160	<.08	.16	19.0

Date	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover -able, ug/L (01055)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen-ium, water, fltrd, ug/L (01145)	Selen-ium, water, unfltrd ug/L (01147)	Stront-ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
FEB										
04...	4.6	6	<.02	1.09	1.46	E.4	E.3	213	.8	<2
MAR										
08...	8.9	12	<.02	1.07	1.23	E.3	E.3	213	1.4	E1
APR										
14...	18.1	35	<.02	.70	1.32	E.2	E.3	189	1.1	E1
27...	21.4	33	<.02	1.18	2.18	E.4	<.4	211	2.2	<2
MAY										
13...	11.3	20	<.02	.47	1.01	E.3	E.3	119	1.0	7
26...	12.1	36	<.02	1.35	1.43	<.4	E.2	134	E.6	2
JUN										
10...	11.7	24	<.02	.73	1.52	E.3	<.4	137	1.0	E2
22...	8.5	19	<.02	1.25	1.10	<.4	<.4	142	1.0	E2
JUL										
27...	5.3	14	<.02	1.18	1.76	E.3	.6	202	2.6	E2
AUG										
24...	4.5	11	<.02	2.54	2.58	E.3	.7	240	.6	E1

E--Estimated.

06299980 TONGUE RIVER AT MONARCH, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
MAY 2004 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		MAY			JUNE			JULY			AUGUST	
1	350	338	342	301	292	296	363	344	357	455	434	442
2	365	350	358	309	301	306	366	347	358	484	449	459
3	377	358	369	321	309	317	374	348	362	486	459	473
4	365	324	347	323	308	318	372	348	361	479	470	476
5	---	---	---	316	295	303	410	348	374	479	467	470
6	---	---	---	298	291	293	410	365	387	479	455	464
7	---	---	---	298	280	292	365	348	358	484	465	475
8	---	---	---	282	272	278	363	342	353	488	463	477
9	262	251	258	296	282	289	359	337	348	495	467	480
10	274	256	266	305	296	302	364	335	350	499	475	485
11	262	245	257	332	291	309	360	338	349	481	462	470
12	252	242	247	325	307	316	370	337	355	475	457	467
13	277	252	265	313	305	309	366	338	357	477	454	465
14	294	277	287	321	313	315	387	355	372	470	447	459
15	303	286	295	331	320	325	388	355	375	475	453	465
16	303	297	300	336	330	332	396	371	385	483	459	473
17	304	299	302	342	330	335	385	354	370	499	479	488
18	310	302	307	346	337	340	382	353	369	521	499	513
19	307	292	302	350	335	342	389	362	376	523	505	515
20	298	284	288	365	339	345	387	371	379	522	491	508
21	298	289	294	369	356	360	388	374	380	528	504	516
22	307	290	302	359	324	340	397	369	384	528	513	519
23	324	298	309	345	332	339	415	389	403	522	497	511
24	332	323	328	355	341	347	422	384	411	519	495	508
25	327	312	317	348	322	334	406	373	390	512	499	505
26	317	312	315	343	331	339	400	372	388	543	506	525
27	323	315	319	358	321	340	409	385	400	553	511	533
28	332	316	320	339	326	333	422	396	410	516	478	494
29	326	320	323	352	337	345	441	416	427	511	479	489
30	320	292	304	360	340	351	459	434	447	520	497	509
31	298	289	293	---	---	---	444	437	441	517	502	511
MONTH	---	---	---	369	272	323	459	335	380	553	434	489
		SEPTEMBER										
1	539	512	528									
2	549	537	544									
3	562	549	556									
4	582	562	573									
5	565	520	539									
6	530	507	520									
7	520	491	507									
8	518	499	509									
9	521	498	511									
10	523	508	515									
11	532	513	523									
12	542	528	536									
13	536	518	526									
14	525	507	518									
15	530	508	518									
16	514	485	501									
17	491	462	477									
18	491	465	478									
19	478	448	462									
20	463	447	453									
21	469	449	461									
22	449	420	435									
23	433	414	424									
24	416	395	409									
25	407	390	398									
26	402	388	395									
27	408	392	401									
28	418	398	411									
29	399	373	387									
30	403	384	392									
31	---	---	---									
MONTH	582	373	480									

06301480 CONEY CREEK ABOVE TWIN LAKES, NEAR BIG HORN, WY

LOCATION.--Lat 44°36'05", long 107°19'01", unsurveyed, Sheridan County, Hydrologic Unit 10090101, Bighorn National Forest, 0.2 mi upstream from Twin Lakes, and 17.0 mi southwest of Big Horn.

DRAINAGE AREA.--3.41 mi^2.

PERIOD OF RECORD.--October 1990 to current year (no winter records 1993 to 1996, 1998 to current year).

GAGE.--Water-stage recorder. Elevation of gage is 8,690 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station. Result of discharge measurements, in cubic feet per second, made when station was not in operation, are given below:

Oct. 7 . . . 0.21

Dec. 12. . . 0.18

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e4.0	8.0	12	1.9	0.24
2	---	---	---	---	---	---	---	e6.0	7.2	11	1.7	0.23
3	---	---	---	---	---	---	---	e8.0	7.7	9.0	1.5	0.29
4	---	---	---	---	---	---	---	e10	11	7.9	1.4	0.29
5	---	---	---	---	---	---	---	e15	16	9.5	1.3	0.28
6	---	---	---	---	---	---	---	22	18	10	1.2	0.26
7	---	---	---	---	---	---	---	23	19	8.2	1.1	0.24
8	---	---	---	---	---	---	---	25	15	6.8	1.0	0.22
9	---	---	---	---	---	---	---	25	13	6.0	0.92	0.19
10	---	---	---	---	---	---	---	18	13	5.4	0.86	0.17
11	---	---	---	---	---	---	---	21	13	4.8	0.80	0.16
12	---	---	---	---	---	---	---	18	12	4.3	0.69	0.15
13	---	---	---	---	---	---	---	13	9.8	4.0	0.60	0.17
14	---	---	---	---	---	---	---	9.5	8.2	3.8	0.51	0.18
15	---	---	---	---	---	---	---	8.0	7.7	3.9	0.42	0.18
16	---	---	---	---	---	---	---	7.7	7.9	4.8	0.35	0.17
17	---	---	---	---	---	---	---	7.4	7.5	4.2	0.32	0.16
18	---	---	---	---	---	---	---	7.7	6.9	3.8	0.31	0.15
19	---	---	---	---	---	---	---	11	6.3	3.4	0.29	0.15
20	---	---	---	---	---	---	---	14	5.4	3.0	0.27	0.24
21	---	---	---	---	---	---	---	15	5.5	2.7	0.26	0.37
22	---	---	---	---	---	---	---	15	5.5	2.9	0.24	0.50
23	---	---	---	---	---	---	---	13	6.4	3.6	0.22	0.59
24	---	---	---	---	---	---	---	12	8.4	4.0	0.19	0.62
25	---	---	---	---	---	---	---	9.7	11	3.5	0.20	0.66
26	---	---	---	---	---	---	---	8.2	12	3.1	0.25	0.69
27	---	---	---	---	---	---	---	7.3	11	2.7	0.28	0.89
28	---	---	---	---	---	---	---	8.5	9.3	2.9	0.29	1.1
29	---	---	---	---	---	---	---	12	8.4	2.8	0.29	1.1
30	---	---	---	---	---	---	---	12	8.2	2.5	0.28	1.0
31	---	---	---	---	---	---	---	9.6	---	2.2	0.26	---
TOTAL	---	---	---	---	---	---	---	395.6	298.3	158.7	20.20	11.64
MEAN	---	---	---	---	---	---	---	12.8	9.94	5.12	0.65	0.39
MAX	---	---	---	---	---	---	---	25	19	12	1.9	1.1
MIN	---	---	---	---	---	---	---	4.0	5.4	2.2	0.19	0.15
AC-FT	---	---	---	---	---	---	---	785	592	315	40	23

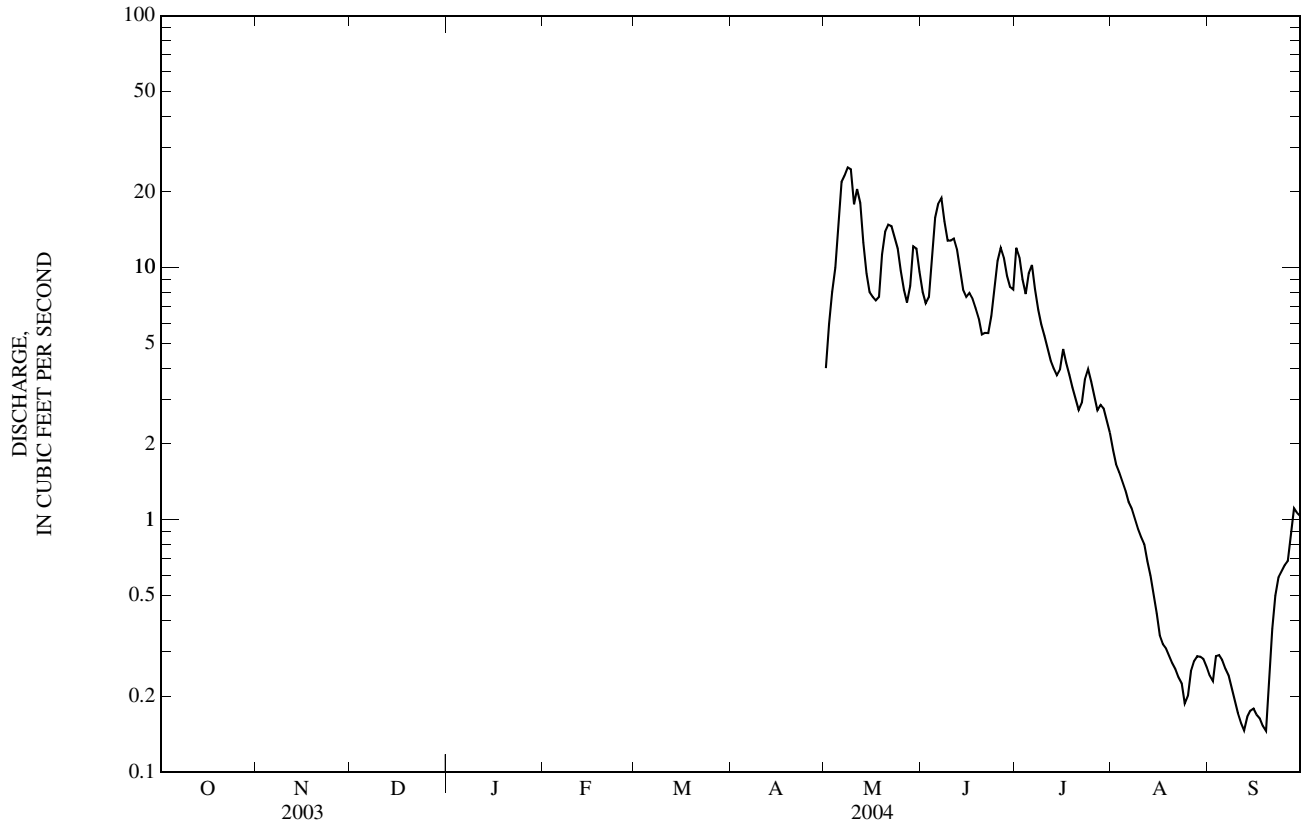
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)*

MEAN	0.57	0.50	0.27	0.16	0.13	0.14	0.58	18.1	24.3	5.91	1.20	0.59
MAX	0.71	0.61	0.36	0.22	0.20	0.21	1.59	27.4	50.9	14.1	3.50	1.26
(WY)	(1993)	(1993)	(1993)	(1992)	(1992)	(1992)	(1992)	(1992)	(1995)	(1995)	(1993)	(1998)
MIN	0.52	0.43	0.17	0.12	0.09	0.06	0.15	8.58	6.46	1.01	0.07	0.10
(WY)	(1992)	(1997)	(1991)	(1997)	(1997)	(1997)	(1997)	(1995)	(2001)	(2001)	(2001)	(2001)

06301480 CONEY CREEK ABOVE TWIN LAKES, NEAR BIG HORN, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1991 - 2004*	
ANNUAL MEAN	--		5.43	
HIGHEST ANNUAL MEAN	--		5.84	1992
LOWEST ANNUAL MEAN	--		4.83	1991
HIGHEST DAILY MEAN	25	May 8,9	105	Jun 16, 1995
LOWEST DAILY MEAN	0.15	Sep 12,18,19	0.00	Sep 4, 2001
MAXIMUM PEAK FLOW	28	May 9	135[a]	Jun 15, 1995
MAXIMUM PEAK STAGE	3.01	May 9	5.05[b]	May 14, 1991
ANNUAL RUNOFF (AC-FT)	--		3,940	

* For period of operation.
a Gage height, 4.35 ft.
b Backwater from snow and ice, site and datum then in use.
e Estimated.



06301495 CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY

LOCATION.--Lat 44°36'33", long 107°18'32", unsurveyed, Sheridan County, Hydrologic Unit 10090101, Bighorn National Forest, 30 ft downstream from Twin Lakes Reservoir, 0.4 mi upstream from mouth, and 16.2 mi southwest of Big Horn.

DRAINAGE AREA.--8.07 mi^2.

PERIOD OF RECORD.--October 1990 to September 1994, October 1995 to current year (no winter records 1993, 1994, 1996, 1998 to current year).

GAGE.--Water-stage recorder and concrete weir. Elevation of gage is 8,560 ft above NGVD of 1929, from topographic map. October 1990 to September 1998, at site 0.2 mi downstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for daily discharges less than 1 cubic foot per second and those for estimated daily discharges, which are poor. Flow regulated by Twin Lakes Reservoir, capacity, 3,400 acre-ft. Seasonal records collected by State of Wyoming at site 0.2 mi downstream, at different datum, 1971-90. Result of discharge measurements, in cubic feet per second, made when station was not in operation, are given below:

Oct. 7 . . . 0.32

Dec. 12 . . . 0.38

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e0.90	0.24	0.29	6.6	4.2
2	---	---	---	---	---	---	---	e0.90	0.24	0.27	6.6	4.1
3	---	---	---	---	---	---	---	e0.90	0.25	0.26	5.7	4.1
4	---	---	---	---	---	---	---	e0.90	0.25	0.27	5.0	4.0
5	---	---	---	---	---	---	---	0.97	0.25	0.30	4.9	3.8
6	---	---	---	---	---	---	---	0.61	0.24	0.27	4.8	4.1
7	---	---	---	---	---	---	---	0.30	0.24	0.27	4.8	4.1
8	---	---	---	---	---	---	---	0.30	0.23	0.27	4.8	3.6
9	---	---	---	---	---	---	---	0.28	0.24	0.27	4.9	3.7
10	---	---	---	---	---	---	---	0.29	0.24	0.28	4.7	4.0
11	---	---	---	---	---	---	---	0.29	0.25	0.28	4.7	4.0
12	---	---	---	---	---	---	---	0.26	0.25	0.28	3.9	3.9
13	---	---	---	---	---	---	---	0.26	0.24	0.28	3.0	3.9
14	---	---	---	---	---	---	---	0.26	0.24	0.27	3.0	3.9
15	---	---	---	---	---	---	---	0.27	0.24	0.28	2.9	3.9
16	---	---	---	---	---	---	---	0.26	0.24	0.27	3.0	3.9
17	---	---	---	---	---	---	---	0.27	0.24	0.27	2.9	3.7
18	---	---	---	---	---	---	---	0.29	0.24	0.27	2.9	3.7
19	---	---	---	---	---	---	---	0.29	0.25	0.27	2.9	3.8
20	---	---	---	---	---	---	---	0.28	0.27	0.28	3.1	3.8
21	---	---	---	---	---	---	---	0.28	0.26	3.4	3.2	3.8
22	---	---	---	---	---	---	---	0.27	0.26	6.2	3.4	3.9
23	---	---	---	---	---	---	---	0.27	0.26	6.3	3.3	4.4
24	---	---	---	---	---	---	---	0.26	0.28	6.3	3.2	3.7
25	---	---	---	---	---	---	---	0.26	0.26	6.3	4.0	3.7
26	---	---	---	---	---	---	---	0.26	0.26	6.3	4.4	3.7
27	---	---	---	---	---	---	---	0.26	0.26	6.4	4.1	3.8
28	---	---	---	---	---	---	---	0.26	0.26	6.8	4.0	3.9
29	---	---	---	---	---	---	---	0.25	0.26	6.7	4.0	3.9
30	---	---	---	---	---	---	---	0.23	0.29	6.6	3.9	4.0
31	---	---	---	---	---	---	---	0.23	---	6.6	4.0	---
TOTAL	---	---	---	---	---	---	---	11.91	7.53	73.40	126.6	117.0
MEAN	---	---	---	---	---	---	---	0.38	0.25	2.37	4.08	3.90
MAX	---	---	---	---	---	---	---	0.97	0.29	6.8	6.6	4.4
MIN	---	---	---	---	---	---	---	0.23	0.23	0.26	2.9	3.6
AC-FT	---	---	---	---	---	---	---	24	15	146	251	232

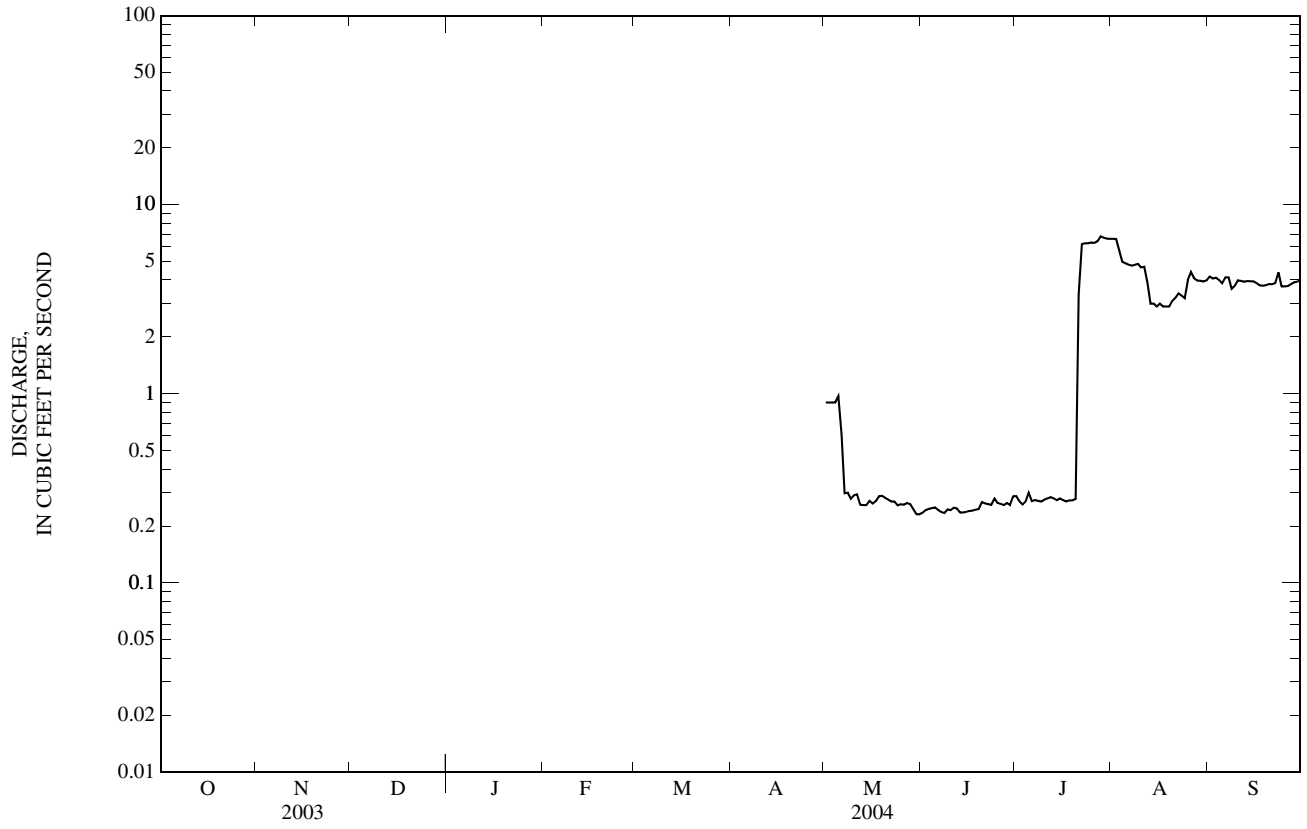
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2004, BY WATER YEAR (WY)*

MEAN	1.68	0.38	0.20	0.14	0.17	0.23	0.52	21.7	34.0	11.4	7.88	5.62
MAX	4.50	0.56	0.32	0.26	0.32	0.51	1.32	54.4	81.3	27.1	18.7	12.7
(WY)	(1991)	(1997)	(1992)	(1992)	(1992)	(1992)	(1992)	(1993)	(1997)	(1992)	(1998)	(1999)
MIN	0.50	0.14	0.13	0.05	0.04	0.04	0.20	0.21	0.21	2.37	2.03	0.78
(WY)	(1992)	(1993)	(1997)	(1997)	(1997)	(1997)	(1993)	(2002)	(2002)	(2004)	(1996)	(1996)

06301495 CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1991 - 2004*	
ANNUAL MEAN	--		12.0	
HIGHEST ANNUAL MEAN	--		12.6	1992
LOWEST ANNUAL MEAN	--		11.2	1991
HIGHEST DAILY MEAN	6.8	Jul 28	172	May 29, 1993
LOWEST DAILY MEAN	0.23	Several days	0.03	Jan 20, 1997
MAXIMUM PEAK FLOW	18	Sep 23	223[a]	May 29, 1993
MAXIMUM PEAK STAGE	1.24	Sep 23	4.32[b]	May 1, 1997
ANNUAL RUNOFF (AC-FT)	--		8,710	

* For period of operation.
a Gage height, 3.16 ft site and datum then in use.
b Backwater from snow and ice, site and datum then in use.
e Estimated.



06303500 LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY

LOCATION.--Lat 44°35'46", long 107°02'22", in SE¼ SW¼ NE¼ sec.1, T.53 N., R.85 W., Sheridan County, Hydrologic Unit 10090101, on left bank 100 ft upstream from headgate of Lower Peralta ditch and 6.5 mi southwest of Big Horn.

DRAINAGE AREA.--51.6 mi^2.

PERIOD OF RECORD.--April 1941 to current year (no winter records since 1971).

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,860 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. Three small reservoirs upstream from station, combined capacity, 860 acre-ft, two of which store some imported water. Water imported into drainage basin upstream from station from East Goose Creek basin is diverted downstream from station for irrigation. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 3 . . . 13.1

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	18	35	48	62	71	54
2	---	---	---	---	---	---	18	35	46	52	73	49
3	---	---	---	---	---	---	16	37	48	43	79	54
4	---	---	---	---	---	---	17	42	64	44	78	44
5	---	---	---	---	---	---	21	52	78	56	78	42
6	---	---	---	---	---	---	23	62	77	54	78	40
7	---	---	---	---	---	---	26	69	74	45	79	38
8	---	---	---	---	---	---	27	72	72	42	79	41
9	---	---	---	---	---	---	27	76	70	40	77	45
10	---	---	---	---	---	---	24	71	78	38	75	45
11	---	---	---	---	---	---	25	86	81	37	75	44
12	---	---	---	---	---	---	23	73	82	41	76	43
13	---	---	---	---	---	---	26	62	79	55	77	48
14	---	---	---	---	---	---	28	59	84	56	78	52
15	---	---	---	---	---	---	29	56	88	63	78	50
16	---	---	---	---	---	---	30	56	73	67	75	48
17	---	---	---	---	---	---	32	54	52	62	71	47
18	---	---	---	---	---	---	36	57	51	61	75	47
19	---	---	---	---	---	---	34	69	48	62	73	47
20	---	---	---	---	---	---	35	63	47	62	72	51
21	---	---	---	---	---	---	35	68	50	63	70	50
22	---	---	---	---	---	---	33	62	46	65	69	48
23	---	---	---	---	---	---	33	60	44	76	68	48
24	---	---	---	---	---	---	33	63	47	72	67	45
25	---	---	---	---	---	---	31	68	49	66	67	39
26	---	---	---	---	---	---	31	67	52	66	72	38
27	---	---	---	---	---	---	33	62	48	66	73	40
28	---	---	---	---	---	---	38	57	46	72	69	39
29	---	---	---	---	---	---	36	63	50	68	67	36
30	---	---	---	---	---	---	34	55	50	68	64	21
31	---	---	---	---	---	---	---	50	---	71	59	---
TOTAL	---	---	---	---	---	---	852	1,861	1,822	1,795	2,262	1,333
MEAN	---	---	---	---	---	---	28.4	60.0	60.7	57.9	73.0	44.4
MAX	---	---	---	---	---	---	38	86	88	76	79	54
MIN	---	---	---	---	---	---	16	35	44	37	59	21
AC-FT	---	---	---	---	---	---	1,690	3,690	3,610	3,560	4,490	2,640

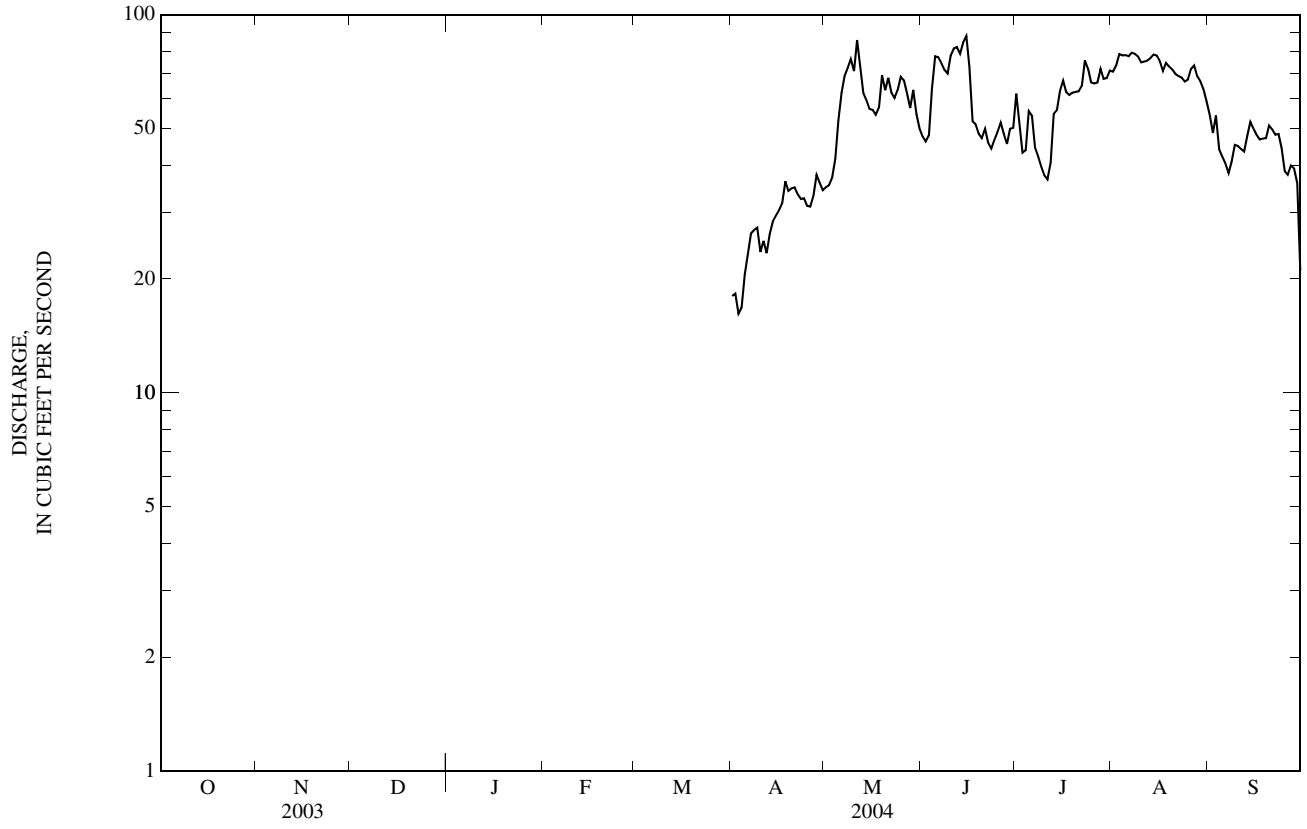
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)*

MEAN	23.6	13.1	10.4	8.58	8.11	8.48	34.6	173	232	102	80.7	51.2
MAX	46.0	26.5	17.5	12.3	13.9	14.1	106	339	502	209	124	90.0
(WY)	(1959)	(1962)	(1942)	(1942)	(1962)	(1962)	(1943)	(1944)	(1995)	(1975)	(1968)	(1978)
MIN	12.7	8.51	6.49	4.99	5.37	5.76	9.46	60.0	50.5	57.9	41.1	20.4
(WY)	(1954)	(1955)	(1950)	(1950)	(1950)	(1950)	(1970)	(2004)	(2001)	(2004)	(1981)	(1960)

06303500 LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1941 - 2004*	
ANNUAL MEAN	--		63.4	
HIGHEST ANNUAL MEAN	--		83.9	1970
LOWEST ANNUAL MEAN	--		40.6	1960
HIGHEST DAILY MEAN	88	Jun 15	837	Jun 15, 1963
LOWEST DAILY MEAN	16	Apr 3	3.0	Jan 3, 1950
MAXIMUM PEAK FLOW	98	Jun 14	1,350[a]	Jun 15, 1963
MAXIMUM PEAK STAGE	2.21	Jun 14	6.78	Jun 15, 1963
ANNUAL RUNOFF (AC-FT)	--		45,900	

* For period of operation.
a From rating curve extended above 900 ft3/s.



06304500 LITTLE GOOSE CREEK AT SHERIDAN, WY

LOCATION.--Lat 44°48'10", long 106°57'10", in NE¼ NW¼ SW¼ sec.26, T.56 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, at bridge on Sheridan Avenue in Sheridan and 0.6 mi upstream from mouth.

PERIOD OF RECORD.--March 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
21...	1505	23	672	11.2	122	8.4	673	23.0	13.5	330	63.2	42.0	2.30
NOV													
19...	1525	32	657	12.1	110	8.5	659	19.0	5.0	320	61.9	39.4	1.97
DEC													
17...	1410	30	674	14.7	114	8.3	607	6.5	.0	310	60.6	37.9	1.80
JAN													
21...	1445	24	670	13.1	102	8.4	644	5.0	.0	320	63.6	39.7	1.83
FEB													
18...	1455	30	660	12.1	96	8.1	631	11.5	.0	310	60.5	39.2	2.94
MAR													
09...	0915	41	668	12.6	111	8.5	625	6.5	4.5	320	61.2	40.7	2.56
APR													
14...	0915	32	660	10.1	101	8.3	487	8.0	9.0	250	49.6	30.6	1.56
MAY													
13...	0915	23	672	10.9	102	8.4	526	10.0	7.0	260	51.4	32.2	1.95
JUN													
09...	0800	4.0	666	6.5	74	8.0	808	14.5	15.0	500	87.9	67.3	3.00
JUL													
14...	0745	7.5	666	6.3	78	8.1	868	24.5	19.0	400	72.0	52.9	2.64
AUG													
18...	0800	4.9	670	8.4	99	8.1	891	18.5	16.5	460	83.6	59.8	3.15
SEP													
21...	0915	44	667	10.5	104	8.1	613	7.5	9.0	330	64.2	41.4	2.85

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
21...	.5	20.6	12	251	4.56	.3	9.28	90.1	383	.56	25.4	410	--
NOV													
19...	.4	18.3	11	229	4.65	.3	8.99	82.1	355	.50	31.9	369	<.04
DEC													
17...	.5	18.3	11	231	6.30	.3	10.7	72.9	347	.46	27.1	335	--
JAN													
21...	.5	20.0	12	238	7.94	.3	11.1	78.2	365	.53	25.3	390	--
FEB													
18...	.7	29.1	17	245	21.6	.3	9.94	87.7	400	.57	34.0	420	<.04
MAR													
09...	.5	19.2	11	220	5.42	.3	7.92	103	372	.54	43.8	397	--
APR													
14...	.4	15.9	12	198	3.87	.2	5.94	60.8	287	.41	26.6	304	--
MAY													
13...	.4	16.5	12	198	3.93	.2	9.68	90.8	325	.47	21.1	346	E.02
JUN													
09...	.7	37.5	14	313	9.17	.4	8.42	250	651	.86	6.78	634	--
JUL													
14...	.6	28.9	14	263	6.94	.3	8.47	186	516	.74	11.1	544	--
AUG													
18...	.6	28.9	12	303	7.39	.3	9.56	197	571	.80	7.71	586	--
SEP													
21...	.5	21.5	12	266	3.64	.3	12.6	89.4	395	.55	48.2	406	<.04

06304500 LITTLE GOOSE CREEK AT SHERIDAN, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	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)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
OCT												
21...	--	--	--	--	--	63	.4	65	<.06	18	7.0	.6
NOV												
19...	<.06	<.008	<.02	23	24	80	.4	67	<.06	17	10.3	E.3
DEC												
17...	--	--	--	--	--	54	.3	61	<.06	19	12.8	.5
JAN												
21...	--	--	--	--	--	97	.3	64	<.06	19	17.4	.4
FEB												
18...	.32	.012	<.02	E6	E9	217	.4	58	<.06	29	27.8	.9
MAR												
09...	--	--	--	--	--	141	.4	59	<.06	34	37.7	.7
APR												
14...	--	--	--	--	--	34	.3	51	<.06	35	24.4	E.2
MAY												
13...	<.06	<.008	<.02	220	280	118	.5	45	<.06	18	17.9	.5
JUN												
09...	--	--	--	--	--	11	.7	62	<.06	47	38.9	.5
JUL												
14...	--	--	--	--	--	10	.9	67	<.06	23	22.5	.5
AUG												
18...	--	--	--	--	--	19	.9	67	<.06	24	25.7	.8
SEP												
21...	<.06	<.008	E.01	760	1,100	569	.6	77	E.06	17	21.7	E.3

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06305500 GOOSE CREEK BELOW SHERIDAN, WY

LOCATION.--Lat 44°49'25", long 106°57'40", in SE$^1/_4$ SW$^1/_4$ sec.15, T.56 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, 700 ft north of Sheridan city limits and 0.2 mi downstream from Soldier Creek.

DRAINAGE AREA.--392 mi^2.

PERIOD OF RECORD.--Water years 1959-65, 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
21...	1555	53	673	12.1	135	8.6	720	21.5	14.5	350	65.0	44.4	3.42
NOV													
19...	1655	66	657	11.7	105	8.4	690	19.0	4.5	330	64.9	41.3	2.69
DEC													
17...	1510	72	675	15.0	118	8.4	652	5.0	.5	310	62.4	37.5	2.49
JAN													
21...	1545	53	671	13.6	107	8.4	653	2.0	.5	310	62.1	37.3	2.63
FEB													
18...	1600	57	660	13.0	106	8.1	627	11.5	1.0	290	59.4	35.5	3.10
MAR													
09...	0800	70	672	11.6	93	8.4	622	2.0	1.0	310	60.1	37.7	2.62
APR													
14...	0730	62	661	7.8	78	8.2	540	4.5	9.0	260	51.9	31.0	2.03
MAY													
13...	0715	45	672	9.8	92	8.1	491	5.0	7.0	230	46.7	27.6	2.32
JUN													
09...	1715	91	665	9.7	120	8.7	320	24.5	19.0	140	29.8	15.8	1.79
JUL													
15...	0630	25	670	4.9	63	8.1	662	20.0	21.0	300	56.2	37.8	3.30
AUG													
17...	1745	11	669	10.5	138	8.7	762	26.0	22.0	360	62.1	48.9	4.87
SEP													
21...	0720	60	670	10.3	103	8.0	658	1.5	9.5	350	66.5	44.3	3.46

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
21...	.7	28.1	15	270	6.64	.4	7.97	131	449	.65	68.1	476	--
NOV													
19...	.6	23.8	13	258	6.28	.3	8.95	112	416	.58	76.4	429	<.04
DEC													
17...	.6	25.6	15	239	11.9	.3	10.2	106	399	.55	78.5	404	--
JAN													
21...	.6	24.0	14	229	9.73	.3	10.7	104	389	.55	57.4	401	--
FEB													
18...	.7	27.7	17	217	15.5	.3	10.3	98.2	383	.54	61.6	400	.76
MAR													
09...	.5	21.5	13	223	6.19	.3	8.22	116	386	.55	75.4	401	--
APR													
14...	.5	19.8	14	193	5.19	.2	6.12	93.6	326	.47	58.1	347	--
MAY													
13...	.5	17.9	14	167	4.70	.2	8.56	91.2	301	.43	38.3	316	E.02
JUN													
09...	.4	11.3	15	102	2.73	<.2	6.26	55.3	184	.24	43.2	176	--
JUL													
15...	.6	24.1	15	232	6.38	.3	7.23	120	395	.58	28.3	425	--
AUG													
17...	.8	33.7	17	245	12.9	.3	5.73	159	474	.68	14.7	500	--
SEP													
21...	.6	25.8	14	261	4.85	.4	11.7	118	433	.61	73.1	451	<.04

06305500 GOOSE CREEK BELOW SHERIDAN, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	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)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
OCT												
21...	--	--	--	--	--	56	.5	57	<.06	15	7.7	.4
NOV												
19...	.24	<.008	.11	70	130	80	.4	57	<.06	16	13.4	E.3
DEC												
17...	--	--	--	--	--	57	.3	50	<.06	17	13.7	.5
JAN												
21...	--	--	--	--	--	58	.3	51	<.06	16	17.1	E.4
FEB												
18...	.29	.027	.12	50	67	150	.4	47	<.06	23	22.5	.6
MAR												
09...	--	--	--	--	--	130	.4	50	<.06	30	32.6	.7
APR												
14...	--	--	--	--	--	68	.4	47	<.06	26	28.8	E.4
MAY												
13...	.32	<.008	.08	300	550	119	.5	37	<.06	24	18.6	E.3
JUN												
09...	--	--	--	--	--	119	.5	27	<.06	28	15.1	<.4
JUL												
15...	--	--	--	--	--	38	1.0	53	<.06	30	26.1	.4
AUG												
17...	--	--	--	--	--	40	.8	47	<.06	21	9.5	.5
SEP												
21...	.16	<.008	.08	630	900	154	.6	60	<.06	21	14.7	<.4

< -- Less than
E -- Estimated value

06305700 GOOSE CREEK NEAR ACME, WY

LOCATION.--Lat 44°53'11", long 106°59'18", in SE¼ SE¼ NE¼ sec.28, T.57 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, on right bank 0.2 mi north of county road, 1.6 mi south of Acme, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--413 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,620 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by many small reservoirs, combined capacity, about 15,000 acre-ft. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	e62	71	e48	e50	e48	75	29	46	102	30	30
2	59	e64	67	e52	e56	e47	79	27	30	146	25	28
3	52	e64	70	e41	e57	e45	80	21	21	119	19	30
4	49	e62	e58	e30	e56	e46	75	18	13	86	22	48
5	48	e56	e46	e32	e52	e48	77	12	9.7	145	31	54
6	46	e60	e56	e36	e54	e52	81	12	36	176	22	45
7	46	e66	e54	e38	e56	e54	82	10	106	147	18	37
8	45	e70	e50	e39	e52	e62	85	9.9	121	114	23	32
9	46	e76	e47	e42	e47	e74	90	8.0	99	99	28	30
10	45	73	e42	e46	e40	e96	86	11	88	77	29	23
11	46	67	e41	e50	e34	e90	69	7.5	116	61	31	31
12	48	68	e43	e52	e32	e86	72	37	121	49	29	33
13	50	65	e46	e52	e37	e88	72	52	92	43	31	33
14	57	66	e52	e54	e35	89	75	47	76	38	28	36
15	58	67	e47	e56	e38	81	77	35	54	33	24	50
16	60	65	e46	e56	e41	81	76	21	45	36	24	54
17	62	65	e50	e54	e44	86	70	12	52	52	24	50
18	63	63	e54	e50	e48	91	68	11	53	40	21	52
19	61	62	e52	e56	e52	92	74	22	54	36	20	43
20	59	69	e52	e54	e56	91	66	29	51	30	21	56
21	55	e62	e54	e56	e54	81	64	44	49	25	31	80
22	56	e54	e52	e62	e52	74	67	60	42	27	31	80
23	55	e47	e50	e60	e52	72	61	71	37	38	38	77
24	54	e52	e48	e54	e54	71	51	64	30	69	36	73
25	54	e54	e50	e48	e56	75	44	59	51	74	29	68
26	55	e58	e48	e36	e54	74	35	51	71	48	31	55
27	58	e60	e47	e32	e60	76	31	41	91	37	41	59
28	60	63	e42	e30	e56	80	29	37	85	48	48	95
29	e64	76	e42	e35	e52	76	36	30	69	50	41	81
30	e60	78	e43	e40	---	76	39	60	63	45	38	67
31	e58	---	e44	e47	---	72	---	62	---	38	33	---
TOTAL	1,695	1,914	1,564	1,438	1,427	2,274	1,986	1,010.4	1,871.7	2,128	897	1,530
MEAN	54.7	63.8	50.5	46.4	49.2	73.4	66.2	32.6	62.4	68.6	28.9	51.0
MAX	66	78	71	62	60	96	90	71	121	176	48	95
MIN	45	47	41	30	32	45	29	7.5	9.7	25	18	23
AC-FT	3,360	3,800	3,100	2,850	2,830	4,510	3,940	2,000	3,710	4,220	1,780	3,030

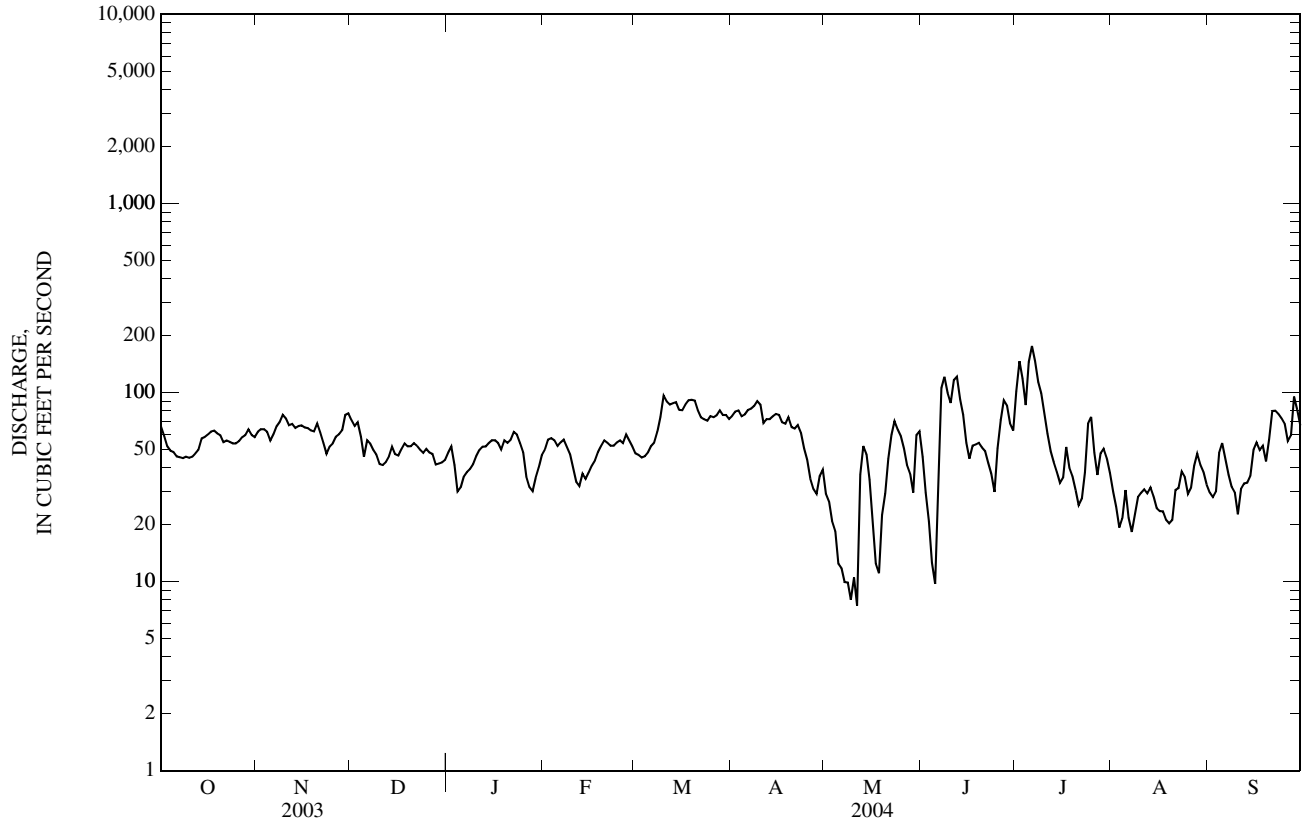
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2004, BY WATER YEAR (WY)

MEAN	96.9	90.4	75.4	68.1	81.8	97.3	130	365	543	141	57.4	82.5
MAX	156	144	107	109	137	185	195	891	1,592	547	157	158
(WY)	(1985)	(1999)	(1996)	(1990)	(1996)	(1994)	(1994)	(1984)	(1995)	(1995)	(1998)	(1998)
MIN	41.6	47.1	42.3	43.5	36.7	46.0	66.2	32.6	39.2	9.51	15.6	28.0
(WY)	(2002)	(2003)	(2002)	(2002)	(1989)	(2002)	(2004)	(2004)	(2001)	(2001)	(1988)	(2001)

06305700 GOOSE CREEK NEAR ACME, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1984 - 2004	
ANNUAL TOTAL	52,246.7		19,735.1		--	
ANNUAL MEAN	143		53.9		147	
HIGHEST ANNUAL MEAN	--		--		303	1995
LOWEST ANNUAL MEAN	--		--		50.4	2002
HIGHEST DAILY MEAN	1,210	Jun 2	176	Jul 6	3,040	Jun 17, 1995
LOWEST DAILY MEAN	6.2	Aug 9	7.5	May 11	3.0	Aug 24, 2001
ANNUAL SEVEN-DAY MINIMUM	7.7	Aug 9	10	May 5	4.3	Aug 22, 2001
MAXIMUM PEAK FLOW			210[a]	Jul 5	3,330	Jun 17, 1995
MAXIMUM PEAK STAGE			3.77[b]	Feb 21	7.65[c]	Feb 25, 1986
ANNUAL RUNOFF (AC-FT)	103,600		39,140		106,300	
10 PERCENT EXCEEDS	399		81		297	
50 PERCENT EXCEEDS	65		52		86	
90 PERCENT EXCEEDS	25		29		37	

a Gage height, 3.19 ft.
b Backwater from ice.
c From floodmarks, backwater from ice.
e Estimated.



06305700 GOOSE CREEK NEAR ACME, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983-89, February to September 2004.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Apr. 21, 2004 to September 2004.

INSTRUMENTATION.--Specific conductance probe installed late April 2004.

REMARKS.--Specific conductance rated good. Missing specific conductance values for May 19, July 10, and Sept. 8, 9, and 13 due to equipment problems. Water samples collected and record provided by the Montana District.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 996 microsiemens per centimeter (µS/cm), May 11, 2004; minimum, 336 µS/cm,June 8, 2004.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 996 microsiemens per centimeter (µS/cm), May 11; minimum, 336 µS/cm, June 8.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
FEB													
03...	1645	E57	665	15.6	123	8.0	643	-2.0	0.0	310	63.4	37.9	2.40
MAR													
08...	1615	E62	678	14.6	127	8.4	610	16.0	4.5	340	66.9	41.6	2.72
APR													
14...	1500	78	662	10.7	115	8.5	553	24.0	12.0	260	51.8	31.0	2.10
27...	0930	29	668	12.4	132	8.7	726	18.5	12.0	340	67.0	42.9	3.09
MAY													
14...	0745	49	674	9.7	92	8.4	546	9.0	7.5	250	49.9	30.7	2.82
26...	1100	52	661	11.4	124	8.5	610	23.5	12.5	290	57.3	36.1	3.17
JUN													
09...	1615	98	665	13.0	168	9.0	336	24.0	21.0	160	33.2	18.2	2.07
22...	1000	44	670	10.6	123	8.6	725	22.0	16.0	350	67.3	44.6	3.45
JUL													
15...	0810	34	670	5.0	66	8.3	670	22.5	22.5	310	59.4	39.6	3.30
AUG													
17...	1545	22	670	15.1	200	9.0	744	27.0	22.5	370	65.5	50.4	4.04

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, water, fltrd fxd end lab, mg/L as CaCO3 (29801)	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)	Ammonia water, fltrd, mg/L as N (00608)
FEB												
03...	.6	23.0	14	249	6.39	.3	9.69	112	408	.55	E62.8	.587
MAR												
08...	.6	25.7	14	230	6.58	.3	6.76	121	411	.56	E68.8	.279
APR												
14...	.6	20.4	15	195	5.49	.2	5.15	95.7	330	.45	69.5	.041
27...	.7	30.8	16	240	10.2	.3	1.05	149	450	.61	35.2	E.006
MAY												
14...	.6	21.4	15	179	6.89	.2	6.83	105	335	.46	44.3	E.008
26...	.6	24.3	15	201	6.35	.3	3.36	125	378	.51	53.0	E.006
JUN												
09...	.4	12.6	15	114	2.92	<.2	5.72	60.9	204	.28	54.1	E.009
22...	.7	29.4	15	249	7.46	.3	1.05	149	453	.62	53.8	<.010
JUL												
15...	.7	26.6	16	236	6.62	.3	4.62	124	408	.58	39.1	.019
AUG												
17...	.8	34.1	16	248	11.7	.3	4.98	159	481	.65	28.6	E.006

06305700 GOOSE CREEK NEAR ACME, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro-gen, water, unfltrd mg/L (62855)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (01012)
FEB													
03...	.301	.013	1.10	.075	.103	E1	17	.4	<2	50	50	<.06	<.06
MAR													
08...	.141	.009	.66	.040	.075	<1	30	.4	<2	42	44	<.06	<.06
APR													
14...	.088	.008	.53	.078	.139	E1	80	.5	<2	43	47	<.06	<.06
27...	.109	.008	.59	.072	.135	<1	38	.6	<2	51	53	<.06	<.06
MAY													
14...	.522	.010	1.10	.129	.215	E1	103	.6	<2	37	37	<.06	<.06
26...	.132	.006	.52	.068	.175	E2	149	.6	<2	40	46	<.06	<.06
JUN													
09...	.016	.004	.30	.083	.170	3	207	.6	E2	27	32	<.06	<.06
22...	<.016	<.002	.45	.112	.160	E2	46	.7	<2	50	50	<.06	<.06
JUL													
15...	.048	.005	.49	.139	.189	E1	16	1.2	E1	50	51	<.06	<.06
AUG													
17...	.042	.007	.55	.192	.234	E2	16	1.1	E1	49	48	<.06	<.06

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)
FEB													
03...	68	<.04	<.04	2	1.3	2.6	26	100	<.08	.09	14.8	20.4	26
MAR													
08...	76	<.04	<.04	<1	1.6	1.6	44	170	<.08	.06	15.9	42.1	49
APR													
14...	61	<.04	<.04	4	1.1	1.5	32	290	E.06	.29	10.9	37.0	62
27...	96	<.04	E.02	<1	1.7	2.0	81	250	.13	.24	16.4	56.5	68
MAY													
14...	74	<.04	<.04	4	1.3	1.7	32	380	.09	.41	12.4	43.8	71
26...	83	<.04	<.04	6	1.7	2.2	33	530	E.05	.54	16.1	41.2	80
JUN													
09...	47	<.04	<.04	<1	1.4	2.1	37	590	.19	.68	9.2	24.4	67
22...	103	<.04	<.04	2	2.4	1.9	80	230	E.06	.18	19.3	30.7	46
JUL													
15...	100	<.04	<.04	<1	1.6	1.8	57	160	E.05	.12	19.3	29.8	32
AUG													
17...	137	<.04	<.04	<1	2.1	2.0	48	140	E.05	.12	24.4	6.5	12

06305700 GOOSE CREEK NEAR ACME, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)	Stront- ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Sus- pended sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
FEB											
03...	<.02	1.48	2.16	.7	.5	415	2.4	3	80	5	E0.77
MAR											
08...	<.02	1.70	2.24	.6	.5	407	2.3	2	78	4	E.67
APR											
14...	<.02	1.08	1.81	.5	E.4	350	2.7	3	60	13	2.7
27...	<.02	2.15	3.58	.5	.6	472	4.2	4	86	8	.63
MAY											
14...	<.02	.85	1.84	.5	.4	335	5.3	6	93	14	1.9
26...	<.02	2.56	2.40	.4	.5	386	3.6	6	84	22	3.1
JUN											
09...	<.02	1.00	1.96	E.4	E.4	223	1.8	7	90	29	7.7
22...	<.02	2.39	2.68	.5	E.4	439	3.1	8	89	5	.59
JUL											
15...	<.02	2.47	2.26	E.2	.5	433	2.6	3	96	3	.28
AUG											
17...	<.02	2.35	2.87	.4	.5	492	4.0	4	79	3	.18

E--Estimated.

06305700 GOOSE CREEK NEAR ACME, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		APRIL			MAY			JUNE			JULY	
1	---	---	---	814	776	795	557	514	536	593	548	577
2	---	---	---	826	774	800	624	557	606	549	428	477
3	---	---	---	823	781	801	693	624	661	438	419	428
4	---	---	---	833	791	814	793	691	724	481	437	463
5	---	---	---	864	791	829	830	793	808	492	436	468
6	---	---	---	882	834	861	838	767	813	525	468	500
7	---	---	---	909	854	891	767	363	530	468	442	455
8	---	---	---	932	877	901	363	336	347	473	446	459
9	---	---	---	934	889	918	363	339	347	506	473	490
10	---	---	---	946	887	916	386	363	371	---	---	---
11	---	---	---	996	893	936	410	360	385	554	516	536
12	---	---	---	935	750	857	469	410	451	570	478	535
13	---	---	---	776	532	659	480	441	455	623	524	581
14	---	---	---	578	533	553	535	480	502	647	562	621
15	---	---	---	613	552	586	573	535	555	689	647	666
16	---	---	---	661	609	634	639	573	605	705	660	688
17	---	---	---	721	658	694	650	637	644	705	646	677
18	---	---	---	807	674	754	650	612	632	669	618	651
19	---	---	---	---	---	---	636	605	623	679	648	664
20	---	---	---	810	765	792	647	621	633	714	678	697
21	598	559	578	765	693	729	664	636	652	722	696	710
22	597	564	582	734	560	628	727	664	698	732	708	721
23	583	561	570	563	480	516	742	712	729	748	677	722
24	602	575	590	570	490	532	745	727	737	734	640	676
25	645	602	623	578	568	573	755	712	735	640	600	621
26	700	645	668	603	573	592	713	601	675	616	600	609
27	742	700	718	607	511	574	601	553	573	623	605	615
28	776	742	758	588	547	566	558	523	539	611	530	590
29	791	655	736	620	577	598	575	531	547	652	533	619
30	813	709	787	667	596	634	585	553	567	650	616	632
31	---	---	---	613	502	557	---	---	---	638	604	620
MONTH	---	---	---	---	---	---	838	336	589	---	---	---
		AUGUST			SEPTEMBER							
1	666	636	653	721	676	701						
2	685	663	674	729	689	713						
3	701	672	686	741	718	731						
4	741	682	704	736	683	716						
5	743	704	728	742	677	712						
6	757	727	739	728	685	710						
7	772	720	746	720	690	706						
8	774	727	752	---	---	---						
9	767	734	748	---	---	---						
10	744	706	732	752	717	735						
11	736	706	724	760	702	732						
12	738	714	728	757	710	734						
13	739	722	729	---	---	---						
14	743	707	731	735	713	727						
15	744	709	728	739	706	721						
16	754	728	743	728	674	700						
17	796	741	765	717	682	699						
18	831	778	808	709	675	693						
19	845	796	823	734	703	717						
20	858	805	834	735	707	725						
21	843	787	818	707	604	665						
22	827	764	797	720	686	703						
23	787	729	751	704	642	687						
24	750	687	720	672	637	656						
25	757	721	745	658	634	645						
26	767	726	749	661	637	648						
27	775	739	756	663	642	655						
28	749	694	723	679	598	646						
29	727	685	709	700	657	680						
30	716	663	694	693	671	681						
31	709	664	691	---	---	---						
MONTH	858	636	740	---	---	---						

06306200 PRAIRIE DOG CREEK AT WAKELEY SIDING, NEAR SHERIDAN, WY

LOCATION.--Lat 44°50'16", long 106°52'50", NE¼ NE¼ SW ¼ sec.8, T.56 N., R.6 W., Sheridan County, Hydrologic Unit 10090101, on right bank at county bridge, 1.2 mi upstream from Wildcat Creek and 4.0 mi northeast of Sheridan.

DRAINAGE AREA.--88.3 mi^2, of which 0.37 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to September 2004.

GAGE.--Water-stage recorder. Elevation of gage is 3,596 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. Numerous ditches/diversions upstream and downstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	13	27	18
2	---	---	---	---	---	---	---	---	---	8.3	25	15
3	---	---	---	---	---	---	---	---	---	6.2	26	15
4	---	---	---	---	---	---	---	---	---	5.5	35	16
5	---	---	---	---	---	---	---	---	---	8.4	36	17
6	---	---	---	---	---	---	---	---	---	13	36	16
7	---	---	---	---	---	---	---	---	---	15	32	18
8	---	---	---	---	---	---	---	---	---	16	24	19
9	---	---	---	---	---	---	---	---	---	16	18	18
10	---	---	---	---	---	---	---	---	---	17	19	15
11	---	---	---	---	---	---	---	---	---	28	20	14
12	---	---	---	---	---	---	---	---	---	34	19	13
13	---	---	---	---	---	---	---	---	---	20	16	12
14	---	---	---	---	---	---	---	---	---	12	14	13
15	---	---	---	---	---	---	---	---	---	8.2	13	21
16	---	---	---	---	---	---	---	---	---	9.2	13	25
17	---	---	---	---	---	---	---	---	---	9.9	12	25
18	---	---	---	---	---	---	---	---	---	7.2	12	24
19	---	---	---	---	---	---	---	---	---	5.3	13	22
20	---	---	---	---	---	---	---	---	---	4.8	12	27
21	---	---	---	---	---	---	---	---	---	4.8	12	36
22	---	---	---	---	---	---	---	---	---	4.7	13	30
23	---	---	---	---	---	---	---	---	---	13	14	28
24	---	---	---	---	---	---	---	---	---	24	14	23
25	---	---	---	---	---	---	---	---	---	49	16	18
26	---	---	---	---	---	---	---	---	---	25	18	16
27	---	---	---	---	---	---	---	---	---	24	18	16
28	---	---	---	---	---	---	---	---	---	19	21	19
29	---	---	---	---	---	---	---	---	---	27	20	26
30	---	---	---	---	---	---	---	---	---	27	20	23
31	---	---	---	---	---	---	---	---	---	27	20	---
TOTAL	---	---	---	---	---	---	---	---	---	501.5	608	598
MEAN	---	---	---	---	---	---	---	---	---	16.2	19.6	19.9
MAX	---	---	---	---	---	---	---	---	---	49	36	36
MIN	---	---	---	---	---	---	---	---	---	4.7	12	12
AC-FT	---	---	---	---	---	---	---	---	---	995	1,210	1,190

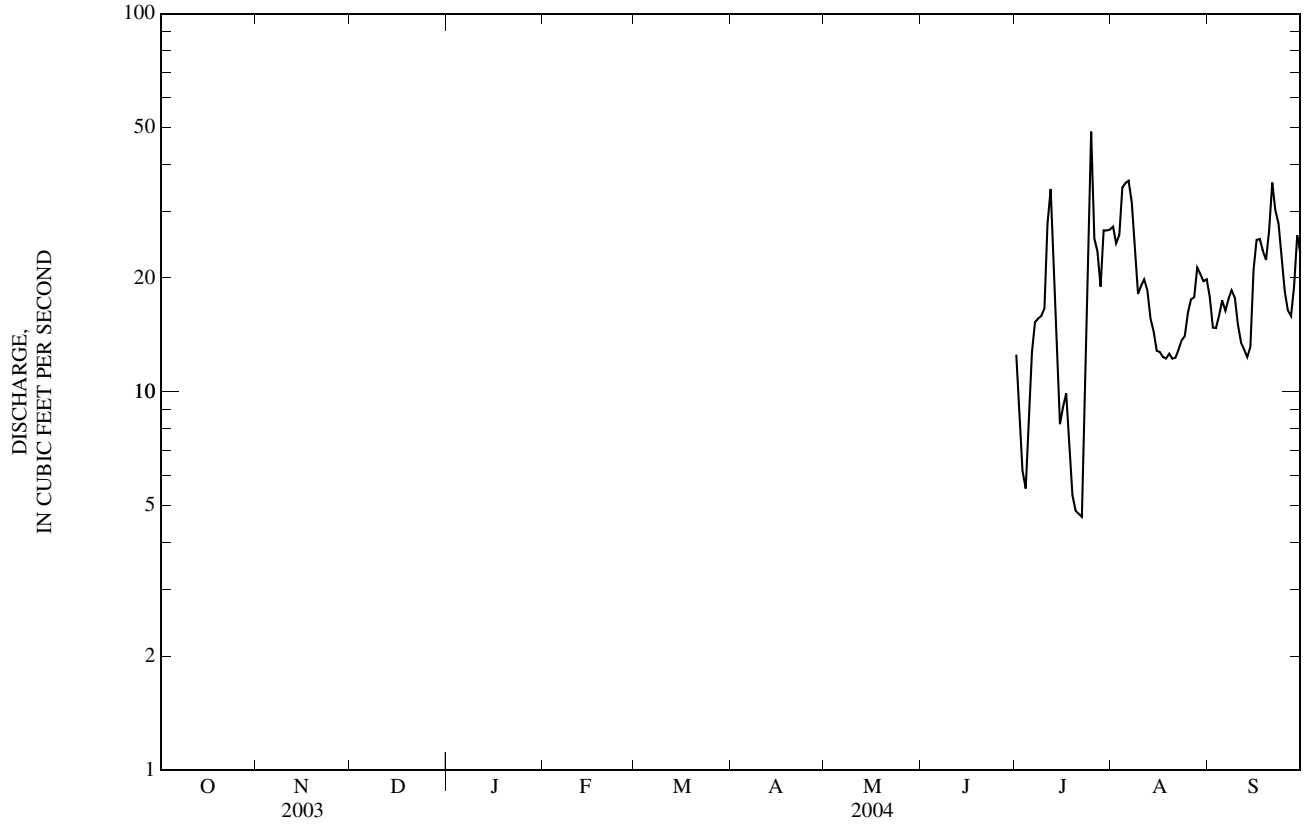
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2004, BY WATER YEAR (WY)*

MEAN	---	---	---	---	---	---	---	---	---	16.2	19.6	19.9
MAX	---	---	---	---	---	---	---	---	---	16.2	19.6	19.9
(WY)	---	---	---	---	---	---	---	---	---	(2004)	(2004)	(2004)
MIN	---	---	---	---	---	---	---	---	---	16.2	19.6	19.9
(WY)	---	---	---	---	---	---	---	---	---	(2004)	(2004)	(2004)

06306200 PRAIRIE DOG CREEK AT WAKELEY SIDING, NEAR SHERIDAN, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*	
HIGHEST DAILY MEAN	49	Jul 25
LOWEST DAILY MEAN	4.7	Jul 22
MAXIMUM PEAK FLOW	56	Jul 25
MAXIMUM PEAK STAGE	3.47	Jul 25

* For period of operation.



06306200 PRAIRIE DOG CREEK AT WAKELEY SIDING, NEAR SHERIDAN, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2003 to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
22...	0730	14	675	9.9	97	8.2	900	4.0	9.0	460	99.9	51.0	4.65
NOV													
20...	0900	8.9	664	11.5	97	8.3	1,090	-1.0	2.5	580	126	63.8	5.13
DEC													
17...	1615	13	676	14.0	108	8.3	994	4.0	.0	550	116	62.8	4.53
JAN													
21...	1720	11	673	13.0	101	8.4	1,030	-4.0	.0	510	108	58.3	4.48
FEB													
18...	1715	8.9	660	11.7	93	8.2	1,150	6.0	.0	590	127	66.6	6.11
MAR													
09...	1000	13	669	11.0	93	8.4	999	17.0	3.0	520	109	61.3	5.37
APR													
14...	1015	8.7	662	9.8	98	8.4	990	10.5	9.0	530	104	64.7	5.40
MAY													
13...	1100	4.4	672	10.0	96	8.3	725	10.0	8.0	380	84.4	41.1	4.12
JUN													
09...	0900	2.5	666	8.0	91	8.2	1,060	16.0	14.5	550	116	62.3	5.88
JUL													
14...	0900	15	669	7.6	94	8.2	582	26.5	19.0	270	60.2	29.0	3.18
AUG													
18...	0845	12	672	8.4	95	8.3	744	18.5	15.0	420	93.0	46.1	4.72
SEP													
15...	1100	25	668	11.0	112	8.3	714	18.5	10.0	380	84.8	41.4	4.00

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT													
22...	.5	23.6	10	267	3.05	.3	11.3	199	553	.82	22.8	602	307
NOV													
20...	.5	25.9	9	263	3.88	.3	13.1	274	670	1.01	17.8	740	159
DEC													
17...	.5	27.5	10	304	4.13	.3	12.8	216	625	.87	22.4	638	93
JAN													
21...	.5	25.0	10	291	4.39	.3	11.6	219	605	.90	19.7	665	166
FEB													
18...	.5	28.7	9	303	4.80	.3	10.7	331	757	1.16	20.5	854	151
MAR													
09...	.6	30.7	11	232	4.33	.3	10.8	236	597	.85	21.3	622	529
APR													
14...	.6	34.0	12	229	4.60	.3	7.17	241	598	.84	14.4	615	128
MAY													
13...	.4	17.7	9	225	2.33	.2	13.1	182	480	.70	6.10	514	330
JUN													
09...	.5	26.7	9	299	3.27	.3	13.8	299	707	.93	4.62	684	85
JUL													
14...	.3	13.0	9	184	1.67	.2	12.4	127	357	.53	15.5	389	1,780
AUG													
18...	.4	17.4	8	253	1.47	.3	13.4	205	533	.78	18.9	570	447
SEP													
15...	.3	15.6	8	237	1.55	.2	12.8	164	467	.67	33.3	494	936

06306200 PRAIRIE DOG CREEK AT WAKELEY SIDING, NEAR SHERIDAN, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
22...	.6	46	<.06	10	22.8	.5
NOV						
20...	.5	49	<.06	14	53.9	.9
DEC						
17...	.5	41	<.06	E5	30.6	.9
JAN						
21...	.4	44	<.06	7	40.5	.8
FEB						
18...	.5	41	<.06	14	186	.8
MAR						
09...	.6	44	E.06	10	41.1	.7
APR						
14...	.5	44	<.06	E6	31.0	.4
MAY						
13...	.5	35	E.03	E6	54.4	.5
JUN						
09...	.7	50	<.06	8	140	.6
JUL						
14...	.7	51	.15	<6	15.8	.4
AUG						
18...	.7	46	E.04	E6	18.0	.9
SEP						
15...	.5	39	.10	E3	26.6	.9

< -- Less than
E -- Estimated value

06306250 PRAIRIE DOG CREEK NEAR ACME, WY

LOCATION.--Lat 44°59'02", long 106°50'21", in NE¼SW¼SW¼ sec. 23, T.58 N., R.83 W., Sheridan County, Hydrologic Unit 10090101, on right bank 600 ft upstream from county bridge, 0.9 mi upstream from mouth, 2.8 mi downstream from Coutant Creek, and 7.6 mi northeast of Acme.

DRAINAGE AREA.--358 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1970 to September 1979, June 2000 to current year. Records for May 1965 to September 1970 in files of Wyoming State Engineer's Office.

GAGE.--Water-stage recorder. Elevation of gage is 3,450 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for November 1-18 and those for estimated daily discharges, which are poor. Diversions for irrigation of about 13,600 acres upstream from station, of which about 60 acres are downstream from station. Flow supplemented by 3 transbasin diversions from North Piney Creek and South Piney Creek via Prairie Dog Creek ditch, Piney and Cruse ditch, and Mead-Coffeen ditch.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	21	e15	e12	11	e13	16	15	1.8	8.6	26	26
2	29	20	e17	e11	10	e13	15	17	1.5	11	25	24
3	30	20	e16	e10	10	e12	14	11	1.5	7.4	22	22
4	30	20	e15	e9.0	10	e12	14	12	1.4	6.5	19	23
5	32	15	e15	e7.0	10	e14	13	11	1.5	9.7	23	25
6	31	14	e13	e8.0	9.9	e16	12	8.5	1.7	19	22	26
7	32	17	e16	e9.0	9.8	e18	12	6.2	1.4	24	20	25
8	31	19	e15	e9.0	9.7	e20	11	6.7	1.2	23	22	25
9	31	17	e14	e10	9.9	e23	11	4.8	1.0	23	21	23
10	28	18	e14	e10	10	e23	9.1	3.8	1.1	22	17	21
11	24	21	e12	e10	9.8	e24	10	3.1	1.4	21	16	16
12	23	21	e13	e10	9.3	e26	10	2.8	1.6	28	16	17
13	22	23	e13	e10	9.0	e28	10	6.5	1.6	26	15	16
14	22	21	e12	e10	9.1	e30	11	8.5	e1.5	17	11	17
15	22	26	e12	e10	9.3	e33	13	5.5	e1.1	15	7.1	20
16	22	24	e11	e10	9.4	31	12	3.5	e1.5	14	7.3	23
17	22	21	e11	e10	e9.5	30	11	2.9	1.9	14	9.4	24
18	21	19	e10	e9.0	e11	32	9.5	2.7	3.0	14	10	28
19	21	17	e10	e10	e11	32	16	2.7	3.9	11	7.5	27
20	20	17	e10	e11	e11	33	26	2.2	5.4	10	8.0	27
21	20	e15	e10	e11	e11	30	26	3.0	9.1	6.6	9.0	31
22	21	e12	e10	e11	e12	27	25	5.0	8.0	3.4	9.7	35
23	21	e9.0	e9.0	e10	e12	25	e20	6.5	7.2	4.5	11	33
24	19	e9.0	e9.0	e10	e13	24	e16	6.8	9.6	16	12	31
25	20	e15	e8.0	e10	e13	23	e12	6.3	9.0	26	12	31
26	19	e16	e8.0	e10	e14	23	e9.0	4.9	9.5	33	15	28
27	19	e16	e8.0	e10	e15	22	e6.0	2.4	5.5	25	16	28
28	20	e17	e9.0	10	e14	20	e9.0	1.7	5.7	27	20	28
29	22	e17	e9.0	11	e14	19	e11	1.7	6.1	25	24	31
30	26	e16	e9.0	11	---	18	e13	1.7	6.3	27	23	35
31	30	---	e9.0	12	---	16	---	2.0	---	24	23	---
TOTAL	767	533.0	362.0	311.0	316.7	710	402.6	178.4	113.0	541.7	499.0	766
MEAN	24.7	17.8	11.7	10.0	10.9	22.9	13.4	5.75	3.77	17.5	16.1	25.5
MAX	37	26	17	12	15	33	26	17	9.6	33	26	35
MIN	19	9.0	8.0	7.0	9.0	12	6.0	1.7	1.0	3.4	7.1	16
AC-FT	1,520	1,060	718	617	628	1,410	799	354	224	1,070	990	1,520

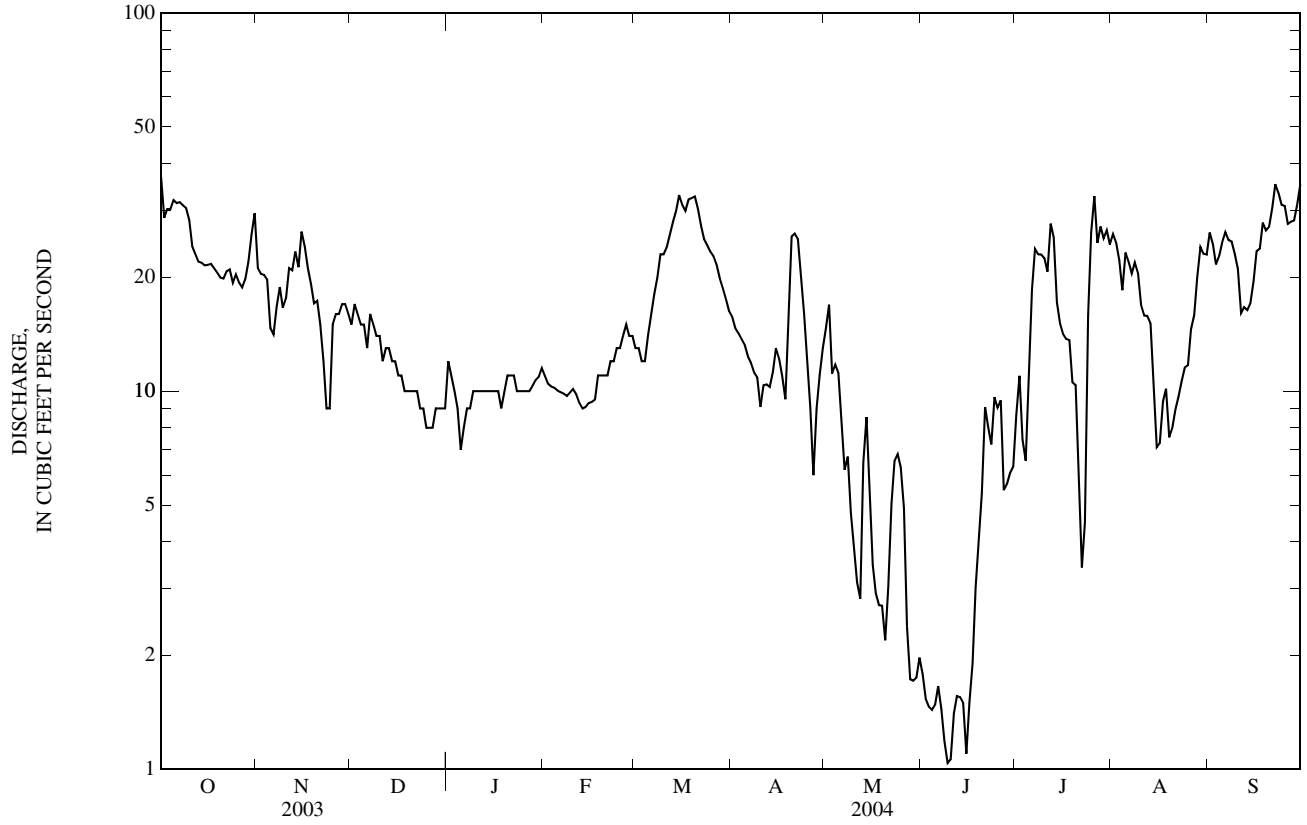
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2004, BY WATER YEAR (WY)

MEAN	36.2	27.7	22.1	17.5	31.7	72.1	55.7	75.1	33.0	18.8	24.9	37.8
MAX	59.5	43.6	32.3	26.7	82.7	167	101	384	86.2	45.0	45.7	79.0
(WY)	(1974)	(1974)	(1976)	(1974)	(1974)	(1972)	(1971)	(1978)	(1978)	(1975)	(1978)	(1973)
MIN	15.5	12.3	10.9	8.55	9.49	16.7	13.4	5.75	3.09	4.39	3.00	13.4
(WY)	(2002)	(2002)	(2002)	(2002)	(2003)	(2002)	(2004)	(2004)	(2002)	(2001)	(2001)	(2001)

06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1971 - 2004*	
ANNUAL TOTAL	9,371.2		5,500.4			
ANNUAL MEAN	25.7		15.0		37.9	
HIGHEST ANNUAL MEAN					72.8	1978
LOWEST ANNUAL MEAN					15.0	2004
HIGHEST DAILY MEAN	250	Mar 14	37	Oct 1	3,090	May 19, 1978
LOWEST DAILY MEAN	1.7	Aug 2	1.0	Jun 9	0.48	Jul 7, 2001
ANNUAL SEVEN-DAY MINIMUM	3.3	Jul 30	1.3	Jun 4	0.70	Jul 5, 2001
MAXIMUM PEAK FLOW			46[a]	Oct 1	3,940[b]	May 18, 1978
MAXIMUM PEAK STAGE			2.71[c]	Feb 22	12.60[d]	May 18, 1978
ANNUAL RUNOFF (AC-FT)	18,590		10,910		27,450	
10 PERCENT EXCEEDS	49		27		64	
50 PERCENT EXCEEDS	16		13		27	
90 PERCENT EXCEEDS	8.5		4.9		10	

* For period of operation.
a Gage height, 2.05 ft.
b From rating curve extended above 760 ft3/s on basis of slope-area determination of peak flow.
c Backwater from ice.
d From floodmarks.
e Estimated.



06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976-1992, April 2000 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 30, 2004 to September 30, 2004 (intermittent operation).

INSTRUMENTATION.--Specific conductance probe installed April 30, 2004.

REMARKS.--Daily specific conductance records rated good except for missing record due to instrument malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD:
SPECIFIC CONDUCTANCE: Maximum daily, 2,510 microsiemens per centimeter (µS/cm) at 25°C, June 10, 2004; minimum daily, 739 µS/cm at 25°C, July 27, 2004.

EXTREMES FOR CURRENT YEAR:
SPECIFIC CONDUCTANCE: Maximum recorded, 2,510 microsiemens per centimeter (µS/cm) at 25°C, June 10; minimum recorded, 739 µS/cm at 25°C, July 27.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
FEB													
04...	1045	10	670	11.9	93	7.8	1,620	-4.0	.0	810	163	98.4	7.80
MAR													
09...	1115	E23	673	11.2	89	8.4	1,560	17.0	.5	780	152	97.3	9.15
APR													
14...	1130	11	668	9.8	97	8.4	1,330	16.0	9.0	670	121	88.3	7.84
27...	0815	6.0	673	9.0	91	8.4	1,460	9.0	10.0	670	129	83.7	7.04
MAY													
13...	1330	6.5	672	11.3	114	8.4	2,080	13.5	10.0	930	170	121	10.2
26...	1700	3.5	664	13.4	154	8.3	1,910	19.0	15.0	890	159	120	10.4
JUN													
09...	1045	1.2	672	8.6	98	8.0	2,510	19.5	15.0	1,100	195	152	11.9
21...	1630	11	674	9.6	118	8.3	1,670	22.0	19.0	780	149	98.7	9.52
JUL													
14...	1100	17	674	8.3	109	8.3	944	35.0	22.0	400	81.8	48.0	5.41
AUG													
18...	1030	9.5	678	9.7	114	8.3	1,400	19.0	17.0	660	131	80.4	7.59
SEP													
15...	1200	19	671	10.4	110	8.5	1,140	20.5	12.0	560	116	66.3	6.06

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, water fltrd fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)
FEB													
04...	1	85.9	19	299	5.33	.3	15.7	542	1,100	1.50	29.8	--	.052
MAR													
09...	1	92.9	20	289	5.47	.3	12.3	608	1,160	1.68	E77.0	1,240	.045
APR													
14...	1	86.4	22	275	5.49	.3	7.20	489	972	1.32	28.9	--	E.005
27...	2	104	25	307	4.78	.3	9.93	537	1,060	1.53	18.3	1,130	E.006
MAY													
13...	3	177	29	331	7.14	.3	14.1	868	1,570	2.34	30.2	1,720	.026
26...	2	137	25	291	6.55	.3	9.46	792	1,410	2.08	14.4	1,530	<.010
JUN													
09...	3	208	29	381	8.30	.4	11.5	1,090	1,910	2.75	6.55	2,020	.015
21...	2	109	23	309	5.50	.3	13.4	631	1,200	1.76	38.4	1,290	<.010
JUL													
14...	1	44.9	19	226	2.66	.3	14.4	283	619	.92	31.0	676	.040
AUG													
18...	1	74.8	20	293	4.15	.3	14.7	501	992	1.40	26.5	1,030	.013
SEP													
15...	1	53.6	17	268	2.79	.3	13.9	362	781	1.13	42.7	832	--

06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, wat unf mg/L (62855)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (01012)
FEB													
04...	.634	.003	.008	.037	.90	<2	234	.7	<2	47	50	<.06	<.06
MAR													
09...	.442	.003	.018	.21	1.14	<2	1,500	.8	2	39	68	<.06	.15
APR													
14...	<.016	<.002	<.006	.018	.29	E1	78	.7	<2	35	40	<.06	<.06
27...	<.016	<.002	E.003	.020	.26	<2	103	.7	<2	42	45	<.06	<.06
MAY													
13...	.231	.004	E.005	.023	.59	<2	38	.9	<2	53	48	<.06	<.06
26...	<.016	<.002	<.006	.040	.32	2	266	.9	<2	50	55	<.06	E.03
JUN													
09...	.022	E.001	.013	.023	.37	E1	59	.9	E2	56	56	<.06	<.06
21...	.059	.003	<.006	.117	.69	E1	772	.8	E1	49	64	<.06	.08
JUL													
14...	.226	.004	.016	.179	.96	10	1,370	.9	E1	31	56	<.06	.16
AUG													
18...	.087	E.001	.010	.036	.39	<2	123	1.0	<10	44	44	<.06	<.06
SEP													
15...	--	--	--	--	--	--	466	.8	--	--	37	--	E.05

Date	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)
FEB													
04...	126	<.04	<.04	5	3.0	8.3	8	590	<.08	.35	33.5	73.7	105
MAR													
09...	109	<.04	.06	<1	3.8	7.4	18	3,600	<.08	2.40	35.9	52.3	289
APR													
14...	142	<.04	<.04	8	2.9	3.7	E6	240	<.08	.13	31.6	59.7	74
27...	109	<.04	<.04	<1	3.2	4.3	13	320	E.07	.17	30.4	120	139
MAY													
13...	168	<.04	<.04	10	4.9	5.4	13	190	<.08	.07	49.4	205	193
26...	151	<.04	<.04	13	5.2	8.2	15	750	<.08	.48	55.4	177	217
JUN													
09...	185	<.04	<.04	<1	5.8	8.9	E14	430	.19	.16	59.5	394	398
21...	148	<.04	.05	1	4.7	7.1	10	2,270	<.08	1.49	39.4	244	474
JUL													
14...	88	<.04	.07	3	2.9	6.1	16	3,400	<.08	2.32	20.3	55.7	383
AUG													
18...	133	<.04	<.04	<1	3.5	4.1	7	410	<.08	.23	34.4	73.6	103
SEP													
15...	--	--	--	--	--	--	E3	--	--	--	--	42.3	--

06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)	Stront- ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)	Sus- pended sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
FEB											
04...	<.02	3.71	5.78	2.1	1.5	2,080	2.1	5	79	61	1.6
MAR											
09...	<.02	5.21	7.46	1.6	1.6	1,940	2.6	16	89	192	E.58
APR											
14...	<.02	2.29	3.69	1.0	.9	1,800	1.4	E2	76	47	1.4
27...	<.02	2.81	5.94	.9	.9	1,710	2.6	13	74	38	.62
MAY											
13...	<.02	2.38	5.37	2.1	1.6	2,290	4.0	3	65	38	.67
26...	<.02	6.10	5.75	1.6	1.4	2,260	3.3	6	78	105	.99
JUN											
09...	<.02	3.76	8.28	1.4	1.3	2,640	4.1	5	84	78	.25
21...	<.02	4.57	5.52	1.1	1.5	2,000	2.5	9	90	178	5.3
JUL											
14...	<.02	2.99	5.55	.7	.6	1,060	1.8	12	97	172	7.9
AUG											
18...	<.02	1.49	4.24	1.2	.9	1,710	1.8	5	90	78	2.0
SEP											
15...	--	--	--	--	1.4	--	--	--	91	85	4.4

<--Less than
E--Estimated
M--Presence verified, not qualified

06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		MAY			JUNE			JULY			AUGUST	
1	1,280	1,150	1,230	---	---	---	1,330	1,290	1,320	851	823	836
2	1,150	1,080	1,110	---	---	---	1,290	1,180	1,230	862	845	854
3	1,260	1,130	1,220	---	---	---	1,200	1,150	1,170	880	856	867
4	---	---	---	---	---	---	1,290	1,200	1,250	920	878	899
5	---	---	---	---	---	---	1,300	1,280	1,300	918	901	913
6	---	---	---	---	---	---	1,280	1,160	1,230	902	893	897
7	---	---	---	---	---	---	1,160	990	1,090	896	887	892
8	---	---	---	---	---	---	990	966	972	919	888	903
9	---	---	---	---	---	*2,510	999	958	977	935	909	918
10	---	---	---	2,510	2,480	2,490	1,020	993	1,000	1,010	935	969
11	---	---	---	2,490	2,400	2,450	1,030	1,000	1,020	1,060	1,010	1,030
12	---	---	---	2,490	2,470	2,480	1,000	924	959	1,120	1,060	1,090
13	---	---	*2,080	---	---	---	940	828	889	1,150	1,120	1,140
14	---	---	---	---	---	---	984	897	938	1,170	1,140	1,150
15	---	---	---	---	---	---	982	953	961	1,220	1,170	1,190
16	---	---	---	---	---	---	1,090	972	1,040	1,320	1,220	1,270
17	---	---	---	2,340	2,210	2,260	1,130	1,080	1,100	1,360	1,320	1,350
18	---	---	---	2,410	2,210	2,310	1,120	1,090	1,110	1,370	1,330	1,350
19	---	---	---	2,240	1,940	2,100	1,180	1,080	1,130	1,570	1,370	1,490
20	---	---	---	1,970	1,530	1,850	1,250	1,180	1,220	1,560	1,410	1,500
21	---	---	---	1,840	1,580	1,720	1,260	1,210	1,230	1,410	1,370	1,390
22	---	---	---	1,600	1,510	1,560	1,430	1,260	1,350	1,390	1,360	1,380
23	---	---	---	1,570	1,460	1,550	1,500	1,430	1,470	1,370	1,320	1,360
24	---	---	---	1,460	1,310	1,370	1,490	1,190	1,390	1,320	1,240	1,260
25	---	---	---	1,310	1,260	1,270	1,190	923	1,040	1,240	1,200	1,220
26	---	---	*1,910	1,260	1,170	1,210	923	753	816	1,210	1,080	1,150
27	---	---	---	1,230	1,160	1,200	775	739	751	1,090	1,060	1,080
28	---	---	---	1,290	1,230	1,260	812	775	797	1,060	1,000	1,030
29	---	---	---	1,320	1,280	1,300	853	812	831	1,000	915	960
30	---	---	---	1,320	1,300	1,310	859	824	849	948	921	934
31	---	---	---	---	---	---	825	807	818	966	939	953
MONTH	---	---	---	---	---	---	1,500	739	1,070	1,570	823	1,100

DAY	MAX	MIN	MEAN
	SEPTEMBER		
1	980	936	960
2	1,010	979	992
3	1,010	987	994
4	1,050	1,010	1,020
5	1,070	1,050	1,060
6	1,080	1,070	1,070
7	1,080	1,060	1,070
8	1,080	1,060	1,060
9	1,080	1,030	1,060
10	1,030	1,020	1,030
11	1,060	1,030	1,040
12	1,090	1,060	1,070
13	1,110	1,090	1,100
14	1,140	1,110	1,130
15	1,180	1,140	1,160
16	1,160	1,060	1,100
17	1,060	1,010	1,040
18	1,030	1,000	1,010
19	1,060	1,030	1,040
20	1,070	1,040	1,050
21	1,060	1,010	1,040
22	1,010	964	979
23	1,030	964	996
24	1,060	1,030	1,040
25	1,080	1,060	1,070
26	1,170	1,080	1,120
27	1,170	1,150	1,160
28	1,190	1,170	1,180
29	1,190	1,130	1,170
30	1,130	1,080	1,090
31	---	---	---
MONTH	1,190	936	1,060

*--Instantaneous value from USGS sample.

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT

LOCATION.--Lat 45°00'32", long 106°50'08", in NW¼NW¼NE¼ sec.33, T.9 S., R.40 E., Big Horn County, Hydrologic Unit 10090101, on left bank 1 mi north of Wyoming-Montana State line, 1.4 mi southeast of Decker, 1.6 mi upstream from Badger Creek, and at river mile 200.9.

DRAINAGE AREA.--1,453 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1960 to current year. Records published as "near Decker" May 1928 to September 1938, not equivalent owing to intervening drainage area.

REVISED RECORDS.--WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,429.14 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by many small reservoirs in Wyoming, combined capacity, about 15,000 acre-ft. Diversions for irrigation of about 64,300 acres upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185	203	e160	e140	e135	e150	154	136	203	167	93	66
2	177	203	e155	e135	e140	e145	163	126	177	221	83	59
3	169	207	e150	e125	e140	e140	170	112	146	223	78	60
4	167	205	e145	e125	e140	e150	168	114	134	190	73	61
5	164	206	e140	e120	e135	e150	161	130	130	217	78	73
6	162	e195	e135	e110	e140	e150	168	169	135	313	82	89
7	159	e200	e145	e125	e140	e145	182	218	169	303	72	84
8	161	e205	e155	e135	e145	e150	188	223	228	253	68	81
9	156	e210	e150	e130	e150	e155	194	218	215	223	68	72
10	148	e215	e145	e130	e150	e160	193	212	198	199	65	66
11	152	e200	e140	e130	e145	e170	165	194	215	175	69	56
12	159	e190	e145	e130	e140	e175	157	204	288	166	71	55
13	159	e180	e130	e125	e130	e180	151	234	259	148	69	63
14	166	e185	e140	e130	e140	e185	161	218	225	121	65	65
15	177	e190	e145	e130	e150	e190	173	188	195	108	54	71
16	174	e190	e145	e130	e155	192	174	164	167	103	49	88
17	180	e180	e140	e135	e160	188	168	149	154	112	51	97
18	181	173	e145	e130	e160	194	163	159	165	120	51	101
19	182	160	e140	e135	e160	192	172	185	164	102	47	102
20	180	158	e140	e135	e160	192	174	198	169	94	48	110
21	175	e150	e145	e135	e165	188	171	201	176	82	47	127
22	175	e145	e150	e130	e155	176	168	247	167	70	47	161
23	176	e150	e150	e140	e155	170	163	264	163	66	50	163
24	176	e155	e145	e140	e155	168	143	269	152	92	52	163
25	177	e155	e140	e135	e160	173	125	244	155	135	53	162
26	177	e160	e145	e125	e155	177	121	220	179	135	54	154
27	183	e160	e150	e120	e160	171	102	200	178	104	49	149
28	194	e155	e145	e115	e165	175	103	187	193	101	62	151
29	201	e160	e140	e120	e160	170	132	174	176	100	77	184
30	206	e160	e135	e130	---	158	148	176	158	102	74	179
31	207	---	e140	e135	---	154	---	220	---	98	70	---
TOTAL	5,405	5,405	4,475	4,010	4,345	5,233	4,775	5,953	5,433	4,643	1,969	3,112
MEAN	174	180	144	129	150	169	159	192	181	150	63.5	104
MAX	207	215	160	140	165	194	194	269	288	313	93	184
MIN	148	145	130	110	130	140	102	112	130	66	47	55
AC-FT	10,720	10,720	8,880	7,950	8,620	10,380	9,470	11,810	10,780	9,210	3,910	6,170

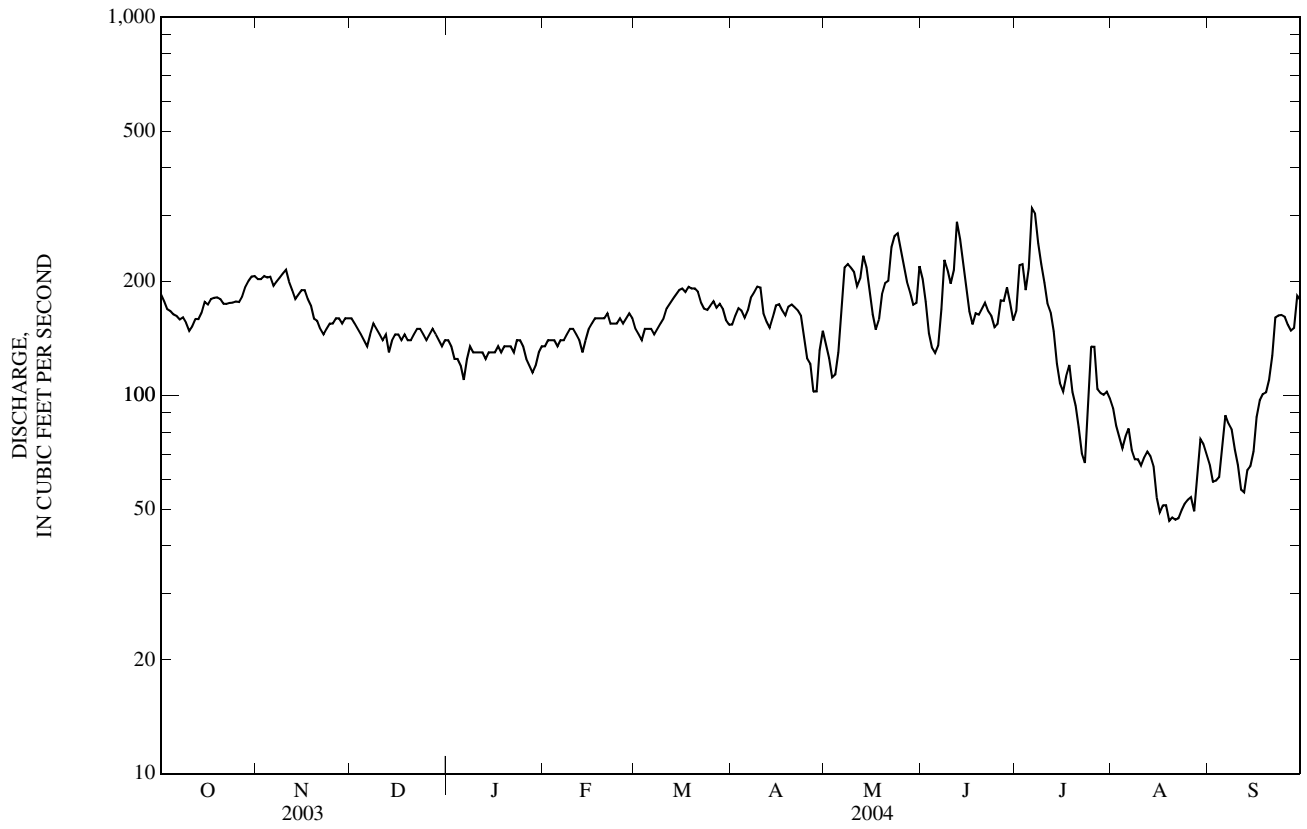
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

MEAN	249	221	177	175	225	303	350	1,111	1,597	450	171	214
MAX	403	324	271	330	672	855	676	3,283	3,570	1,674	475	615
(WY)	(1969)	(1974)	(1976)	(1974)	(1971)	(1972)	(1977)	(1978)	(1978)	(1975)	(1968)	(1968)
MIN	116	126	102	78.7	79.8	88.5	124	192	176	54.7	13.1	73.3
(WY)	(1961)	(2002)	(1985)	(2002)	(2002)	(2002)	(1961)	(2004)	(2001)	(2001)	(2001)	(2001)

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	130,878		54,758		--	
ANNUAL MEAN	359		150		437	
HIGHEST ANNUAL MEAN	--		--		862	1978
LOWEST ANNUAL MEAN	--		--		138	2002
HIGHEST DAILY MEAN	2,690	Jun 2	313	Jul 6	15,400	May 19, 1978
LOWEST DAILY MEAN	55	Aug 7	47	Aug 19,21,22	5.4	Aug 24, 1961
ANNUAL SEVEN-DAY MINIMUM	59	Aug 3	49	Aug 16	7.2	Aug 22, 1961
MAXIMUM PEAK FLOW	--		326 [a]	Jul 6	17,500	May 12, 1978
MAXIMUM PEAK STAGE	--		3.44[b]	Feb 21	14.25	May 12, 1978
ANNUAL RUNOFF (AC-FT)	259,600		108,600		316,400	
10 PERCENT EXCEEDS	930		203		1,010	
50 PERCENT EXCEEDS	180		154		230	
90 PERCENT EXCEEDS	91		73		110	

a Gage heght, 3.10 ft.
b Backwater from ice.
e Estimated.



06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1965 to September 1976, November 1980 to December 1986, August 2000 to current year.
WATER TEMPERATURE: October 1965 to September 1976.

INSTRUMENTATION: Specific conductance probe installed Aug. 21, 2000.

REMARKS.--Specific conductance record is rated good. Missing conductance data for Nov. 23 due to ice conditions, Feb. 19, 20, and 28, May 4-13, and June 9, 10 are due to equipment malfunction, and June 25 to July 6 due to the probe being packed in mud. Samples of aquatic insects and algae were collected to obtain baseline information on biological conditions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,490 microsiemens per centimeter (µS/cm), Aug. 12, 1966, Jan. 11, 1972; minimum recorded, 161 µS/cm, May 30 and June 1, 2003.
WATER TEMPERATURE: Maximum, 30.5°C, July 16, 1966; minimum, 0.0°C on many days during winter.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 909 microsiemens per centimeter (µS/cm), Aug. 27; minimum recorded, 384 µS/cm, June 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
06...	1800	162	670	8.3	93	8.8	643	24.0	14.5	290	58.5	35.8	2.87
NOV													
18...	1330	198	668	14.3	115	8.5	636	18.0	1.0	300	62.9	35.6	2.52
DEC													
04...	1115	E145	687	13.7	104	8.2	636	7.0	0.0	300	63.1	35.6	2.40
JAN													
20...	1400	E135	676	10.7	83	8.3	653	10.5	0.0	310	66.0	35.7	2.44
FEB													
04...	1300	E140	669	14.5	113	8.1	705	7.0	0.0	320	65.9	36.7	2.47
23...	1630	E155	670	15.0	117	8.3	629	12.0	0.0	280	57.5	33.4	4.59
MAR													
09...	1345	E155	670	12.6	100	8.5	680	24.0	.5	320	64.8	38.5	3.01
22...	1800	171	671	10.2	107	8.5	725	15.0	11.5	320	63.3	39.7	3.51
APR													
14...	1315	168	666	10.6	113	8.3	562	23.0	12.0	250	52.9	29.3	2.17
26...	1645	120	678	10.6	124	8.7	584	24.0	17.0	250	51.1	29.8	2.54
MAY													
13...	1615	237	678	12.6	130	8.6	400	12.0	11.5	180	38.9	19.2	1.79
26...	1500	219	664	9.6	112	8.5	477	19.0	16.0	220	47.5	24.2	2.32
JUN													
09...	1315	226	672	8.1	100	8.4	403	22.5	19.5	180	38.1	20.0	1.97
22...	1315	171	674	10.7	131	8.6	534	24.0	19.0	230	48.3	27.3	2.50
JUL													
14...	1420	120	674	8.9	127	8.6	570	39.0	27.0	230	45.2	28.8	2.75
27...	1015	106	675	8.5	107	8.5	634	24.0	20.5	280	53.1	35.0	3.28
AUG													
18...	1250	52	679	8.2	103	8.4	810	26.0	21.0	340	57.6	46.9	4.01
24...	0835	57	671	6.3	73	8.4	876	17.0	16.0	360	62.4	49.3	4.30
SEP													
15...	1405	68	671	11.3	135	8.7	780	24.0	17.5	350	61.5	47.7	4.08
27...	1400	152	683	9.3	103	8.4	643	14.5	15.0	300	59.0	36.0	3.05

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, water, fltrd fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)
OCT								
06...	.7	29.2	18	182	3.89	.2	4.61	123
NOV								
18...	.7	27.5	16	189	4.10	.3	7.08	116
DEC								
04...	.7	26.7	16	202	4.73	.3	6.80	119
JAN								
20...	.7	28.0	16	206	5.43	.3	7.73	115
FEB								
04...	.8	31.0	17	179	4.60	.3	7.23	128
23...	.7	26.7	17	214	6.28	.3	6.41	115
MAR								
09...	.8	33.6	18	216	5.43	.2	4.62	149
22...	.9	35.5	19	227	5.49	.3	2.61	170
APR								
14...	.7	26.6	18	197	4.44	.2	2.66	102
26...	.9	32.5	22	204	4.47	.3	2.04	106
MAY								
13...	.6	18.9	19	145	2.87	.2	5.96	65.5
26...	.7	22.7	18	168	2.85	.2	5.07	82.1
JUN								
09...	.6	18.3	18	155	2.56	.2	4.81	58.7
22...	.7	26.0	19	196	3.03	.2	2.68	88.0
JUL								
14...	.9	29.8	22	194	2.93	.3	4.41	102
27...	.8	31.6	20	216	4.32	.3	6.78	124
AUG								
18...	1	49.9	24	245	5.32	.3	6.42	191
24...	1	58.6	26	271	4.75	.4	6.95	214
SEP								
15...	1	48.6	23	239	4.74	.4	5.46	186
27...	.7	29.3	18	228	3.19	.3	5.55	125

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT						
06...	367	.52	166	90	69	30
NOV						
18...	369	.52	203	74	63	34
DEC						
04...	380	.53	E153	35	15	E5.9
JAN						
20...	384	.58	E155	62	10	E3.6
FEB						
04...	385	.61	E171	66	11	E4.2
23...	379	.52	E159	90	8	E3.4
MAR						
09...	429	.61	E187	92	54	E23
22...	457	.62	211	70	57	26
APR						
14...	339	.46	154	92	24	11
26...	351	.49	118	89	19	6.2
MAY						
13...	241	.33	154	91	19	12
26...	288	.41	177	92	36	21
JUN						
09...	238	.32	145	89	40	24
22...	316	.44	149	90	28	13
JUL						
14...	332	.45	108	90	28	9.1
27...	388	.55	116	85	54	15
AUG						
18...	508	.69	71.4	94	26	3.7
24...	564	.79	89.3	92	28	4.3
SEP						
15...	502	.68	92.2	83	39	7.2
27...	398	.56	170	87	53	22

Date	Time	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)	Total nitrogen, water, unfltrd mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)
OCT													
06...	1800	<.04	<.016	E.001	.22	<.006	.027	--	164	.5	<2	--	46
NOV													
18...	1330	<.04	.034	<.002	.20	<.006	.018	--	66	.3	<2	--	51
DEC													
04...	1115	<.04	E.009	<.002	.21	<.006	.016	--	33	.4	<2	--	50
FEB													
04...	1300	.104	.247	.005	.49	E.005	.016	<2	20	.4	<2	51	52
MAR													
09...	1345	.024	.085	.003	.50	E.004	.070	E1	374	.4	<2	39	50
APR													
14...	1315	E.005	<.016	<.002	.34	<.006	.043	E1	161	.5	<2	49	54
26...	1645	E.006	<.016	<.002	.34	E.003	.040	E1	128	.6	<2	51	55
MAY													
13...	1615	E.007	<.016	E.001	.37	E.005	.047	2	157	.5	<2	39	41
26...	1500	<.010	<.016	<.002	.23	E.003	.065	E1	242	.5	<2	44	52
JUN													
09...	1315	<.010	<.016	E.001	.23	<.006	.071	2	250	.6	E2	44	50
22...	1315	<.010	<.016	<.002	.30	<.006	.045	E1	198	.5	<2	49	52
JUL													
27...	1015	<.010	<.016	<.002	.50	E.003	.061	E1	341	.9	<2	52	58
AUG													
24...	0835	.030	<.016	E.001	.44	<.006	.037	E2	185	1.0	<2	65	68

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Beryll-ium, water, fltrd, ug/L (01010)	Beryll-ium, water, unfltrd recover-able, ug/L (01012)	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)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)
OCT													
06...	--	<.06	--	78	--	<.04	<.8	--	2.3	10	340	--	.30
NOV													
18...	--	<.06	--	70	--	<.04	E.6	--	2.2	12	150	--	.14
DEC													
04...	--	<.06	--	69	--	<.04	<.8	--	2.2	16	80	--	.06
FEB													
04...	<.06	<.06	62	68	<.04	<.04	2	1.2	2.9	17	70	<.08	E.05
MAR													
09...	<.06	E.03	66	62	<.04	<.04	<1	1.7	2.3	27	810	<.08	.58
APR													
14...	<.06	<.06	50	--	<.04	<.04	<1	1.2	1.5	36	460	E.05	.36
26...	<.06	<.06	56	56	<.04	<.04	<1	1.4	1.6	41	350	E.06	.31
MAY													
13...	<.06	<.06	38	35	<.04	<.04	3	1.0	1.4	30	360	<.08	.30
26...	<.06	E.04	47	48	<.04	E.02	4	1.4	2.9	26	630	E.04	.62
JUN													
09...	<.06	E.04	46	48	<.04	<.04	<1	1.2	1.7	41	640	.14	.61
22...	<.06	<.06	54	56	<.04	<.04	<1	1.6	1.7	22	430	<.08	.46
JUL													
27...	<.06	E.04	77	79	<.04	E.03	<1	1.6	2.6	9	730	<.08	.66
AUG													
24...	<.06	<.06	101	105	<.04	<.04	<1	2.1	2.6	14	420	<.08	.36

Date	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, unfltrd recover-able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Strontium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
OCT											
06...	--	12.8	37.5	--	--	2.90	--	.4	--	--	4
NOV											
18...	--	11.1	19.5	--	--	2.47	--	E.4	--	--	3
DEC											
04...	--	11.0	12.8	--	--	2.60	--	E.4	--	--	2
FEB											
04...	16.6	16.9	18	<.02	1.63	2.40	.6	.6	488	1.4	2
MAR											
09...	16.5	27.9	93	<.02	1.68	2.70	.5	.6	478	1.8	4
APR											
14...	13.2	29.1	58	<.02	1.40	2.05	E.3	E.2	365	1.1	3
26...	15.5	24.2	46	<.02	1.52	2.81	E.4	E.3	367	1.1	E1
MAY											
13...	9.3	11.1	42	<.02	.77	2.00	E.3	<.4	207	2.5	3
26...	15.1	15.8	60	--	2.10	2.85	E.2	<.4	281	1.4	5
JUN											
09...	11.1	14.7	70	<.02	1.16	2.61	E.3	<.4	231	1.8	17
22...	13.6	9.6	45	<.02	1.82	1.59	<.4	.4	305	1.2	3
JUL											
27...	19.5	14.2	90	<.02	2.52	3.08	.5	.4	454	1.3	6
AUG											
24...	30.2	16.0	51	<.02	2.04	3.06	.6	.7	664	1.3	3

E--Estimated.

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	608	594	599	693	642	658	661	622	643	762	729	744
2	656	607	630	766	672	717	668	609	638	757	734	744
3	673	650	660	797	734	761	653	605	629	754	728	743
4	669	649	660	771	741	750	663	610	633	764	729	748
5	669	644	656	770	719	752	708	656	684	794	744	769
6	665	639	653	846	753	781	696	642	669	846	786	822
7	671	646	658	866	747	807	694	620	657	830	815	823
8	678	642	659	811	734	779	670	641	655	828	801	819
9	679	653	665	817	729	768	671	632	653	811	769	797
10	704	675	692	777	698	737	678	611	648	772	717	747
11	716	689	704	759	695	732	702	629	670	722	680	702
12	727	711	720	731	693	708	713	661	689	686	664	679
13	739	710	724	744	677	707	792	696	755	678	662	670
14	721	692	710	714	668	690	741	687	723	682	661	673
15	708	692	701	723	652	691	712	655	684	682	669	677
16	720	691	705	710	655	683	683	642	667	683	666	674
17	716	689	703	708	664	687	689	628	661	679	660	669
18	708	685	697	737	662	693	675	626	647	671	657	663
19	708	687	695	709	684	695	709	643	678	682	656	670
20	706	683	694	697	673	687	716	646	680	681	659	668
21	697	682	690	705	662	685	687	649	663	672	653	664
22	705	686	695	765	685	713	679	643	660	673	656	663
23	699	678	691	---	---	---	679	636	661	690	659	674
24	699	682	689	792	739	769	697	641	676	683	658	674
25	711	690	702	776	737	758	727	665	700	671	650	660
26	712	687	700	783	731	760	690	637	668	688	654	677
27	717	688	698	752	706	733	679	653	665	762	682	721
28	708	690	697	745	690	718	678	658	670	789	757	777
29	697	678	689	704	653	684	738	668	711	801	772	785
30	693	646	672	675	643	657	715	676	696	818	794	804
31	651	633	643	---	---	---	757	695	729	811	766	789
MONTH	739	594	682	---	---	---	792	605	673	846	650	722
	FEBRUARY			MARCH			APRIL			MAY		
1	781	731	761	653	620	637	695	671	683	656	564	598
2	736	692	715	669	629	646	692	667	678	659	622	635
3	696	681	687	695	667	682	680	634	656	658	628	644
4	717	688	708	698	660	683	642	612	629	---	---	*613
5	724	704	717	702	630	660	626	598	614	---	---	---
6	720	695	709	702	656	678	617	588	602	---	---	---
7	703	681	695	684	633	661	603	555	575	---	---	---
8	697	677	688	667	591	635	565	532	547	---	---	---
9	686	667	678	707	597	654	540	511	528	---	---	---
10	676	660	668	678	643	659	523	489	506	---	---	---
11	693	660	676	699	614	650	550	517	531	---	---	---
12	706	670	686	683	628	649	560	536	546	---	---	---
13	739	686	716	692	644	679	581	539	554	---	---	*400
14	732	722	727	760	666	699	583	562	572	485	465	480
15	725	692	709	733	680	704	605	566	593	485	461	475
16	713	683	696	729	688	712	601	566	586	461	444	451
17	689	661	676	751	716	734	576	554	565	453	427	441
18	691	650	672	753	732	742	569	546	559	432	420	427
19	---	---	---	764	746	753	602	546	571	451	425	435
20	---	---	---	778	753	767	570	500	534	434	405	420
21	645	606	625	768	748	758	516	496	505	436	407	421
22	673	613	638	767	743	756	524	506	517	475	416	440
23	671	628	649	765	745	755	543	518	528	501	474	491
24	655	619	642	766	741	753	571	540	557	505	497	502
25	692	627	660	757	728	742	597	567	578	497	487	491
26	654	614	633	742	711	727	603	578	591	488	474	483
27	669	592	638	735	702	717	617	593	607	477	463	468
28	---	---	---	714	677	695	649	606	624	476	466	470
29	642	616	628	694	675	685	643	602	628	481	473	478
30	---	---	---	687	671	680	619	589	603	505	471	489
31	---	---	---	693	662	677	---	---	---	493	458	470
MONTH	---	---	---	778	591	698	695	489	579	---	---	---

*--Instantaneous value from USGS sample.

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	501	487	496	---	---	---	688	663	682	821	795	808
2	489	469	480	---	---	---	712	687	702	839	816	831
3	487	469	478	---	---	---	731	686	711	850	833	839
4	501	487	493	---	---	---	731	701	713	869	842	854
5	508	496	501	---	---	---	739	696	718	870	816	848
6	508	472	489	---	---	*485	723	691	706	817	773	789
7	484	423	451	543	520	533	727	698	709	801	774	784
8	530	423	499	540	517	523	757	722	738	812	785	801
9	---	---	*403	520	508	514	766	746	756	818	795	807
10	---	---	---	533	511	518	789	753	767	828	790	810
11	402	384	393	541	525	535	790	762	773	827	804	813
12	416	387	399	561	531	549	783	767	776	852	824	839
13	563	411	477	547	536	542	799	771	784	853	806	830
14	590	543	571	587	542	558	804	782	791	813	789	804
15	545	524	535	618	582	607	799	771	780	818	796	808
16	524	468	490	660	614	629	808	785	798	820	775	805
17	493	480	489	663	620	644	855	804	837	782	730	745
18	525	488	501	622	610	615	857	821	841	750	735	746
19	540	523	530	680	619	646	874	824	847	752	732	743
20	554	528	534	686	661	673	850	815	827	733	708	720
21	571	533	548	721	667	685	854	831	840	718	677	705
22	561	524	541	732	633	667	872	846	861	683	672	677
23	558	531	543	734	656	687	870	852	858	678	664	672
24	569	546	553	723	687	705	893	861	874	676	659	668
25	---	---	---	691	612	642	879	860	867	675	654	666
26	---	---	---	646	628	638	904	869	884	665	652	658
27	---	---	---	659	633	639	909	883	895	669	651	658
28	---	---	---	659	633	649	897	863	881	660	646	653
29	---	---	---	652	638	644	868	800	828	666	633	642
30	---	---	---	663	642	654	802	785	794	651	636	644
31	---	---	---	667	637	648	805	780	794	---	---	---
MONTH	---	---	---	---	---	---	909	663	795	870	633	756

*--Instantaneous value from USGS sample.

BIOLOGICAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Biomass periphyton, ashfree drymass g/m2 (49954)	Periphyton biomass ash weight, g/m2 (00572)	Periphyton biomass dry weight, g/m2 (00573)	Biomass chlorophyll ratio, periphyton, number (70950)	Pheophytin a, periphyton, mg/m2 (62359)	Chlorophyll a periphyton, mg/m2 (70957)
SEP 25...	0900	201	8.2	577	14.0	11.0	7.4	220	225.6	172	23	43.0

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

BENTHIC INVERTEBRATE SAMPLES
SEPTEMBER 24, 2003

Qualitive multiple habitat sample--visual selection
Equipment type--D-frame net;
mesh size--500 µm

Organism	No. of individuals	Percentage of composition
NON INSECTS		
Naididae	200	3.3
Tubificidae	173	2.9
Sphaeriidae	13	0.2
Physidae	213	3.6
Planorbidae	13	0.2
Hyalella azteca	186	3.1
ODONATA		
Calopterygidae	13	0.2
Coenagrionidae	386	6.5
EPHEMEROPTERA		
Acentrella insignificans	146	2.5
Fallceon quilleri	1117	18.8
Plauditus punctoventris	80	1.3
Stenonema	93	1.6
Tricorythodes	372	6.3
HEMIPTERA		
Belostoma	13	0.2
Corixidae	80	1.3
Ambrysus	40	0.7
TRICHOPTERA		
Protoptila	27	0.4
Cheumatopsyche	13	0.2
Hydropsyche	27	0.4
Hydroptila	13	0.2
Nectopsyche	53	0.9
Oecetis	13	0.2
Limnephilidae	53	0.9
Chimarra	160	2.7
Polycentropus	27	0.4
COLEOPTERA		
Coptotomus	13	0.2
Dubiraphia	226	3.8
Microcylloepus	572	9.6
Stenelmis	279	4.7
Ochthebius	133	2.2
Berosus	27	0.4
DIPTERA		
Ceratopogoninae	27	0.4
Simulium	186	3.1
CHIRONOMIDAE		
Chironomidae-pupae	53	0.9
Cricotopus/Orthocladius	67	1.1
Cricotopus Trifascia Group	333	5.6
Dicrotendipes	27	0.4
Limnophyes	13	0.2
Parakiefferiella	279	4.7
Polypedilum	13	0.2
Rheocricotopus	13	0.2
Thienemannimyia Complex	173	2.9

Total number of taxon	42
Total number of organisums	5,958
Hilsenhoff biotic index	6
EPT abundance	2,194
Number of EPT taxon	14

Richest targeted habitat sample--riffles
Composite of 5 samples (unit area of 0.25 m^2)
Equipment type--Slack sampler;
mesh size--500 µm

Organism	No. of individuals	Percentage of composition
NON INSECTS		
Nematoda	5	0.2
Tubificidae	55	2.4
Physidae	20	0.9
Hyalella azteca	5	0.2
ODONATA		
Gomphidae	5	0.2
Coenagrionidae	5	0.2
EPHEMEROPTERA		
Acentrella insignificans	210	9.1
Baetis tricaudatus	5	0.2
Camelobaetidius warreni	5	0.2
Fallceon quilleri	900	38.9
Plauditus punctoventris	60	2.6
Stenonema	150	6.5
Tricorythodes	55	2.4
Neochoroterpes	55	2.4
HEMIPTERA		
Corixidae	5	0.2
Ambrysus	5	0.2
TRICHOPTERA		
Helicopsyche	5	0.2
Cheumatopsyche	5	0.2
Hydropsyche	10	0.4
Oecetis	15	0.6
Chimarra	25	1.1
Polycentropus	5	0.2
LEPIDOPTERA		
Petrophila	5	0.2
COLEOPTERA		
Dubiraphia	35	1.5
Microcylloepus	205	8.9
Stenelmis	20	0.9
DIPTERA		
Simulium	280	12.1
CHIRONOMIDAE		
Chironomidae-pupae	35	1.5
Cricotopus (Isocladius) Sylvestris Group	5	0.2
Cricotopus Trifascia Group	105	4.5
Parakiefferiella	5	0.2
Rheotanytarsus	5	0.2
Thienemannimyia Complex	5	0.2

Total number of taxon	33
Total number of organisums	2,315
Organisums per m^2	1,852
Hilsenhoff biotic index	5.53
EPT abundance	1,505
Number of EPT taxon	14
EPT per m^2	1,204

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

ALGAE SAMPLES
SEPTEMBER 24, 2003

Richest targeted habitat sample
Sample method--Top rock scrape

Organism	Percent of composition	Cell density cells/mm^2
BACILLARIOPHYTA		
Achnanthidium minutissimum	4.46	87.8
Amphipleura pellucida	3.32	65.4
Amphora inariensis	0.41	8.17
Amphora pediculus	0.41	8.17
Cocconeis pediculus	1.55	30.6
Cocconeis placentula	3.01	59.2
Cymbella excisa	6.74	133
Cymbella tumida	0.21	4.09
Diatoma mesodon	0.10	2.04
Diatoma moniliformis	1.66	32.7
Diatoma vulgaris	0.21	4.09
Diploneis puella	0.21	4.09
Encyonema auerswaldii	0.10	2.04
Epithemia adnata	0.21	4.09
Epithemia sorex	3.63	71.5
Gomphonema apiculatum	0.21	4.09
Gomphonema olivaceum	0.62	12.3
Gomphonema parvulum	0.73	14.3
Gomphonema pumilum	0.83	16.3
Karayevia clevei	0.21	4.09
Melosira varians	0.73	14.3
Gomphonema pumilum	0.83	16.3
Karayevia clevei	0.21	4.09
Melosira varians	0.73	14.3
Navicula amphiceropsis	0.10	2.04
Navicula canalis	0.52	10.2
Navicula capitatoradiata	0.83	16.3
Navicula caterva	0.21	4.09
Navicula erifuga	0.21	4.09
Navicula germainii	0.41	8.17
Navicula gregaria	0.62	12.3
Navicula lanceolata	0.21	4.09
Navicula minima	0.62	12.3
Navicula recens	0.31	6.13
Navicula reichardtiana	1.87	36.8
Navicula salinicola	0.10	2.04
Navicula symmetrica	0.73	14.3
Navicula tripunctata	0.41	8.17
Navicula veneta	0.10	2.04
Nitzschia agnita	5.28	104
Nitzschia angustata	0.21	4.09
Nitzschia dissipata	6.74	133
Nitzschia frustulum	5.80	114
Nitzschia graciliformis	2.28	44.9
Nitzschia inconspicua	0.21	4.09
Nitzschia microcephala	0.21	4.09
Nitzschia palea	6.32	125
Nitzschia pusilla	0.21	4.09
Nitzschia reversa	0.41	8.17
Nitzschia sociabilis	1.04	20.4
Nitzschia supralitorea	0.21	4.09
Planothidium dubium	0.21	4.09
Planothidium lanceolatum	0.10	2.04
Pleurosigma delicatulum	0.10	2.04
Reimeria sinuata	0.41	8.17
Rhoicosphenia abbreviata	0.52	10.2
Simonsenia delognei	0.41	8.17
Staurosira construens	1.35	26.6
Staurosirella leptostauron	0.52	10.2
Stephanodiscus hantzschii	0.21	4.09
Surirella minuta	0.41	8.17
Surirella ovalis	0.21	4.09
Synedra acus	1.55	30.6
Synedra ulna	2.80	55.1
CHLOROPHYTA		
Ankistrodesmus sp.	0.22	4.33
Mougeotia sp.	0.22	4.33
Scenedesmus sp.	0.44	8.66
CYANOPHYTA		
Anabaena sp.	7.03	139
Oscillatoria sp.	17.6	347
Total algae cells/mm^2		1,971

Depositional targeted habitat sample
Sample method--Inverted petri dish

Organism	Percent of composition	Cell density cells/mm^2
BACILLARIOPHYTA		
Achnanthes delicatula	0.20	0.28
Achnanthidium minutissimum	2.04	2.78
Amphipleura pellucida	1.12	1.53
Amphora inariensis	0.31	0.42
Asterionella formosa	0.41	0.56
Bacillaria paradoxa	0.51	0.70
Biremis circumtexta	0.20	0.28
Cocconeis pediculus	2.96	4.03
Cocconeis placentula	6.34	8.62
Craticula cuspidata	0.10	0.14
Cyclotella meneghiniana	0.61	0.83
Cymbella excisa	0.82	1.11
Cymbella tumida	0.20	0.28
Diatoma vulgaris	0.31	0.42
Diploneis puella	0.10	0.14
Epithemia adnata	0.20	0.28
Epithemia sorex	1.33	1.81
Fragilaria atomus	0.20	0.28
Fragilaria vaucheriae	0.41	0.56
Gomphonema olivaceum	0.51	0.70
Gomphonema parvulum	0.82	1.11
Fragilaria vaucheriae	0.41	0.56
Gomphonema olivaceum	0.51	0.70
Gomphonema parvulum	0.82	1.11
Gomphonema pumilum	1.33	1.81
Gyrosigma acuminatum	0.10	0.14
Hannaea arcus	0.20	0.28
Hippodonta hungarica	0.20	0.28
Karayevia clevei	0.10	0.14
Melosira varians	0.82	1.11
Navicula amphiceropsis	1.43	1.95
Navicula antonii	0.20	0.28
Navicula canalis	2.25	3.06
Navicula capitatoradiata	2.15	2.92
Navicula erifuga	0.41	0.56
Navicula germainii	5.21	7.09
Navicula gregaria	0.41	0.56
Navicula halophila	0.20	0.28
Navicula kotschyi	0.61	0.83
Navicula krasskei	0.20	0.28
Navicula lanceolata	1.12	1.53
Navicula libonensis	0.20	0.28
Navicula minima	0.61	0.83
Navicula pseudanglica	0.20	0.28
Navicula radiosa	0.20	0.28
Navicula reichardtiana	2.86	3.89
Navicula salinicola	1.02	1.39
Navicula sp.	0.10	0.14
Navicula symmetrica	0.92	1.25
Navicula tripunctata	0.51	0.70
Navicula veneta	0.82	1.11
Navicula viridula	0.10	0.14
Navicula weinzierlii	0.20	0.28
Nitzschia acicularis	1.33	1.81
Nitzschia agnita	4.39	5.98
Nitzschia angustatula	0.10	0.14
Nitzschia aurariae	0.20	0.28
Nitzschia dissipata	2.04	2.78
Nitzschia frustulum	6.34	8.62
Nitzschia graciliformis	1.74	2.36
Nitzschia heufleriana	0.10	0.14
Nitzschia palea	7.25	9.87
Nitzschia reversa	2.04	2.78
Nitzschia sp.	0.41	0.56
Nitzschia supralitorea	0.61	0.83
Nitzschia vermicularis	0.41	0.56
Planothidium dubium	0.20	0.28
Planothidium lanceolatum	0.51	0.70
Pleurosigma delicatulum	0.92	1.25
Reimeria sinuata	0.72	0.97
Rhoicosphenia abbreviata	1.12	1.53
Rhopalodia gibba	0.20	0.28
Rhopalodia operculata	0.20	0.28
Simonsenia delognei	0.20	0.28
Staurosira construens	1.84	2.50

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

ALGAE SAMPLES

Depositional targeted habitat sample
Sample method--Inverted petri dish

Organism	Percent of composition	Cell density cells/mm^2
BACILLARIOPHYTA--Continued		
Staurosirella pinnata	0.31	0.42
Staurosirella leptostauron	0.41	0.56
Surirella angusta	0.20	0.28
Surirella brebissonii	0.10	0.14
Surirella minuta	0.61	0.83
Surirella ovalis	0.61	0.83
Synedra acus	0.20	0.28
Synedra rumpens	0.20	0.28
Synedra ulna	0.41	0.56
Thalassiosira pseudonana	0.10	0.14
Thalassiosira weissflogii	0.20	0.28
Tryblionella apiculata	0.41	0.56
Tryblionella calida	0.31	0.42
Tryblionella hungarica	0.20	0.28
unknown genus	0.20	0.28
CHLOROPHYTA		
Mougeotia sp.	0.28	0.38
CYANOPHYTA		
Chroococcus sp.	1.12	1.5
Oscillatoria sp.	16.8	22.8
Total algae cells/mm^2		136

06309200 MIDDLE FORK POWDER RIVER NEAR BARNUM, WY

LOCATION.--Lat 43°34'40", long 107°08'16", in SE¼ SW¼ NE¼ sec.26, T.42 N., R.86 W., Washakie County, Hydrologic Unit 10090201, on left bank 1,100 ft downstream from Rock Creek and 13 mi southwest of Barnum.

DRAINAGE AREA.--45.2 mi^2.

PERIOD OF RECORD.--September 1961 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,220 ft above NGVD of 1929, from topographic map. Prior to October 1, 1970, at site 1,000 ft upstream at different datum. October 1, 1970 to August 17, 1987, at site 100 ft upstream at datum 6.78 ft higher (gage operated concurrently with present site September 15, 1983 to August 17, 1987). U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	e4.0	4.5	e4.3	e4.8	4.8	20	57	e23	19	4.5	3.9
2	4.1	e4.1	4.4	e4.3	e4.7	e4.7	20	62	21	9.2	4.4	3.9
3	3.9	e4.2	4.3	e4.2	e4.7	e4.4	16	85	20	8.1	4.4	4.7
4	3.9	e4.2	4.3	e4.0	e4.6	e4.4	19	134	20	7.8	4.4	4.7
5	3.9	e3.9	4.4	e4.3	e4.6	e4.5	27	176	20	9.7	4.3	4.2
6	3.9	e4.2	4.6	e4.5	e4.6	e4.8	31	163	17	8.3	4.2	4.1
7	3.9	e4.2	4.5	e4.5	e4.7	e5.0	36	133	16	7.3	4.2	4.1
8	3.9	e4.2	4.5	e4.5	e4.8	5.2	33	116	16	6.8	4.1	4.0
9	3.9	e4.3	e4.4	e4.7	e4.7	5.2	31	101	16	6.5	4.1	3.9
10	3.9	e4.3	e4.5	e5.0	e4.5	5.1	29	93	15	6.3	4.2	3.9
11	3.9	e4.3	4.6	e4.8	e4.6	5.0	20	87	19	6.0	4.2	3.9
12	3.9	4.4	e4.6	e4.8	e4.7	5.0	21	77	15	5.8	4.1	4.0
13	3.9	4.5	e4.8	e4.7	e4.7	4.9	24	67	13	5.6	4.1	5.9
14	3.9	4.4	e4.7	e4.7	e4.8	e4.8	32	60	12	5.4	4.1	4.7
15	3.9	4.4	e4.7	e4.6	e4.8	5.0	38	54	11	6.4	4.0	4.7
16	3.9	4.4	e4.7	e4.6	e4.8	4.8	42	50	11	6.3	4.0	4.2
17	3.9	4.4	4.8	e4.5	e4.9	4.9	50	49	12	5.5	4.0	4.1
18	3.9	e4.3	4.8	e4.5	4.9	e5.0	60	51	13	5.3	5.5	3.9
19	3.9	4.5	4.8	e4.5	4.9	e5.2	49	52	12	5.1	5.2	4.0
20	3.7	4.4	4.7	e4.5	4.6	e5.4	47	56	11	5.0	4.4	4.2
21	3.7	e4.4	4.5	e4.7	e4.4	e5.6	43	59	11	4.9	4.2	4.3
22	3.7	e4.2	4.3	e4.7	e4.5	e5.8	39	50	10	5.2	4.1	4.2
23	3.7	e4.0	4.5	e4.8	4.6	e5.8	36	45	9.1	10	4.1	4.1
24	3.7	e4.1	4.5	e4.6	4.6	e6.0	39	43	9.1	8.5	4.0	4.1
25	3.8	e4.1	4.5	e4.4	4.6	e7.0	39	38	9.2	6.2	4.1	4.1
26	3.8	e4.2	e4.5	e4.2	4.5	e9.0	41	34	8.7	5.8	4.2	4.1
27	e4.0	e4.2	e4.5	e4.5	e4.4	e10	59	32	8.3	5.9	4.5	4.3
28	e4.0	e4.3	e4.4	e4.7	e4.6	e8.0	72	31	8.4	5.9	4.2	6.7
29	e4.0	e4.3	e4.2	e4.9	e4.8	e9.0	62	32	8.1	5.3	4.1	4.6
30	e4.0	e4.5	e4.3	e5.0	---	9.6	58	e34	13	5.0	4.1	4.8
31	e4.3	---	e4.4	e4.9	---	13	---	e27	---	4.8	4.0	---
TOTAL	120.9	127.9	140.2	141.9	135.4	186.9	1,133	2,148	407.9	212.9	132.0	130.3
MEAN	3.90	4.26	4.52	4.58	4.67	6.03	37.8	69.3	13.6	6.87	4.26	4.34
MAX	4.3	4.5	4.8	5.0	4.9	13	72	176	23	19	5.5	6.7
MIN	3.7	3.9	4.2	4.0	4.4	4.4	16	27	8.1	4.8	4.0	3.9
AC-FT	240	254	278	281	269	371	2,250	4,260	809	422	262	258

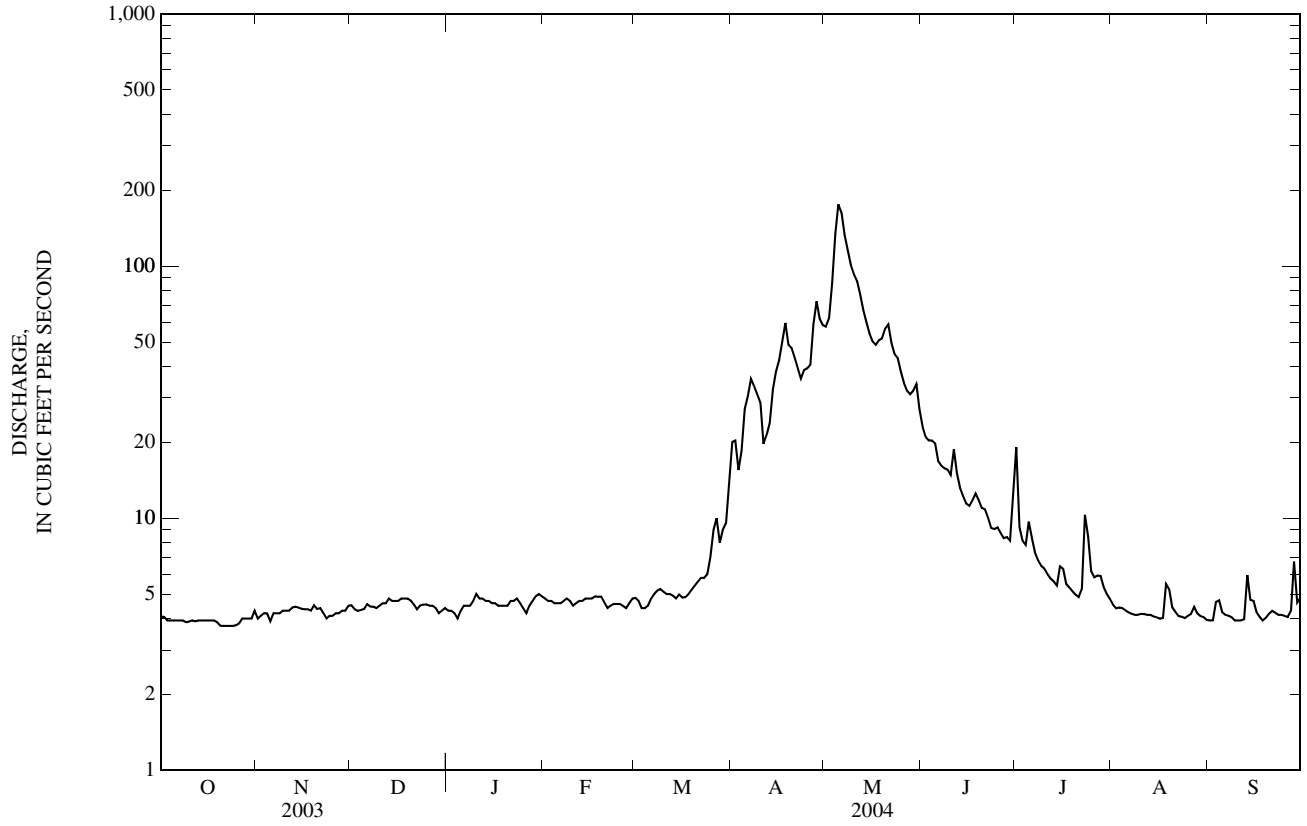
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	6.97	6.49	5.63	5.11	5.24	6.62	34.2	153	86.5	17.4	8.41	7.14
MAX	15.1	22.9	10.3	7.78	10.1	14.2	106	326	299	39.9	18.3	17.0
(WY)	(1999)	(1999)	(1999)	(1983)	(1969)	(1972)	(1987)	(1999)	(1975)	(1975)	(1968)	(1968)
MIN	2.45	2.00	2.75	2.48	2.87	3.47	8.00	42.0	13.0	5.09	4.25	4.16
(WY)	(1963)	(1963)	(1962)	(1962)	(2002)	(2002)	(1970)	(2003)	(2001)	(2003)	(2003)	(1969)

06309200 MIDDLE FORK POWDER RIVER NEAR BARNUM, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	3,876.5		5,017.3		--	
ANNUAL MEAN	10.6		13.7		28.7	
HIGHEST ANNUAL MEAN	--		--		51.4	1999
LOWEST ANNUAL MEAN	--		--		10.6	2003
HIGHEST DAILY MEAN	97	May 18	176	May 5	954	Apr 29, 1999
LOWEST DAILY MEAN	2.7	Feb 24	3.7	Oct 20-24	1.0	Dec 15, 1964
ANNUAL SEVEN-DAY MINIMUM	2.9	Feb 4	3.7	Oct 20	1.2	Jan 22, 1966
MAXIMUM PEAK FLOW	--		226	May 5	7,110[a]	Jun 15, 1963
MAXIMUM PEAK STAGE	--		7.05	May 5	12.60[b]	Jun 15, 1963
ANNUAL RUNOFF (AC-FT)	7,690		9,950		20,780	
10 PERCENT EXCEEDS	30		39		68	
50 PERCENT EXCEEDS	4.3		4.7		7.0	
90 PERCENT EXCEEDS	3.1		4.0		4.4	

a On basis of slope-area measurement of peak flow.
b From floodmarks, site and datum then in use.
e Estimated.



06311000 NORTH FORK POWDER RIVER NEAR HAZELTON, WY

LOCATION.--Lat 44°01'40", long 107°04'49", in SW¼ SE¼ NW¼ sec.21, T.47 N., R.85 W., Johnson County, Hydrologic Unit 10090201, on left bank 0.5 mi upstream from Dullknife Reservoir, 0.6 mi downstream from Twin Creek, 7.2 mi southwest of Hazelton, and 19 mi northwest of Mayoworth.

DRAINAGE AREA.--24.5 mi^2.

PERIOD OF RECORD.--September 1946 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1279: 1947-48(M), 1949, 1950-51(M), 1952. WDR WY-98: 1997.

GAGE.--Water-stage recorder. Elevation of gage is 8,180 ft above NGVD of 1929, from topographic map. Prior to October 1, 1966, at site 0.7 mi downstream at different datum. October 1, 1966 to August 26, 1986, at site 0.1 mi upstream at different 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. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	e2.6	2.3	e2.0	e2.0	1.9	e15	17	18	30	6.5	4.5
2	3.0	e2.0	2.2	e2.0	e2.0	1.9	e15	21	17	13	6.2	4.4
3	2.9	e2.2	2.2	e2.0	2.0	1.9	e11	35	17	11	6.2	7.7
4	2.8	e2.4	2.1	e2.0	2.1	1.9	e13	51	16	10	6.5	6.6
5	2.8	e2.5	2.1	e2.0	2.1	1.9	e24	66	16	22	6.2	5.5
6	2.7	e2.5	2.2	e2.0	2.1	1.9	e26	58	16	18	6.7	4.8
7	2.7	e2.5	2.2	e2.0	2.0	1.9	e31	50	15	12	5.9	4.5
8	2.7	e2.5	2.2	e2.0	2.1	2.0	e28	44	14	9.8	5.6	4.3
9	2.7	e2.5	2.2	e2.0	2.1	2.1	e26	36	14	8.9	5.7	4.2
10	2.6	e2.5	2.1	e2.0	2.0	2.2	e24	31	14	8.4	5.8	4.1
11	e2.5	e2.5	2.1	e2.0	1.9	2.1	e15	33	17	7.9	5.8	4.1
12	e2.6	e2.6	2.1	e2.0	1.9	2.0	e16	28	19	7.5	5.5	4.0
13	e2.7	e2.6	2.1	e2.0	1.9	2.0	e14	26	15	7.3	5.3	6.4
14	e2.8	e2.6	2.2	e2.0	1.9	1.9	e27	28	13	7.1	5.1	5.9
15	e2.9	e2.6	2.1	e2.0	1.9	1.9	e16	26	12	7.5	5.0	5.5
16	e2.8	2.6	2.1	e2.0	2.0	1.9	e14	24	12	8.3	4.7	5.0
17	2.9	2.7	2.0	e2.0	2.0	e2.0	14	23	15	7.5	4.8	4.5
18	2.9	2.6	2.0	e2.0	2.0	2.0	14	25	17	7.2	7.2	4.1
19	2.7	2.5	2.0	e2.0	2.0	2.1	e12	29	17	6.9	8.5	4.5
20	2.7	2.5	2.1	e2.0	2.0	2.4	12	26	15	6.5	8.1	8.1
21	2.7	2.4	2.1	e2.0	1.9	2.4	e11	41	16	6.6	6.5	8.2
22	2.6	2.4	2.1	e2.0	1.9	2.5	e10	29	13	7.4	5.9	6.4
23	2.5	2.3	2.0	e2.0	1.9	3.0	e10	24	12	23	6.3	5.5
24	2.4	2.3	2.0	e2.0	1.9	e3.5	e11	25	12	19	5.1	5.1
25	e1.9	2.3	2.0	e2.0	1.9	e4.0	12	22	12	14	5.6	4.7
26	e2.3	2.1	2.1	e2.0	1.9	e7.0	14	21	12	9.4	6.4	4.5
27	e2.5	2.1	2.0	e2.0	1.9	e5.0	22	20	11	8.6	7.9	5.5
28	e2.7	2.1	1.9	e2.0	1.9	3.6	25	20	10	9.6	8.6	9.5
29	e2.7	2.3	e2.0	e2.0	1.8	3.2	21	25	9.5	9.0	6.3	6.0
30	e2.7	2.3	e2.0	e2.0	---	3.8	e15	25	11	7.6	5.3	5.1
31	e2.6	---	e2.0	e2.0	---	e8.0	---	21	---	6.9	4.8	---
TOTAL	83.0	72.6	64.8	62.0	57.0	85.9	518	950	427.5	337.9	190.0	163.2
MEAN	2.68	2.42	2.09	2.00	1.97	2.77	17.3	30.6	14.2	10.9	6.13	5.44
MAX	3.0	2.7	2.3	2.0	2.1	8.0	31	66	19	30	8.6	9.5
MIN	1.9	2.0	1.9	2.0	1.8	1.9	10	17	9.5	6.5	4.7	4.0
AC-FT	165	144	129	123	113	170	1,030	1,880	848	670	377	324

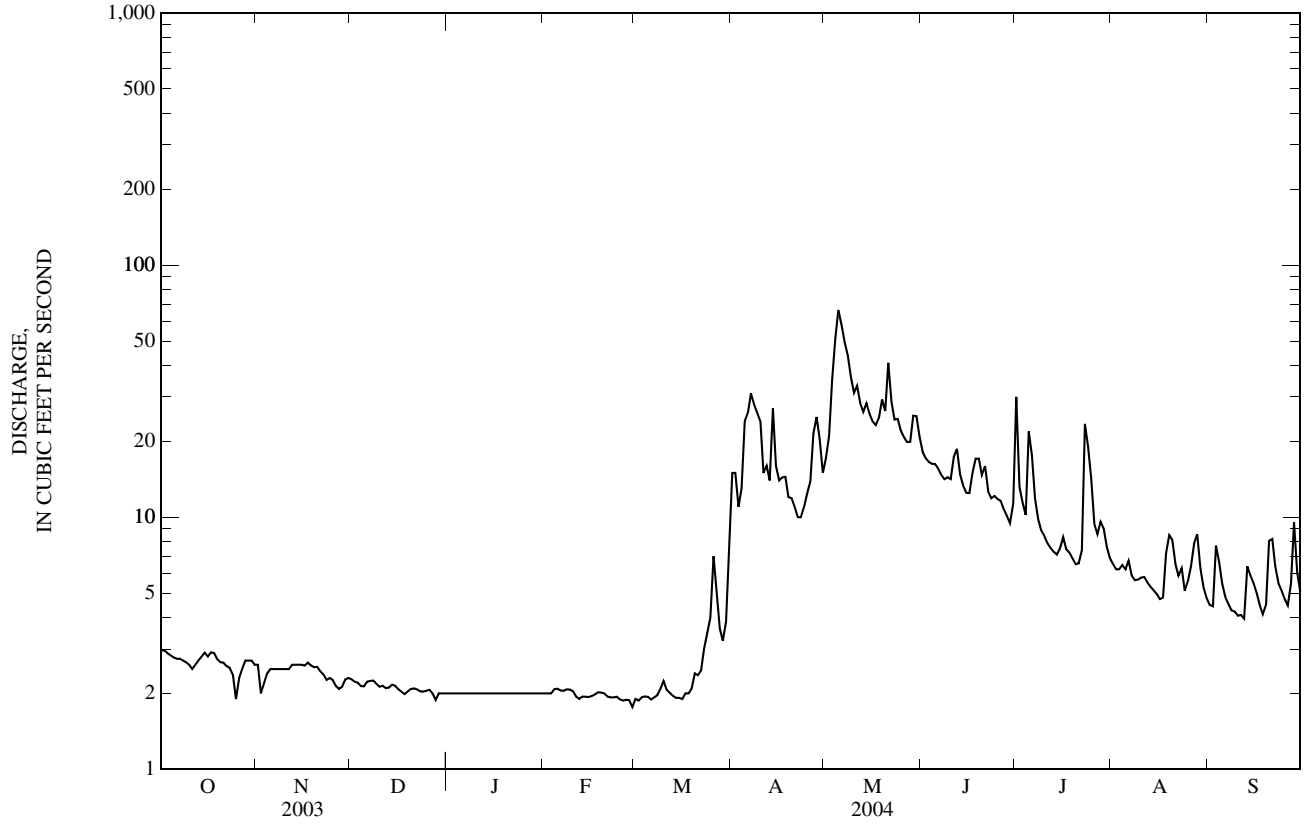
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004, BY WATER YEAR (WY)

MEAN	4.30	3.46	2.78	2.29	2.12	2.24	10.0	59.6	62.2	16.8	6.94	4.99
MAX	10.4	10.1	6.96	4.50	4.00	4.99	45.3	119	178	46.8	13.3	9.74
(WY)	(1983)	(1983)	(1983)	(1958)	(1958)	(1960)	(2003)	(1947)	(1967)	(1975)	(1997)	(1982)
MIN	2.03	1.70	1.41	0.80	1.00	1.19	1.09	20.7	9.08	4.88	2.66	2.47
(WY)	(1961)	(1981)	(1967)	(1949)	(1959)	(1967)	(1961)	(2001)	(2001)	(1960)	(2001)	(1960)

06311000 NORTH FORK POWDER RIVER NEAR HAZELTON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1946 - 2004	
ANNUAL TOTAL	5,752.9		3,011.9		--	
ANNUAL MEAN	15.8		8.23		14.8	
HIGHEST ANNUAL MEAN	--		--		26.7	1967
LOWEST ANNUAL MEAN	--		--		5.05	2001
HIGHEST DAILY MEAN	150	May 25	66	May 5	354	Jun 15, 1953
LOWEST DAILY MEAN	1.2	Jan 12,19	1.8	Feb 29	0.60[a]	Oct 30, 1960
ANNUAL SEVEN-DAY MINIMUM	1.4	Jan 9	1.9	Feb 23	0.64	Apr 12, 1961
MAXIMUM PEAK FLOW	--		90[b]	May 5	886[c]	Jun 15, 1953
MAXIMUM PEAK STAGE	--		4.51[d]	Apr 5	6.21[f]	May 14, 1984
ANNUAL RUNOFF (AC-FT)	11,410		5,970		10,750	
10 PERCENT EXCEEDS	50		22		42	
50 PERCENT EXCEEDS	2.8		4.1		3.8	
90 PERCENT EXCEEDS	1.5		2.0		1.9	

a May have been less during winter months of water years 1947 and 1948.
b Gage height, 3.33 ft.
c Gage height, 4.34 ft, site and datum then in use, from rating curve extended above 110 ft^3/s, on basis of slope-area measurement of peak flow.
d Backwater from ice.
e Estimated.
f Backwater from ice, site and datum then in use.



06311400 NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY

LOCATION.--Lat 43°54'41", long 106°53'20", in NW¼ NE¼ SE¼ sec.36, T.46 N., R.84 W., Johnson County, Hydrologic Unit 10090201, on left bank 0.8 mi downstream from Pass Creek, 1.2 mi upstream from Hat Ranch, 7.2 mi northwest of Mayoworth, and 13 mi downstream from Dullknife Reservoir.

DRAINAGE AREA.--100 mi^2.

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,700 ft above NGVD of 1929, from topographic map. Prior to September 15, 1983, at site 60 ft downstream 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. Some regulation for irrigation by Dullknife Reservoir 13 mi upstream, capacity, 4,350 acre-ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	16	e16	16	17	17	16	25	36	25	25
2	18	17	16	e16	17	17	17	16	25	33	25	24
3	17	17	e16	e16	17	17	17	16	25	32	24	25
4	17	17	e16	e16	17	17	17	16	25	30	24	25
5	17	e16	e16	e16	e16	17	17	16	28	30	24	24
6	17	16	e16	e16	e16	17	17	16	35	29	24	24
7	17	17	e16	e16	e16	17	18	16	39	29	25	24
8	17	17	e16	e16	e16	17	17	16	40	28	26	23
9	17	17	e16	e16	e16	17	18	16	41	27	26	23
10	17	17	e16	e16	e16	17	17	16	41	26	26	23
11	17	17	e16	e16	e16	17	17	16	43	25	27	23
12	17	16	e16	e16	e16	18	17	16	44	24	26	22
13	17	16	e16	17	e16	17	17	16	44	23	26	23
14	17	16	e16	17	e16	18	17	16	44	22	26	21
15	17	16	e16	16	e16	17	17	16	43	23	26	19
16	17	16	e16	16	e16	17	17	16	43	22	25	18
17	17	16	e16	16	e16	17	17	16	44	21	25	18
18	17	16	e16	16	e16	17	18	16	44	23	25	18
19	17	16	e16	16	e16	17	17	15	43	24	25	18
20	17	16	e16	16	e16	17	17	16	43	24	25	18
21	16	16	e16	16	e16	17	17	18	42	24	26	18
22	16	e15	e16	16	e16	17	16	21	42	24	27	17
23	16	e16	e16	16	e16	17	16	21	42	27	28	17
24	16	16	e16	16	e16	17	16	22	42	27	29	17
25	16	16	e16	17	16	17	16	21	42	26	30	17
26	16	16	e16	17	16	17	15	21	39	25	31	17
27	17	16	e16	17	17	17	15	21	36	25	31	18
28	17	16	e16	17	17	17	16	21	34	26	29	18
29	17	16	e16	17	17	17	16	23	33	26	27	18
30	17	16	e16	17	---	17	16	24	33	25	26	17
31	17	---	e16	16	---	17	---	25	---	25	25	---
TOTAL	523	488	496	504	470	529	502	557	1,144	811	814	612
MEAN	16.9	16.3	16.0	16.3	16.2	17.1	16.7	18.0	38.1	26.2	26.3	20.4
MAX	18	17	16	17	17	18	18	25	44	36	31	25
MIN	16	15	16	16	16	17	15	15	25	21	24	17
AC-FT	1,040	968	984	1,000	932	1,050	996	1,100	2,270	1,610	1,610	1,210

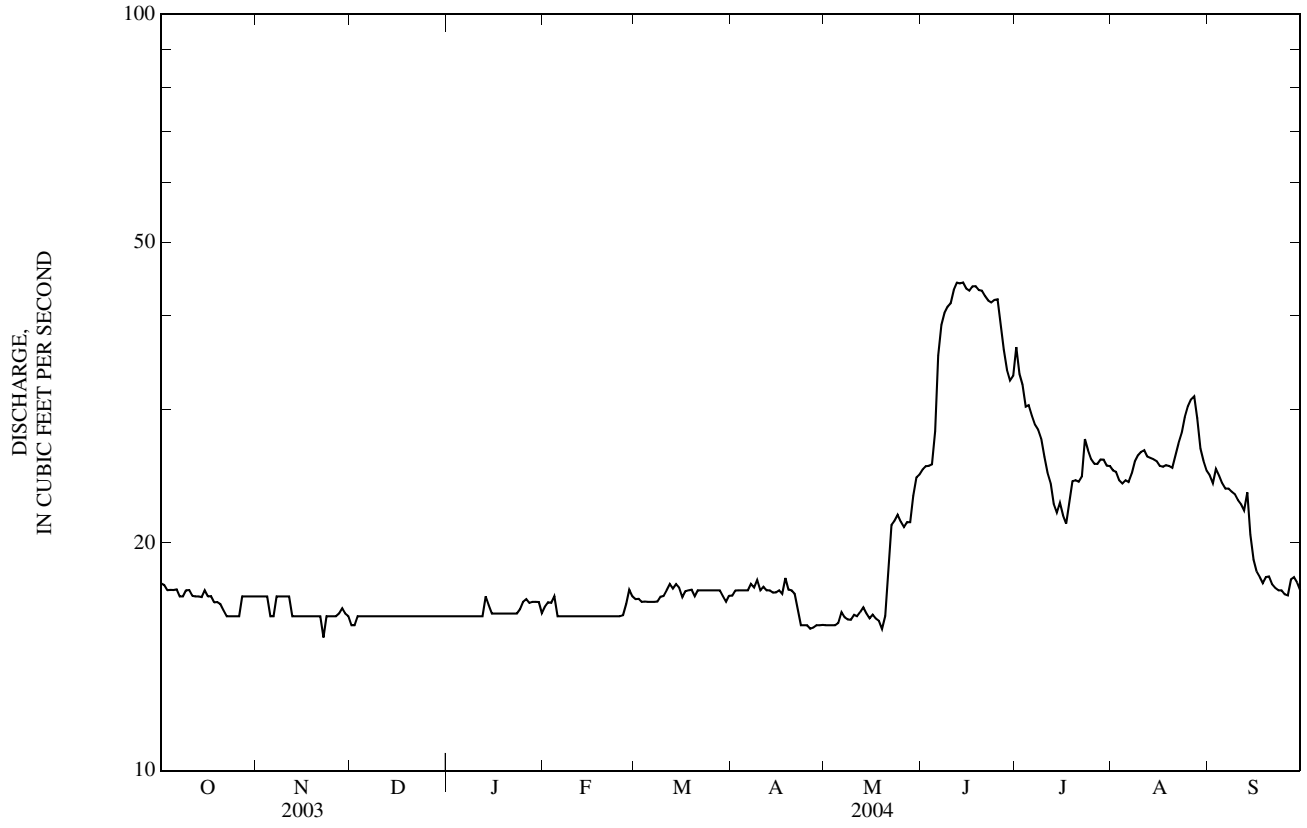
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY)

MEAN	21.6	19.3	18.8	18.3	18.1	18.0	26.9	73.2	85.7	45.0	38.5	31.0
MAX	31.5	25.3	23.1	21.0	22.0	21.1	47.9	176	193	80.5	52.4	53.8
(WY)	(1983)	(1999)	(1977)	(2000)	(2000)	(2000)	(1977)	(1978)	(1995)	(1975)	(1998)	(1997)
MIN	16.1	15.8	14.9	15.1	14.2	14.6	16.7	18.0	29.7	26.2	26.1	18.2
(WY)	(1990)	(1990)	(1991)	(1991)	(1991)	(1991)	(2004)	(2004)	(2001)	(2004)	(1985)	(2001)

06311400 NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1974 - 2004	
ANNUAL TOTAL	11,197		7,450		--	
ANNUAL MEAN	30.7		20.4		34.6	
HIGHEST ANNUAL MEAN	--		--		51.6	1978
LOWEST ANNUAL MEAN	--		--		20.4	2004
HIGHEST DAILY MEAN	160	May 24	44	Several days	379	Jun 5, 1995
LOWEST DAILY MEAN	13	Mar 23-25	15	Several days	9.5	Feb 6, 1991
ANNUAL SEVEN-DAY MINIMUM	14	Mar 20	16	Apr 22	11	Feb 5, 1991
MAXIMUM PEAK FLOW	--		48 [a]	Jun 20	1,590[b]	Aug 1, 1984
MAXIMUM PEAK STAGE	--		4.31[c]	Nov 23	8.89[c]	Aug 1, 1984
ANNUAL RUNOFF (AC-FT)	22,210		14,780		25,070	
10 PERCENT EXCEEDS	54		29		60	
50 PERCENT EXCEEDS	19		17		21	
90 PERCENT EXCEEDS	16		16		17	

a Gage height, 4.12 ft.
b From rating curve extended above 400 ft^3/s, on basis of slope-area measurement of peak flow.
c From floodmarks.
e Estimated.



06313400 SALT CREEK NEAR SUSSEX, WY

LOCATION.--Lat 43°37'19", long 106°22'04", in NE¼ NE¼ SE¼ sec.8, T.42 N., R.79 W., Johnson County, Hydrologic Unit 10090204, on left bank 200 ft upstream from bridge on West Sussex Dugout oil field road, 6.3 mi southwest of Sussex, and 12.6 mi upstream from mouth.

DRAINAGE AREA.--769 mi^2.

PERIOD OF RECORD.--Water years 1949, 1952, 1968 to 1981, October 1982 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 21...	0840	12	654	8.2	85	8.2	5,890	14.0	9.0	570	138	54.3	36.7
NOV 19...	0835	14	649	11.5	97	8.2	5,720	10.0	1.0	740	192	62.5	36.4
DEC 17...	0830	16	650	11.7	96	8.1	6,270	4.5	.0	800	209	67.2	38.0
JAN 21...	0825	15	650	10.3	85	8.0	5,850	-5.0	.0	880	243	67.3	42.8
FEB 18...	0830	16	648	10.7	88	8.1	5,590	7.0	.0	690	188	53.3	36.5
MAR 24...	1115	17	644	9.8	110	8.3	5,870	17.0	12.0	850	207	81.7	36.6
APR 20...	0820	18	642	9.1	91	8.2	6,240	10.5	7.0	610	142	62.1	33.2
MAY 18...	1245	14	648	11.9	150	8.4	6,210	26.0	17.5	720	153	82.8	49.2
JUN 28...	1055	12	660	11.0	139	8.6	5,930	24.0	18.5	320	56.2	44.2	27.8
JUL 27...	0835	20	650	7.6	97	8.1	5,130	22.0	18.5	720	168	72.1	25.0
AUG 24...	0825	10	630	7.7	91	8.3	6,210	17.0	13.0	360	64.3	48.7	35.6
SEP 20...	0910	13	641	11.8	138	8.4	5,520	10.0	13.5	470	104	50.5	36.6

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT 21...	18	992	78	203	1,070	3.0	20.2	1,190	3,620	5.17	123	3,800	140
NOV 19...	15	935	72	223	977	2.8	31.0	1,220	3,590	5.07	141	3,730	843
DEC 17...	17	1,070	73	290	1,070	3.0	36.5	1,240	3,910	5.31	169	3,910	395
JAN 21...	15	1,000	70	232	1,020	3.0	32.4	1,100	3,650	5.03	150	3,700	1,210
FEB 18...	16	938	74	322	1,030	2.8	30.6	1,090	3,560	4.94	157	3,630	1,150
MAR 24...	17	1,150	74	309	945	2.5	24.4	1,430	4,060	5.50	186	4,050	1,150
APR 20...	19	1,090	78	339	1,100	2.6	24.4	1,330	3,980	5.68	203	4,170	470
MAY 18...	19	1,160	76	253	1,120	2.6	15.4	1,270	4,000	5.57	155	4,100	69
JUN 28...	28	1,150	87	284	1,150	2.3	7.66	926	3,540	5.00	119	3,680	60
JUL 27...	15	895	72	290	741	1.7	15.5	1,450	3,540	5.06	201	3,720	25,600
AUG 24...	27	1,180	86	310	1,280	2.5	21.5	966	3,790	5.30	105	3,900	922
SEP 20...	20	1,000	81	235	1,130	2.8	15.3	994	3,480	4.83	125	3,550	1,060

06313400 SALT CREEK NEAR SUSSEX, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)
OCT							
21...	2.4	113	<.18	10	54.3	3.1	2.0
NOV							
19...	2.0	104	<.18	<19	44.8	E1.1	2.2
DEC							
17...	2.2	39	<.06	<32	58.0	1.3	.6
JAN							
21...	3.1	177	<.18	E11	91.3	2.6	3.7
FEB							
18...	2.8	169	<.18	11	94.1	1.2	2.1
MAR							
24...	2.7	170	E.10	<19	72.0	<1.2	1.4
APR							
20...	3.1	121	<.18	E19	46.5	1.5	4.3
MAY							
18...	2.8	79	<.18	E13	37.1	3.0	E1.1
JUN							
28...	3.2	88	<.18	25	32.1	2.7	2.6
JUL							
27...	1.6	440	1.69	<19	6.0	3.3	6.3
AUG							
24...	3.0	119	<.18	<19	9.6	3.3	4.0
SEP							
20...	2.0	108	<.18	E13	20.7	2.1	1.7

< -- Less than
E -- Estimated value

06313500 POWDER RIVER AT SUSSEX, WY

LOCATION.--Lat 43°41'44", long 106°18'24", in SW¼ SW¼ NW¼ sec.13, T.43 N., R.79 W., Johnson County, Hydrologic Unit 10090202, on left bank 0.5 mi upstream from bridge on State Highway 192, 0.6 mi west of Sussex, and 2.7 mi downstream from Salt Creek.

DRAINAGE AREA.--3,090 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to June 1940, February 1950 to September 1957, October 1977 to September 1984, October 1985 to September 1998, November 2002 to current year.

REVISED RECORDS.--WDR WY-80-1: 1979(M), 1979.

GAGE.--Water-stage recorder. Elevation of gage is 4,365.16 ft above NGVD of 1929. Prior to June 30, 1940, nonrecording gage about 500 ft downstream from State Highway 192 at datum 4,363.23 ft. February 8, 1950 to September 30, 1957, water-stage recorder about 600 ft downstream from State Highway 192 at datum 4.362.16 ft. October 1977 to April 8, 1983, water-stage recorder 10 ft downstream from State Highway 192 at datum 4,362.95 ft. April 9, 1983 to October 21, 1987, at site 300 ft upstream at same datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Numerous small reservoirs and diversions for irrigation of about 17,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 30, 1923, reached an elevation of 4,375.75 ft at site about 600 ft downstream from State Highway 192, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	e64	e90	e86	e100	165	144	146	40	21	19	9.4
2	20	e70	e88	e90	e96	162	151	142	35	46	16	6.8
3	23	e68	e86	e82	e98	161	159	132	31	29	14	7.7
4	24	e64	e84	e74	e100	160	162	139	29	23	14	13
5	22	e66	e84	e68	e100	149	159	153	27	187	12	16
6	21	e68	e90	e70	e110	149	165	204	26	62	12	32
7	21	e80	e100	e70	e105	148	172	221	25	59	11	29
8	21	e100	e94	e76	e100	154	180	198	24	43	11	20
9	19	e120	e90	e82	e98	198	190	156	24	25	9.9	15
10	17	e140	e86	e82	e88	314	204	143	22	17	10	12
11	18	e150	e86	e82	e82	799	181	120	21	15	12	10
12	16	e130	e94	e80	e86	329	164	119	21	15	11	13
13	19	e140	e125	e82	e90	240	158	119	20	13	9.7	13
14	33	e140	e120	e84	e100	222	139	116	19	18	10	15
15	41	e145	e115	e86	e115	196	126	102	20	13	9.6	16
16	46	e140	e105	e86	e125	175	123	88	18	11	9.3	20
17	47	e140	e100	e90	e140	167	124	67	18	12	9.8	15
18	51	e135	e100	e92	e145	156	136	57	19	12	9.9	14
19	56	e135	e105	e94	e140	154	181	53	22	11	9.6	13
20	54	e130	e100	e100	e135	157	168	45	23	12	9.9	14
21	55	e110	e98	e105	e130	158	152	48	35	13	9.4	15
22	55	e90	e94	e105	e125	153	142	62	29	17	9.3	16
23	51	e84	e92	e100	e140	152	134	64	26	59	8.3	18
24	50	e92	e86	e98	e175	151	123	56	22	1,040	8.3	13
25	50	e90	e90	e92	e300	150	117	50	21	266	8.0	13
26	58	e90	e96	e88	e340	153	115	49	21	117	12	13
27	61	e90	e92	e82	211	153	103	43	20	67	10	12
28	62	e86	e90	e78	209	153	100	39	20	48	21	31
29	e70	e90	e84	e84	213	149	127	39	18	38	20	79
30	e64	e94	e84	e96	---	142	145	44	20	33	12	46
31	e60	---	e82	e105	---	139	---	43	---	26	8.9	---
TOTAL	1,224	3,141	2,930	2,689	3,996	6,008	4,444	3,057	716	2,368	356.9	559.9
MEAN	39.5	105	94.5	86.7	138	194	148	98.6	23.9	76.4	11.5	18.7
MAX	70	150	125	105	340	799	204	221	40	1,040	21	79
MIN	16	64	82	68	82	139	100	39	18	11	8.0	6.8
AC-FT	2,430	6,230	5,810	5,330	7,930	11,920	8,810	6,060	1,420	4,700	708	1,110

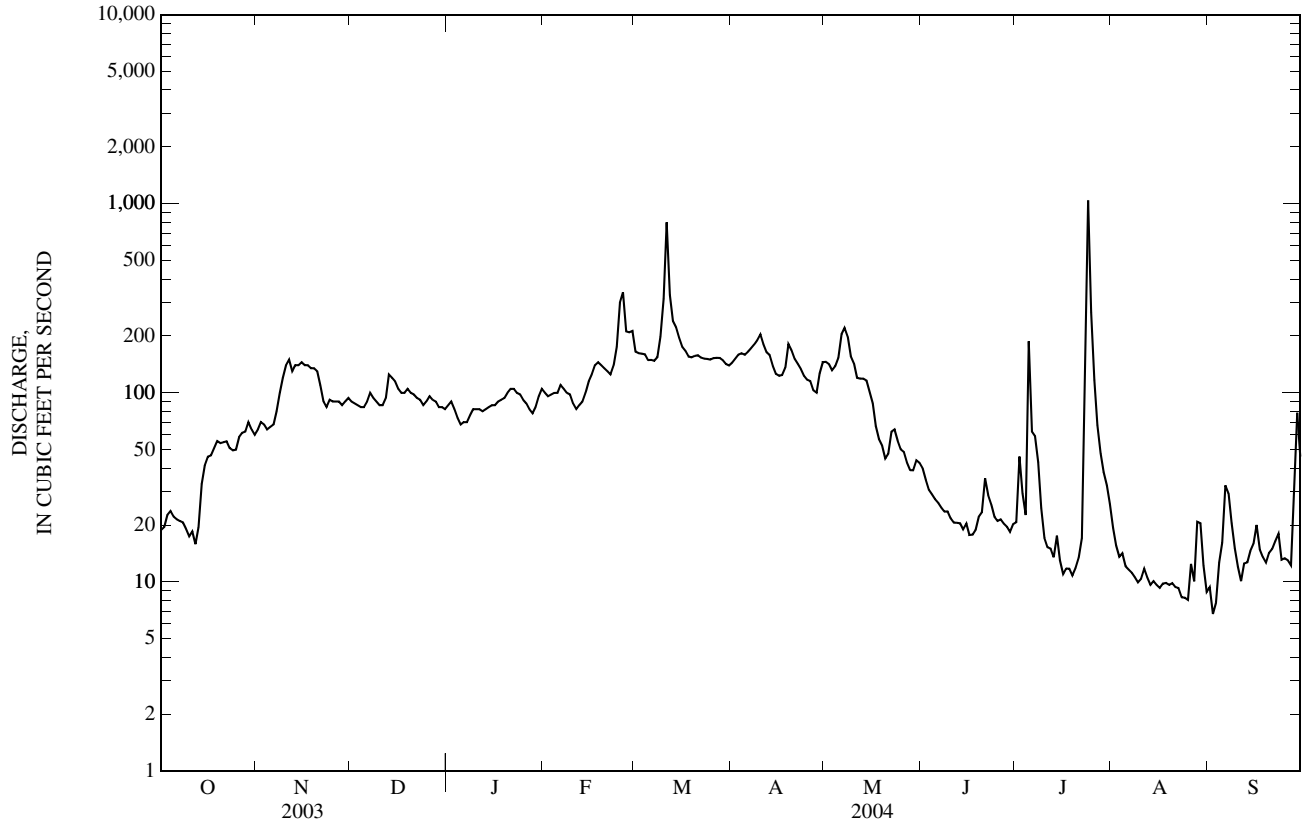
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2004, BY WATER YEAR (WY)

MEAN	141	128	115	114	168	270	273	556	349	127	55.8	70.9
MAX	838	202	176	177	335	701	553	2,553	1,477	374	125	448
(WY)	(1995)	(1987)	(1995)	(1983)	(1980)	(1987)	(1987)	(1978)	(1995)	(1978)	(1983)	(1982)
MIN	24.2	77.7	79.5	58.6	69.4	110	136	72.0	22.2	20.4	3.54	4.90
(WY)	(1957)	(1953)	(1991)	(1940)	(1939)	(1940)	(1953)	(1992)	(1954)	(1996)	(1939)	(1939)

06313500 POWDER RIVER AT SUSSEX, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1938 - 2004	
ANNUAL TOTAL	45,305.8		31,489.8		--	
ANNUAL MEAN	124		86.0		201	
HIGHEST ANNUAL MEAN	--		--		486	1978
LOWEST ANNUAL MEAN	--		--		86.0	2004
HIGHEST DAILY MEAN	1,350	May 1	1,040	Jul 24	14,100	May 23, 1952
LOWEST DAILY MEAN	4.4	Aug 17	6.8	Sep 2	1.5	Aug 25, 1939
ANNUAL SEVEN-DAY MINIMUM	6.3	Aug 11	9.0	Aug 19	2.6	Aug 23, 1939
MAXIMUM PEAK FLOW	--		1,800[a]	Jul 24	32,500[b]	May 23, 1952
MAXIMUM PEAK STAGE	--		5.03[c]	Feb 26	4,374.76[d]	May 23, 1952
ANNUAL RUNOFF (AC-FT)	89,860		62,460		145,600	
10 PERCENT EXCEEDS	238		159		400	
50 PERCENT EXCEEDS	94		82		125	
90 PERCENT EXCEEDS	14		13		25	

a Gage height, 4.29 ft.
b From rating curve extended above 1,500 ft^3/s, on basis of slope-area measurement of peak flow.
c Backwater from ice.
d From floodmarks, site and datum then in use.
e Estimated.



06313500 POWDER RIVER AT SUSSEX, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-53, 1967-68, 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1983 to September 1984, April 2003 to current year (seasonal).
WATER TEMPERATURE: October 1982 to September 1984 April 2003 to current year (seasonal).
SUSPENDED-SEDIMENT DISCHARGE: May 1983 to September 1984.

REMARKS.--Specific conductance records good October 9-20, October 22 to November 9, April 14 to May 3, May 7-9, May 19 to June 2, June 11-29, July 16, 17, July 28 to August 1, September 2-6, 10-30; fair October 21, April 10-13, May 4-6, 10, 11, June 30, July 1, 18, August 2-4, September 7-9; and poor October 1-8, May 12-18, July 2-15, 19-27, August 5-10. Water temperature records good. Water-temperature records represent water temperature at sensor with 0.5°C.

INSTRUMENTATION.--Water quality monitor for specific conductance and water temperature.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 7,980 microsiemens per centimeter at 25°C (µS/cm), August 17, 2003; minimum recorded, 868 µS/cm, April 16, 2003.
WATER TEMPERATURE: Maximum recorded, 31.8°C, July 17, 19, 2004; minimum recorded, -0.1°C, October 30 to November 2, November 4-10, 2003.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 7,540 µS/cm, July 23; minimum recorded, 1000 µS/cm, May 7.
WATER TEMPERATURE: Maximum recorded, 31.8°C, July 17, 19; minimum recorded, -0.1°C, October 30 to November 2, November 4-9.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
08...	1220	20	649	8.6	103	8.3	4,590	22.5	15.5	720	172	71.4	23.7
21...	1010	54	657	9.5	99	8.3	2,650	17.0	10.0	560	136	54.7	10.8
NOV													
10...	0945	145	646	11.9	97	8.2	2,290	9.0	.0	610	158	53.6	8.87
19...	1040	135	649	11.7	100	8.3	2,150	11.5	2.0	600	156	51.9	7.89
DEC													
05...	1555	84	652	11.2	90	8.2	2,210	4.5	.0	600	151	54.4	6.73
17...	1010	100	655	13.4	108	8.2	2,020	7.5	.0	590	152	51.6	7.41
JAN													
09...	1615	82	656	11.5	92	8.0	2,140	4.0	.0	640	163	55.6	7.84
21...	1120	103	653	11.9	96	8.1	2,010	4.0	.0	580	152	48.6	8.25
FEB													
06...	1620	111	651	11.9	96	8.2	1,960	4.0	.0	550	145	45.9	8.02
18...	1010	143	649	11.7	95	8.2	1,870	7.0	.0	510	132	42.9	8.02
MAR													
11...	1300	621	--	--	--	8.0	1,410	17.0	5.0	300	81.8	23.9	6.30
24...	0915	155	647	9.2	95	8.3	2,000	15.5	9.0	590	148	53.7	8.13
APR													
13...	1400	158	--	--	--	8.4	2,000	20.0	17.0	490	121	45.1	8.27
20...	1015	173	645	10.2	101	8.2	1,930	13.5	7.5	410	102	37.8	6.93
MAY													
06...	0850	216	656	7.7	87	8.0	1,340	16.5	14.0	300	74.7	27.9	5.07
18...	1050	53	653	9.7	110	8.2	3,080	13.5	13.5	610	146	58.6	13.0
JUN													
09...	2010	24	648	7.8	105	8.2	4,540	16.0	21.0	650	138	73.6	20.8
24...	1100	21	648	8.4	108	8.2	4,070	20.5	19.0	630	147	64.9	19.8
JUL													
15...	1650	15	652	7.8	104	8.3	4,530	24.5	21.0	610	134	65.8	20.3
27...	1100	67	653	9.2	120	8.1	2,670	22.0	20.0	610	159	52.9	11.2
AUG													
11...	0920	14	655	9.5	113	8.2	5,850	26.0	15.5	550	114	63.6	27.3
24...	1030	8.6	640	8.7	109	8.4	6,060	26.0	16.5	510	98.3	63.8	32.4
SEP													
09...	0930	14	640	10.5	124	8.3	4,590	26.0	14.0	580	132	60.6	21.6
20...	1050	13	638	9.1	106	8.4	4,990	13.0	13.5	560	119	63.4	37.6

06313500 POWDER RIVER AT SUSSEX, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Alum-inum, water, unfltrd recover-able, ug/L (01105)
OCT													
08...	12	746	68	188	711	1.7	15.0	1,170	3,030	4.27	169	3,140	440
21...	6	348	57	189	299	.9	7.93	731	1,700	2.46	264	1,810	1,110
NOV													
10...	4	250	46	193	210	.8	12.2	629	1,440	2.10	605	1,540	4,400
19...	4	237	46	166	183	.7	10.6	644	1,390	2.03	545	1,490	2,420
DEC													
05...	4	237	46	170	221	.7	12.0	600	1,390	2.03	338	1,490	2,290
17...	4	219	44	177	177	.7	13.0	562	1,290	1.83	363	1,340	1,340
JAN													
09...	4	233	44	191	204	.7	14.4	588	1,380	2.02	329	1,490	1,750
21...	4	226	45	164	194	.8	13.8	515	1,260	1.80	369	1,330	1,150
FEB													
06...	4	220	46	210	186	.7	14.4	521	1,270	1.84	405	1,350	983
18...	4	218	48	205	191	.7	12.2	498	1,230	1.76	500	1,300	1,070
MAR													
11...	5	192	57	114	65.9	.8	5.77	524	969	1.40	1,730	1,030	102,000
24...	5	263	49	191	168	.7	9.60	678	1,440	2.07	638	1,520	4,520
APR													
13...	5	266	54	186	202	.7	10.1	604	1,370	2.00	627	1,470	1,610
20...	5	237	55	177	160	.6	8.48	577	1,240	1.84	631	1,350	8,020
MAY													
06...	4	156	52	140	115	.5	7.51	342	812	1.20	513	880	9,820
18...	8	455	61	214	358	1.0	7.80	849	2,020	2.91	306	2,140	201
JUN													
09...	13	755	71	225	679	1.4	6.53	1,130	2,940	4.15	198	3,050	105
24...	11	662	69	230	565	1.2	6.25	1,050	2,650	3.73	156	2,740	111
JUL													
15...	14	800	73	255	733	1.4	5.52	1,030	2,940	4.12	123	3,030	153
27...	7	381	57	191	197	.9	10.7	977	1,900	2.78	370	2,050	27,200
AUG													
11...	21	1,130	81	283	1,170	2.1	16.5	1,090	3,780	5.08	141	3,730	2,210
24...	20	1,060	81	241	1,160	2.4	15.4	1,160	3,740	5.33	91.0	3,920	1,330
SEP													
09...	13	725	72	226	723	1.7	11.3	1,120	2,930	4.24	118	3,120	1,410
20...	17	916	77	238	931	1.9	8.84	1,050	3,270	4.52	117	3,320	1,140

06313500 POWDER RIVER AT SUSSEX, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)
OCT							
08...	1.8	55	<.12	<19	140	5.2	2.8
21...	1.3	59	.08	E6	50.0	3.4	2.8
NOV							
10...	.9	109	.33	<19	39.9	3.0	2.9
19...	1.0	87	.17	<6	43.8	3.0	3.1
DEC							
05...	1.2	73	.15	<19	45.1	4.4	4.2
17...	.9	57	.07	<6	25.5	3.0	3.4
JAN							
09...	1.0	81	.13	<19	40.2	2.9	3.1
21...	1.1	70	.08	<6	33.6	3.0	2.8
FEB							
06...	1.1	71	.07	<6	29.5	3.2	2.6
18...	1.1	64	.07	E4	26.7	2.7	2.9
MAR							
11...	.8	885	7.46	10	24.3	5.3	9.4
24...	1.1	91	.30	<6	13.6	3.3	3.5
APR							
13...	1.2	70	.14	E3	11.9	3.2	2.5
20...	1.0	161	.76	<6	5.4	3.0	3.2
MAY							
06...	.8	203	.96	<6	2.3	1.9	2.1
18...	1.2	59	<.12	<19	62.9	3.6	3.5
JUN							
09...	1.6	50	<.12	E11	96.8	2.4	2.6
24...	1.4	62	<.12	E15	89.2	2.8	3.3
JUL							
15...	2.4	77	<.12	E17	110	1.5	4.4
27...	1.4	503	3.36	<19	2.4	5.6	5.5
AUG							
11...	2.4	131	E.11	<19	58.0	--	1.4
24...	2.8	108	<.18	<19	69.1	4.7	3.2
SEP							
09...	1.4	81	E.09	<19	91.7	2.9	4.0
20...	1.2	88	E.07	<19	54.1	2.5	2.3

< -- Less than
E -- Estimated value

06313500 POWDER RIVER AT SUSSEX, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	3,890	3,770	3,840	2,200	2,170	2,180	---	---	---	---	---	---
2	3,990	3,870	3,940	2,290	2,170	2,230	---	---	---	---	---	---
3	4,080	3,960	4,030	2,320	2,140	2,240	---	---	---	---	---	---
4	4,190	4,060	4,130	2,350	2,320	2,330	---	---	---	---	---	---
5	4,300	4,170	4,240	2,370	2,340	2,350	---	---	---	---	---	---
6	4,420	4,280	4,360	2,370	2,330	2,350	---	---	---	---	---	---
7	4,530	4,390	4,470	2,510	2,370	2,450	---	---	---	---	---	---
8	4,710	4,510	4,610	2,480	2,390	2,420	---	---	---	---	---	---
9	5,020	4,680	4,880	2,400	2,310	2,350	---	---	---	---	---	---
10	5,200	5,020	5,130	---	---	---	---	---	---	---	---	---
11	5,180	4,990	5,090	---	---	---	---	---	---	---	---	---
12	5,080	4,890	4,980	---	---	---	---	---	---	---	---	---
13	5,290	4,890	5,010	---	---	---	---	---	---	---	---	---
14	5,290	3,930	4,720	---	---	---	---	---	---	---	---	---
15	4,600	3,760	4,220	---	---	---	---	---	---	---	---	---
16	3,760	3,090	3,400	---	---	---	---	---	---	---	---	---
17	3,290	3,090	3,180	---	---	---	---	---	---	---	---	---
18	3,110	2,730	2,900	---	---	---	---	---	---	---	---	---
19	2,790	2,680	2,730	---	---	---	---	---	---	---	---	---
20	2,700	2,660	2,680	---	---	---	---	---	---	---	---	---
21	2,700	2,590	2,660	---	---	---	---	---	---	---	---	---
22	2,660	2,460	2,540	---	---	---	---	---	---	---	---	---
23	2,650	2,470	2,530	---	---	---	---	---	---	---	---	---
24	2,660	2,460	2,590	---	---	---	---	---	---	---	---	---
25	2,560	2,460	2,520	---	---	---	---	---	---	---	---	---
26	2,540	2,370	2,460	---	---	---	---	---	---	---	---	---
27	2,380	2,350	2,370	---	---	---	---	---	---	---	---	---
28	2,370	2,350	2,360	---	---	---	---	---	---	---	---	---
29	2,360	2,320	2,330	---	---	---	---	---	---	---	---	---
30	2,340	2,280	2,310	---	---	---	---	---	---	---	---	---
31	2,310	2,180	2,260	---	---	---	---	---	---	---	---	---
MONTH	5,290	2,180	3,530	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	1,770	1,660	1,730
2	---	---	---	---	---	---	1,970	1,780	1,880	1,770	1,740	1,760
3	---	---	---	---	---	---	1,780	1,740	1,760	1,930	1,760	1,860
4	---	---	---	---	---	---	1,820	1,740	1,780	1,870	1,730	1,810
5	---	---	---	---	---	---	1,810	1,720	1,760	1,730	1,550	1,630
6	---	---	---	---	---	---	1,750	1,650	1,700	1,550	1,130	1,320
7	---	---	---	---	---	---	1,660	1,620	1,640	1,130	1,000	1,050
8	---	---	---	---	---	---	1,640	1,570	1,600	1,190	1,080	1,120
9	---	---	---	---	---	---	1,610	1,530	1,570	1,320	1,190	1,250
10	---	---	---	---	---	---	1,850	1,610	1,690	1,550	1,320	1,410
11	---	---	---	---	---	---	2,060	1,710	1,870	1,590	1,540	1,560
12	---	---	---	---	---	---	2,060	1,990	2,010	1,640	1,580	1,600
13	---	---	---	---	---	---	2,170	2,020	2,090	1,750	1,640	1,680
14	---	---	---	---	---	---	2,410	2,170	2,310	1,900	1,750	1,830
15	---	---	---	---	---	---	2,490	2,370	2,430	2,050	1,900	1,960
16	---	---	---	---	---	---	2,490	2,330	2,400	2,370	2,040	2,150
17	---	---	---	---	---	---	2,410	2,210	2,310	2,850	2,370	2,610
18	---	---	---	---	---	---	2,250	2,020	2,090	3,140	2,850	2,990
19	---	---	---	---	---	---	2,100	1,770	1,920	3,180	2,920	3,060
20	---	---	---	---	---	---	1,990	1,760	1,890	3,230	3,120	3,180
21	---	---	---	---	---	---	1,930	1,850	1,880	3,400	3,140	3,280
22	---	---	---	---	---	---	1,950	1,790	1,860	3,380	2,700	3,000
23	---	---	---	---	---	---	1,890	1,800	1,840	2,780	2,500	2,650
24	---	---	---	---	---	---	1,900	1,820	1,860	2,820	2,690	2,750
25	---	---	---	---	---	---	1,900	1,830	1,870	2,950	2,760	2,860
26	---	---	---	---	---	---	1,860	1,800	1,830	2,920	2,840	2,880
27	---	---	---	---	---	---	1,980	1,840	1,920	3,060	2,920	2,980
28	---	---	---	---	---	---	2,000	1,850	1,950	3,210	3,000	3,090
29	---	---	---	---	---	---	1,850	1,600	1,720	3,360	3,190	3,270
30	---	---	---	---	---	---	1,660	1,560	1,600	3,200	3,040	3,130
31	---	---	---	---	---	---	---	---	---	3,190	3,050	3,100
MONTH	---	---	---	---	---	---	---	---	---	3,400	1,000	2,280

06313500 POWDER RIVER AT SUSSEX, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	3,250	3,110	3,180	4,630	4,340	4,500	3,410	2,840	3,080	---	---	---
2	3,430	3,130	3,250	4,580	2,500	3,400	3,820	3,270	3,510	5,580	4,920	5,290
3	---	---	---	3,900	2,660	3,210	4,200	3,630	3,880	5,830	4,960	5,570
4	---	---	---	4,230	3,880	4,100	4,640	3,990	4,310	5,740	4,300	5,000
5	---	---	---	4,130	1,170	1,590	4,680	4,340	4,510	4,770	3,730	4,510
6	---	---	---	2,390	1,640	2,050	4,940	4,540	4,710	3,730	3,180	3,400
7	---	---	---	3,200	2,390	2,760	5,030	4,690	4,840	3,740	3,350	3,550
8	---	---	---	3,310	3,130	3,210	5,240	4,750	4,950	4,040	3,670	3,910
9	---	---	---	3,460	3,160	3,270	5,380	4,950	5,130	4,750	3,980	4,480
10	---	---	---	3,800	3,460	3,610	5,450	5,190	5,290	4,940	4,750	4,880
11	4,640	3,400	4,260	3,960	3,800	3,870	---	---	---	5,210	4,940	4,990
12	4,340	3,300	4,040	3,830	3,710	3,760	---	---	---	5,200	4,950	5,040
13	4,330	3,960	4,230	4,060	3,700	3,830	---	---	---	5,040	4,600	4,760
14	4,480	4,160	4,330	4,380	4,060	4,240	---	---	---	4,750	4,420	4,630
15	4,450	4,090	4,280	4,720	4,360	4,500	---	---	---	4,840	4,410	4,520
16	4,280	4,090	4,170	5,210	4,720	4,920	---	---	---	4,890	3,750	4,130
17	4,220	4,140	4,190	5,440	4,890	5,090	---	---	---	4,920	4,360	4,640
18	4,190	4,110	4,150	5,270	5,010	5,120	---	---	---	5,100	4,880	5,030
19	4,190	4,010	4,110	5,770	4,830	5,440	---	---	---	5,030	4,840	4,950
20	4,170	3,940	4,070	5,830	5,590	5,710	---	---	---	5,020	4,890	4,960
21	4,500	3,880	4,110	6,380	5,700	6,050	---	---	---	5,050	4,900	4,970
22	4,060	3,750	3,880	6,860	6,060	6,200	---	---	---	5,080	3,820	4,700
23	4,440	4,060	4,250	7,540	1,980	4,640	---	---	---	4,230	3,810	4,060
24	4,270	3,640	3,900	5,860	1,170	2,240	---	---	---	4,790	4,230	4,570
25	4,150	3,720	4,020	2,150	1,820	1,980	---	---	---	5,040	4,790	4,950
26	4,380	4,120	4,250	2,540	2,150	2,350	---	---	---	5,020	4,870	4,960
27	4,740	4,290	4,510	3,160	2,460	2,550	---	---	---	5,190	4,890	5,060
28	4,720	4,570	4,630	2,780	2,510	2,630	---	---	---	4,940	2,770	4,480
29	4,830	4,580	4,720	2,780	2,560	2,680	---	---	---	2,770	2,020	2,180
30	4,820	4,330	4,590	2,750	2,470	2,590	---	---	---	2,490	2,270	2,380
31	---	---	---	2,870	2,500	2,670	---	---	---	---	---	---
MONTH	---	---	---	7,540	1,170	3,700	---	---	---	---	---	---

06313500 POWDER RIVER AT SUSSEX, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.4	8.3	12.6	3.0	-0.1	0.9	---	---	---	---	---	---
2	16.4	9.1	12.8	3.2	-0.1	1.2	---	---	---	---	---	---
3	15.7	7.8	12.0	2.1	0.8	1.4	---	---	---	---	---	---
4	16.0	8.2	12.2	1.3	-0.1	0.8	---	---	---	---	---	---
5	16.1	8.6	12.6	0.4	-0.1	0.0	---	---	---	---	---	---
6	16.3	8.8	12.7	0.3	-0.1	0.2	---	---	---	---	---	---
7	16.6	9.8	13.3	0.0	-0.1	-0.1	---	---	---	---	---	---
8	18.4	11.0	14.5	-0.1	-0.1	-0.1	---	---	---	---	---	---
9	17.9	10.5	14.2	-0.1	-0.1	-0.1	---	---	---	---	---	---
10	14.1	9.8	12.0	---	---	---	---	---	---	---	---	---
11	12.9	5.8	9.4	---	---	---	---	---	---	---	---	---
12	12.3	6.1	9.4	---	---	---	---	---	---	---	---	---
13	12.1	7.5	9.6	---	---	---	---	---	---	---	---	---
14	11.1	4.7	7.8	---	---	---	---	---	---	---	---	---
15	11.8	4.4	8.1	---	---	---	---	---	---	---	---	---
16	12.8	6.1	9.4	---	---	---	---	---	---	---	---	---
17	15.8	7.9	11.5	---	---	---	---	---	---	---	---	---
18	15.0	8.6	11.7	---	---	---	---	---	---	---	---	---
19	13.8	8.1	10.9	---	---	---	---	---	---	---	---	---
20	14.2	7.5	10.8	---	---	---	---	---	---	---	---	---
21	16.3	9.5	12.6	---	---	---	---	---	---	---	---	---
22	15.6	8.7	12.0	---	---	---	---	---	---	---	---	---
23	15.2	8.4	11.7	---	---	---	---	---	---	---	---	---
24	11.3	6.2	8.9	---	---	---	---	---	---	---	---	---
25	9.5	3.8	6.3	---	---	---	---	---	---	---	---	---
26	7.9	4.3	5.9	---	---	---	---	---	---	---	---	---
27	9.7	5.9	7.7	---	---	---	---	---	---	---	---	---
28	11.3	6.1	8.7	---	---	---	---	---	---	---	---	---
29	9.4	3.5	7.3	---	---	---	---	---	---	---	---	---
30	3.5	-0.1	1.2	---	---	---	---	---	---	---	---	---
31	2.1	-0.1	0.6	---	---	---	---	---	---	---	---	---
MONTH	18.4	-0.1	10.0	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	14.6	7.8	11.1
2	---	---	---	---	---	---	11.1	6.2	8.1	18.0	7.9	12.7
3	---	---	---	---	---	---	11.3	5.7	7.9	20.6	11.5	15.7
4	---	---	---	---	---	---	16.2	6.2	10.7	21.7	13.4	17.3
5	---	---	---	---	---	---	17.6	9.8	13.4	20.6	14.0	17.4
6	---	---	---	---	---	---	18.0	9.9	13.8	21.0	13.9	17.3
7	---	---	---	---	---	---	15.3	10.6	12.9	20.0	13.9	17.2
8	---	---	---	---	---	---	15.7	10.4	12.7	21.7	13.7	17.5
9	---	---	---	---	---	---	12.4	7.5	9.5	20.0	13.8	16.8
10	---	---	---	---	---	---	11.9	4.8	8.1	20.5	12.4	16.2
11	---	---	---	---	---	---	9.3	6.1	7.5	17.9	12.4	15.3
12	---	---	---	---	---	---	13.7	3.3	8.0	12.4	8.0	9.4
13	---	---	---	---	---	---	17.5	7.5	12.0	12.8	6.1	9.0
14	---	---	---	---	---	---	16.9	9.7	13.1	15.7	7.7	11.5
15	---	---	---	---	---	---	16.4	9.5	12.7	20.1	8.7	14.0
16	---	---	---	---	---	---	15.3	8.9	11.9	18.7	11.4	14.9
17	---	---	---	---	---	---	17.2	9.1	12.8	21.5	11.4	15.7
18	---	---	---	---	---	---	13.2	9.3	10.5	21.9	13.1	16.6
19	---	---	---	---	---	---	11.5	6.8	9.3	23.7	15.0	18.7
20	---	---	---	---	---	---	14.7	7.2	10.7	18.4	13.7	15.7
21	---	---	---	---	---	---	15.5	9.0	11.8	23.3	12.0	17.2
22	---	---	---	---	---	---	12.8	9.5	10.7	19.3	13.3	16.0
23	---	---	---	---	---	---	16.1	6.5	11.0	20.8	12.3	16.1
24	---	---	---	---	---	---	14.7	7.8	11.3	21.1	11.2	15.5
25	---	---	---	---	---	---	14.2	7.5	10.8	22.4	10.8	16.1
26	---	---	---	---	---	---	18.6	7.4	12.5	19.5	11.1	15.4
27	---	---	---	---	---	---	20.2	10.0	15.1	23.9	11.5	17.2
28	---	---	---	---	---	---	16.1	7.8	12.3	19.4	14.0	16.7
29	---	---	---	---	---	---	7.8	5.1	6.5	16.4	12.4	14.4
30	---	---	---	---	---	---	12.0	5.5	8.7	19.2	8.7	13.4
31	---	---	---	---	---	---	---	---	---	19.0	10.2	14.5
MONTH	---	---	---	---	---	---	---	---	---	23.9	6.1	15.2

06313500 POWDER RIVER AT SUSSEX, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.2	11.0	16.1	29.9	18.0	23.1	28.0	17.2	22.3	24.5	15.9	20.1
2	26.3	11.4	18.3	26.4	18.0	22.4	28.2	17.7	23.1	25.1	16.7	20.2
3	---	---	---	28.7	16.2	22.3	27.5	19.6	23.2	18.1	13.8	15.9
4	---	---	---	26.0	17.2	21.2	28.4	18.0	22.8	19.0	13.0	15.8
5	29.9	15.9	22.3	20.4	7.7	14.4	26.2	19.2	22.2	21.1	15.1	17.6
6	27.5	16.6	21.5	24.8	14.2	18.8	28.1	18.1	22.1	21.7	12.8	17.3
7	28.7	15.1	21.1	27.4	17.1	22.0	27.3	16.9	21.8	23.6	12.8	18.1
8	25.2	13.6	18.8	29.1	18.1	22.8	26.7	16.4	21.2	21.3	13.6	17.7
9	22.8	14.5	17.8	28.9	16.7	22.1	26.9	16.2	21.4	24.1	12.7	18.2
10	22.4	14.4	18.0	27.8	17.7	22.5	22.7	16.7	20.1	19.7	13.4	17.0
11	20.9	10.4	15.4	27.6	17.2	22.4	24.6	14.2	19.2	22.8	12.5	17.5
12	24.2	10.8	17.3	31.5	16.6	23.4	24.8	14.6	19.6	21.0	14.1	17.8
13	23.9	13.3	18.4	31.6	18.9	24.4	26.0	15.7	20.8	21.8	14.5	18.0
14	26.4	13.5	19.9	31.4	19.8	25.3	26.3	16.1	21.2	17.9	13.3	15.7
15	28.0	14.1	20.1	25.6	19.1	20.7	26.1	16.1	21.0	18.8	11.0	15.0
16	16.7	12.3	13.7	31.4	16.2	23.0	26.9	16.2	21.3	19.8	11.7	15.9
17	18.8	12.1	14.6	31.8	19.1	25.1	26.2	18.0	21.8	20.5	12.5	16.8
18	13.4	10.8	12.0	31.7	19.5	25.4	21.9	18.0	20.0	19.9	12.5	16.3
19	24.8	9.6	15.9	31.8	20.9	25.9	23.3	15.7	18.7	17.8	14.1	15.5
20	22.8	13.7	18.1	28.6	20.5	24.6	24.2	15.4	19.3	17.3	12.5	14.1
21	19.3	13.7	16.4	31.2	18.5	24.5	26.2	16.2	20.8	14.3	10.4	12.3
22	25.4	11.3	17.8	25.6	19.3	22.0	24.4	17.8	20.7	15.5	9.7	12.7
23	28.0	14.0	20.6	21.2	16.0	18.2	23.0	16.2	18.7	15.9	9.0	12.4
24	26.9	15.2	20.8	19.5	14.6	16.6	22.4	13.2	17.5	18.2	11.1	14.4
25	21.5	15.5	18.8	24.4	16.3	19.8	20.3	15.0	17.2	18.8	11.3	15.0
26	24.0	14.9	19.5	25.8	18.1	21.6	21.1	13.8	17.0	19.0	11.6	15.3
27	26.6	14.1	20.0	24.7	18.4	21.4	20.3	14.8	16.9	16.6	12.8	14.6
28	23.9	15.7	20.0	24.9	16.6	20.3	21.8	13.1	17.2	18.7	11.9	15.4
29	28.6	16.0	22.0	25.7	16.5	20.5	23.8	15.0	19.2	18.2	12.3	15.3
30	26.7	17.7	21.6	26.9	17.0	21.7	24.8	15.1	20.0	15.5	13.1	14.0
31	---	---	---	26.9	17.6	21.9	26.5	15.7	20.7	---	---	---
MONTH	---	---	---	31.8	7.7	21.9	28.4	13.1	20.3	25.1	9.0	16.1

06313540 WILLOW CREEK NEAR MOUTH, NEAR SUSSEX, WY

LOCATION.--Lat 43°53'33", long 106°07'38", in NW¼ NW¼ NW¼ sec.9, T.45 N., R.77 W., Johnson County, Hydrologic Unit 10090202, at culvert on private road and 16.0 mi northeast of Sussex.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)
JUL		
27...	1245	.00
AUG		
24...	1145	.00
SEP		
20...	1155	.00

06313560 PUMPKIN CREEK NEAR MOUTH, NEAR SUSSEX, WY

LOCATION.--Lat 44°01'40", long 106°08'24", in SE¼ NE¼ SW¼ sec.20, T.47 N., R.77 W., Johnson County, Hydrologic Unit 10090202, on private road and 23.5 mi northeast of Sussex.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)
JUL		
14...	1950	.00
AUG		
10...	1830	.00
SEP		
08...	1645	.00

06313585 BEAVER CREEK AT MOUTH, NEAR SUSSEX, WY

LOCATION.--Lat 44°07'04", long 106°07'58", in NE¼ NE¼ SE¼ sec.20, T.48 N., R.77 W., Johnson County, Hydrologic Unit 10090202, at bridge on county road 159 and 29.6 mi northeast of Sussex.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)
JUL													
14...	1835	.50	656	7.7	117	8.6	2,970	34.5	28.5	160	11.1	33.3	22
AUG													
10...	1720	.60	669	9.9	128	8.8	2,780	21.5	21.0	150	11.2	30.5	21
SEP													
08...	1600	.72	663	9.7	130	8.8	2,620	31.5	22.5	140	12.3	27.2	20

Date	Sodium, water, fltrd, mg/L (00930)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL		
14...	647	1,950
AUG		
10...	599	1,780
SEP		
08...	561	1,720

06313590 POWDER RIVER ABOVE BURGER DRAW, NEAR BUFFALO, WY

LOCATION.--Lat 44°08'40", long 106°08'18", in NW¼ SW¼ SE¼ sec. 8, T.48 N., R.77 W., Johnson County, Hydrologic Unit 10090202, on right bank at bridge on Johnson County Road 204 (Schoonover Road) bridge, 0.2 mi upstream from Burger Draw, and 30.7 mi southeast of Buffalo.

DRAINAGE AREA.--4,290 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.-- June 2003 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,000 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Numerous small reservoirs and diversions for irrigation upstream from station.

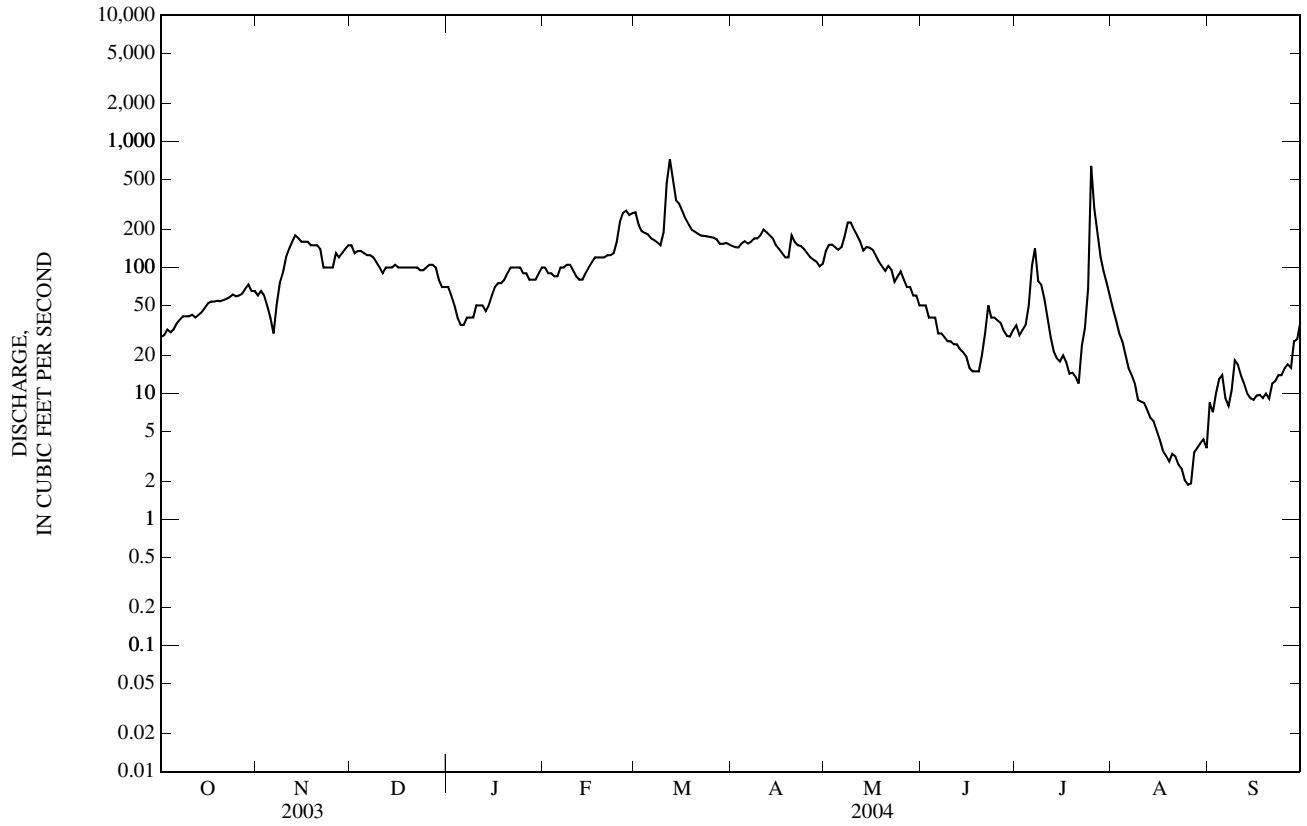
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	e60	e150	e70	e100	274	148	135	e50	35	47	8.5
2	29	e65	e130	e60	e90	218	e145	151	e50	29	38	7.1
3	32	e60	e135	e50	e90	194	144	152	e40	32	30	e10
4	31	e50	e135	e40	e85	188	154	144	e40	35	26	13
5	32	e40	e130	e35	e85	183	161	138	e40	50	20	14
6	36	e30	e125	e35	e100	170	155	145	e30	103	16	9.2
7	38	e50	e125	e40	e100	165	e160	176	e30	142	14	8.0
8	41	e75	e120	e40	e105	158	e170	228	e28	78	12	11
9	41	e90	e110	e40	e105	150	e170	227	26	73	8.9	18
10	41	e120	e100	e50	e95	191	e180	e200	26	56	8.6	17
11	42	e140	e90	e50	e85	464	e200	e180	25	40	8.4	14
12	40	e160	e100	e50	e80	724	e190	e160	25	28	7.4	12
13	42	e180	e100	e45	e80	e500	e180	136	22	22	6.4	10
14	44	e170	e100	e50	e90	340	e170	145	21	19	6.0	9.2
15	48	e160	e105	e60	e100	321	e150	143	20	18	5.1	8.9
16	52	e160	e100	e70	e110	280	e140	138	16	20	4.3	9.6
17	54	e160	e100	e75	e120	245	e130	125	e15	18	3.5	9.7
18	54	e150	e100	e75	e120	e220	e120	111	e15	14	3.2	9.2
19	54	e150	e100	e80	e120	e200	e120	102	e15	15	2.9	10
20	54	e150	e100	e90	e120	193	e180	94	e20	14	3.3	9.1
21	55	e140	e100	e100	e125	185	e160	103	e30	12	3.2	12
22	56	e100	e100	e100	e125	179	e150	96	e50	e24	2.7	13
23	58	e100	e95	e100	e130	178	148	77	e40	33	2.5	14
24	61	e100	e95	e100	e160	176	140	e85	e40	68	2.1	14
25	59	e100	e100	e90	e230	174	130	93	38	640	1.9	16
26	60	e130	e105	e90	e270	172	121	e80	36	291	1.9	17
27	62	e120	e105	e80	282	167	115	e70	31	188	3.4	16
28	68	e130	e100	e80	261	154	111	e70	29	121	3.7	26
29	73	e140	e80	e80	270	154	102	e60	28	93	4.0	27
30	e65	e150	e70	e90	---	156	107	e60	32	75	4.3	36
31	e65	---	e70	e100	---	153	---	e50	---	59	3.7	---
TOTAL	1,515	3,430	3,275	2,115	3,833	7,226	4,451	3,874	908	2,445	304.4	408.5
MEAN	48.9	114	106	68.2	132	233	148	125	30.3	78.9	9.82	13.6
MAX	73	180	150	100	282	724	200	228	50	640	47	36
MIN	28	30	70	35	80	150	102	50	15	12	1.9	7.1
AC-FT	3,010	6,800	6,500	4,200	7,600	14,330	8,830	7,680	1,800	4,850	604	810
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)												
MEAN	48.9	114	106	68.2	132	233	148	125	30.3	59.5	18.6	23.0
MAX	48.9	114	106	68.2	132	233	148	125	30.3	78.9	27.4	32.3
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)
MIN	48.9	114	106	68.2	132	233	148	125	30.3	40.1	9.82	13.6
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)	(2004)

06313590 POWDER RIVER ABOVE BURGER DRAW, NEAR BUFFALO, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR		WATER YEARS 2003 - 2004	
ANNUAL TOTAL	33,784.9		--	
ANNUAL MEAN	92.3		92.3	
HIGHEST ANNUAL MEAN	--		92.3	2004
LOWEST ANNUAL MEAN	--		92.3	2004
HIGHEST DAILY MEAN	724	Mar 12	1,100	Jun 18, 2003
LOWEST DAILY MEAN	1.9	Aug 25,26	0.03	Aug 16, 2003
ANNUAL SEVEN-DAY MINIMUM	2.5	Aug 20	0.10	Aug 10, 2003
MAXIMUM PEAK FLOW	1,140	Mar 11	2,220	Jun 18, 2003
MAXIMUM PEAK STAGE	4.64	Mar 11	5.45	Jun 18, 2003
ANNUAL RUNOFF (AC-FT)	67,010		66,870	
10 PERCENT EXCEEDS	178		178	
50 PERCENT EXCEEDS	80		80	
90 PERCENT EXCEEDS	11		11	

e Estimated.



06313590 POWDER RIVER ABOVE BURGER DRAW, NEAR BUFFALO, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 2003 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
07...	1200	37	655	8.5	95	8.4	3,160	24.0	13.0	790	189	77.3	16.3
NOV													
06...	1515	31	664	11.6	92	8.3	2,450	2.5	.0	650	158	61.2	9.68
DEC													
04...	1445	135	670	12.0	94	8.3	1,970	-1.0	.0	570	141	52.1	7.03
JAN													
08...	1410	40	662	11.9	95	8.0	2,820	6.0	.0	810	208	71.5	10.0
FEB													
05...	1415	84	664	11.1	88	8.2	2,060	-4.0	.0	590	153	50.6	8.85
MAR													
10...	1250	170	665	10.7	96	8.3	2,350	2.0	4.5	600	151	54.3	8.79
APR													
06...	1350	148	654	9.2	113	8.3	1,960	22.0	17.5	520	124	50.5	8.55
MAY													
04...	1200	142	663	8.3	103	8.1	2,120	26.5	18.5	440	106	42.5	8.10
JUN													
09...	0940	27	665	8.8	103	8.3	3,830	13.0	15.5	720	154	82.3	15.8
JUL													
14...	1545	16	664	6.7	106	8.1	3,850	37.0	31.0	680	150	75.0	17.2
AUG													
10...	1510	8.5	663	8.0	108	8.3	4,480	20.5	22.5	760	160	88.7	16.9
SEP													
08...	1330	7.9	670	8.9	120	8.6	4,470	29.0	23.0	670	133	82.0	19.9

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT													
07...	7	459	55	152	343	1.0	8.73	1,040	2,220	3.13	230	2,300	3,800
NOV													
06...	5	299	50	186	216	.8	9.13	771	1,640	2.39	147	1,760	1,560
DEC													
04...	4	200	43	174	177	.7	11.3	541	1,230	1.74	467	1,280	3,970
JAN													
08...	5	314	45	232	251	.9	16.3	830	1,840	2.66	211	1,960	1,710
FEB													
05...	5	264	49	211	192	.7	13.4	556	1,360	1.97	328	1,450	1,490
MAR													
10...	5	304	52	202	213	.8	11.3	736	1,600	2.30	776	1,690	7,730
APR													
06...	5	260	52	174	174	.7	8.03	579	1,310	1.86	547	1,370	2,330
MAY													
04...	6	275	57	172	200	.7	7.87	580	1,320	1.96	552	1,440	2,340
JUN													
09...	10	591	63	195	474	.9	9.27	1,150	2,590	3.74	200	2,750	189
JUL													
14...	10	606	65	180	474	1.0	8.35	1,090	2,530	3.60	114	2,650	765
AUG													
10...	11	692	66	204	565	1.0	11.0	1,280	2,940	4.21	71.0	3,090	660
SEP													
08...	12	684	68	177	565	1.1	.89	1,350	2,940	4.30	67.4	3,160	94

06313590 POWDER RIVER ABOVE BURGER DRAW, NEAR BUFFALO, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
07...	1.4	80	.26	<19	6.6	3.0
NOV						
06...	.8	98	.40	<19	8.5	4.2
DEC						
04...	.7	65	.22	E3	3.0	3.5
JAN						
08...	1.0	67	E.11	<19	7.8	4.4
FEB						
05...	.8	59	.12	E4	4.7	2.7
MAR						
10...	1.1	178	.64	<6	3.5	3.8
APR						
06...	.7	71	.19	<6	2.5	2.2
MAY						
04...	.8	68	.21	<6	2.3	4.0
JUN						
09...	.8	61	<.12	<19	18.6	4.0
JUL						
14...	1.4	70	<.12	<19	8.0	5.2
AUG						
10...	.8	72	<.12	<19	21.9	2.9
SEP						
08...	.9	45	<.12	<19	20.9	3.9

< -- Less than
E -- Estimated value

06313604 BURGER DRAW AT MOUTH, NEAR BUFFALO, WY

LOCATION.--Lat 44°08'50", long 106°08'34", in NE$\frac{1}{4}$ NE$\frac{1}{4}$ SW$\frac{1}{4}$ sec.8, T.48 N., R.77 W., Johnson County, Hydrologic Unit 10090202, 10 ft upstream from mouth and 30.7 mi southeast of Buffalo.

PERIOD OF RECORD.--September 2001, July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)
JUL													
14...	1750	.67	661	10.1	157	8.5	3,860	35.5	30.0	140	13.3	25.4	33
AUG													
10...	1645	1.0	663	9.4	126	8.5	3,850	20.5	22.0	140	14.3	25.1	32
SEP													
08...	1500	.96	667	9.8	129	8.8	3,730	30.0	21.5	150	17.7	26.6	30

Date	Sodium, water, fltrd, mg/L (00930)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL		
14...	879	2,490
AUG		
10...	872	2,450
SEP		
08...	849	2,440

06313605 POWDER RIVER BELOW BURGER DRAW, NEAR BUFFALO, WY

LOCATION.--Lat 44°08'50", long 106°08'34", in NE¼ NE¼ SW¼ sec.8, T.48 N., R.77 W., Johnson County, Hydrologic Unit 10090202, 20 ft downstream of Burger Draw, 0.4 mi downstream of bridge on county road 204, and 24 mi southeast of Buffalo.

PERIOD OF RECORD.--November 2000 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
07...	1250	39	655	8.2	96	8.3	3,180	28.0	15.0	720	170	72.2	17.6
NOV													
06...	1620	33	665	12.0	95	8.3	2,510	.5	.0	660	161	61.7	11.4
DEC													
04...	1550	136	670	11.5	90	8.3	2,020	-2.5	.0	530	131	48.2	9.38
JAN													
08...	1530	42	662	12.0	96	8.0	2,820	7.0	.0	800	205	70.0	10.5
FEB													
05...	1530	85	664	11.1	88	8.2	2,090	-4.0	.0	560	139	52.2	9.61
MAR													
10...	1345	171	665	11.0	101	8.4	2,410	3.0	5.5	590	148	54.5	9.50
APR													
06...	1510	149	654	9.3	118	8.3	2,050	25.0	19.0	510	122	50.0	9.03
MAY													
04...	1300	143	663	8.1	102	8.2	2,170	26.0	19.5	440	105	42.7	8.60
JUN													
09...	1045	28	662	8.6	101	8.3	3,820	13.5	15.5	710	152	80.8	19.2
JUL													
14...	1710	17	661	7.0	109	8.2	3,860	35.5	30.0	650	140	71.8	18.6
AUG													
10...	1615	9.5	663	8.0	106	8.3	4,400	20.5	21.5	670	135	79.7	19.6
SEP													
08...	1440	8.8	667	8.6	117	8.6	4,360	30.0	23.0	600	118	75.1	22.9

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT													
07...	8	471	58	195	329	1.0	8.90	976	2,160	3.11	241	2,290	3,510
NOV													
06...	6	329	52	234	206	.8	9.39	745	1,660	2.35	154	1,730	5,660
DEC													
04...	5	252	51	238	168	.7	12.0	513	1,280	1.76	476	1,300	3,300
JAN													
08...	5	324	46	229	246	.9	16.1	818	1,830	2.58	215	1,900	1,630
FEB													
05...	5	262	50	187	195	.7	14.0	548	1,330	1.93	325	1,420	1,600
MAR													
10...	6	318	53	229	217	.8	10.8	715	1,610	2.31	784	1,700	7,730
APR													
06...	5	267	53	188	175	.7	8.14	573	1,320	1.86	549	1,360	2,320
MAY													
04...	6	282	58	194	198	.7	7.88	572	1,330	1.95	553	1,430	2,220
JUN													
09...	10	629	65	278	443	.9	9.06	1,080	2,580	3.59	200	2,640	266
JUL													
14...	11	643	68	270	457	1.0	8.35	1,030	2,530	3.50	118	2,570	910
AUG													
10...	12	696	69	398	506	1.1	9.95	1,120	2,810	3.91	73.8	2,880	602
SEP													
08...	13	709	71	398	490	1.1	2.04	1,160	2,820	3.99	69.7	2,940	205

06313605 POWDER RIVER BELOW BURGER DRAW, NEAR BUFFALO, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
07...	1.2	146	.26	<19	6.7	3.8
NOV						
06...	1.0	133	.36	<19	11.0	4.1
DEC						
04...	1.0	116	.19	E4	4.9	3.4
JAN						
08...	1.0	89	.13	<19	8.6	4.2
FEB						
05...	1.0	78	.08	E3	5.3	3.0
MAR						
10...	1.1	194	.62	<6	4.2	3.7
APR						
06...	.8	81	.18	<6	2.6	2.2
MAY						
04...	.9	78	.21	<6	3.0	3.6
JUN						
09...	.9	105	<.12	<19	17.5	4.7
JUL						
14...	1.5	103	<.12	<19	6.2	4.8
AUG						
10...	1.1	162	<.12	<19	15.0	2.1
SEP						
08...	1.0	139	<.12	<19	15.8	3.6

< -- Less than
E -- Estimated value

06313633 VAN HOUTEN DRAW AT MOUTH, NEAR BUFFALO, WY

LOCATION.--Lat 44°10'42", long 106°07'43", in SE¼ SE¼ NW¼ sec.33, T.49 N., R.77 W., Johnson County, Hydrologic Unit 10090202, at culvert on county road 159 and 29.8 mi southeast of Buffalo.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)
JUL													
14...	1440	.15	654	8.7	142	8.9	4,780	39.5	32.0	160	6.99	34.9	38
AUG													
10...	1400	.12	664	8.7	120	8.9	4,840	24.5	23.5	180	6.96	40.3	37
SEP													
08...	1235	.23	667	8.6	111	9.2	4,440	30.5	20.5	180	8.13	37.9	35

Date	Sodium, water, fltrd, mg/L (00930)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL		
14...	1,100	3,100
AUG		
10...	1,160	3,200
SEP		
08...	1,060	3,040

06313700 DEAD HORSE CREEK NEAR BUFFALO, WY

LOCATION.--Lat 44°12'54", long 106°06'41", in NW¼ SE¼ SW¼ sec. 15, T.49 N., R.77 W., Johnson County, Hydrologic Unit 10090202, on left bank 250 ft downstream from bridge on dirt road, 0.80 mi upstream from Interstate Highway 90, 5.3 mi upstream from mouth, and 31 mi east of Buffalo.

DRAINAGE AREA.--151 mi^2.

PERIOD OF RECORD.--Water years 1987-1989, April 2000 to February 2004 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)
OCT		
07...	1015	.00
NOV		
06...	1420	.00
DEC		
04...	1330	.00
JAN		
08...	1330	.00
FEB		
05...	1300	.00

06313750 BARBER CREEK AT MOUTH, NEAR BUFFALO, WY

LOCATION.--Lat 44°19'28", long 106°07'57", in NE¼ SE¼ NW¼ sec.9, T.50 N., R.77 W., Johnson County, Hydrologic Unit 10090202, 100 ft upstream from mouth and 27.6 mi east of Buffalo.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)
JUL		
28...	1515	.00
AUG		
24...	1330	.00
SEP		
20...	1340	.00

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY

LOCATION.--Lat 44°29'28", long 106°10'38", in NE¼ SW¼ SW¼ sec.7, T.52 N., R.77 W., Johnson County, Hydrologic Unit 10090205, on left bank 1.1 mi upstream from Jewell Draw, 5.0 mi upstream from mouth, and 11 mi south of Arvada.

DRAINAGE AREA.--937 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1963 to September 1970, October 1977 to September 1981, October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,780 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 12,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	e7.4	e15	e13	e9.8	e19	13	6.2	3.7	1.2	4.8	0.06
2	4.6	e8.0	e16	e15	e9.8	e20	11	5.5	3.2	85	3.5	0.08
3	4.2	e8.6	e15	e12	e10	e21	11	4.9	3.6	34	2.3	0.18
4	4.5	e8.4	e17	e10	e11	e23	10	4.5	5.4	4.0	2.3	0.16
5	4.3	e8.0	e18	e7.4	e10	e26	14	4.4	4.1	6.1	2.1	0.08
6	4.2	e9.0	e20	e7.0	e11	e30	13	4.5	2.9	11	1.5	0.05
7	4.0	e9.6	e18	e7.6	e12	33	11	4.7	2.5	8.7	1.3	0.05
8	3.7	e11	e16	e8.2	e11	35	9.0	3.9	2.2	5.4	1.0	0.05
9	3.7	e13	e15	e8.7	e12	39	8.1	3.3	1.9	4.5	2.2	0.06
10	3.4	16	e14	e8.8	e10	41	8.8	3.0	1.5	3.9	3.4	0.07
11	3.4	19	e15	e8.6	e11	53	8.8	3.0	e0.60	4.1	1.9	0.08
12	3.4	21	e16	e8.4	e13	51	9.6	4.9	e0.50	2.8	1.0	0.07
13	3.4	e17	e17	e8.2	e15	42	8.9	5.5	e0.40	1.9	0.69	0.07
14	3.4	e16	e18	e8.6	e16	90	9.1	6.3	e0.35	1.2	0.42	0.13
15	3.7	e15	e17	e8.0	e17	34	9.6	5.2	e0.32	0.90	0.20	0.14
16	4.1	e14	e15	e8.4	e19	31	8.2	4.6	e0.40	0.78	0.12	0.10
17	4.7	e13	e14	e8.4	e20	29	7.3	7.1	e0.50	0.51	0.07	0.08
18	4.8	e14	e15	e8.0	e19	26	6.8	7.5	e0.70	0.33	0.05	0.05
19	5.3	e15	e14	e7.6	e18	24	6.9	12	1.5	0.19	0.03	0.03
20	6.1	26	e16	e8.0	e17	21	7.3	5.8	1.3	0.09	0.02	0.10
21	6.8	e11	e16	e8.4	e18	18	7.0	5.2	e0.70	0.06	0.02	0.14
22	6.8	e8.0	e15	e8.8	e17	15	6.8	4.9	e0.60	0.06	0.02	0.12
23	6.7	e7.4	e14	e8.8	e19	15	7.3	5.4	e0.70	11	0.01	0.15
24	6.5	e9.0	e14	e8.4	e20	15	7.1	4.7	e0.90	18	0.02	0.15
25	6.5	e11	e15	e7.4	e22	14	6.6	4.9	2.6	31	0.04	0.16
26	6.4	e11	e16	e6.0	e21	14	8.0	9.7	2.8	47	0.04	0.15
27	6.3	e12	e14	e6.6	e19	12	7.9	8.3	2.7	36	0.09	0.20
28	6.9	e13	e13	e8.0	e19	14	7.0	6.6	2.0	28	0.08	0.22
29	7.9	e15	e12	e7.8	e19	17	6.8	5.3	1.5	16	0.07	0.21
30	8.2	e14	e12	e8.2	---	16	6.8	4.9	1.3	11	0.07	0.22
31	8.6	---	e12	e10	---	14	---	3.9	---	6.7	0.07	---
TOTAL	161.4	380.4	474	268.3	445.6	852	262.7	170.6	53.37	381.42	29.43	3.41
MEAN	5.21	12.7	15.3	8.65	15.4	27.5	8.76	5.50	1.78	12.3	0.95	0.11
MAX	8.6	26	20	15	22	90	14	12	5.4	85	4.8	0.22
MIN	3.4	7.4	12	6.0	9.8	12	6.6	3.0	0.32	0.06	0.01	0.03
AC-FT	320	755	940	532	884	1,690	521	338	106	757	58	6.8

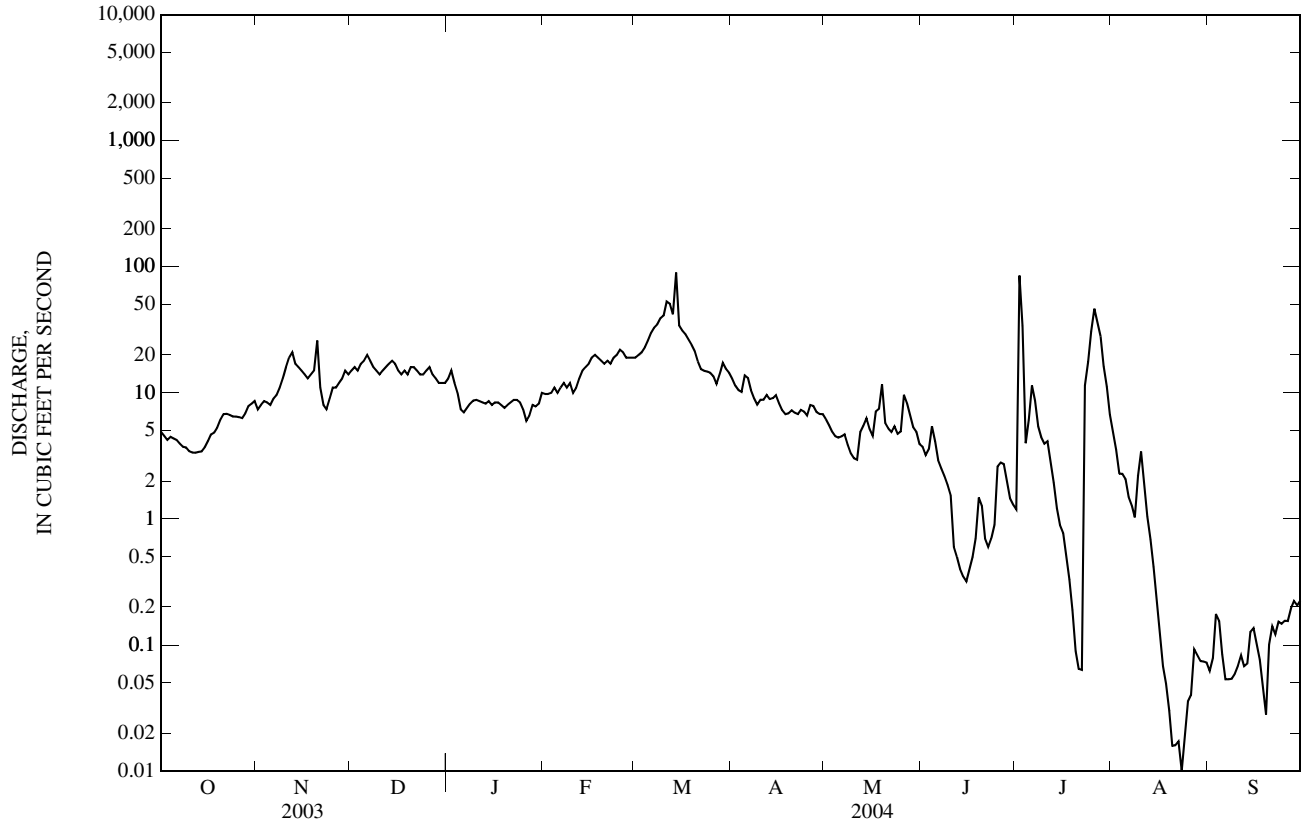
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004, BY WATER YEAR (WY)

MEAN	14.6	17.5	16.5	13.1	17.3	42.6	32.2	96.2	184	52.0	15.0	11.7
MAX	39.5	42.1	39.7	26.3	41.3	101	71.6	629	590	183	68.6	54.9
(WY)	(1969)	(1979)	(1979)	(1980)	(1968)	(1978)	(1980)	(1978)	(1967)	(1967)	(1968)	(1968)
MIN	0.10	3.19	8.62	4.14	7.55	11.5	7.29	5.50	1.78	0.13	0.00	0.06
(WY)	(2002)	(2002)	(2002)	(1970)	(1966)	(1981)	(1967)	(2004)	(2004)	(1966)	(1966)	(2001)

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1963 - 2004*	
ANNUAL TOTAL	11,779.34		3,482.63		--	
ANNUAL MEAN	32.3		9.52		41.2	
HIGHEST ANNUAL MEAN	--		--		119	1978
LOWEST ANNUAL MEAN	--		--		8.02	2002
HIGHEST DAILY MEAN	218	May 31	90	Mar 14	2,030	May 20, 1978
LOWEST DAILY MEAN	0.06	Sep 9	0.01	Aug 23	0.00	Many days, some years,
ANNUAL SEVEN-DAY MINIMUM	0.19	Sep 3	0.02	Aug 19	0.00	Some years
MAXIMUM PEAK FLOW	--		610	Jul 2	15,800[a]	Jun 15, 1965
MAXIMUM PEAK STAGE	--		5.44	Jul 2	16.02[b]	Jun 15, 1965
ANNUAL RUNOFF (AC-FT)	23,360		6,910		29,880	
10 PERCENT EXCEEDS	100		19		80	
50 PERCENT EXCEEDS	13		7.4		15	
90 PERCENT EXCEEDS	3.0		0.13		1.0	

* For period of operation.
a From rating curve extended above 1,300 ft3/s, on basis of slope-area measurement of peak flow.
b From floodmarks.
e Estimated.



06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

WATER-QUALITY RECORDS.

PERIOD OF RECORD.--Water years 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 2001 to current year (seasonal).
WATER TEMPERATURE: July 2001 to current year (seasonal).

REMARKS.--Specific conductance records good October 1 to November 6, April 2 to May 10, May 18 to June 11, June 22 to July 1, July 17, July 19 to September 30; fair May 11-14, June 12-19, July 16, 18; and poor May 15-17, July 2-15. Water temperature records good. Water-temperature records represent water temperature at sensor with 0.5°C.

INSTRUMENTATION.--Water quality monitor for specifice conductance and water temperature.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 3,280 microsiemens per centimeter at 25°C (µS/cm), September 4-7, 2001 and July 18, 2002; minimum recorded, 360 µS/cm, April 17, 2003.
WATER TEMPERATURE: Maximum recorded, 32.0°C, July 18, 2004; minimum recorded, 0.0°C, April 11, 12, 2002.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 3,020 µS/cm, September 20; minimum recorded, 875 µS/cm, July 23.
WATER TEMPERATURE: Maximum recorded, 32.0°C, July 18; minimum recorded, 0.0°C,November 1, 2, 4.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
07...	1500	4.0	660	9.7	110	8.3	1,640	29.0	14.0	740	153	87.0	6.10
22...	1400	6.8	670	9.7	102	8.2	1,860	26.5	11.5	780	158	94.2	6.08
NOV													
07...	1330	9.7	670	11.3	90	8.3	1,780	3.5	.5	830	175	95.7	5.25
20...	1600	26	664	12.5	99	8.3	1,190	-1.0	.0	500	113	53.6	2.98
DEC													
05...	1220	18	669	11.6	91	8.2	1,510	3.5	.0	750	161	83.4	3.89
18...	1430	15	675	12.2	95	8.1	1,370	2.5	.0	620	137	68.4	3.12
JAN													
09...	1255	8.7	673	10.6	83	7.8	1,680	6.0	.0	730	163	79.2	3.57
22...	1630	8.8	665	11.4	90	7.9	1,600	2.5	.0	760	169	80.9	5.61
FEB													
06...	1300	11	670	11.6	91	8.0	1,350	2.0	.0	620	140	65.1	3.24
19...	1810	18	663	11.9	94	8.0	1,100	2.0	.0	500	114	51.7	4.89
MAR													
10...	1600	36	670	11.2	88	8.2	1,100	3.0	.0	450	99.1	50.1	2.50
23...	1745	14	656	10.4	109	8.2	1,450	17.0	10.5	660	142	74.0	3.61
APR													
06...	1745	12	658	9.6	116	8.3	2,260	21.5	17.0	1,000	199	122	5.94
21...	0925	6.8	659	9.3	94	8.1	2,200	9.0	9.0	910	189	106	5.54
MAY													
04...	1500	4.7	665	9.4	122	7.8	2,430	26.5	21.0	1,000	209	127	6.41
17...	1830	10	667	9.9	123	8.2	2,660	16.5	19.0	1,100	227	137	8.94
JUN													
09...	1250	2.0	670	7.6	91	7.9	2,650	18.0	17.5	1,200	227	148	9.54
23...	1755	.69	667	8.9	124	8.0	2,980	30.5	24.5	1,300	257	157	9.49
JUL													
15...	1315	1.3	670	6.2	81	7.8	2,710	13.5	21.5	1,200	260	141	10.2
28...	1300	23	668	--	--	7.9	1,270	22.5	20.0	570	141	53.7	7.41
AUG													
10...	1200	3.7	670	9.2	115	8.3	1,970	19.0	19.5	820	172	94.4	8.22
24...	1505	.04	650	15.0	220	7.4	2,860	26.0	26.0	1,100	235	122	10.1
SEP													
08...	1045	.03	670	7.2	88	8.2	2,130	24.0	18.5	1,000	231	113	9.40
20...	1445	.08	660	11.3	130	7.9	3,030	11.5	14.5	1,200	270	124	9.33

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
07...	2	127	27	188	11.8	.3	1.38	714	1,210	1.86	14.7	1,360	--
22...	2	142	28	238	9.79	.3	1.12	845	1,400	2.11	28.5	1,550	--
NOV													
07...	2	128	25	233	11.0	.3	7.29	772	1,330	2.00	38.5	1,470	--
20...	1	72.8	24	191	5.89	.2	9.38	463	836	1.23	63.4	903	--
DEC													
05...	1	90.7	21	--	7.93	.3	13.9	613	--	--	--	1,180	--
18...	2	89.0	24	225	6.63	.3	11.5	542	992	1.45	43.0	1,060	--
JAN													
09...	2	110	25	228	9.24	.3	12.9	687	1,200	1.83	31.6	1,340	--
22...	2	102	23	223	8.66	.3	15.6	662	1,180	1.71	30.0	1,260	--
FEB													
06...	2	87.3	23	210	6.61	.3	12.2	519	960	1.46	32.0	1,080	--
19...	1	71.7	24	174	5.51	.2	8.30	424	785	1.14	40.7	838	--
MAR													
10...	1	71.5	25	151	5.88	.2	5.84	445	771	1.14	81.3	837	--
23...	2	115	27	177	6.93	.2	3.78	640	1,090	1.56	43.4	1,150	--
APR													
06...	3	189	29	213	12.5	.3	3.19	1,080	1,740	2.71	64.6	1,990	<.04
21...	3	179	30	234	12.1	.3	1.52	1,050	1,690	2.61	35.3	1,920	--
MAY													
04...	3	199	29	239	61.0	.3	1.17	1,180	1,930	2.90	27.1	2,130	<.04
17...	3	232	31	239	14.8	.4	1.79	1,320	2,090	3.25	64.5	2,390	--
JUN													
09...	3	246	31	245	15.4	.4	1.32	1,350	2,140	3.35	13.3	2,460	E.03
23...	3	283	32	243	16.0	.4	1.18	1,540	2,410	3.68	5.04	2,710	--
JUL													
15...	3	222	28	245	14.8	.5	3.09	1,390	2,190	3.34	8.61	2,450	--
28...	1	59.8	18	101	5.68	.4	6.22	607	942	1.47	67.1	1,080	--
AUG													
10...	2	154	29	206	9.01	.4	1.40	925	1,490	2.24	16.5	1,650	--
24...	4	275	35	276	10.5	.4	3.87	1,420	2,240	3.30	.26	2,430	--
SEP													
08...	3	227	32	236	12.9	.4	1.28	1,210	1,950	2.96	.18	2,180	--
20...	4	346	39	288	10.5	.4	4.62	1,540	2,480	3.73	.59	2,750	--

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	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)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryll-ium, water, unfltrd recover-able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
OCT												
07...	--	--	--	200	.7	60	<.06	17	89.4	.9	--	--
22...	--	--	--	233	.8	64	<.06	14	62.3	1.2	--	--
NOV												
07...	--	--	--	113	.7	49	<.06	15	60.7	1.2	--	--
20...	--	--	--	846	.5	45	.08	8	33.1	1.4	--	--
DEC												
05...	--	--	--	202	.8	43	<.06	88	31.0	2.0	--	--
18...	--	--	--	108	.6	39	<.06	10	28.2	1.6	--	--
JAN												
09...	--	--	--	68	.6	49	<.06	35	92.5	1.9	--	--
22...	--	--	--	92	.7	50	<.06	27	60.3	2.2	--	--
FEB												
06...	--	--	--	108	.6	41	<.06	16	30.2	1.7	--	--
19...	--	--	--	556	.6	40	.07	30	25.8	1.6	--	--
MAR												
10...	--	--	--	694	.4	40	.08	8	36.6	1.0	--	--
23...	--	--	--	219	.5	46	<.06	16	132	.9	--	--
APR												
06...	<.06	<.008	<.02	282	.8	71	<.06	E12	110	1.1	53	1.7
21...	--	--	--	192	.7	67	<.06	E17	167	1.1	--	--
MAY												
04...	<.06	E.007	<.02	142	.9	62	<.06	26	180	1.4	28	.36
17...	--	--	--	271	1.0	72	<.12	25	176	1.4	--	--
JUN												
09...	<.06	<.008	<.02	486	1.1	89	<.12	27	451	1.4	46	.25
23...	--	--	--	364	.8	87	<.12	22	335	1.5	--	--
JUL												
15...	--	--	--	413	1.4	114	<.12	40	710	1.6	--	--
28...	--	--	--	22,400	.9	375	2.03	E4	7.7	3.2	--	--
AUG												
10...	--	--	--	398	1.3	80	E.05	20	74.8	1.3	--	--
24...	--	--	--	195	1.2	77	<.12	39	749	1.4	--	--
SEP												
08...	--	--	--	431	1.0	83	<.12	<19	165	1.6	--	--
20...	--	--	--	88	1.1	73	<.12	33	950	1.0	--	--

< -- Less than
E -- Estimated value

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1,480	1,370	1,420	1,820	1,760	1,790	---	---	---	---	---	---
2	1,490	1,430	1,470	1,780	1,700	1,750	---	---	---	---	---	---
3	1,520	1,490	1,510	1,700	1,650	1,670	---	---	---	---	---	---
4	1,550	1,520	1,540	1,650	1,600	1,620	---	---	---	---	---	---
5	1,590	1,520	1,570	1,710	1,620	1,660	---	---	---	---	---	---
6	1,620	1,580	1,600	1,740	1,690	1,710	---	---	---	---	---	---
7	1,630	1,560	1,590	---	---	---	---	---	---	---	---	---
8	1,600	1,580	1,600	---	---	---	---	---	---	---	---	---
9	1,610	1,590	1,600	---	---	---	---	---	---	---	---	---
10	1,640	1,600	1,620	---	---	---	---	---	---	---	---	---
11	1,660	1,640	1,650	---	---	---	---	---	---	---	---	---
12	1,680	1,660	1,670	---	---	---	---	---	---	---	---	---
13	1,700	1,680	1,690	---	---	---	---	---	---	---	---	---
14	1,720	1,700	1,710	---	---	---	---	---	---	---	---	---
15	1,740	1,720	1,730	---	---	---	---	---	---	---	---	---
16	1,740	1,720	1,730	---	---	---	---	---	---	---	---	---
17	1,730	1,710	1,720	---	---	---	---	---	---	---	---	---
18	1,720	1,700	1,710	---	---	---	---	---	---	---	---	---
19	1,720	1,700	1,720	---	---	---	---	---	---	---	---	---
20	1,760	1,720	1,740	---	---	---	---	---	---	---	---	---
21	1,770	1,740	1,750	---	---	---	---	---	---	---	---	---
22	1,750	1,720	1,730	---	---	---	---	---	---	---	---	---
23	1,760	1,740	1,750	---	---	---	---	---	---	---	---	---
24	1,810	1,760	1,780	---	---	---	---	---	---	---	---	---
25	1,830	1,800	1,820	---	---	---	---	---	---	---	---	---
26	1,840	1,820	1,830	---	---	---	---	---	---	---	---	---
27	1,860	1,840	1,860	---	---	---	---	---	---	---	---	---
28	1,870	1,840	1,850	---	---	---	---	---	---	---	---	---
29	1,840	1,800	1,820	---	---	---	---	---	---	---	---	---
30	1,830	1,810	1,820	---	---	---	---	---	---	---	---	---
31	1,830	1,800	1,810	---	---	---	---	---	---	---	---	---
MONTH	1,870	1,370	1,690	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	1,950	1,930	1,940
2	---	---	---	---	---	---	1,930	1,860	1,900	1,960	1,940	1,950
3	---	---	---	---	---	---	1,950	1,930	1,940	2,040	1,950	2,000
4	---	---	---	---	---	---	1,980	1,950	1,960	2,110	2,030	2,070
5	---	---	---	---	---	---	2,100	1,980	2,030	2,190	2,110	2,160
6	---	---	---	---	---	---	2,160	2,070	2,120	2,220	2,190	2,210
7	---	---	---	---	---	---	2,160	2,070	2,120	2,300	2,220	2,260
8	---	---	---	---	---	---	2,240	2,160	2,200	2,380	2,300	2,340
9	---	---	---	---	---	---	2,240	2,220	2,240	2,470	2,380	2,420
10	---	---	---	---	---	---	2,280	2,190	2,250	2,560	2,470	2,520
11	---	---	---	---	---	---	2,190	1,980	2,080	2,640	2,560	2,610
12	---	---	---	---	---	---	1,990	1,860	1,920	2,730	2,640	2,680
13	---	---	---	---	---	---	1,860	1,790	1,830	2,730	2,690	2,710
14	---	---	---	---	---	---	1,790	1,740	1,760	2,700	2,660	2,680
15	---	---	---	---	---	---	1,780	1,750	1,770	2,720	2,670	2,700
16	---	---	---	---	---	---	1,800	1,770	1,790	2,740	2,700	2,730
17	---	---	---	---	---	---	1,850	1,790	1,820	2,700	2,590	2,650
18	---	---	---	---	---	---	1,880	1,850	1,870	2,590	2,420	2,540
19	---	---	---	---	---	---	1,910	1,870	1,890	2,450	2,220	2,330
20	---	---	---	---	---	---	1,940	1,900	1,930	2,330	2,210	2,270
21	---	---	---	---	---	---	1,950	1,920	1,930	2,430	2,210	2,300
22	---	---	---	---	---	---	2,000	1,940	1,980	2,380	2,270	2,320
23	---	---	---	---	---	---	2,030	2,000	2,010	2,320	2,230	2,270
24	---	---	---	---	---	---	2,020	1,970	2,010	2,380	2,280	2,330
25	---	---	---	---	---	---	1,970	1,910	1,940	2,460	2,380	2,420
26	---	---	---	---	---	---	1,920	1,890	1,910	2,610	2,460	2,540
27	---	---	---	---	---	---	1,890	1,840	1,870	2,690	2,610	2,640
28	---	---	---	---	---	---	1,850	1,810	1,830	2,710	2,670	2,700
29	---	---	---	---	---	---	1,870	1,820	1,830	2,670	2,620	2,640
30	---	---	---	---	---	---	1,940	1,870	1,910	2,630	2,570	2,600
31	---	---	---	---	---	---	---	---	---	2,570	2,480	2,540
MONTH	---	---	---	---	---	---	---	---	---	2,740	1,930	2,420

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	2,540	2,480	2,520	2,680	2,140	2,530	1,600	1,500	1,550	2,920	2,770	2,870
2	2,550	2,510	2,530	2,690	995	2,370	1,660	1,570	1,620	3,000	2,890	2,960
3	2,570	2,530	2,550	2,450	1,850	2,260	1,710	1,660	1,680	2,950	2,550	2,730
4	2,590	2,560	2,570	2,480	2,420	2,440	1,760	1,710	1,730	2,550	2,360	2,480
5	2,560	2,510	2,520	2,510	2,480	2,500	1,820	1,760	1,790	2,750	2,460	2,600
6	2,520	2,480	2,500	2,580	2,340	2,460	1,910	1,820	1,860	2,730	2,600	2,640
7	2,610	2,500	2,550	2,670	2,580	2,630	1,940	1,890	1,920	2,760	2,570	2,670
8	2,700	2,600	2,650	2,640	2,560	2,600	1,990	1,900	1,950	2,850	2,680	2,790
9	2,710	2,680	2,700	2,700	2,630	2,660	2,030	1,920	1,980	2,880	2,790	2,820
10	2,730	2,710	2,710	2,670	2,580	2,620	2,000	1,880	1,960	2,940	2,780	2,850
11	2,730	2,720	2,720	2,580	2,500	2,520	1,930	1,870	1,910	2,940	2,790	2,900
12	2,750	2,730	2,740	2,560	2,480	2,520	1,990	1,920	1,950	2,940	2,800	2,880
13	2,760	2,740	2,750	2,620	2,540	2,580	2,020	1,950	1,990	2,930	2,830	2,900
14	2,780	2,750	2,760	2,720	2,620	2,670	2,070	1,990	2,020	2,890	2,830	2,870
15	2,810	2,750	2,790	2,710	2,670	2,690	2,170	1,990	2,080	2,880	2,800	2,830
16	2,860	2,780	2,820	2,690	2,660	2,670	2,230	2,030	2,160	2,860	2,760	2,800
17	2,810	2,790	2,810	2,710	2,670	2,680	2,340	2,180	2,260	2,870	2,760	2,810
18	2,850	2,800	2,820	2,740	2,670	2,710	2,390	2,260	2,330	2,920	2,770	2,860
19	2,930	2,850	2,890	2,810	2,730	2,770	2,450	2,310	2,400	2,990	2,860	2,930
20	---	---	---	2,830	2,780	2,810	2,530	2,320	2,450	3,020	2,910	2,970
21	---	---	---	2,900	2,810	2,850	2,630	2,470	2,550	2,920	2,720	2,820
22	2,960	2,930	2,950	2,910	2,820	2,850	2,680	2,530	2,610	2,740	2,620	2,680
23	2,960	2,910	2,930	2,840	875	2,070	2,710	2,550	2,630	2,840	2,650	2,730
24	2,950	2,730	2,840	2,490	1,330	1,720	2,840	2,630	2,760	2,750	2,640	2,720
25	2,930	2,780	2,850	2,240	1,200	1,660	3,000	2,740	2,840	2,800	2,640	2,730
26	2,960	2,780	2,890	2,120	1,750	1,950	2,940	2,750	2,860	2,840	2,710	2,770
27	2,890	2,760	2,860	2,390	1,500	2,070	2,840	2,610	2,730	2,850	2,740	2,790
28	2,930	2,780	2,890	1,500	1,140	1,330	2,760	2,610	2,690	2,760	2,680	2,730
29	2,840	2,700	2,800	1,340	1,290	1,320	2,860	2,640	2,750	2,880	2,680	2,760
30	2,820	2,640	2,740	1,430	1,320	1,360	2,860	2,690	2,790	2,880	2,680	2,730
31	---	---	---	1,500	1,430	1,460	2,850	2,700	2,800	---	---	---
MONTH	---	---	---	2,910	875	2,330	3,000	1,500	2,250	3,020	2,360	2,790

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	13.9	8.3	11.4	1.7	0.0	0.6	---	---	---	---	---	---
2	13.9	8.7	11.5	1.3	0.0	0.5	---	---	---	---	---	---
3	13.6	8.6	11.2	1.4	0.3	1.1	---	---	---	---	---	---
4	13.2	8.2	10.8	1.0	0.0	0.6	---	---	---	---	---	---
5	13.3	8.0	10.9	0.6	0.1	0.2	---	---	---	---	---	---
6	13.5	8.6	11.1	0.6	0.1	0.2	---	---	---	---	---	---
7	17.0	9.8	12.1	---	---	---	---	---	---	---	---	---
8	14.8	11.0	12.8	---	---	---	---	---	---	---	---	---
9	15.2	10.4	12.8	---	---	---	---	---	---	---	---	---
10	13.1	9.8	11.7	---	---	---	---	---	---	---	---	---
11	11.3	7.1	9.1	---	---	---	---	---	---	---	---	---
12	10.8	7.0	8.7	---	---	---	---	---	---	---	---	---
13	11.8	8.7	9.8	---	---	---	---	---	---	---	---	---
14	9.1	6.7	8.0	---	---	---	---	---	---	---	---	---
15	10.6	7.2	8.7	---	---	---	---	---	---	---	---	---
16	11.3	7.9	9.4	---	---	---	---	---	---	---	---	---
17	12.4	7.6	10.0	---	---	---	---	---	---	---	---	---
18	12.4	8.1	10.5	---	---	---	---	---	---	---	---	---
19	11.5	7.6	9.9	---	---	---	---	---	---	---	---	---
20	11.6	7.4	9.8	---	---	---	---	---	---	---	---	---
21	12.8	7.7	10.3	---	---	---	---	---	---	---	---	---
22	19.9	8.4	10.8	---	---	---	---	---	---	---	---	---
23	11.6	8.0	10.1	---	---	---	---	---	---	---	---	---
24	10.3	6.3	7.9	---	---	---	---	---	---	---	---	---
25	7.1	4.1	5.6	---	---	---	---	---	---	---	---	---
26	8.3	4.2	6.3	---	---	---	---	---	---	---	---	---
27	9.5	6.5	8.0	---	---	---	---	---	---	---	---	---
28	9.1	7.2	8.2	---	---	---	---	---	---	---	---	---
29	8.5	4.8	7.3	---	---	---	---	---	---	---	---	---
30	4.8	0.6	2.4	---	---	---	---	---	---	---	---	---
31	1.4	0.1	0.6	---	---	---	---	---	---	---	---	---
MONTH	19.9	0.1	9.3	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	14.3	7.6	11.0
2	---	---	---	---	---	---	10.7	5.7	7.6	16.8	8.0	12.6
3	---	---	---	---	---	---	10.7	5.3	7.6	19.5	11.5	15.4
4	---	---	---	---	---	---	14.1	6.5	10.2	22.0	13.8	17.8
5	---	---	---	---	---	---	16.7	11.1	13.5	20.4	15.1	17.8
6	---	---	---	---	---	---	15.8	10.4	13.3	21.9	14.4	18.1
7	---	---	---	---	---	---	16.1	11.4	13.7	22.8	15.3	19.0
8	---	---	---	---	---	---	15.2	10.3	12.7	20.7	16.4	18.5
9	---	---	---	---	---	---	12.5	8.4	10.3	20.0	14.6	16.9
10	---	---	---	---	---	---	11.6	4.8	8.3	20.5	13.5	16.7
11	---	---	---	---	---	---	9.4	5.8	7.9	19.3	13.1	16.2
12	---	---	---	---	---	---	11.4	2.7	7.0	13.1	8.8	10.1
13	---	---	---	---	---	---	15.2	6.8	10.9	12.1	7.1	9.6
14	---	---	---	---	---	---	13.6	9.4	11.6	15.2	8.0	11.8
15	---	---	---	---	---	---	14.2	9.0	11.6	18.2	9.7	14.0
16	---	---	---	---	---	---	15.4	8.8	12.0	16.6	12.7	14.1
17	---	---	---	---	---	---	15.8	10.0	13.0	18.2	11.5	14.6
18	---	---	---	---	---	---	13.6	8.8	10.8	19.6	13.8	16.4
19	---	---	---	---	---	---	13.0	6.3	9.7	20.7	15.3	17.6
20	---	---	---	---	---	---	14.1	8.6	11.5	17.2	14.4	15.7
21	---	---	---	---	---	---	13.1	9.3	11.3	19.2	12.6	15.9
22	---	---	---	---	---	---	13.4	9.6	11.4	17.4	13.9	15.8
23	---	---	---	---	---	---	16.1	7.9	11.9	20.2	13.2	16.4
24	---	---	---	---	---	---	13.9	9.1	11.7	17.2	12.8	14.8
25	---	---	---	---	---	---	14.2	7.5	10.9	18.8	10.4	14.4
26	---	---	---	---	---	---	16.4	8.3	12.3	17.0	11.8	14.8
27	---	---	---	---	---	---	19.1	10.4	14.7	20.4	13.4	16.6
28	---	---	---	---	---	---	16.2	9.2	12.6	18.0	15.2	16.7
29	---	---	---	---	---	---	9.2	6.7	7.9	16.6	13.1	14.8
30	---	---	---	---	---	---	11.9	5.0	8.5	13.2	10.2	11.7
31	---	---	---	---	---	---	---	---	---	16.8	9.6	13.0
MONTH	---	---	---	---	---	---	---	---	---	22.8	7.1	15.1

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.1	11.5	15.1	26.9	19.3	22.6	29.3	20.5	24.8	28.1	13.6	20.5
2	22.0	12.9	17.2	27.6	7.7	19.8	28.9	21.5	25.1	20.5	15.1	17.7
3	24.7	15.8	20.0	21.1	11.4	16.4	25.7	21.4	23.2	15.7	13.7	14.9
4	24.3	18.3	21.2	22.2	17.5	19.6	26.7	18.9	22.4	20.1	12.9	15.8
5	26.1	17.5	21.6	19.9	16.8	18.0	28.9	19.6	23.5	22.4	13.2	16.7
6	24.9	18.4	21.3	23.7	15.7	19.3	28.6	20.6	24.4	23.8	12.6	17.2
7	25.3	17.4	21.1	26.2	19.1	22.3	27.3	20.7	23.9	25.1	11.7	17.8
8	21.8	16.5	19.0	26.0	19.1	22.1	25.6	18.7	21.9	25.5	13.0	19.0
9	21.1	16.3	18.4	27.1	18.7	22.9	24.5	17.5	20.9	25.5	13.1	19.0
10	21.8	16.6	18.6	25.1	20.3	23.0	22.5	18.4	20.3	20.1	13.4	16.8
11	17.6	13.8	15.4	26.3	19.3	22.9	22.8	14.9	18.7	25.4	11.5	17.8
12	21.2	12.8	16.8	28.3	19.4	23.6	23.5	15.2	19.4	24.6	12.3	17.6
13	22.1	15.1	17.9	28.1	20.4	24.1	25.0	16.9	20.8	22.1	14.5	16.9
14	24.4	15.2	19.6	29.2	20.9	24.8	26.3	16.9	21.2	19.7	12.4	15.0
15	25.1	16.4	19.8	25.6	19.8	21.9	25.6	16.6	20.8	21.7	9.3	15.0
16	18.3	15.1	16.6	29.3	17.9	23.1	26.7	16.2	20.9	22.5	11.1	16.0
17	16.4	13.7	14.9	31.6	20.4	25.4	24.9	18.7	21.2	22.7	10.6	15.9
18	14.7	12.5	13.4	32.0	20.7	26.2	23.3	17.4	19.9	22.9	11.0	16.5
19	18.7	11.7	14.7	28.3	22.1	24.8	26.0	15.3	19.7	21.3	12.8	16.0
20	18.5	13.5	16.1	28.8	20.0	23.7	26.8	14.4	19.9	16.1	10.8	13.0
21	20.1	13.8	16.6	29.5	19.1	23.6	26.1	15.1	20.1	16.7	9.0	12.2
22	21.2	13.7	17.5	26.5	18.6	21.8	26.7	15.0	19.7	19.6	7.5	13.0
23	24.6	15.4	19.6	20.4	15.9	17.7	21.9	15.5	18.4	18.7	9.3	13.2
24	22.6	17.0	19.5	20.6	14.3	17.2	26.5	11.7	18.4	20.4	11.8	15.6
25	21.7	17.2	19.3	23.4	16.1	19.7	22.8	14.0	17.3	23.1	10.0	16.0
26	21.9	15.9	18.9	24.3	19.8	22.1	23.1	11.8	16.5	21.7	10.4	15.5
27	24.1	16.3	19.8	22.9	19.7	21.5	21.4	12.1	16.4	14.8	12.2	13.3
28	22.7	17.3	20.1	23.4	17.0	20.4	24.5	11.0	17.2	20.2	10.8	14.9
29	26.5	17.7	22.0	23.6	18.6	21.2	25.6	15.0	19.5	21.0	10.2	15.2
30	25.7	20.1	22.3	25.3	18.0	21.6	26.0	13.3	19.3	16.3	12.0	14.0
31	---	---	---	27.6	19.7	23.5	26.6	13.4	19.7	---	---	---
MONTH	26.5	11.5	18.5	32.0	7.7	21.8	29.3	11.0	20.5	28.1	7.5	15.9

06316900 COTTONWOOD CREEK AT MOUTH, NEAR ARVADA, WY

LOCATION.--Lat 44°34'43", long 106°05'52", in SW¼ SW¼ sec.11, T.53 N., R.77 W., Sheridan County, Hydrologic Unit 10090202, at bridge on county road 273 and 5.3 mi southeast of Arvada.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)
JUL													
28...	1100	7.1	670	--	--	7.6	1,270	20.5	19.5	570	165	37.4	1
AUG													
24...	1605	.01	657	6.9	89	8.8	3,420	26.0	20.0	68	10.6	10.0	40
SEP													
20...	1530	.02	662	7.7	82	8.8	3,080	8.5	11.5	68	10.7	10.0	41

Date	Sodium, water, fltrd, mg/L (00930)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL		
28...	57.3	1,080
AUG		
24...	759	2,210
SEP		
20...	777	2,090

06317000 POWDER RIVER AT ARVADA, WY

LOCATION.--Lat 44°39'00", long 106°07'37", in SW¼ SE¼ sec.16, T.54 N., R.77 W., Sheridan County, Hydrologic Unit 10090202, on right bank 0.1 mi downstream from bridge on county road, 0.2 mi southeast of Arvada, and 0.2 mi upstream from Wild Horse Creek.

DRAINAGE AREA.--6,050 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1919 to current year (no winter records in water years 1919-30, 1934). Records for February 16-23, 1930, published in WSP 701, are unreliable and should not be used.

REVISED RECORDS.--WSP 1509: 1921(M), 1923(M), 1924-26, 1927-28(M), 1929, 1930(M), 1931, 1932(M), 1933, 1934(M), 1935-36. See PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 3,620 ft above NGVD of 1929, from topographic map. Prior to October 24, 1938, non-contributing gage at bridge 0.2 mi upstream at datum 3,621.87 ft. October 24, 1938 to April 27, 1983, at site 0.7 mi upstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Numerous small reservoirs and diversions for irrigation of about 29,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	e43	e115	e69	e100	e160	163	110	68	25	53	0.00
2	29	e50	e115	e55	e84	e150	155	120	66	22	37	0.00
3	29	e52	e110	e44	e90	e175	141	138	62	118	30	0.00
4	28	e52	e105	e39	e95	e200	134	146	63	61	24	0.05
5	28	e40	e103	e33	e95	e200	137	149	63	59	20	0.01
6	29	e35	e103	e33	e96	e205	141	147	56	61	17	0.00
7	28	e40	e120	e38	e105	e230	139	142	44	68	15	0.00
8	29	e45	e105	e40	e115	e200	144	143	37	86	12	0.00
9	31	e49	e100	e44	e115	e200	142	175	35	110	9.5	0.00
10	31	e60	e90	e44	e100	206	148	202	31	84	9.2	0.00
11	31	e70	e80	e44	e82	215	152	198	29	77	8.9	0.00
12	32	e80	e90	e40	e69	608	183	173	27	62	6.5	0.00
13	34	e90	e90	e44	e70	649	203	165	25	47	4.7	0.01
14	35	e135	e100	e50	e79	414	185	154	23	34	3.4	0.48
15	34	e140	e115	e56	e88	350	161	147	19	26	2.4	0.40
16	36	e148	e95	e64	e88	333	160	145	17	25	1.6	0.28
17	38	e140	e100	e72	e90	304	150	146	17	19	1.1	0.16
18	45	141	e102	e70	e98	270	141	141	18	16	0.78	0.04
19	49	140	e105	e80	e106	239	140	141	20	11	0.49	0.00
20	45	145	e105	e90	e115	218	141	122	19	7.4	0.31	0.00
21	48	139	e120	e93	e120	201	146	108	23	4.9	0.19	0.00
22	54	61	e110	e93	e120	187	165	111	18	8.8	0.10	0.00
23	50	e70	e100	e100	e125	192	174	114	16	49	0.04	0.04
24	49	e66	e100	e100	e130	204	e150	101	17	65	0.00	0.22
25	53	e73	e112	e88	e140	199	e130	91	20	62	0.00	0.49
26	61	e83	e120	e88	e150	191	121	93	29	403	0.00	0.82
27	57	e110	e120	e70	e165	185	118	95	27	261	0.00	1.6
28	58	e130	e105	e74	e175	180	113	89	23	218	0.00	2.4
29	59	e135	e80	e80	e160	178	111	83	20	150	0.00	3.5
30	e60	e120	e69	e90	---	168	108	80	15	100	0.00	4.8
31	e50	---	e69	e100	---	165	---	77	---	73	0.00	---
TOTAL	1,269	2,682	3,153	2,025	3,165	7,576	4,396	4,046	947	2,413.1	257.21	15.30
MEAN	40.9	89.4	102	65.3	109	244	147	131	31.6	77.8	8.30	0.51
MAX	61	148	120	100	175	649	203	202	68	403	53	4.8
MIN	28	35	69	33	69	150	108	77	15	4.9	0.00	0.00
AC-FT	2,520	5,320	6,250	4,020	6,280	15,030	8,720	8,030	1,880	4,790	510	30

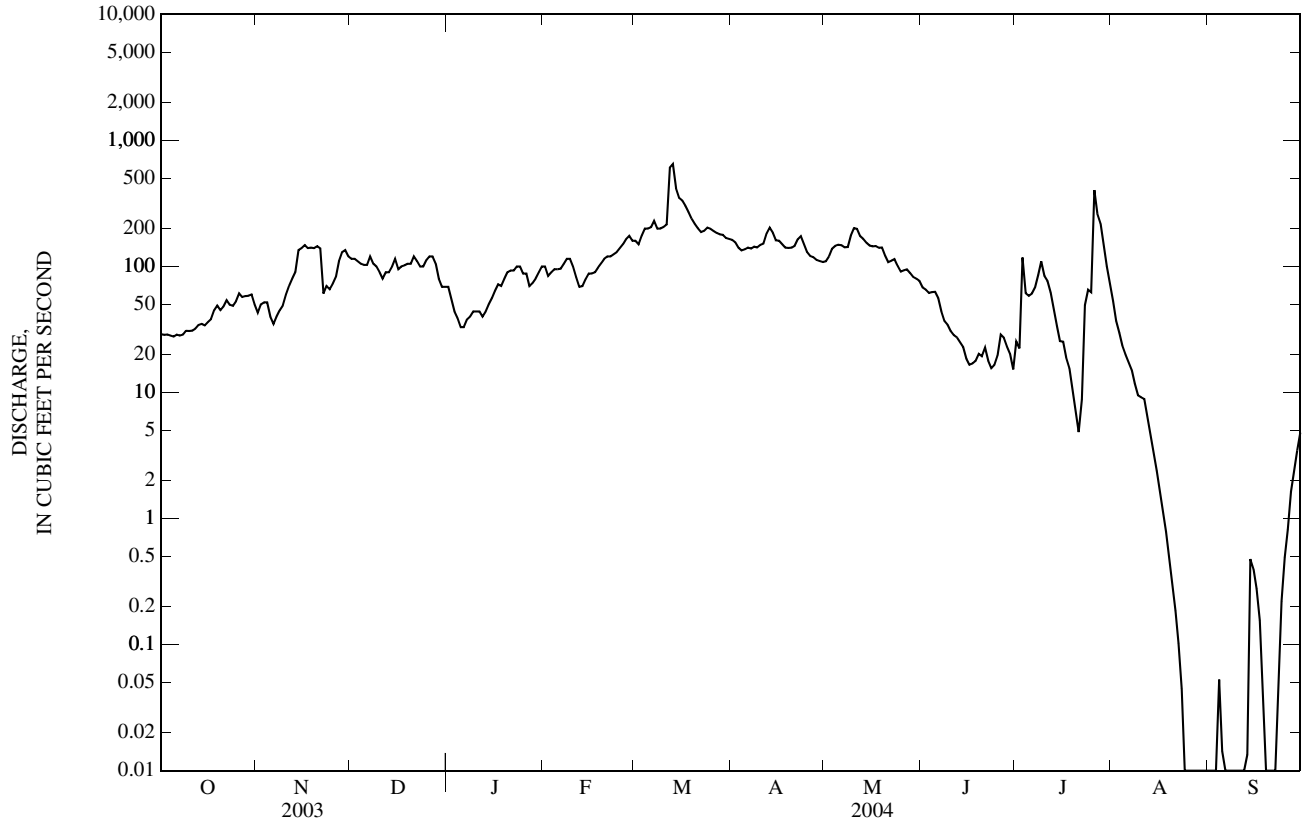
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2004, BY WATER YEAR (WY)

MEAN	134	129	99.8	90.1	167	389	353	716	727	253	94.7	74.1
MAX	865	419	290	242	567	953	1,107	4,025	3,319	1,703	861	451
(WY)	(1995)	(1999)	(1974)	(1974)	(1972)	(1978)	(1941)	(1978)	(1962)	(1937)	(1941)	(1982)
MIN	0.00	11.4	23.0	15.0	10.0	144	99.0	51.3	30.6	15.8	0.00	0.00
(WY)	(1961)	(1936)	(1950)	(1933)	(1933)	(1961)	(1961)	(1936)	(1954)	(1974)	(1932)	(1932)

06317000 POWDER RIVER AT ARVADA, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1931 - 2004	
ANNUAL TOTAL	58,585.52		31,944.61		--	
ANNUAL MEAN	161		87.3		270	
HIGHEST ANNUAL MEAN	--		--		735	1978
LOWEST ANNUAL MEAN	--		--		70.3	1961
HIGHEST DAILY MEAN	1,700	Mar 14	649	Mar 13	22,600	May 20, 1978
LOWEST DAILY MEAN	0.00	Aug 12	0.00	Many days	0.00	Many days, Some years
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 12	0.00	Aug 24	0.00	Some years
MAXIMUM PEAK FLOW	--		1,020	Mar 12	100,000[a]	Sep 29, 1923
MAXIMUM PEAK STAGE	--		3.39	Mar 12	23.70[b]	Sep 29, 1923
ANNUAL RUNOFF (AC-FT)	116,200		63,360		195,800	
10 PERCENT EXCEEDS	340		175		579	
50 PERCENT EXCEEDS	105		77		128	
90 PERCENT EXCEEDS	6.3		0.49		15	

a About, from rating curve extended above 20,000 ft^3/s.
b From floodmarks, site and datum then in use.
e Estimated.



06317000 POWDER RIVER AT ARVADA, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-57, 1968 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: March 1949 to September 1957, October 1967 to September 1978.
SUSPENDED-SEDIMENT DISCHARGE: April 1946 to September 1957, October 1967 to September 1971, January 1975 to September 1978, April 1983 to September 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
07...	1630	27	663	7.3	93	8.4	3,010	28.5	19.5	640	137	73.1	14.8
22...	1145	50	675	9.8	102	8.3	3,290	26.0	11.0	700	149	78.8	13.9
NOV													
07...	1115	40	675	12.6	98	8.2	3,070	2.5	.0	780	178	81.3	12.2
20...	1400	148	667	12.2	99	8.3	2,100	-1.0	1.0	580	144	54.8	8.10
DEC													
05...	1045	103	675	11.5	90	8.1	2,410	-1.5	.0	720	174	68.9	9.33
18...	1245	102	679	10.9	84	8.0	2,380	3.5	.0	670	163	62.8	9.23
JAN													
09...	1110	44	677	10.8	84	7.9	3,240	-2.0	.0	920	229	85.0	11.2
22...	1450	93	670	10.8	85	7.9	2,000	8.0	.0	570	140	52.3	8.00
FEB													
06...	1120	96	674	10.8	84	8.0	2,370	-2.0	.0	590	147	55.2	8.25
19...	1555	106	665	10.1	--	8.0	--	6.0	.0	460	115	42.5	7.70
MAR													
11...	1030	221	676	--	--	8.0	2,110	10.5	3.5	550	136	52.1	7.37
23...	1600	191	659	9.0	102	8.2	2,310	25.0	14.0	620	157	56.5	9.14
APR													
13...	1235	200	--	--	--	8.3	1,940	22.5	10.5	510	121	49.6	7.32
20...	1905	142	660	8.7	100	8.3	2,510	12.5	14.5	550	133	54.0	8.92
MAY													
04...	1640	141	668	7.4	100	8.1	2,350	31.0	23.0	500	117	51.1	9.54
17...	1610	145	668	8.4	109	8.3	2,020	18.0	21.0	460	109	46.7	8.79
JUN													
09...	1445	34	672	8.4	105	8.3	3,590	18.5	19.5	750	157	87.6	15.3
23...	1520	16	673	6.8	103	8.3	4,430	30.5	29.5	790	157	96.2	17.5
JUL													
15...	1130	20	671	8.4	112	8.3	3,820	29.5	22.5	750	165	81.2	17.0
27...	1755	244	662	6.4	89	7.8	1,970	24.5	24.0	390	91.5	38.6	10.9
AUG													
10...	1005	10	673	8.6	106	8.4	3,870	20.0	18.5	730	152	85.2	16.7
24...	1740	.00	--	--	--	--	--	--	--	--	--	--	--
SEP													
08...	0930	.00	--	--	--	--	--	--	--	--	--	--	--
20...	1600	.00	--	--	--	--	--	--	--	--	--	--	--

06317000 POWDER RIVER AT ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Alum-inum, water, unfltrd recover-able, ug/L (01105)
OCT													
07...	8	464	60	77	255	.8	5.22	1,090	2,080	3.04	163	2,230	5,930
22...	8	475	59	169	319	.8	5.88	1,100	2,240	3.25	323	2,390	8,860
NOV													
07...	6	395	52	247	250	.8	7.89	1,000	2,080	3.02	240	2,220	7,260
20...	4	240	47	180	148	.7	8.30	669	1,380	2.01	591	1,480	13,100
DEC													
05...	4	274	45	202	184	.7	11.8	742	1,590	2.29	469	1,690	2,640
18...	5	289	48	237	182	.7	11.1	706	1,570	2.23	452	1,640	2,530
JAN													
09...	5	383	47	243	282	.8	15.7	1,010	2,160	3.11	272	2,290	2,480
22...	4	216	45	216	165	.7	13.5	543	1,270	1.84	341	1,360	2,360
FEB													
06...	5	280	50	256	213	.7	12.1	645	1,510	2.25	429	1,650	2,620
19...	4	202	48	227	134	.5	8.83	473	1,120	1.58	332	1,160	1,540
MAR													
11...	5	264	50	219	151	.7	8.25	703	1,450	2.12	932	1,560	14,300
23...	5	297	50	212	158	.8	8.32	809	1,620	2.34	889	1,720	13,800
APR													
13...	5	250	51	171	158	.7	7.12	583	1,280	1.85	735	1,360	11,300
20...	6	330	56	202	225	.7	6.99	809	1,690	2.44	687	1,790	5,910
MAY													
04...	6	318	57	199	206	.8	7.26	669	1,500	2.21	619	1,630	7,360
17...	6	274	56	193	175	.7	7.00	574	1,310	1.87	539	1,380	5,640
JUN													
09...	9	555	61	213	361	.8	8.10	1,180	2,500	3.58	242	2,630	704
23...	11	705	65	216	496	.7	7.16	1,390	3,000	4.26	135	3,130	246
JUL													
15...	10	605	63	188	425	.9	6.33	1,250	2,670	3.83	152	2,820	2,760
27...	6	276	60	132	66.2	.9	7.16	792	1,360	2.01	972	1,480	130,000
AUG													
10...	10	598	63	201	365	.9	7.14	1,330	2,680	3.81	75.6	2,800	1,590
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--	--

06317000 POWDER RIVER AT ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)
OCT							
07...	1.3	128	.42	<19	3.6	--	3.2
22...	1.2	161	.60	E6	3.6	--	3.8
NOV							
07...	.8	141	.51	<19	7.4	--	4.4
20...	.7	289	1.21	<6	4.1	--	4.3
DEC							
05...	1.0	60	.14	<19	2.9	--	4.0
18...	.8	70	.20	<19	4.2	--	3.5
JAN							
09...	.9	82	.18	<19	13.1	--	5.0
22...	.7	58	.15	E5	5.5	--	2.9
FEB							
06...	.8	71	.17	<19	5.8	--	2.9
19...	.8	51	.11	E5	10.1	--	2.2
MAR							
11...	.9	284	1.13	<6	5.8	--	4.3
23...	1.0	292	1.05	<19	2.7	--	4.6
APR							
13...	.9	258	.91	<6	3.8	--	2.7
20...	1.0	149	.43	<19	3.5	--	3.9
MAY							
04...	.9	157	.45	<19	3.0	--	3.7
17...	.9	127	.45	<6	2.7	--	2.8
JUN							
09...	1.1	66	E.06	<19	5.0	--	3.3
23...	1.1	63	<.12	<19	7.5	--	2.4
JUL							
15...	1.3	92	.22	<19	4.1	4.9	5.8
27...	.9	949	15.8	9	E.8	--	7.5
AUG							
10...	.8	81	E.11	<19	5.8	--	2.4
24...	--	--	--	--	--	--	--
SEP							
08...	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--

< -- Less than
E -- Estimated value

06317020 WILD HORSE CREEK NEAR ARVADA, WY

LOCATION.--Lat 44° 37' 57", long 106° 01' 53", in NE¼ NE¼ NE¼ sec. 29, T.54 N., R.76 W., Sheridan County, Hydrologic Unit 10090202, on left bank 1.0 mi upstream from Sheridan County Road 38, 0.4 mi upstream from Middle Prong Wildhorse Creek and 5.0 mi southeast of Arvada.

DRAINAGE AREA.--250 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,730 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Natural flow of stream affected by numerous small reservoirs and coalbed methane production water.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	e0.02	e0.00	e0.12	0.00	e0.00	0.00	0.00	0.10	0.00
2	0.00	0.00	0.00	e0.00	e0.00	e0.06	0.00	e0.00	0.00	0.00	0.04	0.00
3	0.00	0.00	0.00	e0.00	e0.00	e0.10	0.00	e0.00	0.00	0.00	0.01	0.00
4	0.00	0.00	0.00	e0.00	e0.00	e0.16	0.00	e0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	e0.16	e0.00	e0.30	0.00	e0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	e0.20	e0.00	e0.40	0.00	e0.00	0.00	0.15	0.00	0.00
7	0.00	0.00	0.00	e0.08	e0.00	e0.30	0.00	e0.00	0.00	0.02	0.00	0.00
8	0.00	0.00	0.00	e0.00	e0.00	e0.22	0.00	e0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	e0.00	e0.00	e0.12	0.00	e0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	e0.00	e0.00	e0.04	0.00	e0.00	e0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	e0.00	e0.00	e0.06	0.00	e0.00	e0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	e0.00	e0.00	e0.08	0.00	e0.00	e0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	e0.00	e0.00	e0.08	0.00	e0.00	e0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	e0.00	e0.00	e0.20	0.00	e0.00	e0.00	0.00	0.00	0.00
15	0.00	0.00	e0.80	e0.00	e0.00	e0.16	0.00	e0.00	e0.00	0.00	0.00	0.00
16	0.00	0.00	e0.60	e0.00	e0.00	e0.10	0.00	e0.00	e0.00	0.00	0.00	0.00
17	0.00	0.00	e0.40	e0.00	e0.04	e0.06	0.00	0.00	e0.00	0.00	0.00	0.00
18	0.00	0.00	e0.20	e0.00	e0.80	e0.30	0.00	0.00	e0.00	0.00	0.00	0.00
19	0.00	0.00	e0.10	e0.00	e1.2	e0.16	0.00	0.00	e0.00	0.00	0.00	0.00
20	0.00	0.00	e0.04	e0.00	e0.70	e0.08	0.00	0.00	e0.00	0.00	0.00	0.00
21	0.00	0.00	e0.00	e0.00	e0.08	0.13	0.00	0.00	e0.00	0.00	0.00	0.00
22	0.00	0.00	e0.20	e0.00	e0.04	0.05	0.01	0.00	e0.00	0.00	0.00	0.00
23	0.00	0.00	e0.30	e0.00	0.01	0.02	0.00	0.00	0.00	37	0.00	0.00
24	0.00	0.00	e0.16	e0.00	0.03	0.02	0.00	0.00	0.00	5.2	0.00	0.00
25	0.00	0.00	e0.08	e0.00	0.00	0.01	e0.00	0.00	0.00	1.8	0.00	0.00
26	0.00	0.00	e0.00	e0.00	e0.00	0.01	e0.00	0.00	0.00	0.40	0.00	0.00
27	0.00	0.00	e0.00	e0.00	e0.50	0.01	e0.00	0.00	0.00	0.14	0.00	0.00
28	0.00	0.00	e0.00	e0.00	e0.40	0.01	e0.00	0.00	0.00	7.2	0.00	0.00
29	0.00	0.00	e0.00	e0.00	e0.26	0.29	e0.00	0.00	0.00	4.4	0.00	0.00
30	0.00	0.00	e0.00	e0.00	---	0.00	e0.00	e0.80	0.00	1.2	0.00	0.00
31	0.00	---	e0.06	e0.00	---	0.00	---	e0.42	---	0.33	0.00	---
TOTAL	0.00	0.00	2.94	0.46	4.06	3.65	0.01	1.22	0.00	57.84	0.15	0.00
MEAN	0.00	0.00	0.09	0.01	0.14	0.12	0.00	0.04	0.00	1.87	0.00	0.00
MAX	0.00	0.00	0.80	0.20	1.2	0.40	0.01	0.80	0.00	37	0.10	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	5.8	0.9	8.1	7.2	0.02	2.4	0.00	115	0.3	0.00

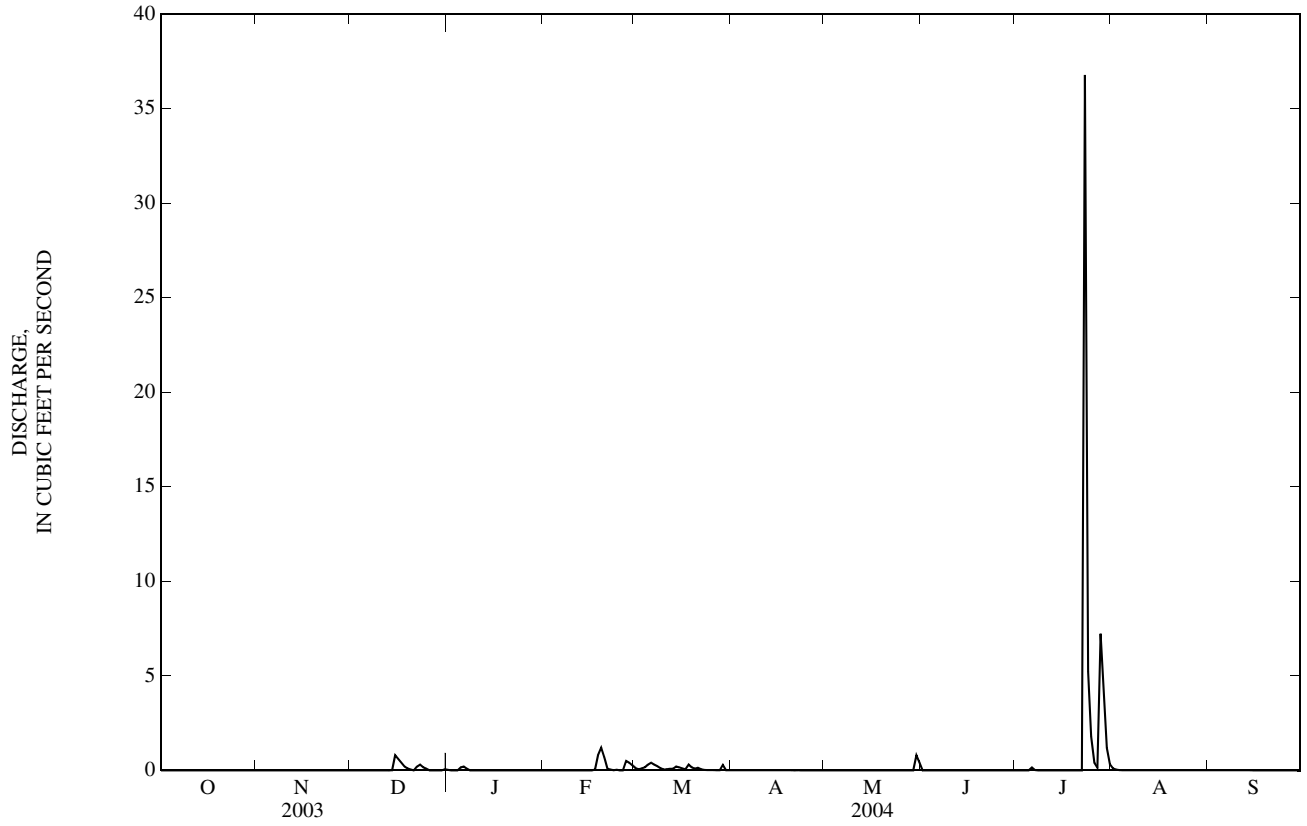
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

MEAN	0.00	0.00	0.02	0.01	0.04	1.77	0.26	0.30	0.00	0.37	0.00	0.00
MAX	0.00	0.00	0.09	0.02	0.14	6.36	0.82	1.11	0.00	1.87	0.00	0.00
(WY)	(2001)	(2001)	(2004)	(2001)	(2004)	(2003)	(2003)	(2003)	(2003)	(2004)	(2004)	(2000)
MIN	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00
(WY)	(2001)	(2001)	(2001)	(2002)	(2002)	(2002)	(2004)	(2002)	(2000)	(2000)	(2000)	(2000)

06317020 WILD HORSE CREEK NEAR ARVADA, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2000 - 2004	
ANNUAL TOTAL	259.41		70.33		--	
ANNUAL MEAN	0.71		0.19		0.24	
HIGHEST ANNUAL MEAN	--		--		0.70	2003
LOWEST ANNUAL MEAN	--		--		0.01	2002
HIGHEST DAILY MEAN	36	Mar 16	37	Jul 23	37	Jul 23, 2004
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days, each year
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Each year
MAXIMUM PEAK FLOW	--		362[a]	Jul 23	362[a]	Jul 23, 2004
MAXIMUM PEAK STAGE	--		3.18	Jul 23	3.18	Jul 23, 2004
ANNUAL RUNOFF (AC-FT)	515		139		175	
10 PERCENT EXCEEDS	1.3		0.14		0.14	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From rating curve extended above 10ft^3/s based on a straight-line extension.
e Estimated.



06317020 WILD HORSE CREEK NEAR ARVADA, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 2000 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
07...	1650	.00	--	--	--	--	--	--	--	--	--	--	--
NOV													
07...	1020	.00	--	--	--	--	--	--	--	--	--	--	--
DEC													
05...	0950	.00	--	--	--	--	--	--	--	--	--	--	--
JAN													
09...	0945	.00	--	--	--	--	--	--	--	--	--	--	--
FEB													
19...	1400	1.1	662	11.6	93	7.6	252	10.0	.5	77	19.6	6.80	10.2
MAR													
23...	1450	.02	658	8.9	101	8.0	2,580	26.0	14.0	470	82.0	64.4	9.45
APR													
20...	1800	.00	--	--	--	--	--	--	--	--	--	--	--
MAY													
17...	1530	.00	--	--	--	--	--	--	--	--	--	--	--
JUN													
23...	1425	.00	--	--	--	--	--	--	--	--	--	--	--
JUL													
27...	1535	.09	653	8.6	124	7.7	1,410	24.0	25.5	460	115	42.2	15.9
AUG													
24...	1650	.00	--	--	--	--	--	--	--	--	--	--	--
SEP													
20...	1605	.00	--	--	--	--	--	--	--	--	--	--	--

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
19...	1	25.4	38	44	2.76	<.2	3.69	84.3	179	.30	.65	218	455
MAR													
23...	9	445	67	615	15.6	.6	6.81	829	1,820	2.59	.10	1,910	123
APR													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
27...	3	126	36	206	6.49	.3	6.93	538	974	1.46	.26	1,070	83
AUG													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--

06317020 WILD HORSE CREEK NEAR ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
07...	--	--	--	--	--	--
NOV						
07...	--	--	--	--	--	--
DEC						
05...	--	--	--	--	--	--
JAN						
09...	--	--	--	--	--	--
FEB						
19...	.4	23	E.05	81	83.9	.5
MAR						
23...	1.6	79	<.12	62	51.3	E.8
APR						
20...	--	--	--	--	--	--
MAY						
17...	--	--	--	--	--	--
JUN						
23...	--	--	--	--	--	--
JUL						
27...	2.5	87	<.06	43	20.3	2.5
AUG						
24...	--	--	--	--	--	--
SEP						
20...	--	--	--	--	--	--

< -- Less than
E -- Estimated value

06317030 WILD HORSE CREEK AT MOUTH, AT ARVADA, WY

LOCATION.--Lat 44°39'01", long 106°07'19", in SE¼ SE¼ SE¼ sec.16, T.49 N., R.77 W., Sheridan County, Hydrologic Unit 10090202, at bridge on county road 40 and 1.0 mi southeast of Arvada.

PERIOD OF RECORD.--October 1978, July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)
JUL													
27...	1635	1.5	653	7.5	105	8.3	1,930	24.0	24.0	450	68.3	67.0	6
AUG													
24...	1720	.02	659	11.5	156	8.4	2,630	25.5	22.5	540	60.8	93.1	8
SEP													
20...	1630	.06	665	9.1	100	8.5	3,440	4.0	13.0	750	74.9	136	11

Date	Sodium, water, fltrd, mg/L (00930)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL		
27...	269	1,450
AUG		
24...	402	1,910
SEP		
20...	711	2,660

06317040 IVY CREEK AT MOUTH, NEAR ARVADA, WY

LOCATION.--Lat 44°49'16", long 106°03'56", in NE$^1/_4$ NE$^1/_4$ NE$^1/_4$ sec.24 T.56 N., R.77 W., Sheridan County, Hydrologic Unit 10090202, at culvert on private road and 11.9 mi northeast of Arvada.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)
JUL		
26...	1700	.00
AUG		
24...	1445	.00
SEP		
27...	1630	.00

06317095 SPOTTED HORSE CREEK AT MOUTH, NEAR ARVADA, WY

LOCATION.--Lat 44°50'48", long 106°02'59", in NE¼ SW¼ NE¼ sec.7 T.56 N., R.76 W., Sheridan County, Hydrologic Unit 10090202, at culvert on private road and 13.8 mi northeast of Arvada.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)
JUL													
26...	1630	.10	670	5.5	76	8.4	2,440	33.0	24.5	300	30.4	54.3	11
AUG													
24...	1430	E.001	--	--	--	--	--	--	--	--	--	--	--
SEP													
27...	1615	.00	--	--	--	--	--	--	--	--	--	--	--

Date	Sodium, water, fltrd, mg/L (00930)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL		
26...	448	1,700
AUG		
24...	--	--
SEP		
27...	--	--

E -- Estimated value

06317100 POWDER RIVER ABOVE CLEAR CREEK, NEAR ARVADA, WY

LOCATION.--Lat 44°52'48", long 106°03'43", in SE¼ NE¼ NW¼ sec.31 T.57 N., R.76 W., Sheridan County, Hydrologic Unit 10090202, at bridge on county road 269 and 17.0 mi north of Arvada.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)
JUL													
27...	0930	331	665	6.5	83	7.2	3,190	21.0	20.0	660	156	66.7	8
AUG													
24...	1345	7.0	666	7.1	101	8.3	1,700	26.0	26.0	740	154	86.7	2
SEP													
27...	1500	13	679	10.8	118	8.5	1,040	13.5	13.8	430	98.1	46.0	1

Date	Sodium, water, fltrd, mg/L (00930)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL		
27...	472	2,400
AUG		
24...	121	1,380
SEP		
27...	70.0	773

06320000 ROCK CREEK NEAR BUFFALO, WY

LOCATION.--Lat 44°27'22", long 106°52'42", in NW¼ NW¼ NW¼ sec.29, T.52 N., R.83 W., Johnson County, Hydrologic Unit 10090206, on left bank 300 ft downstream from confluence of North and South Forks and 11.5 mi northwest of Buffalo.

DRAINAGE AREA.--60.0 mi^2.

PERIOD OF RECORD.--April to August 1941, April to December 1942, May 1943 to November 1944, April 1945 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 5,280 ft above NGVD of 1929, from topographic map. Prior to January 8, 1944, nonrecording gages 600 ft upstream on North and South Forks at different datums, January 8, 1944 to September 30, 1952, water-stage recorder at present site at datum 0.72 ft lower.

REMARKS.--Records good. Water is imported into drainage basin upstream from station from South Piney Creek. Diversions for irrigation of about 250 acres upstream from station. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 10 . . . 7.06

COOPERATION.--Station operated and recorded provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	12	11	20	65	43	18
2	---	---	---	---	---	---	13	11	19	41	42	18
3	---	---	---	---	---	---	11	14	20	34	42	28
4	---	---	---	---	---	---	11	19	35	34	41	27
5	---	---	---	---	---	---	12	32	44	43	41	22
6	---	---	---	---	---	---	13	42	43	48	49	20
7	---	---	---	---	---	---	14	45	42	35	49	19
8	---	---	---	---	---	---	12	41	37	34	48	18
9	---	---	---	---	---	---	11	47	32	31	49	18
10	---	---	---	---	---	---	8.0	31	37	29	50	18
11	---	---	---	---	---	---	8.4	48	40	26	50	19
12	---	---	---	---	---	---	8.8	34	36	25	48	18
13	---	---	---	---	---	---	9.4	24	34	24	42	20
14	---	---	---	---	---	---	12	22	32	23	42	22
15	---	---	---	---	---	---	12	21	33	26	41	20
16	---	---	---	---	---	---	12	21	33	51	41	19
17	---	---	---	---	---	---	12	21	33	38	40	18
18	---	---	---	---	---	---	14	20	44	35	35	18
19	---	---	---	---	---	---	11	29	48	35	35	18
20	---	---	---	---	---	---	11	27	51	34	35	20
21	---	---	---	---	---	---	11	38	47	33	34	22
22	---	---	---	---	---	---	9.8	30	40	39	32	20
23	---	---	---	---	---	---	8.8	26	41	95	31	20
24	---	---	---	---	---	---	10	25	42	93	31	14
25	---	---	---	---	---	---	9.7	24	43	68	29	13
26	---	---	---	---	---	---	9.2	22	44	60	23	13
27	---	---	---	---	---	---	12	21	44	59	23	14
28	---	---	---	---	---	---	16	24	37	73	23	19
29	---	---	---	---	---	---	13	29	34	71	20	15
30	---	---	---	---	---	---	11	26	36	52	19	14
31	---	---	---	---	---	---	---	22	---	44	18	---
TOTAL	---	---	---	---	---	---	338.1	847	1,121	1,398	1,146	562
MEAN	---	---	---	---	---	---	11.3	27.3	37.4	45.1	37.0	18.7
MAX	---	---	---	---	---	---	16	48	51	95	50	28
MIN	---	---	---	---	---	---	8.0	11	19	23	18	13
AC-FT	---	---	---	---	---	---	671	1,680	2,220	2,770	2,270	1,110

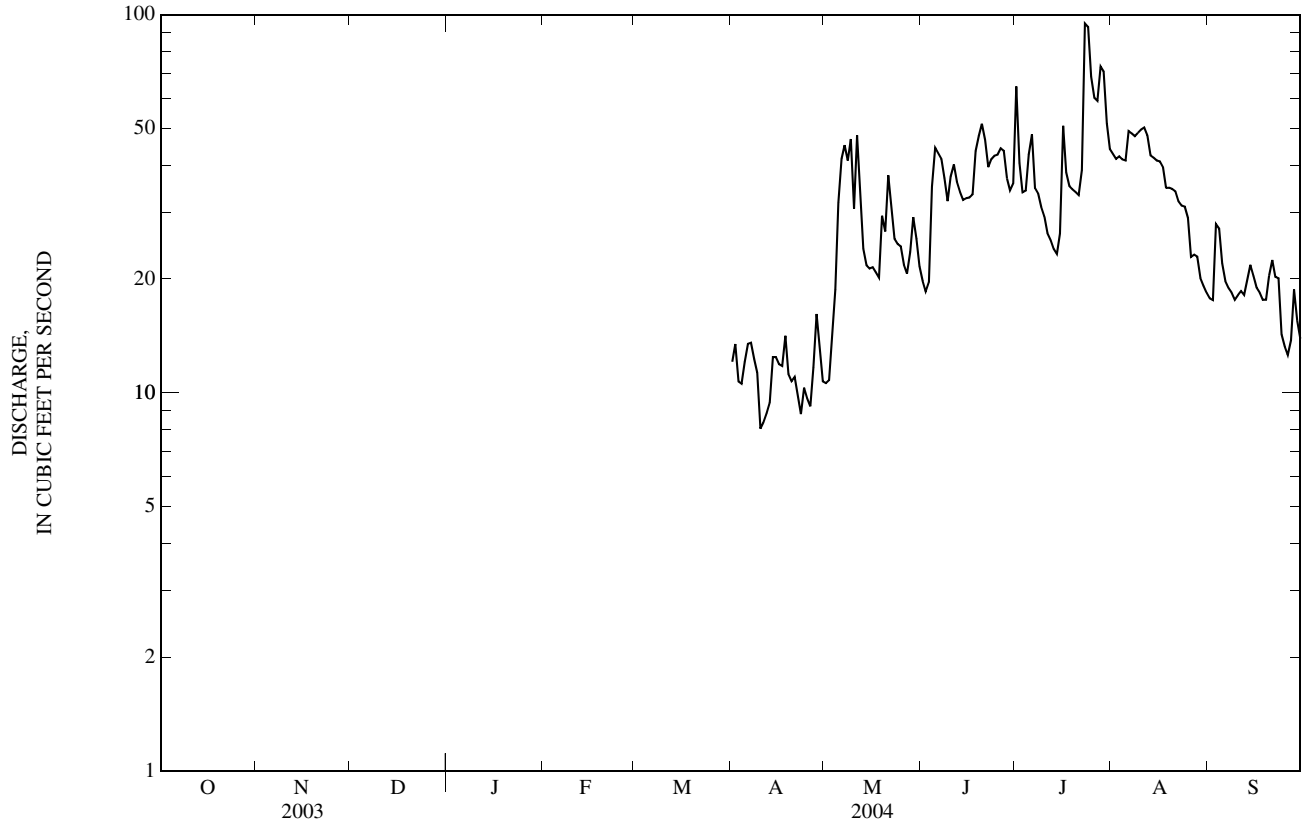
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2004, BY WATER YEAR (WY)*

MEAN	9.23	7.11	5.57	4.58	4.43	4.81	15.3	97.7	142	60.4	40.5	20.3
MAX	20.1	12.7	8.75	6.40	6.57	7.13	46.7	256	352	142	69.2	57.3
(WY)	(1969)	(1969)	(1969)	(1965)	(1969)	(1960)	(1994)	(1978)	(1995)	(1975)	(1968)	(1982)
MIN	3.44	2.74	3.08	1.88	2.27	2.22	4.63	24.7	23.9	28.3	4.22	1.57
(WY)	(1955)	(1955)	(1967)	(1950)	(1957)	(1966)	(1966)	(2001)	(2001)	(1958)	(1954)	(1954)

06320000 ROCK CREEK NEAR BUFFALO, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1945 - 2004*	
ANNUAL MEAN	--		34.7	
HIGHEST ANNUAL MEAN	--		54.7	1963
LOWEST ANNUAL MEAN	--		16.1	1954
HIGHEST DAILY MEAN	95	Jul 23	1,110	Jun 8, 1997
LOWEST DAILY MEAN	8.0	Apr 10	0.50	Sep 19, 1954
MAXIMUM PEAK FLOW	141	Jul 23	2,080[a]	Jun 8, 1997
MAXIMUM PEAK STAGE	4.77	Jul 23	8.80	Jun 8, 1997
ANNUAL RUNOFF (AC-FT)	--		25,120	

* For period of operation.
a From rating curve extended above 610 ft^3/s.



06320210 CLEAR CREEK ABOVE KUMOR DRAW, NEAR BUFFALO, WY

LOCATION.--Lat 44°23'21", long 106°37'23", in NW¼ NE¼ SE¼ sec.17, T.51 N., R.81 W., Johnson County, Hydrologic Unit 10090206, 10 ft upstream from bridge on State Highway 16, 0.7 mi upstream from Kumor Draw, and 5 mi northeast of Buffalo.

PERIOD OF RECORD.--January 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
21...	1305	30	656	10.7	113	8.3	819	23.0	11.0	360	87.2	33.8	2.93
NOV													
19...	1320	42	644	12.5	110	8.4	652	11.5	3.0	280	66.4	27.4	2.02
DEC													
17...	1235	35	654	14.1	113	8.3	683	5.0	.0	300	72.4	29.2	2.09
JAN													
21...	1255	34	652	10.4	83	8.2	726	6.0	.0	320	76.8	31.3	2.30
FEB													
18...	1245	32	645	12.7	103	8.0	767	12.0	.0	350	84.1	33.8	3.34
MAR													
24...	0710	48	646	9.0	88	8.1	648	8.5	7.0	310	73.9	30.4	2.37
APR													
21...	0715	34	643	9.1	90	7.9	700	3.0	7.5	320	78.3	29.2	2.87
MAY													
18...	0750	4.8	652	8.2	86	7.9	788	12.0	10.5	330	74.9	34.8	3.67
JUN													
24...	0750	35	646	7.9	94	7.7	672	12.5	15.5	280	67.3	26.2	2.82
JUL													
28...	0730	93	652	--	--	7.7	409	14.0	14.5	160	36.6	15.9	1.64
AUG													
25...	0900	22	646	8.1	96	7.7	566	15.5	15.5	240	56.9	24.9	2.53
SEP													
21...	1100	81	678	11.7	114	8.0	412	9.0	9.0	180	43.0	18.6	2.31

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
21...	1	42.0	20	170	4.04	.2	10.1	264	546	.80	47.4	586	--
NOV													
19...	.8	31.1	19	147	3.14	<.2	11.4	184	413	.60	49.6	438	<.04
DEC													
17...	.8	33.6	19	158	3.76	<.2	11.9	196	444	.62	43.3	459	--
JAN													
21...	.9	35.7	19	158	4.17	<.2	11.9	208	465	.67	45.1	491	--
FEB													
18...	1	43.2	21	162	5.80	.2	11.4	236	517	.75	47.4	549	.49
MAR													
24...	.9	34.5	19	142	3.80	<.2	7.64	212	450	.65	62.0	478	--
APR													
21...	.8	33.9	19	134	3.79	.2	9.08	228	466	.69	46.7	508	--
MAY													
18...	1	44.9	23	141	5.01	.2	5.30	261	515	.76	7.29	562	--
JUN													
24...	.9	33.3	21	128	3.69	.2	5.28	209	425	.64	44.2	468	<.04
JUL													
28...	.6	17.1	19	81	2.64	<.2	8.14	109	240	.36	66.0	263	--
AUG													
25...	.8	29.5	21	126	2.66	.2	7.08	168	367	.52	22.9	385	--
SEP													
21...	.7	23.1	21	86	--	<.2	10.9	--	--	--	--	286	<.04

06320210 CLEAR CREEK ABOVE KUMOR DRAW, NEAR BUFFALO, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	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)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
OCT												
21...	--	--	--	--	--	41	.4	37	<.06	42	44.6	E.2
NOV												
19...	E.03	<.008	<.02	E13	E12	22	.3	34	<.06	24	33.8	.4
DEC												
17...	--	--	--	--	--	19	E.1	37	<.06	21	39.3	.5
JAN												
21...	--	--	--	--	--	23	.3	39	<.06	27	59.4	.5
FEB												
18...	.20	E.006	.10	E2	E6	30	.3	37	<.06	36	65.3	.5
MAR												
24...	--	--	--	--	--	29	.3	37	<.06	46	116	E.3
APR												
21...	--	--	--	--	--	44	.4	37	<.06	48	144	E.4
MAY												
18...	--	--	--	--	--	45	.5	31	<.06	74	187	E.4
JUN												
24...	<.06	<.008	E.02	470	490	27	.4	32	<.06	76	84.5	.4
JUL												
28...	--	--	--	--	--	167	.3	25	<.06	49	38.3	.7
AUG												
25...	--	--	--	--	--	17	.3	26	<.06	47	28.7	E.3
SEP												
21...	<.06	<.008	.03	230	270	86	.3	22	<.06	41	30.9	<.4

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06323550 CLEAR CREEK ABOVE DOUBLE CROSSING CREEK, NEAR CLEARMONT, WY

LOCATION.--Lat 44°34'55", long 106°26'17", in NW¼ SW¼ NE¼ sec.12 T.53 N., R.80 W., Sheridan County, Hydrologic Unit 10090206, 50 ft upstream from bridge on county road 197 and 4.8 mi southwest of Clearmont.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)
JUL													
28...	0905	140	663	--	--	8.0	551	16.5	17.0	230	57.3	21.8	.7
AUG													
25...	0730	60	638	6.5	80	7.4	790	14.5	16.5	360	86.6	35.3	.9
SEP													
20...	1740	70	658	10.2	113	8.4	687	4.5	13.0	310	75.8	29.6	.9

Date	Sodium, water, fltrd, mg/L (00930)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL		
28...	24.3	381
AUG		
25...	38.7	564
SEP		
20...	35.4	498

06324000 CLEAR CREEK NEAR ARVADA, WY

LOCATION.--Lat 44°51'18", long 106°04'56", in SE $^1/_4$ sec.36, T.57 N., R.77 W., Sheridan County, Hydrologic Unit 10090206, on right bank 600 ft downstream from Cabin Creek, 1.8 mi upstream from mouth, and 16 mi north of Arvada.

DRAINAGE AREA.--1,110 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1915 to April 1919 and April 1928 to May 1929 (no winter records), September 1939 to September 1982, January 2003 to current year.

REVISED RECORDS.--WSP 1309: 1928(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,506.51 ft above NGVD of 1929, from topographic map. July 21, 1915 to April 30, 1919, nonrecording gage at same site at different datum. April 15, 1928 to May 26, 1929, nonrecording gage at site 0.2 mi upstream at different datum. September 13, 1939 to January 14, 1951, nonrecording gage at present site and 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. Some regulation by Cloud Peak Reservoir, capactiy, 3,385 acre-ft, Willow Park Reservoir, capacity, 4,457 acre-ft, Kearny Lake, capacity, 1,860 acre-ft and Lake De Smet, capacity, 135,500 acre-ft. Diversions for irrigation of about 35,000 acres upstream from station. Diversion to Kendrick canal about 4.5 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	e76	e55	e50	e50	e80	80	34	0.46	5.4	63	34
2	72	e60	e54	e52	e52	e79	80	32	0.41	10	41	25
3	63	e50	e56	e54	e54	e78	87	19	0.42	7.1	31	16
4	53	e58	e56	e56	e50	e76	95	16	0.40	17	19	13
5	48	e54	e56	e56	e45	e76	95	6.2	0.38	36	17	15
6	51	e53	e60	e50	e42	e70	92	2.0	0.69	64	19	46
7	53	e46	e58	e40	e42	e65	92	1.2	0.85	58	22	62
8	48	e60	e60	e23	e43	e62	93	0.95	0.65	32	19	64
9	44	e70	e62	e30	e43	e70	89	0.86	0.49	47	16	51
10	38	e80	e62	e34	e45	e66	87	0.98	0.48	27	14	37
11	29	e82	e58	e36	e46	e72	86	7.0	2.0	16	12	28
12	30	e83	e56	e40	e45	e70	86	16	1.2	10	16	21
13	34	e84	e59	e44	e45	e68	87	5.5	0.86	3.3	10	24
14	53	e80	e62	e48	e44	e66	85	8.0	0.69	1.5	12	35
15	55	e90	e64	e52	e44	e65	83	5.2	0.60	1.2	7.8	34
16	57	e80	e60	e54	e45	e66	78	4.6	0.59	1.2	5.1	43
17	58	e84	e58	e54	e45	e64	73	2.8	0.58	0.84	4.9	50
18	60	e89	e56	e56	e46	e66	72	1.5	0.65	0.68	5.8	52
19	57	e74	e57	e58	e47	e66	72	1.1	0.72	0.57	6.4	60
20	54	83	e56	e58	e60	e68	70	0.82	0.87	0.49	4.3	54
21	51	e80	e56	e58	e80	e69	69	0.88	0.94	0.35	2.1	54
22	47	e60	e60	e58	e110	e75	60	0.91	3.8	0.68	2.7	60
23	47	e50	e56	e56	e100	85	57	0.85	2.3	2.9	2.8	102
24	45	e54	e54	e54	e96	81	53	0.82	1.3	17	14	108
25	48	e60	e52	e50	e90	81	49	0.65	1.1	169	16	116
26	51	e54	e54	e46	e88	85	44	0.63	0.76	202	11	103
27	55	e53	e60	e45	e87	90	33	0.55	0.58	174	5.3	83
28	58	e50	e50	e44	e84	87	31	0.57	0.53	131	7.6	72
29	62	e52	e40	e46	e82	85	30	0.71	0.45	107	14	64
30	63	e54	e50	e50	---	90	26	0.86	4.2	97	18	82
31	69	---	e48	e50	---	83	---	0.62	---	75	35	---
TOTAL	1,634	2,003	1,745	1,502	1,750	2,304	2,134	173.76	29.95	1,315.21	473.8	1,608
MEAN	52.7	66.8	56.3	48.5	60.3	74.3	71.1	5.61	1.00	42.4	15.3	53.6
MAX	81	90	64	58	110	90	95	34	4.2	202	63	116
MIN	29	46	40	23	42	62	26	0.55	0.38	0.35	2.1	13
AC-FT	3,240	3,970	3,460	2,980	3,470	4,570	4,230	345	59	2,610	940	3,190

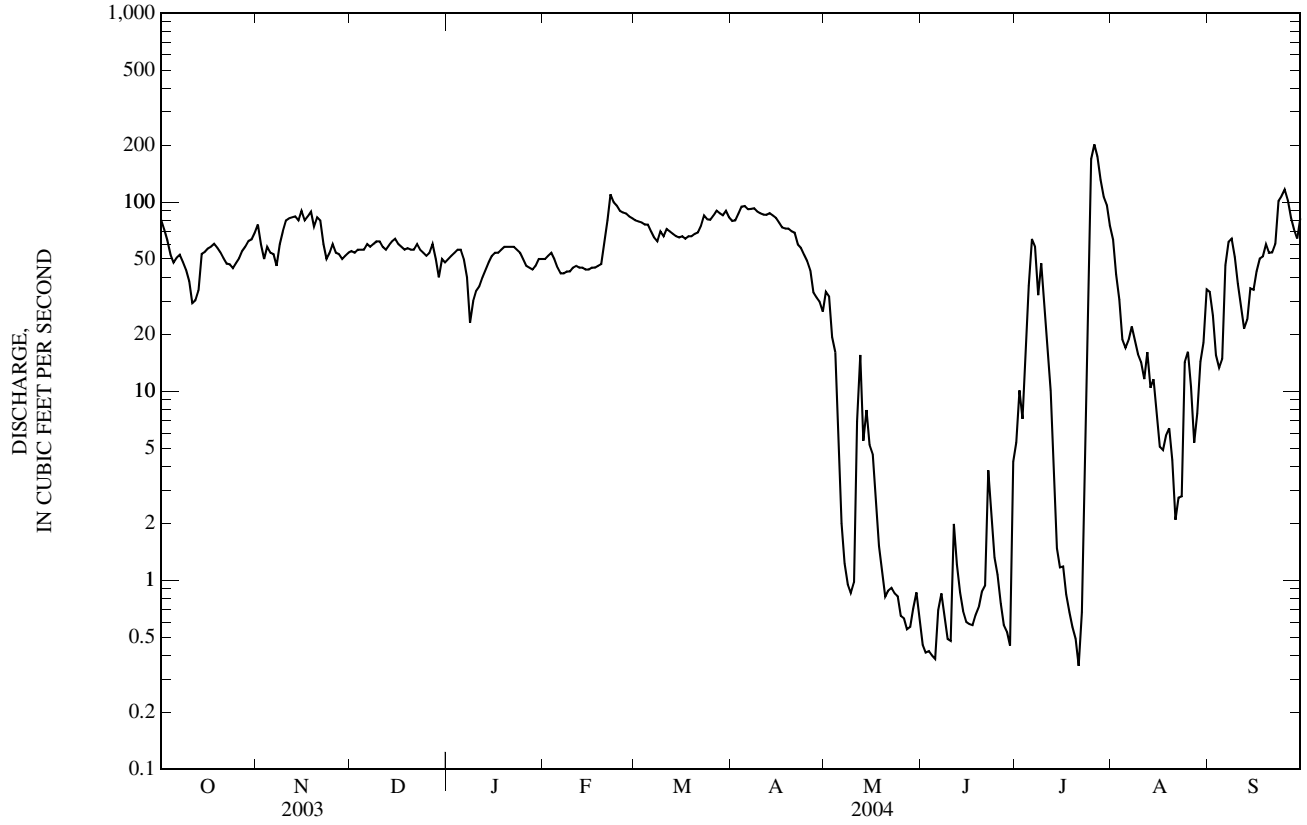
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2004, BY WATER YEAR (WY)*

MEAN	95.3	104	86.2	70.9	81.2	155	175	425	675	185	62.8	79.5
MAX	246	286	296	292	232	450	436	1,427	2,229	863	256	274
(WY)	(1981)	(1981)	(1981)	(1981)	(1962)	(1943)	(1965)	(1978)	(1944)	(1928)	(1968)	(1915)
MIN	17.5	31.6	25.0	22.8	25.0	37.2	20.4	1.79	1.00	4.79	0.98	2.04
(WY)	(1956)	(1917)	(1917)	(1980)	(1917)	(1982)	(1961)	(1960)	(2004)	(1960)	(1966)	(1955)

06324000 CLEAR CREEK NEAR ARVADA, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR		WATER YEARS 1915 - 2004*	
ANNUAL TOTAL	16,672.72		--	
ANNUAL MEAN	45.6		179	
HIGHEST ANNUAL MEAN	--		408	1944
LOWEST ANNUAL MEAN	--		45.6	2004
HIGHEST DAILY MEAN	202	Jul 26	4,880	Jun 17, 1963
LOWEST DAILY MEAN	0.35	Jul 21	0.00	Many days, several years
ANNUAL SEVEN-DAY MINIMUM	0.48	May 31	0.00	Several years
MAXIMUM PEAK FLOW	289[a]	Jul 25	9,600[b]	Aug 5, 1954
MAXIMUM PEAK STAGE	3.19[c]	Feb 23	10.45	Aug 5, 1954
ANNUAL RUNOFF (AC-FT)	33,070		129,400	
10 PERCENT EXCEEDS	84		374	
50 PERCENT EXCEEDS	50		85	
90 PERCENT EXCEEDS	0.86		20	

* For period of operation.
a Gage height, 2.31 ft.
b From rating curve extended above 2,500 ft^3/s, on basis of slope-area measurement of peak flow.
c Backwater from ice.
e Estimated.



06324000 CLEAR CREEK NEAR ARVADA, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-54, 1967-92, October 2000 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 2003 to current year (seasonal).
WATER TEMPERATURE: April 2003 to current year (seasonal).

INSTRUMENTATION.--Water quality monitor for specific conductance and water temperature.

REMARKS.--Specific conductance and water temperature records good. Water-temperature records represent water temperature at sensor within 0.5°C.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 2080 microsiemens per centimeter at 25°C (µS/cm), June 10, 11, 2004; minimum recorded, 376 µS/cm, May 31, 2003.
WATER TEMPERATURE: Maximum recorded, 33.8°C, July 19, 2003; minimum recorded, 7.6°C, May 11, 2003.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 2,080 µS/cm, June 10, 11; minimum recorded, 708 µS/cm, July 28.
WATER TEMPERATURE: Maximum recorded, 32.6°C, July 14; minimum recorded, -0.1°C, October 31 to November 2, November 4-6.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
08...	0840	49	670	9.0	94	8.3	1,080	6.5	11.5	490	114	50.6	4.60
22...	1010	49	678	9.6	96	8.4	1,260	7.0	10.0	530	119	56.6	4.91
NOV													
07...	0900	46	678	12.8	99	8.3	1,380	-2.5	.0	640	151	65.2	5.41
20...	1200	87	670	12.7	101	8.3	1,060	-1.0	.5	460	110	46.1	3.75
DEC													
05...	0830	56	680	12.4	95	8.2	1,090	-12.0	.0	510	120	50.2	4.35
18...	1045	56	682	13.5	104	8.2	1,210	-2.0	.0	570	135	56.4	4.37
JAN													
09...	0830	30	680	12.2	94	7.8	1,420	-10.0	.0	630	148	61.9	4.66
22...	1200	58	675	12.4	96	8.0	1,130	3.0	.0	530	125	52.4	4.43
FEB													
06...	0825	42	676	11.0	85	7.7	1,180	-3.5	.0	530	127	51.7	4.24
19...	1130	47	668	12.3	96	8.0	1,190	13.0	.0	550	130	54.8	4.99
MAR													
11...	0840	72	677	--	--	7.9	921	5.0	1.5	410	94.8	41.5	3.70
23...	1255	83	663	10.7	111	8.4	1,050	25.5	10.5	500	113	52.7	4.83
APR													
13...	1020	91	669	10.3	106	8.4	831	17.0	10.5	360	84.0	36.2	3.09
20...	1645	67	663	9.5	109	8.3	938	15.5	15.0	410	93.9	42.1	3.80
MAY													
05...	1440	4.4	671	8.5	115	8.1	1,200	26.0	23.5	480	104	54.0	4.60
17...	1340	2.7	671	8.1	97	8.0	1,340	16.5	17.5	590	126	67.3	6.96
JUN													
09...	1630	.42	669	9.5	125	8.0	1,980	22.5	22.0	900	189	105	9.44
23...	1315	2.4	678	9.7	131	8.1	1,960	31.0	24.0	770	160	90.3	7.61
JUL													
15...	0935	1.0	680	7.1	91	7.7	1,500	24.5	21.5	660	147	71.1	7.25
27...	1130	164	665	8.3	107	8.0	717	22.5	21.0	310	75.0	28.9	4.18
AUG													
10...	0810	17	676	7.9	97	8.0	1,370	19.5	19.0	610	129	69.4	6.19
24...	1245	E20	666	8.3	105	8.2	1,580	25.5	20.0	730	153	84.5	7.84
SEP													
08...	0815	66	656	8.0	94	8.4	1,160	9.0	15.5	510	114	55.0	5.92
27...	1330	E79	679	9.2	101	8.4	816	11.5	14.3	360	83.0	36.3	3.69

06324000 CLEAR CREEK NEAR ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Alum-inum, water, unfltrd recover-able, ug/L (01105)
OCT													
08...	1	61.7	21	193	4.06	.2	4.75	387	743	1.10	107	805	87
22...	1	72.6	23	204	3.92	.2	5.37	473	857	1.28	125	945	93
NOV													
07...	1	78.8	21	244	4.83	.2	10.4	530	992	1.47	134	1,080	43
20...	1	55.1	20	192	4.52	.2	8.18	369	712	1.07	184	784	33
DEC													
05...	1	64.3	21	183	4.85	.2	9.28	365	728	1.10	122	806	23
18...	1	66.6	20	227	5.06	.2	10.6	412	826	1.20	134	885	18
JAN													
09...	1	75.7	21	217	5.19	.2	11.0	510	947	1.45	86.3	1,070	16
22...	1	60.8	20	188	4.28	.2	10.6	387	757	1.08	124	793	18
FEB													
06...	1	65.0	21	187	4.88	.2	12.7	406	784	1.19	98.8	871	23
19...	1	67.9	21	244	4.91	.2	10.6	422	841	1.22	114	895	75
MAR													
11...	1	53.1	22	174	4.28	<.2	6.31	328	636	.94	134	690	61
23...	1	63.4	21	189	4.78	.2	.72	392	745	1.07	177	789	68
APR													
13...	1	45.8	22	172	3.66	<.2	4.09	268	548	.81	146	592	80
20...	1	52.4	22	182	4.03	.2	3.10	326	635	.95	126	697	98
MAY													
05...	1	73.1	25	196	4.03	.2	1.90	436	796	1.21	10.5	886	121
17...	2	99.2	26	210	3.88	.2	4.03	528	962	1.44	7.74	1,060	1,630
JUN													
09...	2	156	27	273	5.96	.3	9.23	863	1,500	2.20	1.83	1,620	193
23...	3	169	32	224	6.82	.3	5.08	875	1,450	2.11	10.0	1,550	427
JUL													
15...	2	103	25	259	4.55	.3	8.21	592	1,090	1.63	3.23	1,200	89
27...	.8	31.8	18	135	2.52	<.2	9.04	232	464	.68	223	503	246
AUG													
10...	1	81.3	22	201	3.18	.2	4.11	567	981	1.48	50.0	1,090	114
24...	2	108	24	191	3.83	.2	4.75	709	1,180	1.75	--	1,290	241
SEP													
08...	1	63.3	21	192	2.93	.3	6.93	451	815	1.24	163	910	189
27...	1	44.3	21	167	2.28	.2	5.43	281	556	.81	--	596	117

06324000 CLEAR CREEK NEAR ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
08...	.7	33	<.06	30	14.1	E.4
22...	.6	36	<.06	21	16.2	.8
NOV						
07...	.6	38	<.06	26	15.9	.5
20...	.4	31	<.06	24	10.4	.6
DEC						
05...	.4	34	<.06	34	12.4	1.0
18...	.4	39	<.06	30	14.3	1.0
JAN						
09...	.4	47	<.06	31	19.8	1.1
22...	.4	37	<.06	24	20.0	.7
FEB						
06...	.4	40	<.06	27	19.1	.7
19...	.4	37	<.06	32	24.4	.9
MAR						
11...	.5	28	<.06	33	28.6	.6
23...	.5	39	<.06	55	24.9	.6
APR						
13...	.6	31	<.06	52	16.0	.5
20...	.6	37	<.06	48	22.9	.6
MAY						
05...	.6	39	<.06	28	60.1	.7
17...	.7	67	.14	13	118	.7
JUN						
09...	.9	66	<.06	23	190	.9
23...	.7	66	.07	11	98.6	.9
JUL						
15...	1.1	43	<.06	11	229	.8
27...	.9	37	E.04	14	8.4	1.0
AUG						
10...	1.0	49	<.06	11	22.7	.8
24...	.9	48	<.06	15	20.6	1.1
SEP						
08...	.8	31	<.06	21	10.5	.9
27...	.7	30	<.06	17	11.0	.6

< -- Less than
E -- Estimated value

06324000 CLEAR CREEK NEAR ARVADA, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	941	931	938	1,240	1,200	1,220	---	---	---	---	---	---
2	936	926	932	1,220	1,180	1,200	---	---	---	---	---	---
3	958	933	945	1,210	1,160	1,180	---	---	---	---	---	---
4	974	954	961	1,230	1,170	1,190	---	---	---	---	---	---
5	1,010	974	990	1,300	1,230	1,270	---	---	---	---	---	---
6	1,040	1,010	1,020	1,350	1,290	1,310	---	---	---	---	---	---
7	1,080	1,040	1,060	---	---	---	---	---	---	---	---	---
8	1,100	1,080	1,080	---	---	---	---	---	---	---	---	---
9	1,110	1,090	1,100	---	---	---	---	---	---	---	---	---
10	1,140	1,110	1,120	---	---	---	---	---	---	---	---	---
11	1,160	1,140	1,150	---	---	---	---	---	---	---	---	---
12	1,200	1,160	1,180	---	---	---	---	---	---	---	---	---
13	1,240	1,200	1,220	---	---	---	---	---	---	---	---	---
14	1,270	1,240	1,260	---	---	---	---	---	---	---	---	---
15	1,280	1,270	1,280	---	---	---	---	---	---	---	---	---
16	1,280	1,270	1,280	---	---	---	---	---	---	---	---	---
17	1,270	1,270	1,270	---	---	---	---	---	---	---	---	---
18	1,270	1,260	1,260	---	---	---	---	---	---	---	---	---
19	1,260	1,250	1,260	---	---	---	---	---	---	---	---	---
20	1,260	1,250	1,250	---	---	---	---	---	---	---	---	---
21	1,270	1,260	1,260	---	---	---	---	---	---	---	---	---
22	1,280	1,260	1,280	---	---	---	---	---	---	---	---	---
23	1,290	1,280	1,280	---	---	---	---	---	---	---	---	---
24	1,310	1,280	1,300	---	---	---	---	---	---	---	---	---
25	1,320	1,310	1,320	---	---	---	---	---	---	---	---	---
26	1,330	1,310	1,320	---	---	---	---	---	---	---	---	---
27	1,320	1,300	1,310	---	---	---	---	---	---	---	---	---
28	1,300	1,270	1,290	---	---	---	---	---	---	---	---	---
29	1,280	1,270	1,270	---	---	---	---	---	---	---	---	---
30	1,290	1,260	1,280	---	---	---	---	---	---	---	---	---
31	1,260	1,240	1,250	---	---	---	---	---	---	---	---	---
MONTH	1,330	926	1,180	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	1,120	1,100	1,110
2	---	---	---	---	---	---	988	969	982	1,160	1,120	1,140
3	---	---	---	---	---	---	985	968	978	1,180	1,160	1,170
4	---	---	---	---	---	---	973	935	957	1,180	1,160	1,170
5	---	---	---	---	---	---	936	906	927	1,240	1,180	1,200
6	---	---	---	---	---	---	906	869	888	1,310	1,240	1,280
7	---	---	---	---	---	---	870	846	857	1,410	1,310	1,360
8	---	---	---	---	---	---	846	822	833	1,460	1,390	1,420
9	---	---	---	---	---	---	831	822	828	1,490	1,450	1,470
10	---	---	---	---	---	---	837	830	834	1,540	1,490	1,520
11	---	---	---	---	---	---	842	833	838	1,570	1,270	1,440
12	---	---	---	---	---	---	847	833	839	1,520	1,340	1,440
13	---	---	---	---	---	---	853	839	846	1,540	1,520	1,540
14	---	---	---	---	---	---	839	832	835	1,560	1,400	1,510
15	---	---	---	---	---	---	849	834	843	1,400	1,250	1,320
16	---	---	---	---	---	---	858	844	851	2,030	1,160	1,270
17	---	---	---	---	---	---	889	858	873	1,370	1,330	1,350
18	---	---	---	---	---	---	903	888	898	1,370	1,330	1,350
19	---	---	---	---	---	---	932	901	920	1,500	1,360	1,410
20	---	---	---	---	---	---	968	932	953	1,580	1,430	1,480
21	---	---	---	---	---	---	971	958	964	1,570	1,490	1,520
22	---	---	---	---	---	---	958	937	945	1,600	1,520	1,550
23	---	---	---	---	---	---	939	929	933	1,640	1,570	1,600
24	---	---	---	---	---	---	962	939	951	1,650	1,560	1,610
25	---	---	---	---	---	---	985	961	969	1,680	1,620	1,650
26	---	---	---	---	---	---	1,020	985	1,010	1,750	1,670	1,700
27	---	---	---	---	---	---	1,050	1,020	1,030	1,720	1,660	1,690
28	---	---	---	---	---	---	1,060	1,050	1,060	1,760	1,720	1,740
29	---	---	---	---	---	---	1,070	1,060	1,070	1,760	1,700	1,730
30	---	---	---	---	---	---	1,100	1,070	1,090	1,780	1,700	1,730
31	---	---	---	---	---	---	---	---	---	1,790	1,760	1,780
MONTH	---	---	---	---	---	---	---	---	---	2,030	1,100	1,460

06324000 CLEAR CREEK NEAR ARVADA, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1,790	1,750	1,770	1,920	1,840	1,870	961	927	945	1,460	1,400	1,430
2	1,820	1,790	1,810	1,840	1,600	1,740	983	954	967	1,420	1,240	1,320
3	1,850	1,800	1,820	1,610	1,580	1,600	998	980	986	1,240	1,210	1,220
4	1,880	1,830	1,860	1,650	1,570	1,620	1,060	991	1,020	1,210	1,200	1,200
5	1,910	1,870	1,890	1,570	1,390	1,470	1,100	1,040	1,070	1,230	1,200	1,210
6	1,950	1,900	1,920	1,480	1,290	1,410	1,150	1,100	1,120	1,370	1,220	1,270
7	2,020	1,940	1,980	1,290	1,210	1,230	1,220	1,150	1,180	1,430	1,310	1,390
8	2,030	1,990	2,010	1,230	1,130	1,200	1,320	1,220	1,270	1,310	1,170	1,200
9	2,050	2,020	2,030	1,130	1,060	1,080	1,360	1,320	1,330	1,170	1,120	1,150
10	2,080	2,050	2,070	1,210	1,100	1,160	1,380	1,360	1,370	1,120	1,050	1,070
11	2,080	1,890	1,990	1,250	1,200	1,230	1,370	1,350	1,360	1,080	1,060	1,080
12	1,890	1,820	1,850	1,230	1,190	1,210	1,350	1,330	1,340	1,120	1,080	1,110
13	1,890	1,810	1,850	1,330	1,220	1,280	1,460	1,350	1,400	1,140	1,120	1,130
14	1,950	1,890	1,920	1,520	1,330	1,430	1,480	1,420	1,450	1,200	1,130	1,160
15	1,990	1,940	1,960	1,620	1,520	1,560	1,420	1,380	1,400	1,350	1,200	1,300
16	1,980	1,950	1,960	1,670	1,610	1,640	1,480	1,400	1,440	1,330	1,270	1,290
17	2,000	1,980	1,990	1,740	1,610	1,670	1,490	1,470	1,480	1,320	1,250	1,300
18	1,980	1,960	1,970	1,810	1,730	1,770	1,540	1,460	1,490	1,250	1,160	1,180
19	2,000	1,960	1,980	1,840	1,790	1,820	1,580	1,540	1,570	1,160	1,130	1,140
20	1,960	1,920	1,950	1,910	1,800	1,860	1,630	1,580	1,610	1,130	1,080	1,100
21	1,940	1,920	1,930	1,990	1,900	1,950	1,600	1,580	1,590	1,080	1,020	1,040
22	1,920	1,790	1,840	1,990	1,910	1,940	1,610	1,560	1,590	1,050	1,020	1,030
23	1,880	1,840	1,860	1,920	1,180	1,620	1,560	1,510	1,530	1,070	1,020	1,060
24	1,900	1,840	1,860	1,520	1,350	1,420	1,580	1,530	1,550	1,020	938	971
25	1,910	1,870	1,890	1,610	976	1,420	1,570	1,480	1,520	938	903	923
26	1,930	1,900	1,910	976	740	852	1,750	1,520	1,660	903	821	860
27	1,980	1,930	1,960	766	710	730	1,780	1,750	1,760	841	817	826
28	2,010	1,960	1,990	723	708	716	1,770	1,640	1,710	882	841	862
29	2,040	2,000	2,020	832	723	779	1,640	1,360	1,470	945	882	908
30	2,040	1,920	1,970	897	832	865	1,380	1,330	1,350	996	945	973
31	---	---	---	927	897	912	1,420	1,360	1,390	---	---	---
MONTH	2,080	1,750	1,930	1,990	708	1,390	1,780	927	1,380	1,460	817	1,120

06324000 CLEAR CREEK NEAR ARVADA, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.0	10.2	12.4	2.5	-0.1	0.9	---	---	---	---	---	---
2	14.8	10.1	12.3	1.6	-0.1	0.7	---	---	---	---	---	---
3	14.8	9.8	12.2	1.2	0.2	0.8	---	---	---	---	---	---
4	14.9	9.4	12.0	1.2	-0.1	0.6	---	---	---	---	---	---
5	15.1	9.2	12.1	0.5	-0.1	0.1	---	---	---	---	---	---
6	15.2	9.6	12.4	0.4	-0.1	0.0	---	---	---	---	---	---
7	15.8	10.5	13.0	---	---	---	---	---	---	---	---	---
8	16.4	11.7	13.7	---	---	---	---	---	---	---	---	---
9	16.9	11.1	14.1	---	---	---	---	---	---	---	---	---
10	14.9	10.9	12.5	---	---	---	---	---	---	---	---	---
11	12.5	7.6	10.1	---	---	---	---	---	---	---	---	---
12	11.7	7.6	9.7	---	---	---	---	---	---	---	---	---
13	12.0	8.4	10.3	---	---	---	---	---	---	---	---	---
14	11.2	7.5	9.4	---	---	---	---	---	---	---	---	---
15	11.8	7.8	9.7	---	---	---	---	---	---	---	---	---
16	12.5	8.6	10.3	---	---	---	---	---	---	---	---	---
17	13.8	8.7	11.0	---	---	---	---	---	---	---	---	---
18	13.3	9.4	11.2	---	---	---	---	---	---	---	---	---
19	12.9	8.5	10.6	---	---	---	---	---	---	---	---	---
20	12.9	8.5	10.7	---	---	---	---	---	---	---	---	---
21	14.0	8.8	11.3	---	---	---	---	---	---	---	---	---
22	14.6	9.4	12.1	---	---	---	---	---	---	---	---	---
23	13.1	9.6	11.5	---	---	---	---	---	---	---	---	---
24	11.1	7.7	9.1	---	---	---	---	---	---	---	---	---
25	8.6	5.6	7.0	---	---	---	---	---	---	---	---	---
26	8.8	5.5	7.3	---	---	---	---	---	---	---	---	---
27	10.0	7.6	8.8	---	---	---	---	---	---	---	---	---
28	9.3	7.6	8.4	---	---	---	---	---	---	---	---	---
29	8.4	5.2	7.5	---	---	---	---	---	---	---	---	---
30	5.2	1.3	3.1	---	---	---	---	---	---	---	---	---
31	1.9	-0.1	0.9	---	---	---	---	---	---	---	---	---
MONTH	16.9	-0.1	10.2	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	14.7	7.9	11.5
2	---	---	---	---	---	---	11.1	6.9	8.9	18.1	8.3	13.2
3	---	---	---	---	---	---	10.8	6.3	8.2	19.2	12.7	16.1
4	---	---	---	---	---	---	14.0	7.6	10.5	22.0	13.9	17.9
5	---	---	---	---	---	---	16.9	11.6	13.9	24.3	14.8	19.0
6	---	---	---	---	---	---	17.3	11.7	14.3	24.2	13.4	18.2
7	---	---	---	---	---	---	17.0	13.0	14.8	26.4	14.4	19.7
8	---	---	---	---	---	---	14.9	12.1	13.3	25.2	14.9	19.7
9	---	---	---	---	---	---	12.4	9.3	11.1	24.0	13.1	18.0
10	---	---	---	---	---	---	12.4	6.9	9.5	20.1	11.5	15.8
11	---	---	---	---	---	---	9.9	6.7	8.8	20.0	12.4	15.6
12	---	---	---	---	---	---	11.8	4.4	7.8	13.6	9.0	11.0
13	---	---	---	---	---	---	15.3	8.0	11.2	16.7	6.9	11.2
14	---	---	---	---	---	---	15.1	11.4	12.7	17.8	6.9	12.7
15	---	---	---	---	---	---	15.4	10.8	12.8	22.0	10.4	15.5
16	---	---	---	---	---	---	16.4	10.8	13.2	17.0	4.0	12.4
17	---	---	---	---	---	---	16.6	11.9	13.9	18.7	6.4	12.9
18	---	---	---	---	---	---	13.6	10.0	11.9	20.2	11.6	15.2
19	---	---	---	---	---	---	12.9	8.0	10.4	23.6	13.2	18.0
20	---	---	---	---	---	---	15.6	9.6	12.1	19.3	12.6	15.9
21	---	---	---	---	---	---	12.9	10.6	11.6	21.9	12.5	16.9
22	---	---	---	---	---	---	15.2	10.3	12.3	16.4	12.3	14.1
23	---	---	---	---	---	---	17.2	9.9	13.2	23.1	11.1	15.6
24	---	---	---	---	---	---	15.7	10.9	13.1	17.8	11.0	14.3
25	---	---	---	---	---	---	14.4	8.9	11.6	22.8	8.5	14.6
26	---	---	---	---	---	---	17.3	8.4	12.8	18.4	10.3	14.4
27	---	---	---	---	---	---	19.5	10.3	15.1	23.8	11.2	16.9
28	---	---	---	---	---	---	16.8	10.3	13.2	22.1	13.5	17.8
29	---	---	---	---	---	---	10.4	7.9	9.1	18.8	13.2	15.9
30	---	---	---	---	---	---	13.5	6.3	9.8	16.2	9.0	12.3
31	---	---	---	---	---	---	---	---	---	18.3	8.7	13.3
MONTH	---	---	---	---	---	---	---	---	---	26.4	4.0	15.3

06324000 CLEAR CREEK NEAR ARVADA, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.1	9.4	15.9	28.0	19.8	23.3	28.5	21.9	25.0	24.5	16.8	20.9
2	25.1	10.8	17.4	28.7	19.4	23.7	28.4	22.3	25.1	22.1	17.9	19.6
3	27.9	14.0	20.5	26.6	20.2	23.0	25.7	21.7	23.1	18.3	14.8	16.5
4	27.8	17.3	21.6	24.6	19.1	22.0	27.1	19.5	23.1	20.0	14.0	16.5
5	29.3	15.2	21.3	21.6	17.3	18.7	29.1	21.3	24.8	20.3	14.7	17.2
6	29.4	17.6	22.6	24.2	15.5	19.7	29.1	22.1	25.4	19.3	14.1	16.8
7	28.4	14.8	21.1	27.0	20.1	23.1	27.9	22.8	25.1	19.8	14.4	16.9
8	23.3	14.0	18.1	26.0	19.6	22.7	25.3	19.6	22.3	21.3	15.5	18.1
9	23.3	14.6	17.6	27.3	19.8	23.8	24.0	18.3	20.9	22.4	16.1	19.1
10	23.7	16.8	19.7	29.0	21.0	25.0	23.0	18.5	20.2	19.6	16.0	17.8
11	21.0	13.2	16.5	28.9	21.9	25.2	23.9	15.0	19.3	21.7	13.9	17.7
12	25.2	13.3	19.0	30.5	21.1	25.3	23.8	16.5	20.1	20.8	15.7	18.3
13	24.6	14.8	19.0	31.4	20.5	25.3	25.8	17.4	21.3	19.6	16.4	17.6
14	29.1	14.6	20.9	32.6	21.1	26.2	25.9	17.4	21.5	17.1	13.7	15.6
15	27.0	14.8	20.0	25.6	20.9	22.6	26.1	17.4	21.7	17.2	11.8	14.7
16	20.1	14.1	16.8	32.3	17.8	24.3	26.9	17.6	22.0	18.7	13.0	15.7
17	18.5	13.8	16.1	32.3	20.2	26.0	24.3	19.7	21.9	19.9	13.0	16.4
18	15.7	11.3	13.6	32.2	20.4	26.1	22.9	18.3	20.4	19.3	14.6	16.9
19	20.2	11.6	14.8	28.9	22.4	25.7	24.5	16.1	19.7	17.9	15.1	16.5
20	19.5	11.4	15.5	28.3	20.5	24.3	25.6	15.7	20.3	15.3	12.4	14.1
21	19.8	12.4	15.9	29.6	18.3	23.6	25.3	16.2	20.5	14.4	10.8	12.5
22	22.4	12.0	17.0	27.5	18.7	22.8	27.1	15.9	20.5	15.8	9.9	12.7
23	27.1	13.2	19.6	22.6	17.1	18.6	23.7	17.6	20.1	14.6	11.9	13.0
24	20.7	14.4	17.0	23.5	15.3	19.1	23.1	15.3	19.0	16.2	12.3	14.1
25	24.5	13.7	18.5	24.2	17.6	21.1	20.6	16.9	18.5	17.4	12.3	14.7
26	23.3	13.7	18.2	24.0	20.7	22.6	21.9	15.3	18.1	17.8	13.2	15.4
27	26.7	13.9	19.4	23.7	20.4	22.1	21.7	14.4	17.8	15.4	13.1	14.2
28	27.6	15.3	21.3	24.2	19.9	22.0	21.8	13.7	17.8	16.5	11.8	14.0
29	29.4	17.2	23.3	24.3	20.0	22.0	22.0	16.6	19.0	17.4	12.6	14.8
30	27.7	18.7	22.7	25.0	18.9	21.9	23.1	16.3	19.6	15.7	13.9	14.6
31	---	---	---	26.9	20.4	23.5	24.3	16.1	20.4	---	---	---
MONTH	29.4	9.4	18.7	32.6	15.3	23.1	29.1	13.7	21.1	24.5	9.9	16.1

06324200 L X BAR CREEK AT MOUTH, NEAR MOORHEAD, MT

LOCATION.--Lat 44°55'19", long 105°57'57", in SE¼ NW¼ SE¼ sec.14 T.57 N., R.76 W., Campbell County, Hydrologic Unit 10090207, at culvert on coutny road 269 and 10.9 mi southwest of Moorhead, MT.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)
JUL		
26...	1550	.00
AUG		
24...	1515	.00
SEP		
27...	1700	.00

06324300 S A CREEK AT MOUTH, NEAR MOORHEAD, MT

LOCATION.--Lat 44°56'30", long 106°55'34", in NE¼ SW¼ NE¼ sec.7 T.57 N., R.75 W., Campbell County, Hydrologic Unit 10090207, at bridge on county road 269 and 9.0 mi southwest of Moorhead, MT.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)
JUL													
26...	1500	.39	672	13.3	194	8.4	5,450	31.0	27.0	1,200	90.3	227	12
AUG													
24...	1530	E.01	666	4.7	63	7.8	7,660	27.0	22.0	2,500	316	420	11
SEP													
27...	1730	E.01	681	10.1	111	8.0	7,600	14.0	13.4	2,700	330	453	11

Date	Sodium, water, fltrd, mg/L (00930)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL		
26...	964	4,450
AUG		
24...	1,260	7,360
SEP		
27...	1,310	7,380

E -- Estimated value

06324500 POWDER RIVER AT MOORHEAD, MT

LOCATION.--Lat 45°03'28", long 105°52'39", iin SE¼NE¼NE¼ sec.18, T.9 S., R.48 E., Powder River County, Hydrologic Unit 10090207, on left bank 25 ft downstream from bridge on Powder River, 7.3 mi upstream from Buffalo Creek, and at river mile 183.7.

DRAINAGE AREA.--8,086 mi^2; September 13, 1956 to August 27, 2001 published as 8,088 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1929 to September 1972, October 1974 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1932(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,334.6 ft above NGVD of 1929 . Prior to August 28, 1931, nonrecording gage at site 0.8 mi downstream at different elevation. August 28, 1931, to March 21, 1956, water-stage recorder at site 0.1 mi upstream at different elevation. March 22 to July 24, 1956, nonrecording gage at site 1.4 mi downstream at different elevation. July 25 to September 12, 1956, nonrecording gage at different site and elevation. September 13, 1956 to August 27, 2001, water-stage recorder during period of gage operation 1.1 mi downstream at different elevation. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for period of estimated daily discharges, which are poor. Some regulation by three reservoirs in Wyoming with combined usable capacity of 36,800 acre-ft. Diversions for irrigation of about 66,300 acres upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	e90	e200	e100	e60	e200	230	137	64	23	163	44
2	95	e80	e200	e90	e55	e300	217	137	59	23	122	43
3	87	e90	e200	e80	e55	e500	222	135	55	25	91	40
4	79	e80	e170	e70	e55	e450	231	147	52	32	80	32
5	72	e70	e150	e40	e55	398	236	151	48	89	58	26
6	70	e75	e200	e45	e50	376	226	135	48	106	49	23
7	73	e75	e200	e50	e60	307	230	128	44	99	43	58
8	73	e80	e190	e60	e60	345	234	119	37	73	39	74
9	70	e90	e160	e60	e55	430	222	120	33	69	35	73
10	64	e100	e150	e55	e50	384	210	136	31	109	30	58
11	59	e110	e140	e55	e45	293	218	179	32	80	28	48
12	55	e100	e130	e55	e50	296	235	172	33	58	22	38
13	60	e100	e150	e50	e55	975	257	164	30	50	25	30
14	64	e100	e170	e50	e60	739	273	152	28	40	22	32
15	74	e100	e170	e50	e70	577	265	146	23	30	19	42
16	73	e100	e160	e50	e80	461	231	133	20	27	16	41
17	77	e100	e150	e50	e90	437	226	147	18	21	14	52
18	80	e110	e150	e50	e100	419	205	135	17	17	11	59
19	82	e120	e150	e50	e100	357	193	131	19	15	9.8	55
20	83	e100	e150	e50	e100	315	189	120	19	13	9.4	60
21	82	e90	e150	e55	e90	306	196	116	25	10	9.3	58
22	81	e70	e150	e55	e90	294	196	112	27	11	7.5	56
23	81	e60	e150	e60	e90	278	199	104	26	14	6.6	68
24	78	e70	e140	e55	e90	266	224	101	23	23	5.0	100
25	76	e80	e150	e50	e100	257	191	100	20	57	7.2	104
26	81	e80	e160	e50	e100	257	179	86	19	292	20	111
27	89	e80	e170	e45	e100	248	165	80	19	736	19	92
28	96	e90	e150	e50	e100	237	151	90	19	552	14	86
29	103	e100	e100	e55	e150	231	149	84	23	434	13	74
30	101	e150	e90	e60	---	240	144	75	21	288	18	67
31	e90	---	e100	e60	---	247	---	69	---	218	25	---
TOTAL	2,449	2,740	4,850	1,755	2,215	11,420	6,344	3,841	932	3,634	1,030.8	1,744
MEAN	79.0	91.3	156	56.6	76.4	368	211	124	31.1	117	33.3	58.1
MAX	103	150	200	100	150	975	273	179	64	736	163	111
MIN	55	60	90	40	45	200	144	69	17	10	5.0	23
AC-FT	4,860	5,430	9,620	3,480	4,390	22,650	12,580	7,620	1,850	7,210	2,040	3,460

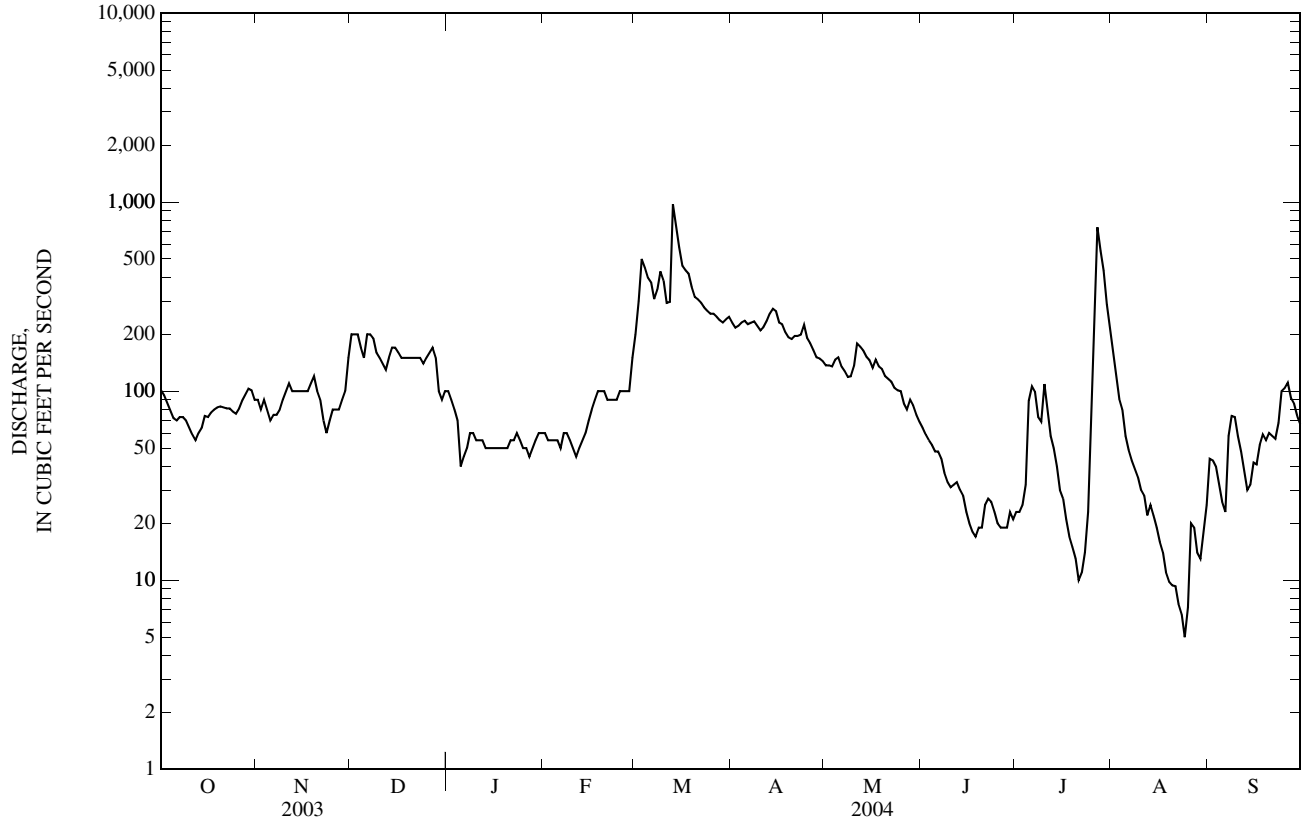
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)*

MEAN	223	223	159	152	284	608	505	1,037	1,338	458	171	143
MAX	897	660	326	445	1,200	2,290	1,314	5,553	4,131	2,500	1,219	686
(WY)	(1995)	(1999)	(1981)	(1981)	(1930)	(1947)	(1965)	(1978)	(1967)	(1937)	(1941)	(1982)
MIN	16.1	80.0	56.2	27.2	20.9	185	117	82.6	31.1	33.9	0.60	1.28
(WY)	(1955)	(1936)	(1933)	(1950)	(1933)	(2002)	(1961)	(1934)	(2004)	(1961)	(1966)	(1960)

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

SUMMARY STATISTICS			FOR 2004 WATER YEAR*		WATER YEARS 1930 - 2004*	
ANNUAL TOTAL	101,324		42,954.8		--	
ANNUAL MEAN	278		117		442	
HIGHEST ANNUAL MEAN	--		--		1,091	1978
LOWEST ANNUAL MEAN	--		--		109	1961
HIGHEST DAILY MEAN	2,000	Mar 16	975	Mar 13	27,500	May 20, 1978
LOWEST DAILY MEAN	11	Several days	5.0	Aug 24	0.00	Jul 15, 1931
ANNUAL SEVEN-DAY MINIMUM	15	Jul 25	7.8	Aug 19	0.00	Sep 4, 1960
MAXIMUM PEAK FLOW	--		1,180 [a]	Mar 13	33,000 [c]	May 20, 1978
MAXIMUM PEAK STAGE	--		5.18[b]	Nov 21	17.70[d]	Mar 21, 1956
ANNUAL RUNOFF (AC-FT)	201,000		85,200		320,000	
10 PERCENT EXCEEDS	705		238		1,020	
50 PERCENT EXCEEDS	160		81		215	
90 PERCENT EXCEEDS	23		23		45	

* For period of operation.
a Gage height, 3.97 ft.
b Backwater from ice.
c Gage height, 15.24 ft, site and datum then in use.
d Ice jam, site and datum then in use.
e Estimated.



06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-53, 1956-67, 1969-72, 1975-77, 2001 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1986 to November 1989, May 2001 to current year (seasonal operation).
WATER TEMPERATURE: February 1951 to September 1953, October 1955 to September 1957, October 1974 to September 1977, March 1978 to September 1981 (seasonal records only).
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1977, March 1978 to September 1996 (seasonal records only).

INSTRUMENTATION.--Specific conductance probe installed May 20, 2001.

REMARKS.--Specific conductance record is rated good. The continuous monitor was seasonally discontinued during winter ice conditions, Nov. 1 to Mar. 10. No data are available for May 1 to June 21 due to equipment problems. An observer was hired to collect samples approximately twice-weekly during winter period and during period when equipment malfunctioned. Water-quality sample for Sept. 14 was lost in transit to the lab.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE : Maximum daily, 5,920 microsiemens per centimeter (µS/cm), July 16, 2002; minimum daily, 642 µS/cm at 25.0°C, May 20, 1988.
WATER TEMPERATURE: Maximum daily, 33.0°C, July 14, 1981; minimum daily 0.0°C on many days during winter.
SEDIMENT CONCENTRATION: Maximum daily mean, 53,500 mg/L May 27, 1980; minimum daily mean, 3 mg/L Sept. 16-18, 1996.
SEDIMENT LOAD: Maximum daily, 2,230,000 tons May 20, 1978; minimum daily, 0.17 ton Aug. 1, 1988 and Sept. 16, 1996.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: For period of available record, maximum, 4,170 microsiemens per centimeter (µS/cm), July 5; minimum, 543 µS/cm, Feb. 20.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
07...	1700	79	668	8.8	107	8.7	1,630	28.5	18.0	520	115	56.6	7.39
22...	1230	84	678	10.4	108	8.3	2,140	23.0	11.5	590	122	68.1	8.81
NOV													
03...	1100	E90	673	11.9	93	8.4	2,170	-1.0	0.0	620	136	67.5	8.23
13...	1630	E100	672	10.6	83	8.5	1,820	7.5	0.0	680	156	71.1	7.70
DEC													
03...	1445	E200	674	13.9	108	8.0	1,930	9.0	0.0	740	168	77.5	7.23
16...	1230	E160	676	10.7	83	7.9	1,820	3.0	0.0	640	156	61.0	6.70
JAN													
07...	1400	E50	672	9.7	76	8.4	2,190	-3.0	0.0	740	180	71.5	7.69
21...	1100	E55	680	9.0	69	8.0	1,850	7.5	0.0	620	150	60.2	7.10
FEB													
03...	1330	E55	673	11.4	89	7.7	2,110	-1.0	0.0	670	166	62.4	8.43
24...	1300	E90	671	12.3	96	7.9	1,410	22.0	0.0	450	109	43.8	6.65
MAR													
09...	1230	368	652	12.7	117	8.0	1,790	17.5	5.0	520	128	47.8	7.45
23...	1030	281	669	10.7	102	8.4	1,870	18.5	7.5	550	134	53.4	7.68
APR													
13...	1200	262	672	10.9	112	8.5	1,810	23.0	10.5	520	123	52.4	7.09
20...	1440	194	668	9.9	108	8.4	1,830	15.0	13.0	530	123	53.1	7.18
MAY													
11...	1230	189	663	8.6	103	8.4	2,450	15.5	17.0	560	131	57.4	10.9
17...	1140	150	675	--	--	8.4	1,820	15.0	13.0	460	106	47.4	7.89
JUN													
07...	1130	47	667	7.4	95	8.5	3,370	22.5	20.5	730	151	86.8	14.3
23...	1120	27	682	11.4	135	8.1	3,360	25.5	17.5	790	157	97.5	12.7
JUL													
12...	1300	60	668	8.4	120	8.3	3,050	31.0	26.0	680	150	75.2	13.5
26...	1300	226	670	8.0	111	8.3	1,710	34.0	25.0	720	156	79.2	8.87
AUG													
17...	1115	14	676	7.6	98	8.3	2,330	24.5	21.5	710	140	86.6	11.1
24...	1630	5.1	668	8.2	112	8.4	2,290	30.5	24.0	780	146	102	10.8
SEP													
14...	1230	33	668	9.4	111	8.3	1,220	20.0	16.5	--	--	--	--
27...	1830	94	682	9.5	105	8.5	957	13.5	14.5	400	88.6	42.6	4.36

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Alkalinity, water fltrd fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)
OCT													
07...	3	180	42	198	144	73.0	.3	4.52	586	1,110	1.66	260	1,220
22...	5	253	48	--	178	147	.5	5.18	721	1,430	2.11	351	1,550
NOV													
03...	4	247	46	317	211	134	.5	5.92	730	1,460	2.21	E395	1,630
13...	3	194	38	307	219	81.9	.4	9.84	644	1,300	1.90	E377	1,400
DEC													
03...	3	189	35	244	202	100	.4	11.3	672	1,350	1.97	E783	1,450
16...	3	193	39	225	180	114	.5	10.4	590	1,240	1.78	E566	1,310
JAN													
07...	4	227	40	266	221	133	.6	12.5	730	1,500	2.22	E221	1,630
21...	3	200	41	158	166	120	.5	12.3	560	1,210	1.80	E196	1,320
FEB													
03...	4	231	42	292	225	156	.5	12.8	610	1,380	2.07	E226	1,520
24...	3	131	38	200	188	74.6	.4	8.27	436	924	1.34	E240	988
MAR													
09...	4	206	46	307	176	107	.5	8.01	578	1,190	1.72	1,260	1,270
23...	4	214	45	267	208	97.2	.6	5.87	674	1,310	1.89	1,060	1,390
APR													
13...	4	220	47	236	185	123	.5	6.27	564	1,210	1.76	918	1,300
20...	4	217	47	232	194	126	.5	6.37	587	1,240	1.79	689	1,320
MAY													
11...	6	350	57	259	197	221	.8	7.44	774	1,670	2.41	904	1,770
17...	5	222	51	222	188	142	.6	6.57	556	1,200	1.73	515	1,270
JUN													
07...	8	499	59	197	197	307	.7	7.04	1,120	2,310	3.40	317	2,500
23...	7	461	55	179	195	272	.5	5.28	1,240	2,370	3.47	186	2,550
JUL													
12...	7	430	57	190	177	293	.7	5.10	1,030	2,100	3.06	364	2,250
26...	2	117	26	--	178	27.6	.3	7.25	733	1,240	1.90	850	1,390
AUG													
17...	4	256	44	170	167	103	.4	4.07	938	1,640	2.45	68.0	1,800
24...	4	249	40	154	154	63.7	.4	2.31	1,060	1,720	2.57	26.1	1,890
SEP													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	1	54.6	23	--	170	5.67	.2	4.70	340	643	.97	182	717

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	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)	Total nitro-gen, water unfltrd mg/L (62855)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover -able, ug/L (01007)
OCT										
07...	<.04	<.016	E.001	.49	<.006	.125	1,810	.5	E1	57
22...	<.04	<.016	<.002	.53	<.006	.166	3,250	.6	--	79
NOV										
03...	<.04	.118	.002	.97	<.006	.69	8,010	.7	5	169
13...	.04	.237	.002	.84	<.006	.29	4,820	.7	--	100
DEC										
03...	.05	.297	.002	.72	<.006	.168	2,990	.7	<2	78
16...	.06	.424	.002	.77	<.006	.154	2,000	.7	--	66
JAN										
07...	.06	.580	.008	.99	E.004	.113	2,710	.8	2	68
21...	.04	.562	.013	.86	<.006	.107	1,920	.5	--	56
FEB										
03...	--	.542	.013	.90	<.006	.086	1,480	.7	<2	58
24...	.087	.374	.012	.85	E.003	.128	1,830	.7	--	52
MAR										
09...	.071	.410	.008	1.62	E.004	1.37	20,800	.7	9	342
23...	E.010	.296	<.002	1.14	<.007	.91	11,800	.7	--	228
APR										
13...	E.007	<.016	<.002	.64	<.006	.49	6,620	.8	4	141
20...	E.006	.159	E.001	.70	E.003	.38	5,340	.9	--	121
MAY										
11...	.026	.022	E.001	.95	.009	.79	9,440	1.2	6	183
17...	E.007	.104	.002	--	E.003	--	5,750	<.2	--	123
JUN										
07...	E.007	<.016	E.001	.31	<.006	E.03	209	1.2	<2	52
23...	--	--	--	--	--	--	76	.9	--	46
JUL										
12...	E.007	<.016	<.002	.63	<.006	.098	905	1.0	<2	62
26...	<.010	<.016	.003	1.13	<.006	.28	3,550	1.1	--	108
AUG										
17...	.015	<.016	<.002	.56	<.006	.036	422	.8	<2	53
24...	E.007	<.016	<.002	.52	<.006	.019	133	1.0	--	43
SEP										
14...	--	--	--	--	--	--	--	--	--	--
27...	E.005	<.016	<.002	.29	<.006	.017	172	.6	--	28

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Beryll-ium, water, unfltrd recover-able, ug/L (01012)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover-able, ug/L (01034)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, fltrd, ug/L (01056)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)
OCT										
07...	.13	199	.10	1.8	9.9	<6	2,690	2.16	5.2	56.3
22...	.22	--	--	--	--	<6	--	--	4.6	--
NOV										
03...	.66	246	.52	10.7	22.1	<6	14,700	12.2	3.8	247
13...	.36	--	--	--	--	E4	--	--	6.3	--
DEC										
03...	.19	225	.14	3.2	12.3	E4	4,210	3.31	5.1	68.2
16...	.19	--	--	--	--	<6	--	--	4.2	--
JAN										
07...	.15	257	.11	1.7	10.9	--	2,760	2.10	9.8	42.1
21...	.12	--	--	--	--	E4	--	--	7.2	--
FEB										
03...	.10	256	.06	1.2	10.9	E4	2,070	1.50	6.2	36.2
24...	.13	--	--	--	--	11	--	--	11.7	--
MAR										
09...	1.62	196	1.06	21.7	39.5	7	35,100	28.8	5.3	557
23...	.94	--	--	--	--	<6	--	--	2.6	--
APR										
13...	.50	212	.36	7.9	16.8	<6	12,600	9.78	2.4	182
20...	.42	--	--	--	--	E4	--	--	4.7	--
MAY										
11...	.71	335	.55	10.8	23.1	<19	25,500	15.1	E1.6	317
17...	.48	--	--	--	--	<6	--	--	1.9	--
JUN										
07...	<.12	449	<.08	.9	11.1	<19	380	.39	8.2	16.5
23...	<.12	--	--	--	--	<19	--	--	10.6	--
JUL										
12...	E.06	467	.08	1.4	12.2	<19	1,800	1.41	9.3	59.6
26...	.34	--	--	--	--	<6	--	--	3.7	--
AUG										
17...	E.03	269	E.04	E.7	8.2	<6	640	.59	7.3	38.0
24...	<.06	--	--	--	--	<19	--	--	18.8	--
SEP										
14...	--	--	--	--	--	--	--	--	--	--
27...	<.06	--	--	--	--	16	--	--	4.4	--

E--Estimated.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01092)	Sus- pended sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
OCT							
07...	--	8.67	1.3	17	99	183	39
22...	--	--	1.7	--	99	279	63
NOV							
03...	--	23.7	2.7	72	99	936	E227
13...	--	--	1.6	--	98	469	E127
DEC							
03...	--	11.2	2.4	22	94	290	E157
16...	--	--	2.8	--	97	257	E111
JAN							
07...	--	8.76	2.5	18	92	257	E34.7
21...	--	--	2.0	--	93	163	E24.2
FEB							
03...	--	7.37	2.2	12	91	123	E18.3
24...	--	--	1.4	--	98	154	E37.4
MAR							
09...	--	46.6	3.7	148	95	2,190	2,170
23...	--	--	4.0	--	99	1,280	970
APR							
13...	--	17.3	2.3	52	98	671	475
20...	--	--	2.6	--	100	451	236
MAY							
11...	--	25.9	4.2	79	99	1,060	543
17...	--	--	2.3	--	99	626	254
JUN							
07...	<.02	8.48	3.0	7	87	40	5.1
23...	--	--	1.8	--	96	8	.58
JUL							
12...	--	8.90	2.7	10	98	82	13
26...	--	--	2.1	--	98	451	275
AUG							
17...	--	6.34	1.0	5	97	46	1.7
24...	--	--	1.3	--	95	13	.18
SEP							
14...	--	--	--	--	98	16	1.4
27...	--	--	.6	--	--	--	--

E--Estimated.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1,460	1,380	1,420	---	---	---	---	---	---	---	---	---
2	1,380	1,340	1,360	---	---		---	---	---	---	---	---
3	1,400	1,370	1,390	---	---	*2,170	---	---	*1,930	---	---	*2,120
4	1,450	1,400	1,420	---	---	*2,480	---	---	---	---	---	---
5	1,540	1,450	1,490	---	---	---	---	---	---	---	---	---
6	1,670	1,540	1,610	---	---	---	---	---	*2,140	---	---	---
7	1,730	1,670	1,680	---	---	*2,310	---	---	---	---	---	*2,190
8	1,790	1,730	1,760	---	---	---	---	---	---	---	---	---
9	1,820	1,780	1,800	---	---	---	---	---	*1,770	---	---	---
10	1,850	1,820	1,830	---	---	---	---	---	---	---	---	*2,630
11	1,900	1,840	1,880	---	---	*2,230	---	---	---	---	---	---
12	2,050	1,890	1,980	---	---	---	---	---	*1,760	---	---	---
13	2,130	2,050	2,090	---	---	*1,820	---	---	---	---	---	*2,330
14	2,130	2,090	2,110	---	---	---	---	---	---	---	---	---
15	2,130	1,960	2,040	---	---	*2,360	---	---	---	---	---	---
16	2,050	1,970	2,010	---	---	---	---	---	*1,820	---	---	---
17	2,060	1,990	2,020	---	---	---	---	---	---	---	---	*2,090
18	2,040	2,000	2,020	---	---	---	---	---	---	---	---	---
19	2,060	2,010	2,030	---	---	*1,660	---	---	---	---	---	---
20	2,120	2,060	2,100	---	---	---	---	---	*2,100	---	---	---
21	2,190	2,120	2,170	---	---	---	---	---	---	---	---	*1,850
22	2,180	2,150	2,170	---	---	---	---	---	---	---	---	---
23	2,230	2,150	2,190	---	---	*2,180	---	---	---	---	---	---
24	2,430	2,230	2,360	---	---	---	---	---	*1,960	---	---	---
25	2,500	2,420	2,460	---	---	---	---	---	---	---	---	*1,720
26	2,430	2,260	2,360	---	---	---	---	---	---	---	---	---
27	2,280	2,250	2,270	---	---	*2,020	---	---	---	---	---	---
28	2,290	2,230	2,260	---	---	---	---	---	*2,120	---	---	---
29	2,240	2,130	2,170	---	---	---	---	---	---	---	---	*1,930
30	2,170	2,110	2,140	---	---	*1,980	---	---	---	---	---	---
31	2,140	2,020	2,110	---	---	---	---	---	---	---	---	---
MONTH	2,500	1,340	1,960	---	---	---	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	1,980	1,930	1,950	---	---	---
2	---	---	---	---	---	*1,560	1,960	1,920	1,940	---	---	---
3	---	---	*2,110	---	---	---	1,940	1,890	1,920	---	---	---
4	---	---		---	---	---	1,900	1,840	1,870	---	---	---
5	---	---		---	---	*1,760	1,850	1,800	1,820	---	---	2,380
6	---	---	*1,990	---	---	---	1,860	1,800	1,830	---	---	2,460
7	---	---	---	---	---	---	1,860	1,840	1,850	---	---	---
8	---	---	---	---	---	---	1,850	1,780	1,830	---	---	---
9	---	---	*1,980	---	---	*1,790	1,840	1,790	1,810	---	---	---
10	---	---	---	1,830	1,730	1,770	1,790	1,760	1,780	---	---	---
11	---	---	---	1,820	1,720	1,770	1,790	1,750	1,770	---	---	2,450
12	---	---	*1,970	1,850	1,670	1,750	1,800	1,780	1,790	---	---	2,310
13	---	---	---	2,210	1,740	2,040	1,820	1,760	1,800	---	---	1,780
14	---	---	---	2,280	2,210	2,260	1,770	1,720	1,750	---	---	1,710
15	---	---	---	2,220	1,840	2,030	1,740	1,650	1,700	---	---	1,700
16	---	---	*556	1,840	1,590	1,660	1,650	1,620	1,640	---	---	1,810
17	---	---	---	1,630	1,560	1,590	1,700	1,630	1,660	---	---	1,820
18	---	---	---	1,630	1,560	1,600	1,810	1,700	1,740	---	---	1,980
19	---	---	---	1,710	1,620	1,660	1,850	1,810	1,840	---	---	2,070
20	---	---	*543	1,810	1,700	1,760	1,860	1,810	1,830	---	---	2,070
21	---	---	---	1,860	1,790	1,820	1,910	1,840	1,870	---	---	2,170
22	---	---	---	1,880	1,850	1,870	2,030	1,900	1,950	---	---	2,240
23	---	---	---	1,930	1,870	1,900	2,050	2,020	2,040	---	---	2,310
24	---	---	*1,410	2,000	1,930	1,960	2,080	2,030	2,060	---	---	2,380
25	---	---	---	2,050	2,000	2,020	2,060	1,970	2,010	---	---	2,430
26	---	---	---	2,060	2,020	2,040	1,980	1,870	1,920	---	---	2,610
27	---	---	*1,320	2,040	2,010	2,030	1,990	1,870	1,910	---	---	2,680
28	---	---	---	2,020	1,980	1,990	2,070	1,990	2,040	---	---	2,730
29	---	---	---	1,990	1,970	1,990	2,110	2,060	2,090	---	---	2,860
30	---	---	---	2,010	1,960	1,990	2,110	2,060	2,080	---	---	---
31	---	---	---	1,980	1,940	1,960	---	---	---	---	---	3,030
MONTH	---	---	---	2,280	1,560	1,860	2,110	1,620	1,870	---	---	2,270

*--Instantaneous value from USGS or observer samples.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	3,010	4,000	3,910	3,960	1,600	1,560	1,580	1,910	1,630	1,750
2	---	---	3,020	3,970	3,890	3,930	1,840	1,600	1,690	1,630	1,560	1,580
3	---	---	3,090	3,940	3,610	3,780	2,020	1,660	1,910	1,570	1,530	1,550
4	---	---	3,200	3,610	3,320	3,460	2,010	1,960	1,980	1,570	1,490	1,540
5	---	---	3,230	4,170	2,990	3,740	2,170	1,980	2,060	1,500	1,470	1,480
6	---	---	3,320	2,990	2,040	2,250	2,250	2,170	2,220	1,480	1,460	1,470
7	---	---	3,370	2,100	1,920	1,990	2,300	2,180	2,230	1,480	1,390	1,440
8	---	---	3,530	1,980	1,920	1,940	2,320	2,280	2,290	1,550	1,390	1,460
9	---	---	3,640	2,520	1,980	2,260	2,290	2,270	2,280	1,550	1,310	1,450
10	---	---	3,820	2,990	2,120	2,470	2,310	2,260	2,280	1,310	1,250	1,270
11	---	---	3,700	3,240	2,990	3,110	2,330	2,290	2,310	1,260	1,240	1,250
12	---	---	3,640	3,200	2,970	3,080	2,290	2,250	2,270	1,250	1,210	1,220
13	---	---	3,530	2,980	2,470	2,800	2,360	2,270	2,310	1,230	1,200	1,210
14	---	---	3,450	2,470	2,360	2,400	2,350	2,180	2,290	1,260	1,200	1,220
15	---	---	3,560	2,460	2,410	2,430	2,180	2,120	2,130	1,260	1,220	1,230
16	---	---	3,590	2,960	2,460	2,690	2,230	2,120	2,170	1,290	1,240	1,260
17	---	---	3,700	3,080	2,960	3,030	2,320	2,200	2,260	1,410	1,280	1,340
18	---	---	3,770	3,120	3,040	3,070	2,250	2,190	2,220	1,410	1,370	1,390
19	---	---	3,840	3,320	3,120	3,210	2,330	2,240	2,290	1,440	1,360	1,410
20	---	---	3,840	3,500	3,320	3,420	2,330	2,300	2,310	1,360	1,210	1,280
21	---	---	---	3,690	3,500	3,610	2,330	2,300	2,310	1,210	1,190	1,190
22	3,620	3,420	3,470	3,650	3,420	3,530	2,340	2,290	2,310	1,200	1,170	1,190
23	3,420	3,300	3,340	3,420	2,990	3,220	2,340	2,310	2,320	1,170	1,120	1,140
24	3,340	3,180	3,250	3,020	2,610	2,890	2,370	2,320	2,340	1,160	1,080	1,120
25	3,390	3,240	3,300	2,670	2,330	2,480	2,480	2,360	2,410	1,100	996	1,050
26	3,410	3,340	3,380	2,720	1,470	1,870	2,520	2,190	2,410	1,020	968	997
27	3,500	3,390	3,430	2,760	1,480	2,570	2,190	1,870	1,970	1,010	932	962
28	3,650	3,490	3,560	2,540	1,770	2,060	1,900	1,870	1,890	932	894	906
29	3,670	3,570	3,620	1,770	1,600	1,640	1,890	1,870	1,880	919	891	902
30	3,950	3,670	3,830	1,710	1,620	1,670	2,060	1,890	1,960	941	913	929
31	---	---	---	1,640	1,590	1,620	2,080	1,910	2,010	---	---	---
MONTH	---	---	---	4,170	1,470	2,780	2,520	1,560	2,160	1,910	891	1,270

*--Instantaneous value from USGS or observer samples.

06324785 DRY FORK LITTLE POWDER RIVER AT MOUTH, NEAR GILLETTE, WY

LOCATION.--Lat 44°25'14", long 105°27'25", in NE¼ NW¼ NE¼ sec.12 T.51 N., R.72 W., Campbell County, Hydrologic Unit 10090208, 8.7 mi northeast of Gillette.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)
JUL													
09...	1040	.70	662	10.5	128	7.3	1,920	33.0	17.5	910	233	80.4	1
AUG													
02...	1135	.59	653	9.1	114	7.9	2,000	30.5	18.5	950	236	87.3	1
SEP													
02...	1115	.54	649	11.9	140	7.7	1,930	22.5	15.0	970	249	85.1	1

Date	Sodium, water, fltrd, mg/L (00930)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL		
09...	83.6	1,600
AUG		
02...	95.1	1,670
SEP		
02...	87.4	1,590

06324870 RAWHIDE CREEK AT MOUTH, NEAR GILLETTE, WY

LOCATION.--Lat 44°27'42", long 105°28'22", in NE$\frac{1}{4}$ SW$\frac{1}{4}$ NE$\frac{1}{4}$ sec.26 T.52 N., R.72 W., Campbell County, Hydrologic Unit 10090208, 11.8 mi north of Gillette.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)
JUL		
09...	1120	.00
AUG		
02...	1030	.00
SEP		
02...	1045	.00

06324940 HORSE CREEK AT MOUTH, NEAR WESTON, WY

LOCATION.--Lat 44°43'49", long 105°22'42", in NW¼ SW¼ SE¼ sec.22 T.55 N., R.71 W., Campbell County, Hydrologic Unit 10090208, at bridge on state highway 59 and 6.6 mi north of Weston.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)
JUL		
09...	1145	.00
AUG		
25...	0800	.00
SEP		
09...	0935	.00

06324950 LITTLE POWDER RIVER BELOW ELK CREEK AT MOUTH, NEAR WESTON, WY

LOCATION.--Lat 44°48'33", long 105°21'58", in SW¼ SE¼ NW¼ sec.12 T.51 N., R.72 W., Campbell County, Hydrologic Unit 10090208, 11.8 mi north of Weston.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium adsorption ratio (00931)
JUL													
09...	1210	3.9	665	8.9	123	8.1	3,500	30.0	24.0	580	106	76.2	11
AUG													
25...	0830	.06	663	6.4	77	8.0	2,550	24.0	17.0	1,000	225	110	3
SEP													
09...	1030	E.11	669	8.9	110	7.7	3,070	22.5	18.5	1,100	234	128	4

Date	Sodium, water, fltrd, mg/L (00930)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL		
09...	621	2,510
AUG		
25...	236	2,090
SEP		
09...	308	2,710

E -- Estimated value

06324965 OLMSTEAD CREEK AT MOUTH, NEAR WESTON, WY

LOCATION.--Lat 44°55'10", long 105°22'12", in NE¼ SW¼ NW¼ sec.23 T.57 N., R.71 W., Campbell County, Hydrologic Unit 10090208, at bridge on state highway 59 and 19.5 mi north of Weston.

PERIOD OF RECORD.--July to September 2004.

0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)
JUL		
09...	1310	.00
AUG		
25...	0930	.00
SEP		
09...	1105	.00

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY

LOCATION.--Lat 44°55'37", long 105°21'10", in NW¼ SW¼ SW¼ sec.13, T.57 N., R.71 W., Campbell County, Hydrologic Unit 10090208, on left bank 3.1 mi upstream from Dry Creek, 5.0 mi south of the Wyoming-Montana State line, and 20 mi north of Weston.

DRAINAGE AREA.--1,237 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORDS.--WDR WY-77-1: Drainage area. WDR WY-78-1: 1976(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,410 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of about 80 acres downstream from station. Flow occasionally affected by contributions from mine dewatering.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.04	0.03	0.52	e0.20	0.50	e4.0	1.4	0.79	1.00	0.08	e2.1	0.09
2	0.03	0.04	0.66	e0.15	0.45	e3.6	1.4	0.75	0.80	0.07	1.4	0.13
3	0.02	0.04	0.67	e0.18	0.37	e3.8	1.3	0.80	0.65	0.07	0.93	0.15
4	0.02	0.04	0.73	0.16	0.34	e4.0	1.2	0.69	0.59	0.39	0.52	0.15
5	0.01	0.04	0.56	0.14	0.36	e4.4	1.1	0.60	0.52	0.25	0.25	0.17
6	0.01	0.04	e0.50	0.08	0.33	e4.7	0.95	0.53	0.37	0.19	0.17	0.17
7	0.00	0.04	e0.40	0.07	e0.20	e4.9	0.85	0.50	0.35	13	0.13	0.22
8	0.00	0.04	e0.52	0.08	e0.17	e5.0	0.69	0.49	0.26	9.2	0.08	0.23
9	0.00	0.04	e0.60	0.08	e0.22	5.5	1.1	0.41	0.24	4.7	0.05	0.25
10	0.01	0.04	0.63	0.09	e0.24	9.0	1.0	0.48	0.19	2.1	0.04	0.22
11	0.01	0.06	0.65	0.09	e0.22	23	0.79	0.48	0.21	0.69	0.04	0.24
12	0.01	e0.10	0.49	0.09	e0.20	12	0.68	0.43	0.21	0.36	0.04	0.25
13	0.01	0.23	0.46	0.11	e0.18	11	0.67	0.38	0.14	0.14	0.03	0.27
14	0.01	0.32	0.63	0.17	e0.15	9.5	0.58	0.49	0.13	0.05	0.04	0.22
15	0.01	0.32	0.88	0.26	e0.18	7.6	0.63	0.48	0.13	0.03	0.04	0.26
16	0.01	0.34	0.84	0.26	e0.25	5.9	0.55	0.60	0.12	0.02	0.03	0.26
17	0.01	0.27	0.91	0.27	e0.31	5.5	0.57	0.84	0.12	0.01	0.03	0.26
18	0.01	0.25	0.91	0.34	e0.50	6.7	0.67	1.2	0.11	0.01	0.04	0.27
19	0.02	0.28	0.78	0.49	e3.0	6.5	0.76	1.3	0.09	0.01	0.04	0.32
20	0.02	0.40	0.81	0.52	e20	6.9	0.77	0.99	0.10	0.01	0.04	0.37
21	0.02	0.47	0.86	0.51	e50	9.3	1.1	1.0	0.09	0.01	0.04	0.39
22	0.02	0.46	0.75	0.56	e90	11	1.4	1.3	0.09	0.01	0.04	0.40
23	0.02	0.39	0.62	0.65	e40	7.7	1.3	5.7	0.08	0.02	0.04	0.36
24	0.02	e0.30	0.59	0.65	e18	6.3	1.3	4.8	0.08	0.01	0.04	0.36
25	0.03	e0.20	0.60	0.67	e15	5.6	1.1	2.3	0.07	19	0.04	0.37
26	0.02	e0.25	0.62	0.69	e10	4.5	0.94	1.3	0.05	50	0.05	0.48
27	0.02	e0.28	0.73	0.67	e8.0	3.8	0.85	1.3	0.04	9.5	0.05	0.47
28	0.02	0.30	0.69	0.33	e6.0	3.4	0.76	1.3	0.04	4.5	0.07	0.33
29	0.03	0.38	0.54	0.29	5.0	2.7	0.78	1.3	0.05	3.8	0.07	0.52
30	0.04	0.51	e0.30	0.36	---	2.1	0.77	1.3	0.09	e3.3	0.07	0.52
31	0.04	---	e0.25	0.47	---	1.6	---	1.2	---	e2.6	0.08	---
TOTAL	0.54	6.50	19.70	9.68	270.17	201.5	27.96	36.03	7.01	124.13	6.63	8.70
MEAN	0.02	0.22	0.64	0.31	9.32	6.50	0.93	1.16	0.23	4.00	0.21	0.29
MAX	0.04	0.51	0.91	0.69	90	23	1.4	5.7	1.0	50	2.1	0.52
MIN	0.00	0.03	0.25	0.07	0.15	1.6	0.55	0.38	0.04	0.01	0.03	0.09
AC-FT	1.1	13	39	19	536	400	55	71	14	246	13	17

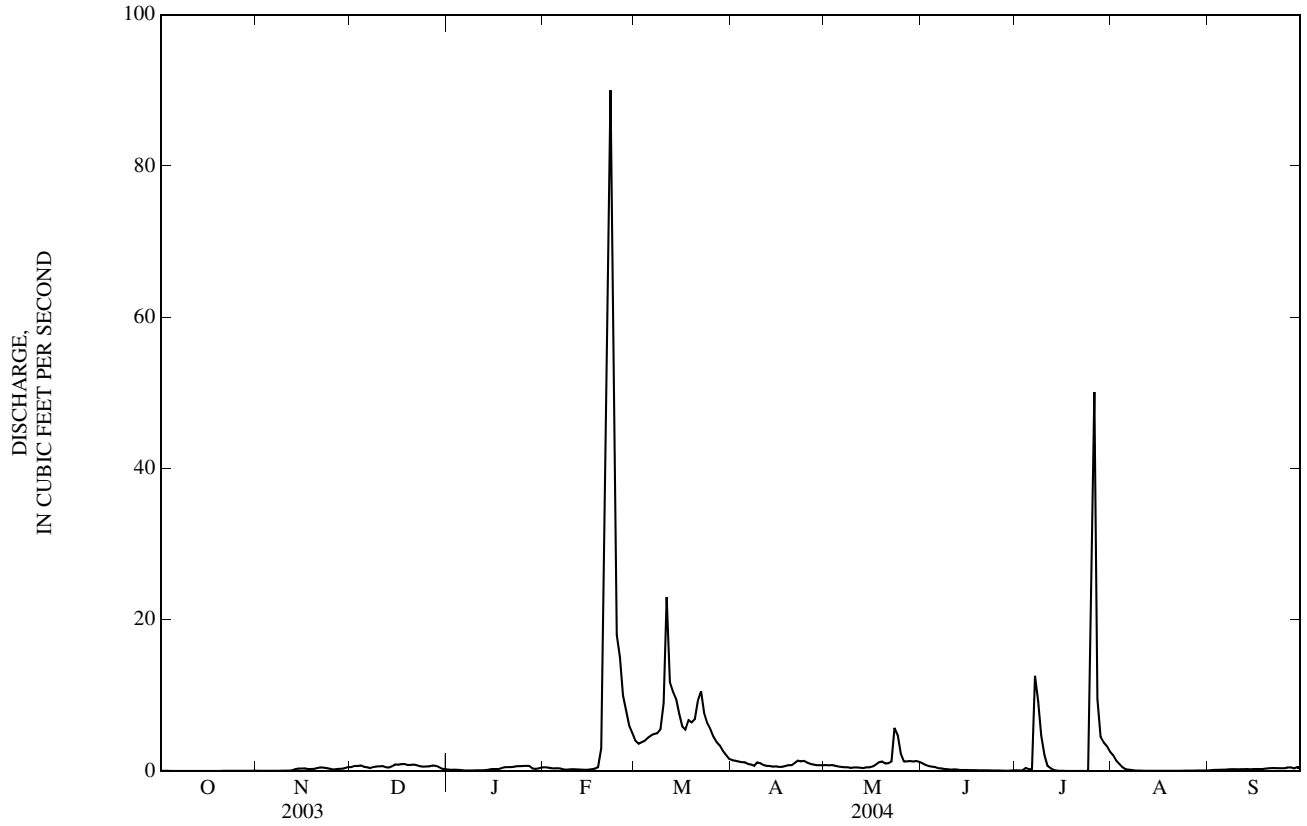
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2004, BY WATER YEAR (WY)

MEAN	10.6	3.62	2.44	7.61	35.6	58.3	22.7	54.8	26.8	10.5	5.20	3.76
MAX	172	25.4	9.97	89.0	336	613	99.3	703	187	68.8	44.8	60.8
(WY)	(1995)	(1999)	(1995)	(1974)	(1997)	(1978)	(1999)	(1978)	(1984)	(1982)	(1993)	(1986)
MIN	0.01	0.01	0.21	0.10	0.46	1.34	0.75	1.04	0.23	0.04	0.00	0.00
(WY)	(1992)	(1982)	(1982)	(1991)	(1989)	(1981)	(1981)	(1992)	(2004)	(1980)	(1991)	(1991)

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1973 - 2004	
ANNUAL TOTAL	2,986.86		718.55		--	
ANNUAL MEAN	8.18		1.96		20.1	
HIGHEST ANNUAL MEAN	--		--		127	1978
LOWEST ANNUAL MEAN	--		--		1.49	1992
HIGHEST DAILY MEAN	135	Mar 14	90	Feb 22	5,000	May 19, 1978
LOWEST DAILY MEAN	0.00	Many days	0.00	Oct 7-9	0.00	Many days, some years
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 3	0.01	Oct 5	0.00	Some years
MAXIMUM PEAK FLOW	--		102[a]	Jul 25	5,300[b]	May 19, 1978
MAXIMUM PEAK STAGE	--		4.53[c]	Feb 21	11.63	Mar 20, 1978
ANNUAL RUNOFF (AC-FT)	5,920		1,430		14,570	
10 PERCENT EXCEEDS	18		4.7		32	
50 PERCENT EXCEEDS	0.84		0.37		2.6	
90 PERCENT EXCEEDS	0.01		0.03		0.02	

a Gage height, 4.03 ft.
b Gage height, 11.62 ft.
c Backwater from ice.
e Estimated.



06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-82, 1985 to current year.

REMARKS.--Samples collected for the National Water_Quality Assessment Program are included in the special studies section of this report.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 16...	0850	.01	677	6.7	64	7.8	3,400	7.0	8.0	1,000	199	125	17.4
NOV 14...	0800	.37	669	9.0	74	7.7	5,250	.0	1.0	1,500	276	198	28.2
DEC 16...	1600	.80	674	10.0	78	7.9	3,690	3.0	.0	1,000	196	127	23.6
JAN 21...	1400	.48	676	9.2	72	7.9	5,210	8.0	.0	1,600	313	200	33.6
FEB 24...	1500	23	670	11.5	90	7.7	725	12.0	.0	160	35.5	17.5	10.2
MAR 09...	1630	8.6	669	12.8	115	8.1	1,640	20.0	5.0	370	78.4	42.7	10.9
APR 13...	1500	1.1	670	10.2	118	8.2	3,240	27.0	15.5	840	154	110	19.2
MAY 11...	1630	.50	663	8.7	110	8.2	3,810	12.5	19.0	1,000	186	135	24.4
JUN 07...	1435	.27	666	7.1	102	8.4	3,420	25.5	26.0	760	138	100	20.3
JUL 07...	1300	21	667	6.9	90	8.2	3,600	32.0	21.0	680	111	97.4	20.7
AUG 25...	0945	.04	666	5.7	69	8.1	3,030	22.5	17.5	850	172	101	17.7
SEP 09...	1130	.23	671	8.2	106	8.1	3,340	26.5	21.0	880	164	114	16.9

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	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)
OCT 16...	7	491	51	370	--	385	470	--	114	.9	12.7	1,450	
NOV 14...	10	859	55	456	415	306	373	--	190	.7	9.13	2,560	4,300
DEC 16...	8	598	56	--	379	456	556	--	35.2	.9	11.5	1,730	
JAN 21...	11	977	56	538	533	706	813	24	93.1	1.2	16.2	2,530	4,590
FEB 24...	3	77.4	49	98	98	95	116	--	21.9	.3	5.99	214	442
MAR 09...	5	223	56	206	206	195	234	2	30.9	.5	6.85	595	1,110
APR 13...	8	507	56	421	349	--	--	--	40.1	.7	6.60	1,360	2,400
MAY 11...	8	617	56	399	387	412	503	--	64.4	.8	4.57	1,710	2,990
JUN 07...	9	539	60	331	320	--	--	--	62.9	.8	3.55	1,420	2,470
JUL 07...	10	602	65	334	331	311	373	3	40.5	.7	3.07	1,590	2,660
AUG 25...	6	426	52	389	377	--	--	--	80.1	.9	10.9	1,210	2,240
SEP 09...	7	449	52	332	363	420	512	--	99.2	1.0	10.5	1,380	2,490

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	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-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover -able, ug/L (01007)
OCT 16...	--	--	2,690	E.02	<.06	<.008	<.006	.053	.69	526	1.1	<2	44
NOV 14...	6.24	4.58	4,580	E.04	<.06	<.008	<.006	.052	.68	366	1.0	<2	41
DEC 16...	--	--	3,140	<.04	<.06	<.008	<.006	.013	.29	97	1.0	<4	30
JAN 21...	6.16	5.87	4,530	<.04	<.06	<.008	<.006	.038	.56	158	1.2	<2	41
FEB 24...	.67	30.7	495	<.04	.22	.011	.068	.36	2.25	4,630	1.0	3	53
MAR 09...	1.58	27.0	1,160	<.04	<.06	<.008	<.006	.093	.65	876	.5	E2	30
APR 13...	3.43	7.48	2,520	--	--	--	--	--	--	239	1.2	E1	52
MAY 11...	4.27	4.24	3,140	<.04	<.06	<.008	<.006	.046	.61	600	1.2	<2	51
JUN 07...	3.52	1.89	2,590	--	--	--	--	--	--	415	1.3	<2	47
JUL 07...	3.80	160	2,800	<.04	<.06	<.008	<.006	.089	.92	725	1.1	E2	48
AUG 25...	3.14	.25	2,310	--	--	--	--	--	--	427	1.4	3	70
SEP 09...	3.61	1.65	2,660	<.04	<.06	<.008	<.006	.022	.35	175	1.0	E1	44

Date	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Boron, water, unfltrd recover -able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom-ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, unfltrd recover -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	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, unfltrd ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01092)
OCT 16...	E.07	158	<.08	E.6	14.2	<19	930	1.16	774	789	9.46	1.8	11
NOV 14...	<.18	258	<.12	<.8	23.6	26	1,330	.97	315	323	12.6	1.2	21
DEC 16...	<.12	246	<.08	<.8	16.9	E17	280	.21	146	142	10.5	1.6	10
JAN 21...	<.18	E334	<.12	<.8	30.2	42	350	.24	176	174	13.3	1.6	15
FEB 24...	.50	55	.14	2.6	11.7	115	4,990	9.10	85.5	147	7.63	.7	37
MAR 09...	.06	92	E.02	E.6	5.2	17	910	1.21	137	138	4.30	.5	6
APR 13...	<.12	204	<.08	E.6	9.0	<19	470	.67	201	248	7.45	<.8	7
MAY 11...	E.08	225	<.08	E.6	9.9	<19	1,020	1.57	325	329	7.61	E.7	9
JUN 07...	E.06	197	<.08	E.4	11.7	<19	550	.82	230	244	8.97	1.4	7
JUL 07...	.12	213	<.08	1.1	12.3	<19	1,170	1.64	38.8	122	7.48	1.1	11
AUG 25...	<.12	185	<.08	1.6	12.4	<19	470	.58	176	260	9.54	.9	7
SEP 09...	<.12	200	<.08	<.8	15.7	<19	250	.31	113	162	7.05	2.0	6

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
OCT			
16...	--	272	.01
NOV			
14...	--	175	.17
DEC			
16...	--	--	--
JAN			
21...	--	44	.06
FEB			
24...	--	383	24
MAR			
09...	--	51	1.2
APR			
13...	70	99	.29
MAY			
11...	--	140	.19
JUN			
07...	--	101	.07
JUL			
07...	--	96	5.5
AUG			
25...	--	162	.02
SEP			
09...	--	93	.06

< -- Less than
E -- Estimated value

06364300 PORCUPINE CREEK NEAR TECKLA, WY

LOCATION.--Lat 43°34'41", log 105°20'19", in SE¼ SW¼ SW¼ sec. 25, T.42 N., R.71 W., Campbell County Hydrologic Unit 10120101, on left bank 0.2 mi downstream from culvert on County Road 69, 0.6 mi upstream from Boss Draw, and 1.2 mi northeast of Teckla.

DRAINAGE AREA.--78.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 2003 to current year.

GAGE.--Water stage recorder. Elevation of gage is 4,685 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.21	1.4	1.1	1.1	0.72	0.47	0.21	0.20	0.08	e0.01	0.00	e0.00
2	0.21	1.5	1.1	1.1	0.69	1.5	0.21	0.21	0.08	0.03	0.00	e0.00
3	0.17	e1.6	1.2	0.97	0.69	0.87	0.21	0.21	0.06	0.03	0.00	e0.00
4	0.21	1.7	1.2	0.87	0.71	0.75	0.21	0.17	0.04	0.04	0.00	e0.00
5	0.27	1.5	1.2	e0.70	0.69	0.76	0.21	0.14	0.03	0.04	0.00	e0.00
6	0.27	1.2	1.2	e0.60	0.69	1.1	0.21	0.12	0.02	0.05	0.00	e0.00
7	0.25	1.2	1.2	e0.40	0.69	0.89	0.21	0.11	0.01	0.04	0.00	e0.00
8	0.17	0.96	1.1	0.37	e0.70	0.82	0.21	0.11	0.01	0.09	0.00	e0.00
9	0.19	e0.90	1.1	0.37	0.76	1.2	0.21	0.11	0.00	0.16	0.00	e0.00
10	0.21	e1.0	1.1	e0.40	0.69	2.1	0.19	0.10	0.00	0.34	0.00	e0.00
11	0.19	e3.0	1.0	0.89	0.69	1.4	0.19	0.09	0.00	0.03	0.00	e0.00
12	0.22	2.8	0.93	0.92	0.69	1.3	0.19	0.09	0.00	0.00	0.00	e0.00
13	0.26	e2.0	0.93	0.84	0.72	1.0	0.19	0.09	0.00	0.00	0.00	e0.00
14	0.31	1.2	0.98	0.83	0.83	0.62	0.19	0.09	0.00	0.00	0.00	e0.00
15	0.41	1.2	1.0	0.76	0.83	0.47	0.20	0.09	e0.00	0.00	0.00	e0.00
16	0.46	1.1	0.97	0.82	0.76	0.46	0.21	0.09	e0.00	0.00	0.00	e0.00
17	0.48	e1.1	0.73	0.80	0.87	0.46	0.21	0.09	e0.00	0.00	0.00	e0.00
18	0.51	1.1	0.69	0.72	1.1	0.47	0.21	0.08	0.00	0.00	0.00	e0.00
19	0.51	1.1	0.69	e0.70	1.1	0.57	0.19	0.09	0.00	0.00	0.00	e0.00
20	0.56	0.76	0.73	0.70	1.0	0.54	0.19	0.11	0.00	0.00	0.00	e0.00
21	0.57	0.57	0.76	0.71	0.93	0.46	0.19	0.13	0.00	0.00	0.00	e0.00
22	0.58	0.57	0.82	0.66	0.82	0.38	0.19	0.13	0.00	0.00	0.00	e0.00
23	0.57	0.83	0.93	0.63	0.69	0.37	0.19	0.14	0.00	0.00	0.00	e0.00
24	0.66	0.93	0.93	e0.70	0.69	0.34	0.19	0.17	0.00	0.00	0.00	e0.00
25	0.69	0.93	0.87	0.76	0.69	0.32	1.2	0.17	0.00	0.00	0.00	e0.00
26	0.69	0.93	0.84	0.76	0.69	0.30	0.90	0.14	e0.00	e0.00	0.00	e0.00
27	0.68	0.93	0.95	e0.70	0.69	0.33	0.39	0.10	e0.00	0.00	0.00	e0.00
28	0.62	0.93	0.72	e0.70	0.69	0.34	0.25	0.08	e0.00	0.00	0.00	e0.00
29	1.0	0.97	0.86	0.80	0.62	0.31	0.19	0.08	e0.00	0.00	e0.00	e0.00
30	1.1	1.1	1.2	0.79	---	0.27	0.19	0.08	e0.00	0.05	e0.00	e0.00
31	1.1	---	1.3	0.85	---	0.26	---	0.08	---	0.30	e0.00	---
TOTAL	14.33	37.01	30.33	22.92	22.13	21.43	7.93	3.69	0.33	1.21	0.00	0.00
MEAN	0.46	1.23	0.98	0.74	0.76	0.69	0.26	0.12	0.01	0.04	0.00	0.00
MAX	1.1	3.0	1.3	1.1	1.1	2.1	1.2	0.21	0.08	0.34	0.00	0.00
MIN	0.17	0.57	0.69	0.37	0.62	0.26	0.19	0.08	0.00	0.00	0.00	0.00
AC-FT	28	73	60	45	44	43	16	7.3	0.7	2.4	0.00	0.00

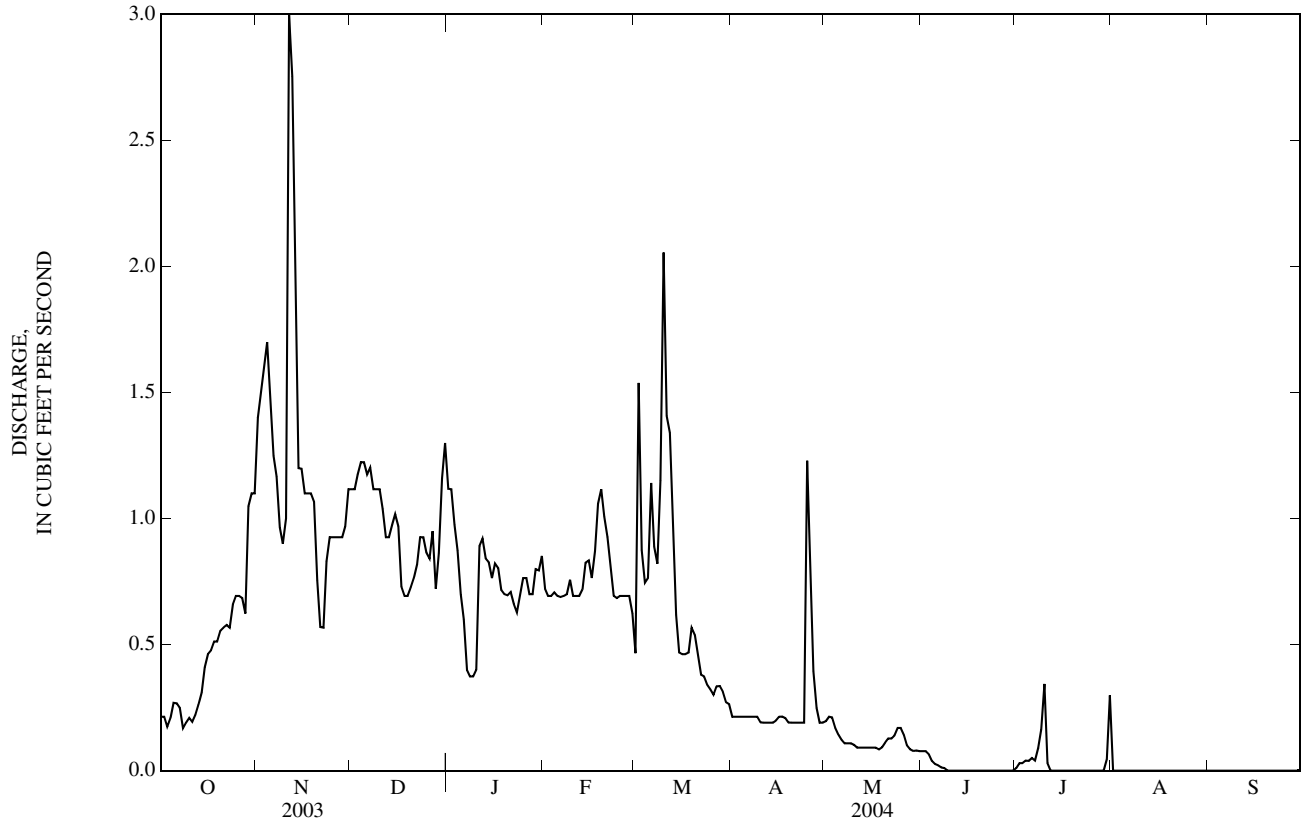
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	0.46	1.23	0.98	0.74	0.76	0.69	0.26	0.12	0.01	0.08	0.00	0.01
MAX	0.46	1.23	0.98	0.74	0.76	0.69	0.26	0.12	0.01	0.13	0.00	0.03
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)
MIN	0.46	1.23	0.98	0.74	0.76	0.69	0.26	0.12	0.01	0.04	0.00	0.00
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2004)

06364300 PORCUPINE CREEK NEAR TECKLA, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR		WATER YEARS 2003 - 2004	
ANNUAL TOTAL	161.31		--	
ANNUAL MEAN	0.44		0.44	
HIGHEST ANNUAL MEAN	--		0.44	2004
LOWEST ANNUAL MEAN	--		0.44	2004
HIGHEST DAILY MEAN	3.0	Nov 11	4.2	Jun 18, 2003
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days, each year
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 9	0.00	Each year
MAXIMUM PEAK FLOW	3.1[a]	Nov 12	4.6	Jun 17, 2003
MAXIMUM PEAK STAGE	0.82[b]	Feb 8	0.82	Feb 8, 2004
ANNUAL RUNOFF (AC-FT)	320		319	
10 PERCENT EXCEEDS	1.1		1.1	
50 PERCENT EXCEEDS	0.21		0.21	
90 PERCENT EXCEEDS	0.00		0.00	

a Gag height, 0.45 ft.
b Backwater from ice.
e Estimated.



06364300 PORCUPINE CREEK NEAR TECKLA, WY—Continued

WATER-QUALITY RECORD.

PERIOD OF RECORD.--May 2003 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
06...	1050	.27	645	8.1	86	8.6	2,130	20.0	10.0	300	39.0	48.3	11.2
NOV													
05...	1040	1.2	644	10.9	89	8.5	1,330	-6.0	.0	210	34.9	30.9	8.31
DEC													
03...	1020	1.1	643	10.5	87	8.4	1,450	8.5	.5	300	60.5	37.0	7.39
JAN													
07...	0955	.30	639	9.1	75	7.8	1,680	.0	.0	310	66.4	34.5	7.52
FEB													
04...	0915	.69	638	11.1	91	8.2	1,510	-8.0	.0	290	63.9	32.5	7.18
MAR													
09...	0940	1.1	645	9.8	85	8.1	1,490	7.0	2.5	320	66.8	37.5	5.54
APR													
05...	0915	.22	640	7.5	81	8.0	2,410	12.5	10.5	560	109	69.4	7.64
MAY													
03...	1030	.21	--	--	--	8.2	2,620	23.0	14.5	530	89.6	74.9	6.72
JUN													
08...	0945	.01	648	11.5	144	8.5	3,880	20.0	17.5	720	99.0	115	6.89
JUL													
13...	1115	.00	--	--	--	--	--	--	--	--	--	--	--
AUG													
09...	1040	.00	--	--	--	--	--	--	--	--	--	--	--
SEP													
07...	0945	.00	--	--	--	--	--	--	--	--	--	--	--

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT													
06...	10	391	73	487	23.6	1.9	1.26	635	1,440	2.08	1.11	1,530	260
NOV													
05...	7	226	69	412	12.7	1.5	1.23	291	854	1.22	2.90	896	424
DEC													
03...	5	215	60	337	12.8	1.4	4.31	340	881	1.24	2.70	910	468
JAN													
07...	6	252	63	457	14.7	1.7	2.39	405	1,060	1.55	.92	1,140	773
FEB													
04...	6	234	63	334	11.8	1.4	3.61	384	939	1.35	1.85	994	460
MAR													
09...	5	201	57	281	9.61	.9	1.07	499	990	1.41	3.08	1,040	352
APR													
05...	7	395	60	337	15.2	1.1	.96	979	1,780	2.51	1.09	1,840	180
MAY													
03...	8	423	63	299	14.8	1.0	.74	1,080	1,870	2.69	1.12	1,980	84
JUN													
08...	11	693	67	261	21.0	1.1	.43	1,820	2,910	4.22	.08	3,100	93
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--

06364300 PORCUPINE CREEK NEAR TECKLA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
06...	4.8	26	<.06	32	10.6	E.3
NOV						
05...	1.5	33	E.03	19	10.6	<.4
DEC						
03...	1.4	99	E.05	9	12.7	.8
JAN						
07...	.9	150	E.04	29	31.1	.7
FEB						
04...	1.0	135	E.04	8	28.7	<.4
MAR						
09...	.9	93	E.03	11	78.8	.4
APR						
05...	1.3	84	<.06	E16	175	.4
MAY						
03...	1.6	48	<.12	24	139	.8
JUN						
08...	2.6	38	<.12	44	129	1.6
JUL						
13...	--	--	--	--	--	--
AUG						
09...	--	--	--	--	--	--
SEP						
07...	--	--	--	--	--	--

< -- Less than
E -- Estimated value

06364700 ANTELOPE CREEK NEAR TECKLA, WY

LOCATION.--Lat 43°29'08", long 105°13'39", in SW¼ NE¼ sec.35, T.41 N., R.70 W., Converse County, Hydrologic Unit 10120101, on left bank 0.4 mi downstream from Porcupine Creek, 9 mi southeast of Teckla, and 18 mi north of Bill.

PERIOD OF RECORD.--Water years 1977-81, 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
06...	1000	.00	--	--	--	--	--	--	--	--	--	--	--
NOV													
05...	0930	.06	650	7.0	60	8.4	3,010	-5.5	2.0	1,400	345	136	21.5
DEC													
03...	0930	.14	650	4.8	41	7.3	3,110	9.5	2.0	1,400	333	138	16.2
JAN													
07...	0845	.10	645	2.8	23	7.2	3,280	-1.0	.5	1,500	356	138	18.1
FEB													
04...	0825	.10	643	4.8	41	7.2	3,060	-4.0	1.5	1,300	314	121	16.4
MAR													
09...	0835	.12	652	7.3	68	7.5	2,840	6.5	5.0	1,200	286	112	15.1
APR													
05...	0820	.14	646	6.7	73	7.6	3,040	10.0	11.5	1,300	322	129	20.3
MAY													
03...	0915	.16	--	--	--	8.2	3,120	24.0	13.5	1,300	321	126	18.4
JUN													
08...	0845	.05	653	4.5	52	7.2	3,030	18.5	14.0	1,300	313	133	21.2
JUL													
13...	1045	.02	--	--	--	7.4	3,030	27.0	23.5	1,300	327	129	23.2
AUG													
09...	1020	.00	--	--	--	--	--	--	--	--	--	--	--
SEP													
07...	0930	.00	--	--	--	--	--	--	--	--	--	--	--

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
05...	3	270	29	301	23.4	.7	21.0	1,500	2,500	3.79	.45	2,790	139
DEC													
03...	3	242	27	316	22.7	.7	20.6	1,470	2,440	3.65	1.01	2,680	91
JAN													
07...	3	270	28	282	23.4	.7	23.0	1,560	2,570	3.86	.77	2,840	33
FEB													
04...	3	227	27	315	21.2	.7	20.1	1,400	2,320	3.69	.73	2,710	46
MAR													
09...	3	249	31	326	25.1	.6	16.8	1,350	2,260	3.42	.81	2,510	33
APR													
05...	3	280	31	273	25.8	.7	18.9	1,450	2,420	3.61	1.00	2,650	106
MAY													
03...	4	297	32	307	26.4	.7	18.6	1,480	2,470	3.70	1.17	2,720	51
JUN													
08...	3	271	30	376	22.3	.7	24.1	1,450	2,470	3.68	.36	2,700	21
JUL													
13...	3	259	29	342	19.9	.8	26.0	1,500	2,490	3.72	.15	2,730	97
AUG													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--

06364700 ANTELOPE CREEK NEAR TECKLA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
06...	--	--	--	--	--	--
NOV						
05...	.8	44	<.12	109	1,300	E.6
DEC						
03...	.9	40	<.12	486	2,840	1.1
JAN						
07...	.8	42	<.12	1,510	3,380	E.7
FEB						
04...	.8	38	<.12	1,030	2,600	E.6
MAR						
09...	.8	29	<.12	109	2,060	E.5
APR						
05...	.6	32	<.12	22	1,410	<.8
MAY						
03...	.6	27	<.12	E17	652	E.6
JUN						
08...	.8	38	<.12	180	2,000	1.0
JUL						
13...	.9	43	<.12	E19	2,250	E.6
AUG						
09...	--	--	--	--	--	--
SEP						
07...	--	--	--	--	--	--

< -- Less than
E -- Estimated value

06365900 CHEYENNE RIVER NEAR DULL CENTER, WY

LOCATION.--Lat 43°25'45", long 105°02'43", in SE¼ SW¼ NE¼ sec.20, T.40 N., R.68 W., Converse County, Hydrologic Unit 10120103, Thunder Basin National Grassland, on right bank at the Fiddleback Ranch, 1.2 mi downstream from confluence of Antelope Creek and Dry Fork Cheyenne River, and 3.0 mi west of Dull Center.

DRAINAGE AREA.--1,527 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1976 to September 1981, October 1985 to September 1987, July to September 2004.

GAGE.--Water-stage recorder. Elevation of gage is 4,310 ft above NGVD of 1929, from topographic map. Prior to June 16, 1978, at datum 2.00 ft higher. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	0.01	0.03	0.01
2	---	---	---	---	---	---	---	---	---	0.01	0.01	0.01
3	---	---	---	---	---	---	---	---	---	0.01	0.00	0.01
4	---	---	---	---	---	---	---	---	---	0.01	0.01	0.01
5	---	---	---	---	---	---	---	---	---	0.01	0.01	0.01
6	---	---	---	---	---	---	---	---	---	0.01	0.01	0.01
7	---	---	---	---	---	---	---	---	---	0.01	0.01	0.01
8	---	---	---	---	---	---	---	---	---	0.01	0.01	0.01
9	---	---	---	---	---	---	---	---	---	0.01	0.01	0.01
10	---	---	---	---	---	---	---	---	---	0.01	0.01	0.01
11	---	---	---	---	---	---	---	---	---	0.01	0.01	0.01
12	---	---	---	---	---	---	---	---	---	0.01	0.01	0.01
13	---	---	---	---	---	---	---	---	---	0.00	0.01	0.01
14	---	---	---	---	---	---	---	---	---	0.00	0.01	0.01
15	---	---	---	---	---	---	---	---	---	0.00	0.01	0.01
16	---	---	---	---	---	---	---	---	---	0.00	0.01	0.01
17	---	---	---	---	---	---	---	---	---	0.00	0.01	0.01
18	---	---	---	---	---	---	---	---	---	0.00	0.01	0.01
19	---	---	---	---	---	---	---	---	---	0.00	0.01	0.01
20	---	---	---	---	---	---	---	---	---	0.00	0.01	0.01
21	---	---	---	---	---	---	---	---	---	0.00	0.01	0.01
22	---	---	---	---	---	---	---	---	---	0.00	0.01	0.00
23	---	---	---	---	---	---	---	---	---	0.01	0.01	0.00
24	---	---	---	---	---	---	---	---	---	0.00	0.01	0.00
25	---	---	---	---	---	---	---	---	---	0.00	0.01	0.00
26	---	---	---	---	---	---	---	---	---	0.00	0.01	0.00
27	---	---	---	---	---	---	---	---	---	0.00	0.01	0.01
28	---	---	---	---	---	---	---	---	---	0.00	0.01	0.00
29	---	---	---	---	---	---	---	---	---	0.01	0.01	0.00
30	---	---	---	---	---	---	---	---	---	10	0.01	0.01
31	---	---	---	---	---	---	---	---	---	0.39	0.01	---
TOTAL	---	---	---	---	---	---	---	---	---	10.53	0.32	0.23
MEAN	---	---	---	---	---	---	---	---	---	0.34	0.01	0.01
MAX	---	---	---	---	---	---	---	---	---	10	0.03	0.01
MIN	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	---	---	21	0.6	0.5

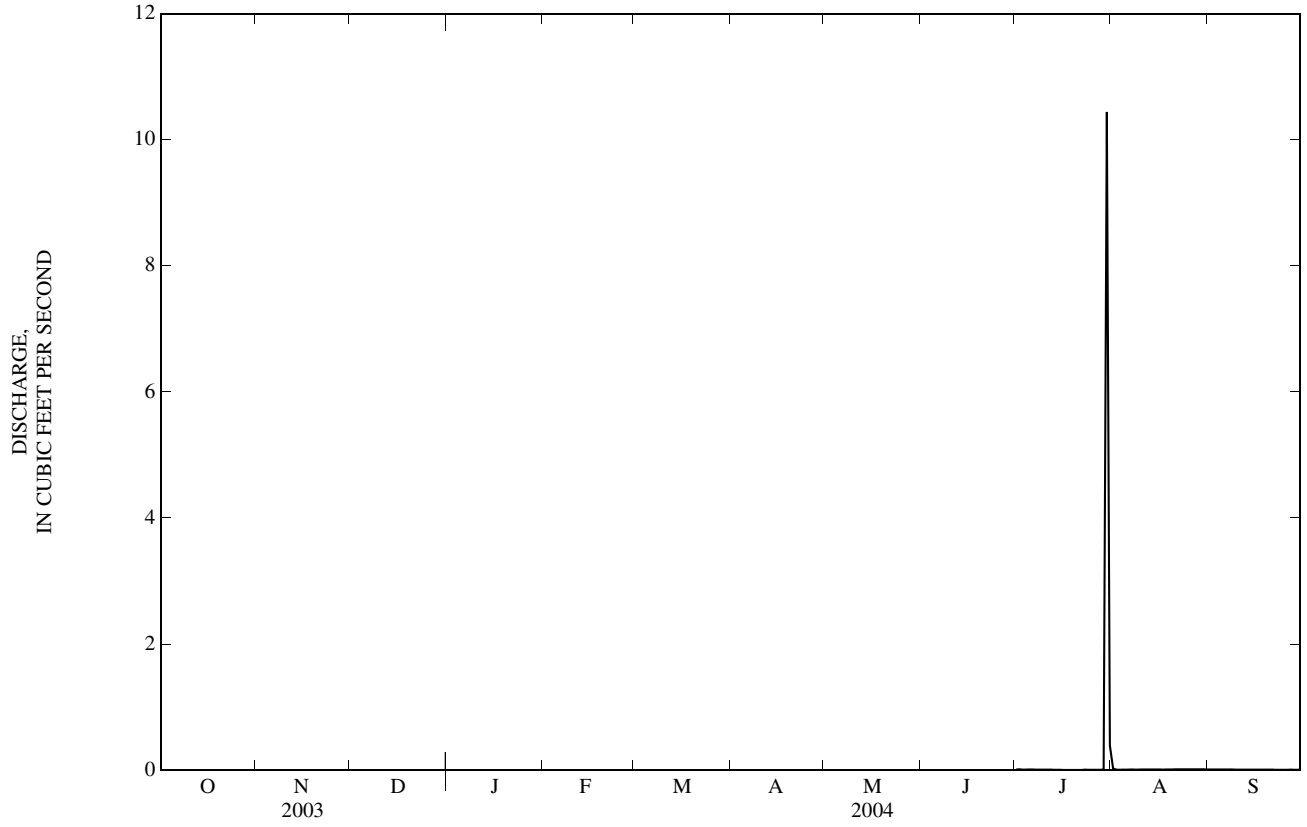
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2004, BY WATER YEAR (WY)*

MEAN	2.92	0.30	0.19	0.16	2.64	20.6	9.16	93.7	29.4	24.8	11.2	1.36
MAX	19.3	0.99	0.23	0.41	8.37	83.4	24.4	633	75.2	123	39.0	5.64
(WY)	(1987)	(1987)	(1980)	(1987)	(1980)	(1978)	(1987)	(1978)	(1986)	(1978)	(1979)	(1986)
MIN	0.07	0.10	0.10	0.04	0.10	0.14	0.14	0.24	0.04	0.34	0.01	0.01
(WY)	(1986)	(1977)	(1977)	(1980)	(1977)	(1981)	(1981)	(1977)	(1977)	(2004)	(2004)	(2004)

06365900 CHEYENNE RIVER NEAR DULL CENTER, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1976 - 2004*	
ANNUAL MEAN	--		17.9	
HIGHEST ANNUAL MEAN	--		76.2	1978
LOWEST ANNUAL MEAN	--		2.28	1981
HIGHEST DAILY MEAN	10	Jul 30	9,610	May 18, 1978
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days, most years
	--			
ANNUAL SEVEN-DAY MINIMUM	--		0.00	Most years
MAXIMUM PEAK FLOW	31	Jul 30	11,800[a]	May 18, 1978
MAXIMUM PEAK STAGE	3.15	Jul 30	14.00[b]	May 18, 1978
ANNUAL RUNOFF (AC-FT)	--		12,960	
10 PERCENT EXCEEDS	--		19	
50 PERCENT EXCEEDS	--		0.24	
90 PERCENT EXCEEDS	--		0.06	

* For period of operation.
a From rating curve extended above 2,500 ft^3/s, on basis of slope-area measurement of peak flow.
b From floodmarks, at present datum.



06365900 CHEYENNE RIVER NEAR DULL CENTER, WY—Continued

WATER-QUALITY RECORD.

PERIOD OF RECORD.--Water years 1976-81, 1986-87, July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
JUL													
13...	0950	.01	--	--	--	7.1	4,880	27.0	20.0	1,800	438	181	13.2
AUG													
09...	0945	.01	658	5.7	71	7.3	4,740	20.5	18.0	2,000	469	191	13.2
SEP													
07...	0845	.03	641	5.0	58	7.4	4,830	14.0	13.0	1,800	427	180	12.7

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
JUL													
13...	6	562	40	370	30.9	.7	22.3	2,550	4,030	5.99	.06	4,400	58
AUG													
09...	6	570	39	405	32.5	.8	22.6	2,670	4,210	6.05	.08	4,450	39
SEP													
07...	6	546	39	418	30.6	.7	22.1	2,620	4,100	6.23	.37	4,580	65

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, unfltrd recoverable, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, unfltrd ug/L (01147)
JUL						
13...	1.1	21	<.12	3,080	2,180	1.6
AUG						
09...	1.1	24	<.12	613	1,700	1.1
SEP						
07...	1.1	20	<.12	416	1,430	1.6

< -- Less than

06375600 LITTLE THUNDER CREEK NEAR HAMPSHIRE, WY

LOCATION.--Lat 43°39'18", long 104°54'33", in SW¼ SE¼ SE¼ sec.33 T.43 N., R.67 W., Weston County, Hydrologic Unit 10121203, Thunder Basin National Grassland, on left bank 1.2 mi downstream from county bridge, 2.7 mi upstream from mouth, 12 mi northwest of Hampshire, and 38 mi southwest of Newcastle.

DRAINAGE AREA.--234 mi^2.

PERIOD OF RECORD.--September 1977 to September 1981, October 1987 to September 1997, July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)
JUL		
13...	1425	.00
AUG		
09...	1305	.00
SEP		
07...	1130	.00

06376300 BLACK THUNDER CREEK NEAR HAMPSHIRE, WY

LOCATION.--Lat 43°34'54", long 104°43'", in SW¼ SW¼ SW¼ sec.30, T.42 N., R.65 W., Weston County, Hydrologic Unit 10120103, 20 ft downstream from bridge on county road, 1.3 mi west of Hampshire, and 4.0 mi upstream from mouth.

PERIOD OF RECORD.--Water years 1980-81, 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
06...	1415	.00	--	--	--	--	--	--	--	--	--	--	--
NOV													
05...	1350	.00	--	--	--	--	--	--	--	--	--	--	--
DEC													
03...	1315	.00	--	--	--	--	--	--	--	--	--	--	--
JAN													
07...	1300	.00	--	--	--	--	--	--	--	--	--	--	--
FEB													
04...	1230	.00	--	--	--	--	--	--	--	--	--	--	--
MAR													
09...	1325	.02	657	8.2	96	8.0	1,140	17.5	15.5	270	63.3	27.2	8.60
APR													
05...	1230	.00	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	1320	.00	--	--	--	--	--	--	--	--	--	--	--
JUN													
08...	1300	.00	--	--	--	--	--	--	--	--	--	--	--
JUL													
13...	1455	.00	--	--	--	--	--	--	--	--	--	--	--
AUG													
09...	1330	.00	--	--	--	--	--	--	--	--	--	--	--
SEP													
07...	1230	.00	--	--	--	--	--	--	--	--	--	--	--

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT													
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
09...	4	134	51	121	8.91	.3	3.48	441	760	1.12	.04	821	5,530
APR													
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--

06376300 BLACK THUNDER CREEK NEAR HAMPSHIRE, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
06...	--	--	--	--	--	--
NOV						
05...	--	--	--	--	--	--
DEC						
03...	--	--	--	--	--	--
JAN						
07...	--	--	--	--	--	--
FEB						
04...	--	--	--	--	--	--
MAR						
09...	.7	92	.37	21	96.9	.9
APR						
05...	--	--	--	--	--	--
MAY						
03...	--	--	--	--	--	--
JUN						
08...	--	--	--	--	--	--
JUL						
13...	--	--	--	--	--	--
AUG						
09...	--	--	--	--	--	--
SEP						
07...	--	--	--	--	--	--

06386400 CHEYENNE RIVER AT RIVERVIEW, WY

LOCATION.--Lat 43°25'41", long 104°11'45", in NW¼ NE¼ SW ¼ sec. 21, T.40 N., R.61 W., Niobrara County, Hydrologic Unit 10120106, at bridge on U.S. Highway 85, 0.5 mi north of Riverview, 0.9 mi upstream from Bobcat Creek, 4.7 mi upstream from former gaging station, and 30 mi south of Newcastle.

DRAINAGE AREA.--5,160 mi^2, approximately.

PERIOD OF RECORD.--Water years 1951-54, 1969-70, 1972-92 October 2001 to current year. Published as South Fork Cheyenne River near Spencer prior to October 1951, as Cheyenne River near Spencer 1952-76, and as Cheyenne River near Riverview 1977-79.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
06...	1515	.07	669	10.1	128	8.1	6,120	27.0	19.5	1,800	406	181	15.7
NOV													
05...	1520	.51	673	12.7	108	8.0	5,190	-6.0	2.5	1,500	348	149	12.9
DEC													
03...	1430	.63	668	11.0	89	8.0	5,030	11.5	.5	1,500	347	148	11.4
JAN													
07...	1410	.26	666	9.9	79	7.7	5,590	-8.0	.0	1,500	367	152	10.6
FEB													
04...	1350	.34	665	10.1	81	7.7	5,430	.5	.0	1,600	398	155	12.1
MAR													
09...	1500	2.1	666	10.8	108	8.1	3,320	17.0	9.0	900	219	86.8	7.67
APR													
05...	1755	.57	665	10.7	132	8.1	5,260	18.0	18.0	1,300	298	143	13.4
MAY													
03...	1425	.06	--	--	--	8.2	5,680	25.5	19.0	1,500	337	150	16.6
JUN													
08...	1420	.02	673	10.4	127	8.0	6,340	19.0	18.0	1,600	361	159	13.5
JUL													
13...	1630	E.00	--	--	--	--	--	--	--	--	--	--	--
AUG													
09...	1430	E.00	--	--	--	--	--	--	--	--	--	--	--
SEP													
07...	1330	.00	--	--	--	--	--	--	--	--	--	--	--

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT													
06...	11	1,060	56	264	122	.6	6.65	3,150	5,100	7.46	1.04	5,490	162
NOV													
05...	9	766	53	258	79.4	.6	8.95	2,740	4,260	6.27	6.35	4,610	195
DEC													
03...	8	723	51	220	74.6	.6	11.1	2,560	4,010	5.79	7.24	4,260	77
JAN													
07...	9	785	52	267	86.4	.6	12.2	2,980	4,560	6.60	3.41	4,860	27
FEB													
04...	9	830	52	327	81.7	.6	12.8	2,800	4,490	6.38	4.31	4,690	30
MAR													
09...	7	511	55	217	49.2	.5	7.15	1,640	2,650	3.83	16.0	2,820	154
APR													
05...	11	933	60	240	101	.6	3.13	2,670	4,310	6.13	6.94	4,510	543
MAY													
03...	11	971	59	270	106	.6	3.73	2,980	4,720	6.76	.81	4,970	748
JUN													
08...	12	1,060	59	311	114	<1.7	11.5	3,310	5,210	7.74	.31	5,690	24
JUL													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--

06386400 CHEYENNE RIVER AT RIVERVIEW, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
06...	2.3	28	<.18	E13	219	1.4
NOV						
05...	.9	34	<.18	<19	429	1.5
DEC						
03...	1.0	26	<.12	<64	544	2.9
JAN						
07...	1.1	26	<.18	63	929	1.7
FEB						
04...	1.2	23	<.18	38	869	1.9
MAR						
09...	1.0	18	<.12	8	331	1.2
APR						
05...	1.1	34	<.18	E13	711	E.7
MAY						
03...	1.4	36	E.09	E10	463	1.5
JUN						
08...	1.7	23	<.18	40	1,110	2.4
JUL						
13...	--	--	--	--	--	--
AUG						
09...	--	--	--	--	--	--
SEP						
07...	--	--	--	--	--	--

< -- Less than
E -- Estimated value

06386500 CHEYENNE RIVER NEAR SPENCER, WY

LOCATION.--Lat 43°25'16", long 104°07'52", in NE¼ NW¼ NE¼ sec.25, T.40 N., R.61 W., Niobrara County, Hydrologic Unit 10120106, on right bank at downstream side of old highway bridge, 0.1 mi downstream from Sage Creek, 1.8 mi downstream from Robbers Roost Creek, and 17 mi northwest of Edgemont, SD.

DRAINAGE AREA.--5,270 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1948 to September 1974, October 2003 to September 2004. Published as South Fork Cheyenne River near Spencer October 1949 to September 1951.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,6000 ft above NGVD of 1929, from topographic map. Pior to October 18, 1955 water stage recorder at site 400 ft upstream. October 1955 to August 1, 1961, at site 2,500 ft upstream, and August 1, 1961 to August 22, 1962, at site 2,000 ft upstream, all at differant datums. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records poor. Many small reservoirs upstream from station used for stock and irrigation water, total capacity, about 45,000 acre-ft. Station operated by Wyoming District from October 1948 to Septbember 1974. Station operated and record provided by the South Dakota District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.05	0.10	e0.08	e0.08	e0.00	e0.04	0.07	0.14	0.15	0.02	0.00	0.00
2	0.05	0.11	e0.08	e0.07	e0.00	e0.06	0.15	0.14	0.14	0.02	0.00	0.00
3	0.05	e0.12	e0.09	e0.06	e0.00	e0.05	0.15	0.14	0.13	e0.02	0.00	0.00
4	0.05	e0.13	e0.09	e0.05	e0.00	e0.04	0.18	0.15	0.13	e0.02	0.00	0.00
5	0.05	e0.10	e0.10	e0.04	e0.00	e0.04	0.15	0.15	0.12	e0.02	0.00	0.00
6	0.05	e0.09	e0.10	e0.04	e0.00	e0.06	0.14	0.14	0.11	e0.01	0.00	0.00
7	0.05	e0.08	e0.10	e0.07	e0.00	e0.10	0.14	0.15	0.10	e0.01	0.00	0.00
8	0.05	e0.08	e0.10	e0.07	e0.00	e0.20	0.22	0.15	0.09	0.01	0.00	0.00
9	0.05	e0.08	e0.09	e0.06	e0.00	e0.40	0.23	0.15	0.08	0.01	0.00	0.00
10	0.05	e0.09	e0.08	e0.06	e0.00	1.0	0.20	0.15	0.09	e0.01	0.00	0.00
11	0.05	e0.10	e0.06	e0.06	e0.00	1.8	0.20	0.22	0.08	e0.01	0.00	0.00
12	0.05	e0.11	e0.06	e0.06	e0.00	0.33	0.22	1.1	0.07	e0.01	0.00	0.00
13	0.06	e0.12	e0.07	e0.06	e0.00	0.23	0.18	0.10	0.07	e0.01	0.00	0.00
14	0.05	0.12	e0.07	e0.06	e0.00	0.51	0.16	0.17	0.06	e0.00	0.00	0.00
15	0.06	0.12	e0.07	e0.06	e0.01	0.30	0.14	0.22	0.05	e0.00	0.00	0.00
16	0.06	0.12	e0.07	e0.06	e0.02	0.21	0.10	0.19	0.05	e0.00	0.00	0.00
17	0.06	0.11	e0.07	e0.05	e0.02	0.18	0.09	0.21	0.06	e0.00	0.00	0.00
18	0.06	0.11	e0.07	e0.05	e0.03	0.12	0.09	0.23	0.06	e0.00	0.00	0.00
19	0.06	0.11	e0.07	e0.05	e0.03	0.17	0.10	0.22	0.07	e0.00	0.00	0.00
20	0.06	0.10	e0.07	e0.05	e0.04	e0.26	0.10	0.23	0.07	e0.00	0.00	0.00
21	0.06	e0.09	e0.07	e0.05	e0.04	e0.32	0.10	0.27	0.07	e0.00	0.00	0.00
22	0.06	e0.08	e0.07	e0.06	e0.05	0.34	0.11	0.27	0.06	e0.00	0.00	0.00
23	0.07	e0.08	e0.07	e0.06	e0.05	0.36	0.11	0.25	0.05	e0.00	0.00	0.00
24	0.07	e0.07	e0.08	e0.06	e0.05	0.31	0.11	0.21	e0.04	e0.00	0.00	0.00
25	0.07	e0.07	e0.08	e0.03	e0.04	0.31	0.12	0.21	0.04	e0.00	0.00	0.00
26	0.07	e0.06	e0.08	e0.00	e0.04	0.31	0.12	0.21	0.04	e0.00	0.00	0.00
27	0.07	e0.06	e0.08	e0.00	e0.03	e0.30	0.13	0.21	0.04	0.00	0.00	0.00
28	0.07	e0.06	e0.07	e0.00	e0.03	e0.26	0.13	0.19	0.03	0.00	0.00	0.00
29	0.07	e0.07	e0.07	e0.00	e0.03	e0.22	0.13	0.18	0.02	0.00	0.00	0.00
30	0.07	e0.07	e0.07	e0.00	---	e0.15	0.14	0.16	0.02	0.00	0.00	0.00
31	0.09	---	e0.07	e0.00	---	e0.10	---	0.16	---	0.00	0.00	---
TOTAL	1.84	2.81	2.40	1.42	0.51	9.08	4.21	6.67	2.19	0.18	0.00	0.00
MEAN	0.06	0.09	0.08	0.05	0.02	0.29	0.14	0.22	0.07	0.01	0.00	0.00
MAX	0.09	0.13	0.10	0.08	0.05	1.8	0.23	1.1	0.15	0.02	0.00	0.00
MIN	0.05	0.06	0.06	0.00	0.00	0.04	0.07	0.10	0.02	0.00	0.00	0.00
AC-FT	3.6	5.6	4.8	2.8	1.0	18	8.4	13	4.3	0.4	0.00	0.00

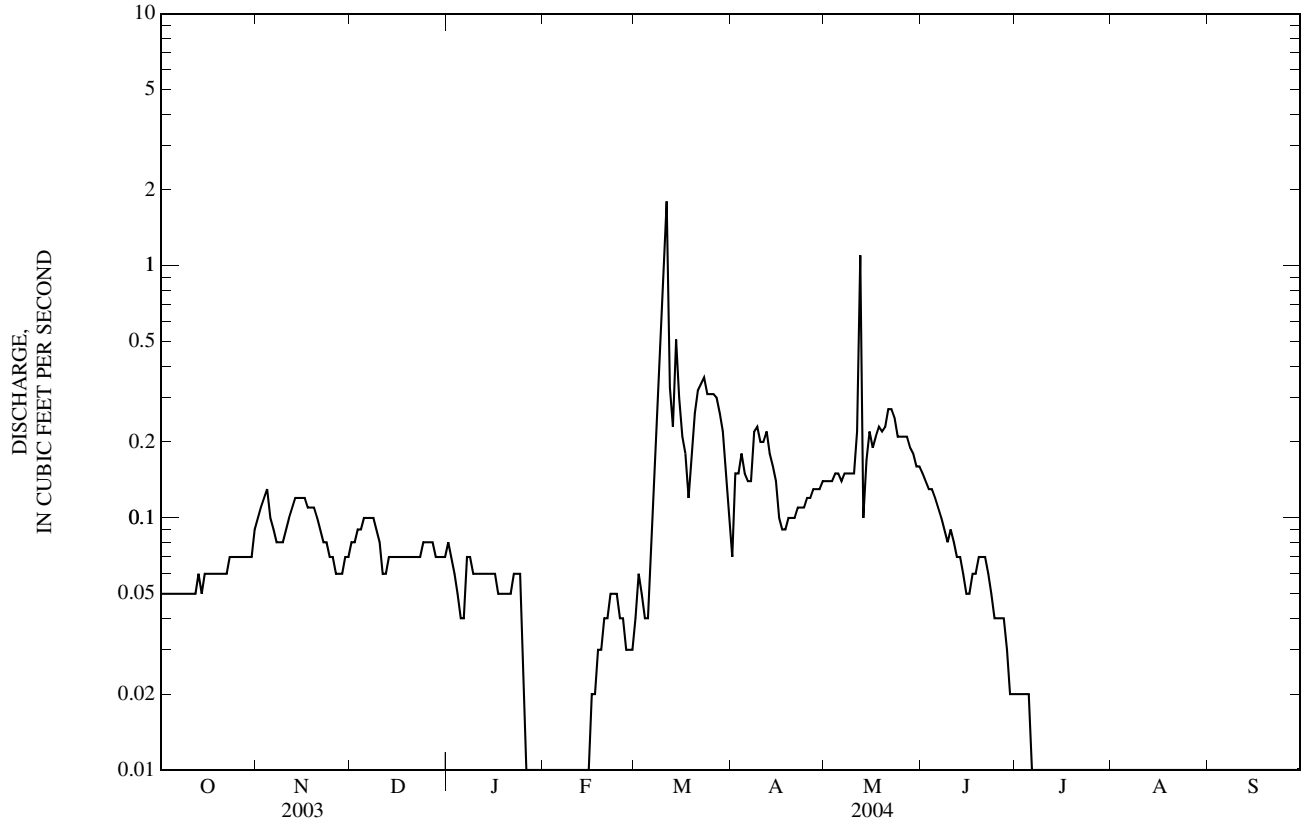
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1974, 2004, BY WATER YEAR (WY)

MEAN	2.40	0.94	0.36	3.33	15.5	16.2	32.6	181	223	117	50.1	28.2
MAX	28.4	19.9	5.94	84.9	120	80.0	502	1,663	1,260	680	409	292
(WY)	(1963)	(1974)	(1974)	(1974)	(1963)	(1955)	(1955)	(1962)	(1962)	(1958)	(1955)	(1973)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
(WY)	(1951)	(1950)	(1949)	(1949)	(1950)	(1951)	(1951)	(1951)	(1966)	(2004)	(1959)	(1953)

06386500 CHEYENNE RIVER NEAR SPENCER, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR		WATER YEARS 1949 - 1974, 2004	
ANNUAL TOTAL	31.31		--	
ANNUAL MEAN	0.09		56.0	
HIGHEST ANNUAL MEAN	--		280	1962
LOWEST ANNUAL MEAN	--		0.09	2004
HIGHEST DAILY MEAN	1.8	Mar 11	12,100	May 27, 1962
LOWEST DAILY MEAN	0.00	Jan 26	0.00[a]	Oct 4, 1948
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 26	0.00	Oct 4, 1948
MAXIMUM PEAK FLOW	7.7	May 12	16,000	May 27, 1962
MAXIMUM PEAK STAGE	5.47	May 12	13.74[b]	May 27, 1962
ANNUAL RUNOFF (AC-FT)	62		40,590	
10 PERCENT EXCEEDS	0.20		71	
50 PERCENT EXCEEDS	0.06		0.00	
90 PERCENT EXCEEDS	0.00		0.00	

a No flow at times in most years.
b Site and datum then in use.
e Estimated.



06386500 CHEYENNE RIVER NEAR SPENCER, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analysis: Water years 1951-54, 1969-70, and 1972-79. Sediment records: Periodic samples taken May 1971 to July 1974.

PERIOD OF DAILY RECORD.--March to September 2004.
WATER TEMPERATURE: March to September 2004.
SPECIFIC CONDUCTANCE: March to September 2004.
pH: March to September 2004.
DISSOLVED OXYGEN: March to September 2004.
TURBIDITY: March to September 2004.

REMARKS.--Data published in the tables below are rated as follows: temperature, good; specific conductance, good except those for Apr. 16 to May 18, which are poor; pH, good; dissolved oxygen, fair; turbidity, fair. Daily records are collected at 15-minute intervals using multi-parameter water-quality instrument. Satellite data-collection platform at station. Interruptions in daily record between Mar. 25 and July 13 due to probe fouling and/or instrument malfunction. Daily records not computed during period of no flow, July 14 to Sept. 30.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum daily, 28.0°C, July 9, 2004; minimum daily, 2.3°C, Apr. 12, 2004.
SPECIFIC CONDUCTANCE: Maximum daily, 6,110 µS/cm, June 30, 2004; minimum daily, 3,940 µS/cm, May 15, 2004.
pH: Maximum daily, 8.4 standard units, Apr. 2, 17, 18 and June 21, 2004; minimum daily, 7.2 standard units, July 1, 2004.
DISSOLVED OXYGEN: Maximum daily, 16.6 mg/L, June 16, 2004; minimum daily, 1.6 mg/L, July 1, 2004.
TURBIDITY: Maximum daily, 260 NT units, May 12, 2004; minimum daily, 2.0 NT units, June 30, 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, IR LED light, det ang 90 deg, FNU (63680)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT								
17...	1115	.06	--	4,810	14.0	12.0	--	--
MAR								
25...	1405	.32	--	4,680	20.0	17.0	--	--
APR								
16...	1500	.11	--	--	20.0	19.0	55	.02
MAY								
18...	1600	.25	--	--	14.5	15.0	--	--
24...	1630	.21	13	4,970	17.0	17.0	62	.04
JUN								
17...	1220	E.05	9.0	5,250	15.5	13.5	50	--
AUG								
09...	1450	.00	--	--	--	--	--	--

E -- Estimated value

06386500 CHEYENNE RIVER NEAR SPENCER, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	21.2	---	---	14.3	8.3	11.0
2	---	---	---	---	---	---	14.4	6.5	10.2	18.0	7.0	11.6
3	---	---	---	---	---	---	14.5	6.8	9.5	19.5	10.1	15.0
4	---	---	---	---	---	---	19.3	5.1	11.4	24.0	14.7	18.3
5	---	---	---	---	---	---	18.8	9.4	12.9	21.5	14.6	18.2
6	---	---	---	---	---	---	19.5	6.6	12.9	19.3	12.5	15.7
7	---	---	---	---	---	---	14.8	10.1	12.3	21.1	10.6	15.4
8	---	---	---	---	---	---	16.4	6.6	11.0	23.1	14.9	19.1
9	---	---	---	---	---	---	11.9	7.8	9.6	21.9	14.7	18.2
10	---	---	---	---	---	---	14.1	4.3	8.8	18.0	12.9	15.6
11	---	---	---	---	---	---	10.1	5.1	7.0	20.5	14.2	16.7
12	---	---	---	---	---	---	15.0	2.3	7.9	15.1	10.1	12.3
13	---	---	---	---	---	---	21.0	5.4	11.5	12.2	7.6	10.1
14	---	---	---	---	---	---	17.4	8.7	13.3	19.2	9.0	13.6
15	---	---	---	---	---	---	17.1	9.1	12.8	24.5	11.7	17.3
16	---	---	---	---	---	---	19.1	9.5	12.9	18.0	11.9	14.5
17	---	---	---	---	---	---	17.2	6.6	11.7	22.2	11.4	15.5
18	---	---	---	---	---	---	13.1	9.3	11.3	15.1	12.2	13.6
19	---	---	---	---	---	---	15.9	6.3	10.9	21.3	11.9	16.0
20	---	---	---	---	---	---	14.1	7.8	11.3	17.8	13.1	15.2
21	---	---	---	---	---	---	14.0	8.5	11.1	19.7	12.0	15.5
22	---	---	---	---	---	---	12.9	7.3	9.7	18.0	13.7	16.1
23	---	---	---	---	---	---	19.6	5.2	10.9	---	12.0	---
24	---	---	---	---	---	---	15.9	7.0	11.3	18.0	---	---
25	---	---	---	---	---	---	13.3	6.3	10.1	19.2	9.7	14.1
26	---	---	---	18.7	6.9	11.9	16.6	6.7	11.9	19.1	13.4	16.4
27	---	---	---	---	---	---	18.4	8.6	13.3	21.3	13.7	17.2
28	---	---	---	---	---	---	17.2	9.1	13.0	22.2	15.6	19.0
29	---	---	---	---	---	---	9.1	6.2	7.4	20.5	14.7	17.9
30	---	---	---	---	---	---	15.2	6.3	10.0	14.7	11.1	13.2
31	---	---	---	---	---	---	---	---	---	16.4	9.7	12.9
MONTH	---	---	---	---	---	---	21.2	---	---	---	---	---
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.0	10.6	14.8	25.8	18.0	21.9	---	---	---	---	---	---
2	22.9	12.6	17.1	---	17.1	---	---	---	---	---	---	---
3	24.3	14.1	18.6	---	---	---	---	---	---	---	---	---
4	23.1	15.6	19.5	---	---	---	---	---	---	---	---	---
5	26.8	17.5	21.1	---	---	---	---	---	---	---	---	---
6	24.3	16.4	19.9	---	---	---	---	---	---	---	---	---
7	27.2	15.9	20.2	---	---	---	---	---	---	---	---	---
8	18.5	13.9	16.2	25.6	---	---	---	---	---	---	---	---
9	16.9	12.3	14.2	28.0	16.7	21.1	---	---	---	---	---	---
10	20.5	13.5	16.3	---	---	---	---	---	---	---	---	---
11	19.9	12.2	16.1	---	---	---	---	---	---	---	---	---
12	21.5	13.0	17.5	---	---	---	---	---	---	---	---	---
13	21.4	14.6	18.3	---	---	---	---	---	---	---	---	---
14	23.8	14.5	18.9	---	---	---	---	---	---	---	---	---
15	25.7	14.9	19.2	---	---	---	---	---	---	---	---	---
16	17.0	13.7	14.9	---	---	---	---	---	---	---	---	---
17	18.8	13.3	15.1	---	---	---	---	---	---	---	---	---
18	15.9	11.4	12.6	---	---	---	---	---	---	---	---	---
19	18.1	10.0	13.1	---	---	---	---	---	---	---	---	---
20	21.9	13.3	17.2	---	---	---	---	---	---	---	---	---
21	19.4	14.3	16.9	---	---	---	---	---	---	---	---	---
22	22.4	12.5	17.2	---	---	---	---	---	---	---	---	---
23	24.1	15.1	19.5	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	22.0	---	---	---	---	---	---	---	---	---	---	---
26	24.1	14.5	19.0	---	---	---	---	---	---	---	---	---
27	25.7	15.1	19.6	---	---	---	---	---	---	---	---	---
28	25.9	13.4	19.1	---	---	---	---	---	---	---	---	---
29	27.4	15.0	21.0	---	---	---	---	---	---	---	---	---
30	27.1	17.4	21.7	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

06386500 CHEYENNE RIVER NEAR SPENCER, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	---	---	---	4,960	4,830	4,880
2	---	---	---	---	---	---	4,930	4,850	4,900	4,980	4,850	4,920
3	---	---	---	---	---	---	5,030	4,840	4,900	4,930	4,850	4,900
4	---	---	---	---	---	---	5,060	4,610	4,890	4,910	4,790	4,860
5	---	---	---	---	---	---	5,050	4,950	5,000	5,020	4,860	4,930
6	---	---	---	---	---	---	5,100	4,900	4,980	5,160	5,020	5,070
7	---	---	---	---	---	---	5,170	4,920	5,010	5,240	5,130	5,180
8	---	---	---	---	---	---	5,150	4,970	5,110	5,320	5,160	5,220
9	---	---	---	---	---	---	5,150	5,060	5,090	5,460	5,260	5,330
10	---	---	---	---	---	---	5,190	5,050	5,080	5,560	5,210	5,490
11	---	---	---	---	---	---	5,170	4,870	5,010	5,660	5,130	5,310
12	---	---	---	---	---	---	5,200	4,910	5,060	5,990	4,790	5,330
13	---	---	---	---	---	---	5,360	5,000	5,120	4,810	4,310	4,550
14	---	---	---	---	---	---	5,420	5,000	5,120	4,310	4,090	4,180
15	---	---	---	---	---	---	5,340	5,080	5,160	4,160	3,940	4,080
16	---	---	---	---	---	---	5,270	5,110	5,170	4,420	4,160	4,290
17	---	---	---	---	---	---	5,160	5,120	5,140	4,460	4,280	4,370
18	---	---	---	---	---	---	5,130	5,040	5,080	4,560	4,460	4,530
19	---	---	---	---	---	---	5,130	4,980	5,070	4,720	4,560	4,630
20	---	---	---	---	---	---	5,130	4,980	5,040	4,770	4,650	4,720
21	---	---	---	---	---	---	5,150	4,920	5,020	4,750	4,480	4,610
22	---	---	---	---	---	---	5,130	4,920	5,010	4,890	4,670	4,760
23	---	---	---	---	---	---	5,210	4,980	5,070	---	4,730	---
24	---	---	---	---	---	---	5,100	4,980	5,030	4,920	---	---
25	---	---	---	---	---	---	5,060	4,950	5,010	5,190	4,910	4,960
26	---	---	---	---	---	---	5,090	4,940	5,010	5,150	5,000	5,060
27	---	---	---	---	---	---	5,100	4,900	5,000	5,190	5,070	5,110
28	---	---	---	---	---	---	5,050	4,910	4,970	5,250	5,120	5,160
29	---	---	---	---	---	---	4,980	4,840	4,910	5,200	5,150	5,180
30	---	---	---	---	---	---	4,920	4,800	4,850	5,260	5,200	5,220
31	---	---	---	---	---	---	---	---	---	5,330	5,240	5,280
MONTH	---	---	---	---	---	---	---	---	---	5,990	3,940	4,900
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5,410	5,310	5,350	6,050	5,320	5,680	---	---	---	---	---	---
2	5,480	5,330	5,400	---	---	---	---	---	---	---	---	---
3	5,490	5,370	5,420	---	---	---	---	---	---	---	---	---
4	5,650	5,270	5,410	---	---	---	---	---	---	---	---	---
5	5,590	5,370	5,460	---	---	---	---	---	---	---	---	---
6	5,580	5,430	5,480	---	---	---	---	---	---	---	---	---
7	5,710	5,430	5,580	---	---	---	---	---	---	---	---	---
8	5,610	5,530	5,550	---	---	---	---	---	---	---	---	---
9	5,530	5,430	5,470	---	---	---	---	---	---	---	---	---
10	5,500	5,370	5,430	---	---	---	---	---	---	---	---	---
11	5,610	5,460	5,520	---	---	---	---	---	---	---	---	---
12	5,710	5,450	5,580	---	---	---	---	---	---	---	---	---
13	5,710	5,370	5,580	---	---	---	---	---	---	---	---	---
14	5,780	5,270	5,600	---	---	---	---	---	---	---	---	---
15	5,800	5,440	5,640	---	---	---	---	---	---	---	---	---
16	5,750	5,030	5,440	---	---	---	---	---	---	---	---	---
17	5,720	5,120	5,410	---	---	---	---	---	---	---	---	---
18	5,580	5,110	5,410	---	---	---	---	---	---	---	---	---
19	5,450	5,220	5,360	---	---	---	---	---	---	---	---	---
20	5,500	5,200	5,420	---	---	---	---	---	---	---	---	---
21	5,580	5,340	5,510	---	---	---	---	---	---	---	---	---
22	5,660	5,270	5,530	---	---	---	---	---	---	---	---	---
23	---	5,510	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	5,770	5,210	5,580	---	---	---	---	---	---	---	---	---
27	5,890	5,430	5,690	---	---	---	---	---	---	---	---	---
28	6,050	5,400	5,810	---	---	---	---	---	---	---	---	---
29	6,100	5,430	5,860	---	---	---	---	---	---	---	---	---
30	6,110	5,460	5,900	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

06386500 CHEYENNE RIVER NEAR SPENCER, WY—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	8.3	8.1	8.3	8.1	7.7	7.2	---	---	---	---
2	8.4	8.1	8.3	8.1	8.2	8.0	---	---	---	---	---	---
3	8.3	8.2	8.3	8.1	8.2	8.0	---	---	---	---	---	---
4	8.2	8.0	8.2	7.9	8.2	7.9	---	---	---	---	---	---
5	8.2	7.8	8.3	7.9	8.3	7.7	---	---	---	---	---	---
6	8.2	7.8	8.3	8.1	8.3	7.9	---	---	---	---	---	---
7	8.3	7.9	8.3	8.0	8.2	7.9	---	---	---	---	---	---
8	8.3	8.1	8.2	7.9	8.3	7.9	---	---	---	---	---	---
9	8.2	8.0	8.2	7.9	8.3	8.0	---	---	---	---	---	---
10	8.3	8.1	8.3	7.9	8.3	8.0	---	---	---	---	---	---
11	8.3	8.0	8.3	8.1	8.3	8.0	---	---	---	---	---	---
12	8.2	8.0	8.3	8.1	8.3	7.8	---	---	---	---	---	---
13	8.1	7.9	8.2	8.2	8.3	7.8	---	---	---	---	---	---
14	8.2	7.9	8.2	8.1	8.3	7.6	---	---	---	---	---	---
15	8.3	8.0	8.2	8.1	8.3	7.8	---	---	---	---	---	---
16	8.3	8.0	8.3	8.0	8.1	7.6	---	---	---	---	---	---
17	8.4	8.2	8.3	8.0	8.1	7.5	---	---	---	---	---	---
18	8.4	8.1	8.3	8.1	8.3	7.8	---	---	---	---	---	---
19	8.3	8.0	8.3	8.0	8.3	8.0	---	---	---	---	---	---
20	8.3	8.1	8.2	8.1	8.2	7.9	---	---	---	---	---	---
21	8.3	8.0	8.2	8.0	8.4	7.8	---	---	---	---	---	---
22	8.3	8.1	8.2	7.9	8.3	7.8	---	---	---	---	---	---
23	8.2	8.0	---	---	8.3	7.7	---	---	---	---	---	---
24	8.2	8.0	---	---	---	---	---	---	---	---	---	---
25	8.3	8.0	8.2	8.0	8.1	---	---	---	---	---	---	---
26	8.3	8.1	8.2	7.9	8.0	7.6	---	---	---	---	---	---
27	8.2	8.0	8.2	8.0	8.0	7.6	---	---	---	---	---	---
28	8.3	8.0	8.2	7.9	7.9	7.5	---	---	---	---	---	---
29	8.3	8.2	8.3	8.0	7.8	7.5	---	---	---	---	---	---
30	8.2	8.1	8.3	8.1	7.7	7.3	---	---	---	---	---	---
31	---	---	8.3	8.2	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

06386500 CHEYENNE RIVER NEAR SPENCER, WY—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	11.8	---	---	11.6	9.5	10.6
2	---	---	---	---	---	---	11.9	8.9	10.5	12.4	9.6	10.7
3	---	---	---	---	---	---	12.3	8.8	10.4	11.8	9.0	10.4
4	---	---	---	---	---	---	11.8	7.5	10.1	12.9	6.8	9.5
5	---	---	---	---	---	---	11.1	6.1	8.7	10.7	6.4	8.9
6	---	---	---	---	---	---	11.0	5.5	8.6	11.0	8.2	9.7
7	---	---	---	---	---	---	10.9	5.8	8.8	13.2	9.0	10.4
8	---	---	---	---	---	---	11.1	7.4	9.4	12.3	7.2	9.9
9	---	---	---	---	---	---	11.7	7.1	9.3	12.9	6.8	9.8
10	---	---	---	---	---	---	11.3	7.6	9.8	10.5	7.2	9.1
11	---	---	---	---	---	---	11.5	7.5	9.7	9.8	7.4	8.4
12	---	---	---	---	---	---	12.1	8.1	10	9.1	7.3	8.5
13	---	---	---	---	---	---	10.6	6.5	8.4	9.9	8.1	9.0
14	---	---	---	---	---	---	8.9	4.8	7.3	9.6	7.8	8.7
15	---	---	---	---	---	---	9.2	6.1	8.0	9.5	6.5	8.2
16	---	---	---	---	---	---	9.6	7.2	8.4	8.9	6.1	7.6
17	---	---	---	---	---	---	10.4	8.0	9.2	9.6	6.2	7.7
18	---	---	---	---	---	---	10.2	6.1	8.6	8.9	6.4	7.4
19	---	---	---	---	---	---	11.6	---	---	8.4	6.0	7.3
20	---	---	---	---	---	---	10.4	---	---	8.4	5.5	6.8
21	---	---	---	---	---	---	11.1	6.7	9.2	9.0	6.2	7.4
22	---	---	---	---	---	---	11.4	9.0	10.2	8.4	4.0	6.5
23	---	---	---	---	---	---	11.8	6.9	9.6	---	5.8	---
24	---	---	---	---	---	---	11.3	7.8	9.7	10.7	---	---
25	---	---	---	---	---	---	11.1	7.0	9.5	13.8	8.3	10.4
26	---	---	---	---	---	---	11.2	7.8	9.8	12.9	8.0	10.1
27	---	---	---	---	---	---	10.7	7.5	9.1	13.3	7.2	9.8
28	---	---	---	---	---	---	10.8	7.3	9.5	12.6	7.4	10.0
29	---	---	---	---	---	---	12.8	10.5	11.3	12.8	7.0	9.7
30	---	---	---	---	---	---	12.1	9.9	11.3	11.4	8.1	10.1
31	---	---	---	---	---	---	---	---	---	11.4	9.2	10.5
MONTH	---	---	---	---	---	---	12.8	---	---	---	---	---
		JUNE			JULY			AUGUST			SEPTEMBER	
1	12.0	8.3	10.6	12.2	1.6	7.5	---	---	---	---	---	---
2	14.6	8.4	10.6	---	3.5	---	---	---	---	---	---	---
3	13.8	8.3	10.3	---	---	---	---	---	---	---	---	---
4	13.6	6.9	9.9	---	---	---	---	---	---	---	---	---
5	15.4	6.3	10.2	---	---	---	---	---	---	---	---	---
6	12.1	7.3	9.2	---	---	---	---	---	---	---	---	---
7	14.1	5.0	9.1	---	---	---	---	---	---	---	---	---
8	12.9	7.6	10.2	---	---	---	---	---	---	---	---	---
9	14.3	9.8	11.6	---	---	---	---	---	---	---	---	---
10	14.4	8.9	11.4	---	---	---	---	---	---	---	---	---
11	13.1	9.4	11.4	---	---	---	---	---	---	---	---	---
12	14.6	7.6	11.6	---	---	---	---	---	---	---	---	---
13	14.4	7.5	11.3	---	---	---	---	---	---	---	---	---
14	14.5	7.8	11.7	---	---	---	---	---	---	---	---	---
15	15.1	7.1	10.8	---	---	---	---	---	---	---	---	---
16	16.6	7.0	10.7	---	---	---	---	---	---	---	---	---
17	13.2	5.7	10.2	---	---	---	---	---	---	---	---	---
18	13.2	6.1	9.7	---	---	---	---	---	---	---	---	---
19	12.5	8.2	10.2	---	---	---	---	---	---	---	---	---
20	11.0	6.0	8.1	---	---	---	---	---	---	---	---	---
21	9.6	4.7	7.2	---	---	---	---	---	---	---	---	---
22	9.7	4.6	7.0	---	---	---	---	---	---	---	---	---
23	10.5	2.6	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	10.1	---	---	---	---	---	---	---	---	---	---	---
26	10.7	2.5	7.0	---	---	---	---	---	---	---	---	---
27	10.7	4.1	7.1	---	---	---	---	---	---	---	---	---
28	11.1	2.9	7.2	---	---	---	---	---	---	---	---	---
29	10.3	3.8	6.6	---	---	---	---	---	---	---	---	---
30	9.0	1.8	5.7	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
YEAR	---	---	---									

06386500 CHEYENNE RIVER NEAR SPENCER, WY—Continued

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	28	7.8	11	17	9.1	11
2	---	---	---	---	---	---	11	7.8	9.2	15	8.2	10
3	---	---	---	---	---	---	18	3.5	9.7	15	8.9	10
4	---	---	---	---	---	---	17	8.1	12	20	10	14
5	---	---	---	---	---	---	25	10	14	150	20	49
6	---	---	---	---	---	---	40	6.0	14	76	18	33
7	---	---	---	---	---	---	52	9.4	21	120	17	47
8	---	---	---	---	---	---	76	12	24	130	22	56
9	---	---	---	---	---	---	94	13	30	170	19	54
10	---	---	---	---	---	---	51	11	21	160	24	48
11	---	---	---	---	---	---	78	11	26	54	14	28
12	---	---	---	---	---	---	120	9.3	44	260	12	56
13	---	---	---	---	---	---	94	9.7	30	17	5.6	10
14	---	---	---	---	---	---	98	12	30	24	10	16
15	---	---	---	---	---	---	29	11	16	49	17	29
16	---	---	---	---	---	---	95	12	28	48	17	23
17	---	---	---	---	---	---	29	13	17	39	12	22
18	---	---	---	---	---	---	140	11	39	49	13	19
19	---	---	---	---	---	---	61	9.0	24	33	9.1	17
20	---	---	---	---	---	---	110	11	35	46	11	17
21	---	---	---	---	---	---	100	12	30	55	13	24
22	---	---	---	---	---	---	180	12	27	76	12	30
23	---	---	---	---	---	---	50	9.7	19	---	13	17
24	---	---	---	---	---	---	57	9.6	20	---	11	15
25	---	---	---	---	---	---	120	13	37	14	7.3	9.7
26	---	---	---	---	---	---	---	14	45	45	8.2	21
27	---	---	---	---	---	---	120	16	42	54	11	22
28	---	---	---	---	---	---	86	15	28	34	11	17
29	---	---	---	---	---	---	29	11	16	74	10	22
30	---	---	---	---	---	---	38	11	15	14	7.8	10
31	---	---	---	---	---	---	---	---	---	48	6.9	10
MONTH	---	---	---	---	---	---	---	3.5	24	---	5.6	25
		JUNE			JULY			AUGUST			SEPTEMBER	
1	34	6.7	12	22	3.1	9.5	---	---	---	---	---	---
2	36	8.8	14	---	---	---	---	---	---	---	---	---
3	15	8.7	11	---	---	---	---	---	---	---	---	---
4	22	9.0	13	---	---	---	---	---	---	---	---	---
5	35	11	19	---	---	---	---	---	---	---	---	---
6	28	12	17	---	---	---	---	---	---	---	---	---
7	43	11	16	---	---	---	---	---	---	---	---	---
8	32	9.1	15	---	---	---	---	---	---	---	---	---
9	21	6.2	9.2	---	---	---	---	---	---	---	---	---
10	24	5.8	11	---	---	---	---	---	---	---	---	---
11	23	6.8	12	---	---	---	---	---	---	---	---	---
12	29	6.6	10	---	---	---	---	---	---	---	---	---
13	55	6.1	19	---	---	---	---	---	---	---	---	---
14	75	4.7	22	---	---	---	---	---	---	---	---	---
15	62	9.1	20	---	---	---	---	---	---	---	---	---
16	28	3.5	11	---	---	---	---	---	---	---	---	---
17	13	2.3	5.9	---	---	---	---	---	---	---	---	---
18	51	6.5	14	---	---	---	---	---	---	---	---	---
19	41	5.7	15	---	---	---	---	---	---	---	---	---
20	120	7.4	38	---	---	---	---	---	---	---	---	---
21	60	18	30	---	---	---	---	---	---	---	---	---
22	50	7.4	23	---	---	---	---	---	---	---	---	---
23	160	---	28	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	24	6.7	12	---	---	---	---	---	---	---	---	---
27	130	7.2	22	---	---	---	---	---	---	---	---	---
28	19	3.4	10	---	---	---	---	---	---	---	---	---
29	27	3.5	12	---	---	---	---	---	---	---	---	---
30	30	2.0	12	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY

LOCATION.--Lat 44°05'06", long 104°03'36", in SE¼ NE¼ NE¼ sec.4, T.47 N., R.60 W., Weston County, Hydrologic Unit 10120107, on right bank in Mallo Campgrounds, 250 ft upstream from mouth, 750 ft upstream from dam on Stockade Beaver Creek, and 3.8 mi east of Four Corners.

DRAINAGE AREA.--10.3 mi^2.

PERIOD OF RECORD.--October 1974 to September 1982, April 1991 to current year.

REVISED RECORD.--WDR-85-1: 1981, 1982.

GAGE.--Water-stage recorder. Elevation of gage is 6,030 ft above NGVD of 1929, from topographic map. October 1974 to September 1982, at site 50 ft upstream and datum 3.11 ft lower. U.S. Geological Survey data collection with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversions upstream from station.

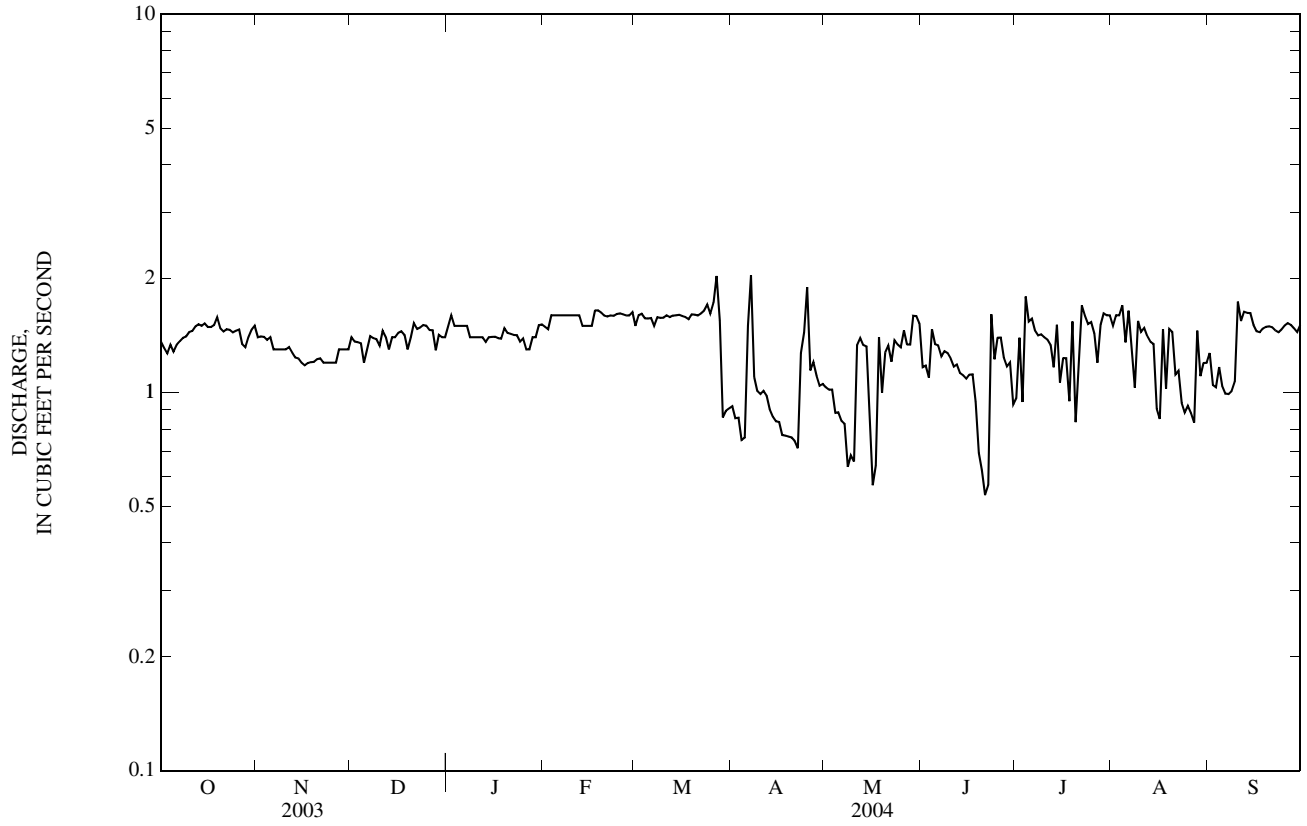
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	e1.4	e1.4	e1.5	1.5	e1.5	0.92	1.0	1.2	0.97	1.5	1.3
2	1.3	1.4	1.4	1.6	1.5	e1.6	0.85	1.0	1.2	1.4	e1.6	1.0
3	1.3	1.4	1.4	e1.5	1.6	1.6	0.86	1.0	1.1	0.94	e1.6	1.0
4	1.3	1.4	1.3	e1.5	e1.6	1.6	0.75	0.88	1.5	1.8	1.7	1.2
5	1.3	e1.4	e1.2	e1.5	e1.6	1.6	0.76	0.89	1.3	1.5	1.4	1.0
6	1.3	e1.3	e1.3	e1.5	e1.6	1.6	1.5	0.84	1.3	1.6	1.6	0.99
7	1.4	e1.3	1.4	e1.5	e1.6	e1.5	2.0	0.83	1.2	1.5	1.3	0.99
8	1.4	e1.3	1.4	e1.4	e1.6	1.6	1.1	0.64	1.3	1.4	1.0	1.0
9	1.4	e1.3	1.4	e1.4	e1.6	1.6	1.0	0.68	1.3	1.4	1.5	1.1
10	1.4	e1.3	1.3	e1.4	e1.6	1.6	0.99	0.66	1.2	1.4	1.4	1.7
11	1.5	1.3	1.5	e1.4	e1.6	e1.6	1.0	1.3	1.2	1.4	1.5	1.5
12	1.5	1.3	e1.4	1.4	e1.6	1.6	0.98	1.4	1.2	1.3	1.4	1.6
13	1.5	1.2	e1.3	1.4	e1.5	1.6	0.90	1.3	1.1	1.2	1.4	1.6
14	1.5	1.2	e1.4	e1.4	e1.5	e1.6	0.86	1.3	1.1	1.5	1.3	1.6
15	1.5	1.2	e1.4	1.4	e1.5	1.6	0.84	0.87	1.1	1.1	0.91	1.5
16	1.5	1.2	1.4	1.4	e1.5	1.6	0.84	0.57	1.1	1.2	0.85	1.5
17	1.5	1.2	1.5	1.4	1.6	1.6	0.77	0.64	1.1	1.2	1.5	1.4
18	1.5	1.2	1.4	1.4	1.6	1.6	0.77	1.4	0.95	0.95	1.0	1.5
19	1.6	1.2	e1.3	1.5	1.6	1.6	0.76	1.00	0.69	1.5	1.5	1.5
20	1.5	1.2	e1.4	1.4	1.6	1.6	0.76	1.3	0.62	0.83	1.4	1.5
21	1.4	1.2	1.5	1.4	1.6	1.6	0.75	1.3	0.54	1.2	1.1	1.5
22	1.5	e1.2	1.5	1.4	1.6	1.6	0.71	1.2	0.57	1.7	1.1	1.5
23	1.5	e1.2	1.5	1.4	1.6	1.6	1.3	1.4	1.6	1.6	0.94	1.4
24	1.4	e1.2	1.5	1.4	1.6	1.7	1.4	1.3	1.2	1.5	0.88	1.5
25	1.5	e1.2	1.5	1.4	1.6	1.6	1.9	1.3	1.4	1.5	0.92	1.5
26	1.5	e1.2	1.5	e1.3	1.6	1.7	1.1	1.5	1.4	1.4	0.88	1.5
27	1.3	e1.3	1.5	e1.3	1.6	2.0	1.2	1.3	1.2	1.2	0.83	1.5
28	1.3	e1.3	1.3	e1.4	1.6	1.6	1.1	1.3	1.2	1.5	1.5	1.5
29	1.4	e1.3	1.4	e1.4	1.6	0.86	1.0	1.6	1.2	1.6	1.1	1.4
30	1.5	e1.3	e1.4	1.5	---	0.89	1.1	1.6	0.93	1.6	1.2	1.5
31	e1.5	---	e1.4	1.5	---	0.91	---	1.5	---	1.6	1.2	---
TOTAL	44.4	38.1	43.5	44.3	45.8	47.86	30.77	34.80	34.00	42.49	39.01	41.28
MEAN	1.43	1.27	1.40	1.43	1.58	1.54	1.03	1.12	1.13	1.37	1.26	1.38
MAX	1.6	1.4	1.5	1.6	1.6	2.0	2.0	1.6	1.6	1.8	1.7	1.7
MIN	1.3	1.2	1.2	1.3	1.5	0.86	0.71	0.57	0.54	0.83	0.83	0.99
AC-FT	88	76	86	88	91	95	61	69	67	84	77	82
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)												
MEAN	1.87	1.73	1.63	1.56	1.72	1.99	2.24	2.16	2.32	2.08	1.97	1.87
MAX	3.16	3.30	2.68	2.95	2.90	5.83	4.07	3.44	4.05	3.09	2.89	3.08
(WY)	(2000)	(2000)	(1999)	(1999)	(1999)	(1999)	(1994)	(1978)	(1980)	(1979)	(1978)	(2000)
MIN	0.31	0.47	0.44	0.42	0.46	0.71	0.88	0.81	1.13	1.34	0.75	0.62
(WY)	(1977)	(1977)	(1977)	(1993)	(1977)	(1977)	(1993)	(1993)	(2004)	(1993)	(1976)	(1976)

06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1975 - 2004	
ANNUAL TOTAL	486.61		486.31		--	
ANNUAL MEAN	1.33		1.33		1.94	
HIGHEST ANNUAL MEAN	--		---		3.20	1999
LOWEST ANNUAL MEAN	--		--		0.94	1977
HIGHEST DAILY MEAN	2.9	Apr 12	2.0	Mar 27,Apr 7	34	Mar 26, 1999
LOWEST DAILY MEAN	0.68	Feb 24	0.54	Jun 21	0.10	Jan 20, 1993
ANNUAL SEVEN-DAY MINIMUM	0.75	Jan 1	0.77	Apr 16	0.12	Jan 17, 1993
MAXIMUM PEAK FLOW	--		13[a]	Sep 10	103[b]	Apr 22, 1994
MAXIMUM PEAK STAGE	--		1.92[c]	Mar 11	2.88[c]	Dec 25, 1998
ANNUAL RUNOFF (AC-FT)	965		965		1,400	
10 PERCENT EXCEEDS	1.9		1.6		2.9	
50 PERCENT EXCEEDS	1.3		1.4		1.9	
90 PERCENT EXCEEDS	0.84		0.91		1.0	

a Gage height, 1.54 ft.
b From rating curve extended above 8.5 ft^3/s.
c Backwater from ice.
e Estimated.



06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY

LOCATION.--Lat 43°51'32", long 104°06'24", in SW¼ SW¼ SE¼ sec.19, T.45 N., R.60 W., Weston County, Hydrologic Unit 10120107, on right bank 20 ft upstream from culverts on county road, 0.6 mi upstream from South Draw, 2.5 mi upstream from LAK Reservoir Dam, and 4.7 mi east of Newcastle.

DRAINAGE AREA.--107 mi^2.

PERIOD OF RECORD.--October 1974 to September 1982, April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,460 ft above NGVD of 1929, from topographic map. October 1974 to September 1982, at same site and 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. A few small diversions upstream from station for irrigation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	14	15	15	15	14	15	9.0	12	12	8.4	9.7
2	12	13	16	16	15	13	15	9.1	11	12	8.9	9.7
3	13	13	16	15	15	13	15	9.5	11	11	10	9.8
4	13	15	16	15	15	13	15	9.0	11	11	11	9.8
5	11	14	15	e14	15	13	15	8.6	11	12	11	9.8
6	11	15	15	e13	14	13	15	8.4	11	12	12	9.8
7	12	14	15	e14	14	14	15	8.3	11	12	12	9.8
8	13	15	16	e15	14	14	15	8.3	11	11	12	9.8
9	13	15	15	e15	14	14	14	8.6	11	11	12	9.8
10	13	15	15	16	14	14	13	8.6	11	12	12	9.7
11	14	15	15	17	14	14	12	8.9	11	12	12	9.5
12	14	15	15	17	15	13	12	9.5	11	12	11	9.5
13	15	14	15	17	15	13	12	9.1	11	11	11	9.7
14	15	15	15	17	15	13	12	9.0	11	9.5	11	9.5
15	15	15	15	17	14	13	12	9.1	10	9.7	11	9.5
16	14	15	15	e17	14	14	12	10	10	8.5	11	9.5
17	14	15	15	17	14	14	12	11	11	6.9	10	9.5
18	14	14	14	16	14	14	12	11	11	6.8	10	9.7
19	15	15	14	16	15	14	12	11	11	7.0	9.9	9.8
20	14	14	15	16	15	14	12	11	11	7.9	9.7	9.9
21	14	e14	15	16	14	14	12	12	11	7.4	9.6	10
22	14	e14	15	17	14	14	11	12	11	7.6	9.5	10
23	14	e14	15	17	14	14	11	12	11	8.3	9.5	10
24	14	e14	15	17	13	15	10	12	11	10	9.6	10
25	14	e14	15	16	13	15	9.3	12	11	11	9.6	10
26	14	e15	15	e15	13	15	8.9	12	11	10	9.6	10
27	14	e15	15	e14	13	16	8.6	12	11	9.5	9.5	10
28	14	e15	16	e13	14	16	8.6	11	11	8.1	9.5	10
29	15	e15	16	e14	14	15	8.6	11	11	7.3	9.5	10
30	15	e15	16	15	---	15	8.8	11	11	8.3	9.6	10
31	15	---	16	15	---	15	---	12	---	8.5	9.6	---
TOTAL	425	435	471	484	412	435	363.8	316.0	329	303.3	321.0	293.8
MEAN	13.7	14.5	15.2	15.6	14.2	14.0	12.1	10.2	11.0	9.78	10.4	9.79
MAX	15	15	16	17	15	16	15	12	12	12	12	10
MIN	11	13	14	13	13	13	8.6	8.3	10	6.8	8.4	9.5
AC-FT	843	863	934	960	817	863	722	627	653	602	637	583

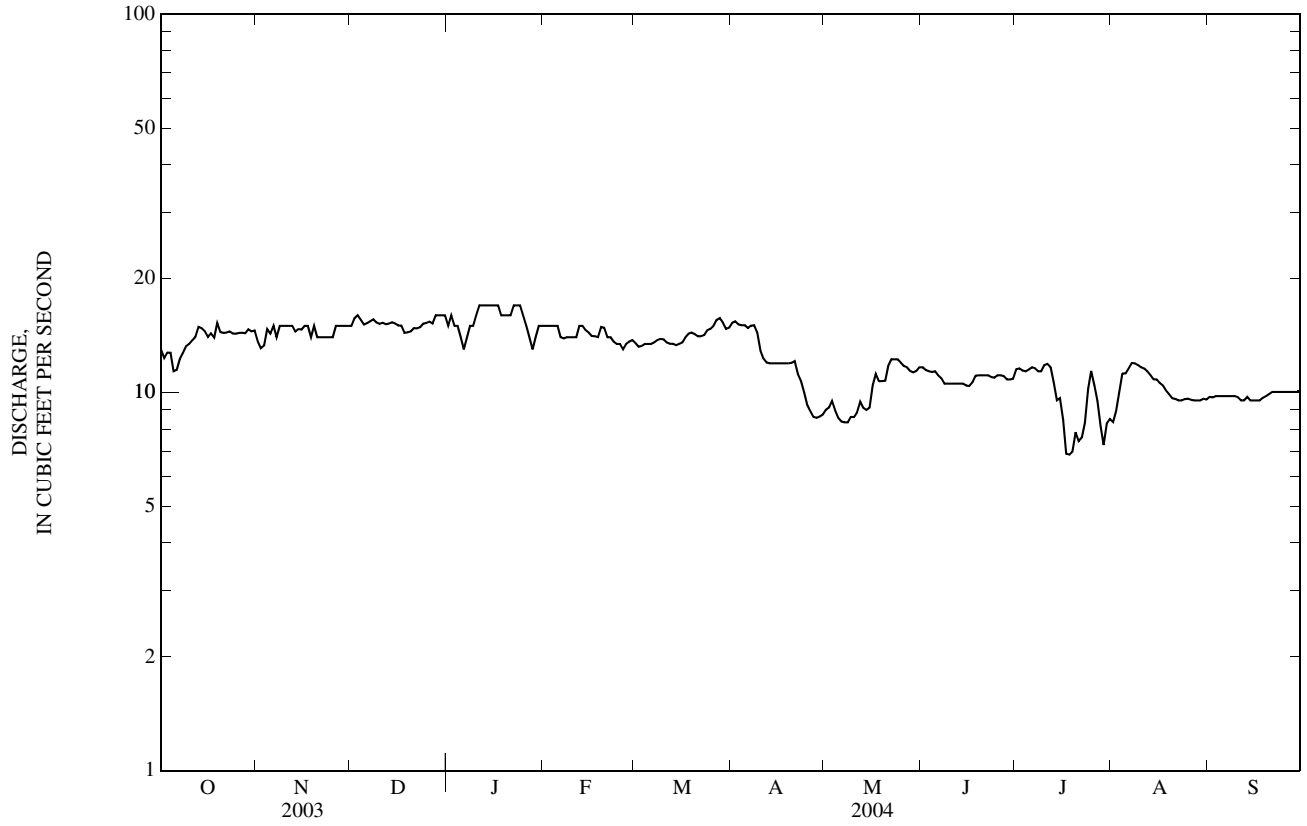
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

MEAN	13.6	13.7	13.6	13.3	13.5	15.0	13.9	11.6	11.8	11.6	12.3	12.7
MAX	18.9	19.0	18.1	17.6	17.6	21.3	19.4	18.5	17.8	17.0	20.9	20.0
(WY)	(2000)	(2001)	(2000)	(2000)	(2000)	(1996)	(2000)	(2000)	(1999)	(1999)	(1999)	(1999)
MIN	9.40	9.74	10.2	9.52	10.6	10.8	9.53	6.45	5.92	8.24	6.33	8.89
(WY)	(1982)	(1994)	(1993)	(1980)	(1993)	(1993)	(1981)	(1992)	(1992)	(1981)	(1992)	(1991)

06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1975 - 2004	
ANNUAL TOTAL	5,157.7		4,588.9			
ANNUAL MEAN	14.1		12.5		13.1	
HIGHEST ANNUAL MEAN					17.4	2000
LOWEST ANNUAL MEAN					9.80	1992
HIGHEST DAILY MEAN	45	Mar 18	17	Many days	143	Jul 16, 1993
LOWEST DAILY MEAN	7.1	Aug 13,14	6.8	Jul 18	3.9	May 21, 1992
ANNUAL SEVEN-DAY MINIMUM	8.3	Aug 10	7.4	Jul 17	4.6	Aug 2, 1992
MAXIMUM PEAK FLOW			27[a]	Dec 31	776[b]	Jul 16, 1993
MAXIMUM PEAK STAGE			7.36[c]	Jan 6	12.44	Jul 16, 1993
ANNUAL RUNOFF (AC-FT)	10,230		9,100		9,490	
10 PERCENT EXCEEDS	17		15		17	
50 PERCENT EXCEEDS	14		13		13	
90 PERCENT EXCEEDS	10		9.5		9.3	

a Gage height, 7.04 ft.
b From rating curve extended above 18 ft^3/s, on basis of culvert backwater computation.
c Backwater from ice.
e Estimated.



06395000 CHEYENNE RIVER AT EDGEMONT, SD

LOCATION.--Lat 43°18'20", long 103°49'14", in SW¼ SE¼ SE¼ sec.36, T.8 S., R.2 E., Fall River County, Hydrologic Unit 10120106, on right bank at downstream side of bridge on U.S. Highway 18, at Edgemont, 300 ft downstream from Burlington Northern Railroad bridge, and 600 ft upstream from Cottonwood Creek.

DRAINAGE AREA.--7,143 mi^2.

PERIOD OF RECORD.--June 1903 to November 1906 (no winter records), April 1928 to February 1933 (monthly discharge only), October 1946 to current year.

REVISED RECORDS.--WSP 1086: Drainage area. WSP 1116: 1947. WDR SD-78-1: 1977.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 3,414.56 ft above NGVD of 1929. Prior to December 1, 1906, nonrecording gage 20 ft upstream at datum 0.7 ft lower. April 11, 1928 to February 28, 1933, October 4, 1946 to October 23, 1947 and January 11, 1961 to April 24, 1963, nonrecording gage, and October 24, 1947 to January 10, 1961 and April 25, 1963 to September 30, 1972, water-stage recorder all at present site at datum 2.00 ft higher. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Many small reservoirs upstream from station used for stock and irrigation water, total capacity, about 45,000 acre-ft. Station operated and record provided by the South Dakota District.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 12, 1920, reached a stage of 13.0 ft, present datum, from floodmarks at railroad bridge.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	11	13	14	16	25	6.4	3.4	2.2	0.68	0.00	0.01
2	3.3	10	16	14	15	20	6.2	3.6	2.3	0.95	0.00	0.01
3	2.7	9.3	15	13	14	25	6.1	3.3	2.5	0.65	0.00	0.01
4	2.2	9.0	15	13	14	20	7.6	3.5	2.1	0.97	0.01	0.01
5	1.8	8.7	14	13	13	30	6.9	3.3	2.2	0.75	0.03	0.01
6	1.4	8.5	14	12	13	40	6.7	3.4	1.9	1.8	0.03	0.01
7	1.4	8.5	14	12	12	50	6.4	2.9	1.8	0.80	0.05	0.01
8	1.4	8.4	13	12	12	73	6.2	2.3	1.4	0.49	0.02	0.01
9	1.5	8.3	13	13	12	58	6.0	2.1	1.4	0.25	0.01	0.01
10	1.9	8.9	13	13	12	55	5.6	2.3	1.4	0.30	0.05	0.01
11	2.4	8.8	13	14	11	36	5.6	2.1	1.3	0.23	0.02	0.01
12	2.9	8.8	13	13	11	48	5.6	2.2	0.99	0.14	0.01	0.01
13	3.4	9.0	13	13	10	39	5.3	5.2	0.83	0.10	0.01	0.01
14	4.1	17	14	12	10	32	5.0	5.9	0.74	0.18	0.00	0.01
15	4.7	19	15	11	11	31	4.7	4.6	0.70	0.08	0.00	0.01
16	4.8	18	14	11	11	30	4.4	4.4	0.78	0.05	0.00	0.01
17	5.3	19	14	11	11	28	4.5	3.6	0.89	0.02	0.00	0.01
18	6.3	17	14	11	12	28	4.4	3.5	1.3	0.01	0.00	0.01
19	6.5	17	13	12	18	19	4.2	3.3	1.2	0.01	0.00	0.00
20	6.5	18	14	13	20	13	4.1	2.3	1.0	0.01	0.00	0.00
21	7.2	16	15	14	26	12	4.3	2.1	0.97	0.00	0.00	0.04
22	7.5	7.4	15	15	30	11	4.4	27	0.96	0.00	0.00	0.00
23	8.3	7.4	14	16	35	14	4.1	56	0.98	0.02	0.00	0.02
24	7.5	7.4	14	17	40	18	4.0	67	1.1	0.00	0.00	0.00
25	7.8	7.3	15	16	80	14	4.1	33	1.1	0.00	0.00	0.00
26	7.9	7.3	16	16	60	12	3.6	6.5	1.1	0.01	0.00	0.00
27	8.2	7.2	16	15	70	16	3.3	4.9	0.85	0.00	0.00	0.00
28	8.3	7.1	15	15	45	15	3.4	3.4	1.1	0.00	0.00	0.00
29	9.3	8.5	15	15	30	9.1	3.2	3.0	0.71	0.00	0.01	0.00
30	10	11	15	15	---	7.4	3.0	2.2	0.49	0.00	0.01	0.00
31	11	---	14	15	---	8.5	---	1.9	---	0.00	0.01	---
TOTAL	161.3	328.8	441	419	674	837.0	149.3	274.2	38.29	8.50	0.27	0.24
MEAN	5.20	11.0	14.2	13.5	23.2	27.0	4.98	8.85	1.28	0.27	0.01	0.01
MAX	11	19	16	17	80	73	7.6	67	2.5	1.8	0.05	0.04
MIN	1.4	7.1	13	11	10	7.4	3.0	1.9	0.49	0.00	0.00	0.00
AC-FT	320	652	875	831	1,340	1,660	296	544	76	17	0.5	0.5

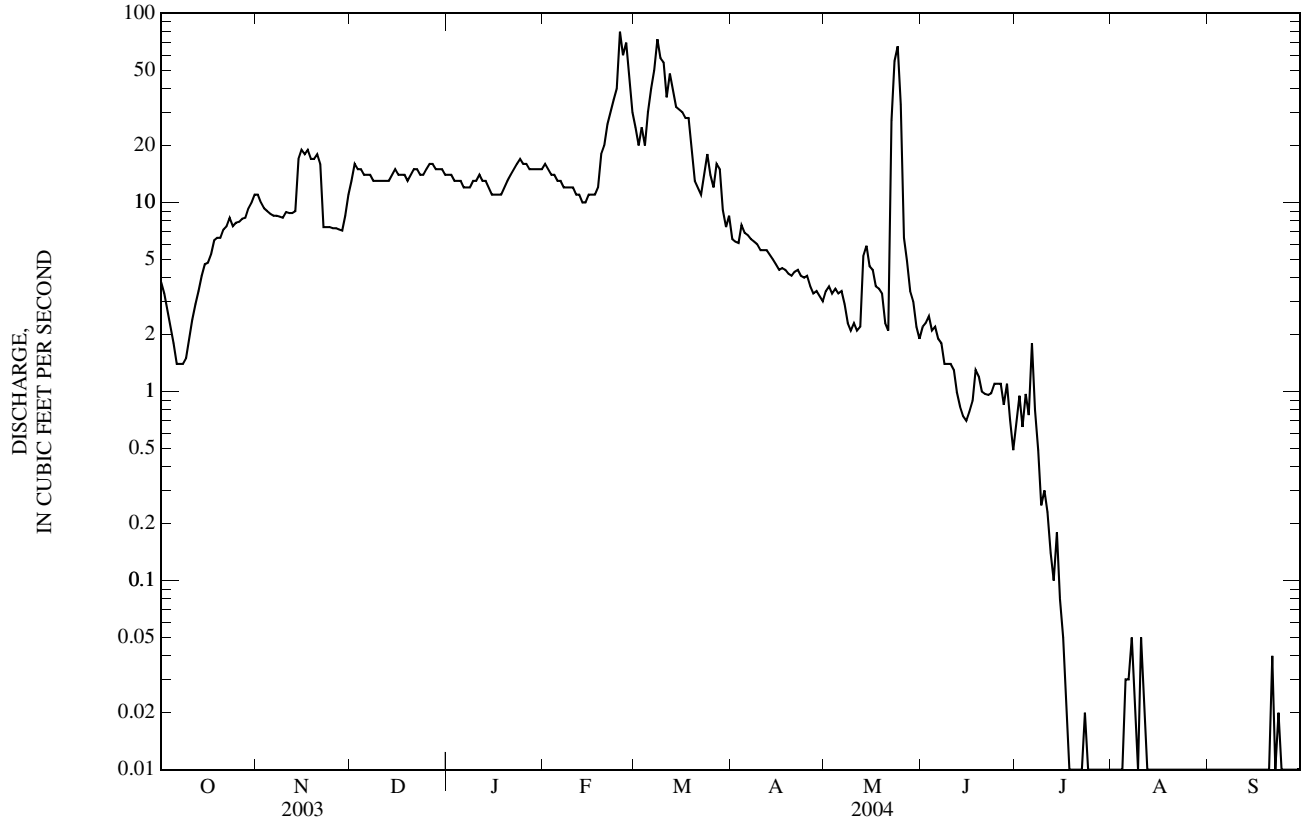
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2004, BY WATER YEAR (WY)

MEAN	21.2	16.5	9.27	9.13	40.8	122	65.8	203	241	119	63.4	25.6
MAX	291	266	50.5	37.3	302	506	558	2,192	2,084	806	388	275
(WY)	(1999)	(1999)	(1999)	(1999)	(1997)	(1994)	(1955)	(1978)	(1962)	(1958)	(1955)	(1973)
MIN	0.00	0.02	0.00	0.00	0.00	3.39	0.22	0.27	1.28	0.15	0.00	0.00
(WY)	(1961)	(1962)	(1960)	(1950)	(1960)	(1961)	(1961)	(1960)	(2004)	(1985)	(1960)	(1956)

06395000 CHEYENNE RIVER AT EDGEMONT, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1947 - 2004	
ANNUAL TOTAL	15,360.30		3,331.90		--	
ANNUAL MEAN	42.1		9.10		78.2[a]	
HIGHEST ANNUAL MEAN	--		--		434	1962
LOWEST ANNUAL MEAN	--		--		9.10	2004
HIGHEST DAILY MEAN	1,440	Mar 19	80	Feb 25	24,000	May 20, 1978
LOWEST DAILY MEAN	0.15	Aug 6	0.00	Many days	0.00[b]	Jan 5, 1947
ANNUAL SEVEN-DAY MINIMUM	0.26	Aug 1	0.00	Jul 27	0.00[c]	Aug 31, 1947
MAXIMUM PEAK FLOW	--		100	Feb 25	28,000	May 20, 1978
MAXIMUM PEAK STAGE	--		3.86[d]	Feb 25	13.65	May 20, 1978
ANNUAL RUNOFF (AC-FT)	30,470		6,610		56,660	
10 PERCENT EXCEEDS	57		18		148.[c]	
50 PERCENT EXCEEDS	14		5.6		12 [c]	
90 PERCENT EXCEEDS	1.4		0.00		0.11[c]	

a Median of annual mean discharges, 62 ft^3/s.
b No flow at times in most years.
c Reflects water years 1947-2004 only.
d Backwater from ice.
e Estimated.



06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY

LOCATION.--Lat 43°59'04", long 105°23'16", in NW¼ NE¼ NE¼ sec.9, T.46 N., R.71 W., Campbell County, Hydrologic Unit 10120201, on right bank 200 ft downstream from bridge on county road, 1.2 mi downstream from Rattlesnake Creek, 10.0 mi southwest of Piney, 15.5 mi north of Reno Junction, and 22 mi south of Gillette.

DRAINAGE AREA.--495 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to April 1983, March 2001 to current year.

REVISED RECORD.--WDR WY-78-1.

GAGE.--Water-stage recorder and metal v-notch weir. Elevation of gage is 4,540 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. No diversions upstream from station. Several small stockwater reservoirs upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.45	1.1	2.1	1.8	2.0	3.6	1.7	1.9	0.21	0.67	0.19	0.25
2	0.48	1.2	2.1	e1.5	e1.9	4.4	1.5	1.8	0.20	0.36	0.20	0.18
3	0.44	1.2	2.1	e1.0	e1.8	4.3	e1.4	1.8	0.10	0.32	0.21	0.20
4	0.50	1.1	2.0	e0.80	e1.6	4.2	1.4	1.8	0.04	0.42	0.24	0.29
5	0.51	1.1	1.7	e0.60	e1.5	4.3	1.5	1.7	0.00	0.60	0.27	0.30
6	0.47	0.97	1.9	e0.60	e1.4	3.7	1.5	1.8	0.04	0.81	0.25	0.26
7	0.45	0.95	1.9	e0.64	e1.2	3.6	1.4	1.7	0.32	0.73	0.26	0.27
8	0.45	1.0	1.9	e0.70	e1.2	4.6	1.4	1.2	0.39	0.64	0.27	0.30
9	0.49	1.1	1.8	e0.78	e1.2	4.3	1.4	0.83	0.38	0.59	0.27	0.28
10	0.51	1.3	1.7	e0.84	e1.3	4.0	1.4	0.62	0.35	0.22	0.32	0.26
11	0.51	e1.1	1.7	0.90	e1.3	4.3	1.5	0.31	0.46	0.14	0.38	0.24
12	0.51	e1.3	1.6	1.1	e1.4	3.9	1.6	0.16	0.49	0.09	0.42	0.19
13	0.55	1.5	1.7	1.3	1.5	3.5	1.6	0.28	0.49	e284	0.46	0.17
14	0.59	1.6	2.1	1.2	1.5	3.6	1.7	0.23	0.53	e500	0.46	0.17
15	0.63	1.6	2.1	1.4	1.6	3.6	1.4	0.25	0.59	87	0.47	0.16
16	0.63	1.4	1.7	1.6	1.8	3.5	1.4	0.27	0.71	22	0.53	0.15
17	0.70	1.6	1.9	1.8	2.3	4.9	1.4	0.21	0.64	4.6	0.57	0.16
18	0.73	1.8	1.8	1.6	2.6	4.5	1.8	0.14	0.48	1.5	0.64	0.15
19	0.73	1.6	1.6	1.5	2.9	3.9	2.0	0.08	0.37	0.26	0.28	0.13
20	0.76	1.7	1.7	1.6	3.5	3.0	2.0	0.07	0.36	0.06	0.02	0.17
21	0.80	1.8	1.8	1.7	2.9	2.7	2.1	0.21	0.36	0.06	0.03	0.22
22	0.84	1.4	1.7	1.8	3.0	2.6	2.0	0.07	0.34	0.07	0.03	0.26
23	0.84	1.8	1.7	1.8	3.0	2.3	1.8	0.08	0.33	0.06	0.03	0.24
24	0.80	1.8	1.7	2.0	3.7	2.2	1.8	0.23	0.33	0.07	0.01	0.22
25	0.80	1.8	1.7	e1.5	4.2	2.2	1.8	0.31	0.33	0.09	0.01	0.25
26	0.80	1.7	1.8	e1.2	3.9	2.1	1.7	0.18	0.33	0.12	0.01	0.26
27	0.88	1.9	1.6	e0.90	4.4	2.0	1.6	0.14	0.36	0.10	0.05	0.34
28	0.88	1.6	1.5	e0.70	4.8	1.8	1.8	0.11	0.43	0.13	0.08	0.43
29	0.98	2.4	1.4	e1.0	4.2	1.8	1.8	0.14	0.48	0.15	0.15	0.36
30	1.0	2.2	1.4	e1.5	---	1.7	1.8	0.16	0.69	0.16	0.14	0.48
31	1.1	---	1.6	2.1	---	1.7	---	0.18	---	0.15	0.18	---
TOTAL	20.81	44.62	55.0	39.46	69.6	102.8	49.2	18.96	11.13	906.17	7.43	7.34
MEAN	0.67	1.49	1.77	1.27	2.40	3.32	1.64	0.61	0.37	29.2	0.24	0.24
MAX	1.1	2.4	2.1	2.1	4.8	4.9	2.1	1.9	0.71	500	0.64	0.48
MIN	0.44	0.95	1.4	0.60	1.2	1.7	1.4	0.07	0.00	0.06	0.01	0.13
AC-FT	41	89	109	78	138	204	98	38	22	1,800	15	15

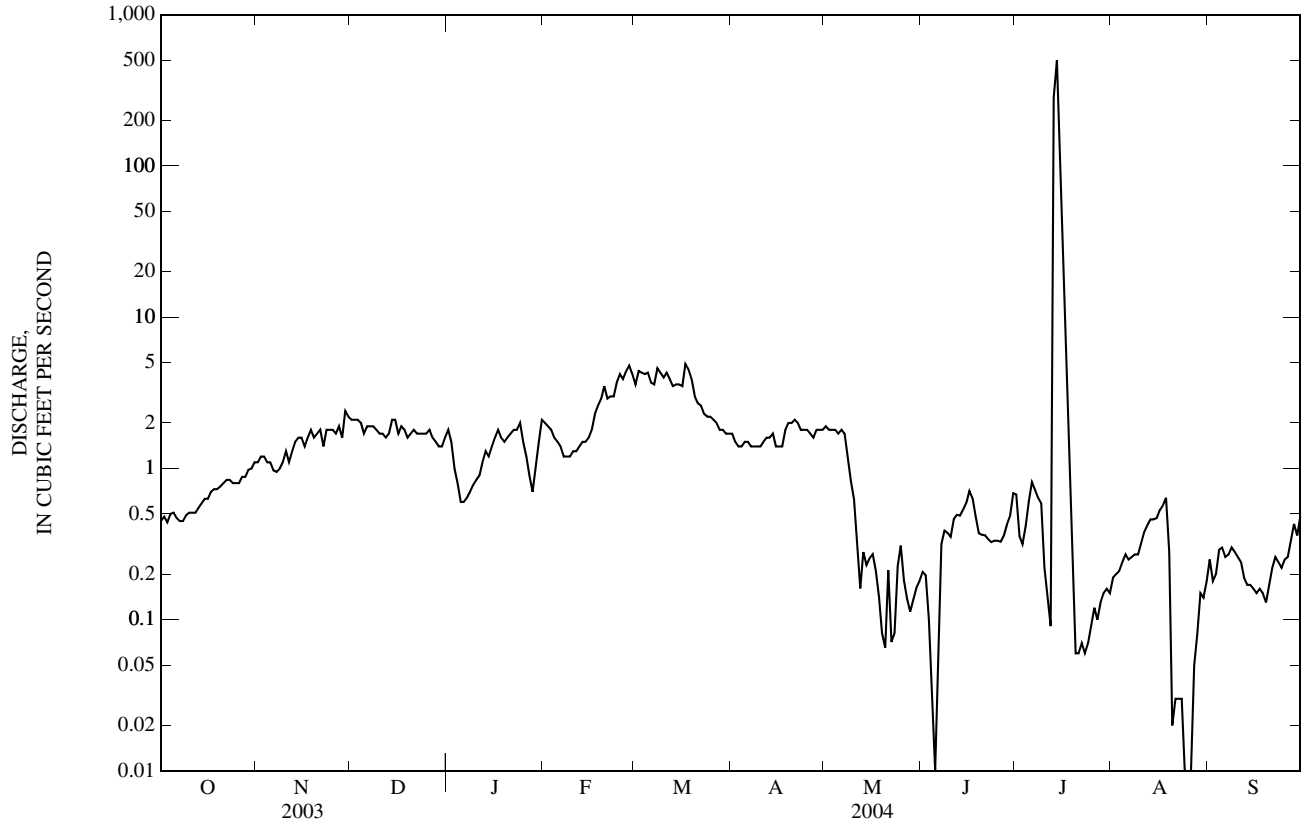
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2004, BY WATER YEAR (WY)*

MEAN	0.31	0.59	0.71	0.93	1.89	4.58	2.17	9.31	3.97	4.15	1.85	0.41
MAX	0.94	2.14	2.26	3.25	7.36	15.8	5.62	88.3	15.6	29.2	15.8	2.71
(WY)	(1983)	(2003)	(2002)	(2002)	(1982)	(1978)	(2001)	(1978)	(1979)	(2004)	(1982)	(1982)
MIN	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.00
(WY)	(1976)	(1976)	(1982)	(1977)	(1978)	(1981)	(1981)	(1981)	(1981)	(1976)	(1976)	(1976)

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1976 - 2004*	
ANNUAL TOTAL	936.82		1,332.52		--	
ANNUAL MEAN	2.57		3.64		2.61	
HIGHEST ANNUAL MEAN	--		--		9.76	1978
LOWEST ANNUAL MEAN	--		--		0.19	1976
HIGHEST DAILY MEAN	25	Jun 17	500	Jul 14	1,060	May 19, 1978
LOWEST DAILY MEAN	0.00	Aug 20	0.00	Jun 5	0.00	Many days, most years
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 20	0.02	Aug 20	0.00	Most years
MAXIMUM PEAK FLOW	--		1,130	Jul 13	4,100[a]	May 18, 1978
MAXIMUM PEAK STAGE	--		6.90[b]	Jul 13	11.33[b]	May 18, 1978
ANNUAL RUNOFF (AC-FT)	1,860		2,640		1,890	
10 PERCENT EXCEEDS	6.1		2.8		3.9	
50 PERCENT EXCEEDS	1.8		1.0		0.14	
90 PERCENT EXCEEDS	0.07		0.15		0.00	

* For period of operation.
a From rating curve extended above 1,200 ft^3/s, on basis of flow over road and culvert computations.
b From floodmarks.
e Estimated.



06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-83, March 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
06...	1205	.50	648	7.0	75	8.1	2,930	24.0	10.5	810	111	128	19.0
NOV													
05...	1200	1.0	648	9.7	79	8.2	2,760	-5.0	.0	780	140	104	13.7
DEC													
03...	1125	2.1	646	10.5	86	8.2	2,730	7.5	.0	840	175	98.9	13.1
JAN													
07...	1110	.64	642	3.9	32	7.7	3,590	2.0	.0	1,100	231	121	16.8
FEB													
04...	1055	1.6	641	8.0	66	7.8	2,690	-5.0	.0	760	168	83.8	12.2
MAR													
09...	1055	5.0	647	10.2	83	8.2	2,150	5.5	.0	670	135	80.4	10.1
APR													
05...	1035	1.5	644	6.6	73	8.0	2,670	17.0	12.0	880	170	111	13.6
MAY													
03...	1145	1.8	--	--	--	8.1	2,820	20.5	15.0	920	167	123	13.0
JUN													
08...	1110	.40	651	9.0	109	8.9	2,830	20.0	16.5	710	85.3	121	11.8
JUL													
13...	1235	.04	--	--	--	9.2	3,600	32.5	25.5	890	118	145	16.9
AUG													
09...	1135	.41	652	7.3	92	8.2	2,350	18.5	18.5	710	84.6	122	12.7
SEP													
07...	1045	.31	651	6.4	73	8.5	3,150	14.5	13.5	850	97.0	148	16.8

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT													
06...	7	456	54	281	29.2	.8	.97	1,340	2,260	3.19	3.16	2,340	262
NOV													
05...	6	368	50	315	22.0	.8	1.98	1,210	2,050	2.98	5.92	2,190	181
DEC													
03...	5	325	45	316	18.4	.9	3.98	1,140	1,970	2.75	11.5	2,020	67
JAN													
07...	6	458	48	335	24.1	1.1	2.42	1,550	2,610	3.81	4.84	2,800	98
FEB													
04...	5	322	47	339	18.6	.9	1.27	1,100	1,910	2.85	9.06	2,100	99
MAR													
09...	4	239	43	260	15.1	.6	2.13	935	1,570	2.29	22.8	1,690	76
APR													
05...	5	339	45	330	20.4	.8	1.69	1,150	2,000	2.99	8.91	2,200	163
MAY													
03...	5	354	45	283	20.7	.8	1.30	1,300	2,140	3.16	11.3	2,330	146
JUN													
08...	7	407	55	117	20.1	.7	1.14	1,380	2,100	3.10	2.46	2,280	48
JUL													
13...	8	534	56	120	29.9	1.0	.63	1,900	2,810	4.24	.34	3,120	245
AUG													
09...	5	279	45	178	17.0	.5	.30	1,110	1,730	2.59	2.11	1,900	101
SEP													
07...	6	391	49	158	27.7	.6	.48	1,580	2,360	3.61	2.22	2,660	109

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
06...	1.6	53	<.12	E12	159	1.2
NOV						
05...	1.0	60	<.12	E16	57.5	E.7
DEC						
03...	1.1	84	<.12	E16	29.3	1.4
JAN						
07...	1.1	130	<.12	32	125	1.0
FEB						
04...	.8	88	<.12	23	54.0	E.5
MAR						
09...	.8	49	<.06	38	123	.6
APR						
05...	1.2	56	<.12	46	334	E.5
MAY						
03...	1.1	38	<.12	32	112	E.7
JUN						
08...	1.9	14	<.12	59	176	1.1
JUL						
13...	4.3	17	<.12	25	69.8	2.1
AUG						
09...	2.8	61	<.06	E14	48.0	1.0
SEP						
07...	2.8	53	<.12	E15	50.7	2.1

< -- Less than
E -- Estimated value

06425800 CABALLO CREEK NEAR GILLETTE, WY

LOCATION.--Lat 44°04'52", long 105°27'50", in SW¼ SW¼ NW¼ sec.1 T.47 N., R.72 W., Campbell County, Hydrologic Unit 10120201, 50 ft downstream of bridge on state highway 59 and 14.0 mi south of Gillette.

PERIOD OF RECORD.--July to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)
JUL		
09...	0820	.00
AUG		
02...	0820	.00
SEP		
02...	0900	.00

06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY

LOCATION.--Lat 44°04'48", long 105°15'59", in NW¼ NE¼ SE¼ sec.4, T.47 N., R.70 W., Campbell County, Hydrologic Unit 10120201, 0.1 mi downstream from bridge on county road, 0.7 mi southwest of Piney, 1.3 mi upstream from mouth, and 18 mi southeast of Gillette.

PERIOD OF RECORD.--Water years 1978-80, 1982, 1983, 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
07...	0940	1.2	647	6.7	67	8.5	1,640	17.5	8.0	380	63.5	52.8	12.9
NOV													
06...	1300	1.7	655	10.8	88	8.4	1,660	1.0	.5	360	65.2	48.1	11.5
DEC													
04...	1205	1.8	661	10.9	87	8.3	1,740	-3.5	.0	460	85.3	59.5	11.1
JAN													
08...	1120	.86	653	10.2	82	8.1	2,100	2.5	.0	530	107	62.9	13.4
FEB													
05...	1120	1.5	654	9.6	77	8.3	1,450	-9.0	.0	330	69.3	38.8	10.5
MAR													
10...	1040	3.1	654	10.9	87	8.3	1,220	-2.5	.0	340	64.2	43.2	7.52
APR													
06...	1145	1.1	--	--	--	8.4	1,840	19.0	11.5	520	91.6	70.8	12.8
MAY													
04...	0940	.59	657	5.3	61	8.1	2,470	18.5	14.5	710	116	101	15.2
JUN													
09...	0715	.63	657	5.8	69	8.2	1,950	12.5	16.0	370	46.9	61.5	14.9
JUL													
14...	1240	.25	657	3.2	43	7.4	772	31.5	22.0	150	27.2	19.9	13.2
AUG													
11...	0635	.00	--	--	--	--	--	--	--	--	--	--	--
SEP													
09...	0630	.00	--	--	--	--	--	--	--	--	--	--	--

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT													
07...	5	244	57	364	21.9	.9	1.64	473	1,090	1.56	3.73	1,150	601
NOV													
06...	6	249	59	408	23.3	1.0	4.12	445	1,090	1.58	5.32	1,160	513
DEC													
04...	5	233	52	352	23.4	.9	5.40	499	1,130	1.55	5.53	1,140	354
JAN													
08...	6	315	56	452	26.1	1.2	7.44	580	1,380	1.90	3.25	1,400	679
FEB													
05...	5	226	59	359	16.2	1.0	7.94	360	945	1.32	3.93	970	630
MAR													
10...	3	144	47	217	14.2	.6	2.60	414	820	1.15	7.09	847	342
APR													
06...	5	251	50	317	25.5	.9	2.39	647	1,290	1.84	4.02	1,350	588
MAY													
04...	5	317	49	361	39.0	.9	1.94	945	1,750	2.53	2.96	1,860	465
JUN													
09...	7	314	64	421	27.1	1.1	1.85	593	1,310	1.87	2.34	1,380	1,620
JUL													
14...	3	91.9	55	107	12.7	.6	4.93	234	468	.69	.34	511	7,690
AUG													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--

06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT 07...	1.3	69	.06	6	17.6	1.0
NOV 06...	1.0	59	E.05	E6	45.9	.8
DEC 04...	.9	64	E.04	E6	77.8	1.4
JAN 08...	.9	121	E.05	9	120	1.2
FEB 05...	.9	100	.07	7	58.3	.8
MAR 10...	.8	56	E.04	14	247	.7
APR 06...	1.1	64	.07	10	150	.9
MAY 04...	1.4	86	E.03	<19	230	1.1
JUN 09...	2.1	64	.12	E4	45.0	1.2
JUL 14...	2.4	264	1.08	29	118	2.1
AUG 11...	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--

< -- Less than
E -- Estimated value

06426130 DONKEY CREEK NEAR GILLETTE, WY

LOCATION.--Lat 44°16'04", long 105°26'17", in NW¼ NW¼ SW¼ sec. 31, T.50 N., R.71 W., Campbell County, Hydrologic Unit 10120201, on right bank 0.2 mi upstream from mouth and 3.0 mi southeast of Gillette.

DRAINAGE AREA.--63.4 mi^2.

PERIOD OF RECORD.--July 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,460 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetray at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow of stream affected by numerous small reservoirs and diversions for irrigation and coalbed methane production water.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	e0.18	0.59	e0.33	1.5	e0.60	0.12	2.2	0.10	0.00	0.74	0.00
2	0.00	e0.18	0.68	e0.30	1.5	e0.66	0.10	1.6	0.08	0.00	0.39	0.00
3	0.00	e0.16	0.69	e0.27	1.1	0.73	0.11	0.90	0.04	0.00	0.24	0.00
4	0.00	e0.15	0.65	e0.25	0.99	0.70	0.12	0.69	0.00	0.00	0.16	0.00
5	0.00	e0.20	e0.60	e0.21	1.0	1.1	0.13	0.62	0.06	0.00	0.04	0.00
6	0.00	e0.30	e0.52	e0.24	e1.1	1.3	e0.14	0.59	0.06	0.27	0.00	0.00
7	0.00	0.41	0.61	e0.30	e1.3	1.4	e0.16	0.56	0.00	0.74	0.00	0.00
8	0.00	0.40	e0.61	e0.34	e1.5	1.0	e0.18	0.46	0.04	0.97	0.13	0.00
9	0.00	0.39	e0.56	e0.40	e1.7	1.4	e0.22	0.43	0.06	0.40	0.03	0.00
10	0.00	0.43	e0.61	e0.46	e2.0	1.7	e0.25	0.40	0.02	0.06	0.00	0.00
11	0.00	0.50	0.66	0.49	e2.5	1.3	e0.28	0.32	0.00	0.00	0.00	0.00
12	0.00	0.58	0.63	0.53	e3.0	0.81	e0.32	0.33	0.00	0.00	0.00	0.00
13	0.00	0.59	0.59	0.88	3.9	0.60	e0.39	0.35	0.00	0.00	0.00	0.00
14	0.00	0.55	0.57	1.7	3.7	0.61	e0.35	0.33	0.00	0.00	0.00	0.00
15	0.00	0.55	0.61	2.6	3.5	0.54	e0.31	0.27	0.00	0.80	0.00	0.00
16	0.00	0.54	0.72	4.1	3.7	0.39	e0.28	0.45	0.00	2.0	0.00	0.00
17	0.00	0.53	0.63	7.4	4.9	0.48	e0.25	0.70	0.00	0.59	0.00	0.00
18	0.00	0.52	0.67	4.4	5.8	0.49	e0.27	0.62	0.00	0.14	0.00	0.00
19	0.00	0.46	0.54	3.3	6.2	0.45	e0.32	0.89	0.00	0.02	0.00	0.00
20	0.00	0.38	0.53	3.2	e5.2	0.38	e0.37	0.95	0.00	0.00	0.00	0.00
21	0.00	e0.35	0.52	3.1	e4.0	0.34	e0.43	0.86	0.00	0.00	0.00	0.00
22	0.00	e0.31	0.59	2.3	e2.5	0.30	e0.50	0.55	0.00	0.00	0.00	0.00
23	0.12	e0.26	1.1	1.6	2.0	0.27	0.61	0.85	0.00	0.00	0.00	0.00
24	0.21	e0.28	3.3	e1.4	1.5	0.27	0.66	1.3	0.00	13	0.00	0.00
25	0.22	e0.30	0.76	e0.90	1.2	0.26	0.54	1.6	0.00	5.9	0.00	0.00
26	0.18	e0.31	0.50	e0.60	1.2	0.27	0.40	1.3	0.00	2.8	0.00	0.00
27	0.20	e0.32	e0.46	e0.40	1.0	0.25	0.35	0.68	0.00	1.5	0.00	0.00
28	0.26	e0.33	e0.38	e0.32	0.97	0.21	0.34	0.33	0.00	0.93	0.00	0.00
29	0.24	0.42	e0.33	e0.40	e0.80	0.18	0.43	0.22	0.00	4.1	0.00	0.00
30	0.23	0.49	e0.30	e0.50	---	0.16	1.2	0.19	0.00	3.4	0.00	0.00
31	e0.21	---	e0.31	1.4	---	0.12	---	0.15	---	1.8	0.00	---
TOTAL	1.87	11.37	20.82	44.62	71.26	19.27	10.13	21.69	0.46	39.42	1.73	0.00
MEAN	0.06	0.38	0.67	1.44	2.46	0.62	0.34	0.70	0.02	1.27	0.06	0.00
MAX	0.26	0.59	3.3	7.4	6.2	1.7	1.2	2.2	0.10	13	0.74	0.00
MIN	0.00	0.15	0.30	0.21	0.80	0.12	0.10	0.15	0.00	0.00	0.00	0.00
AC-FT	3.7	23	41	89	141	38	20	43	0.9	78	3.4	0.00

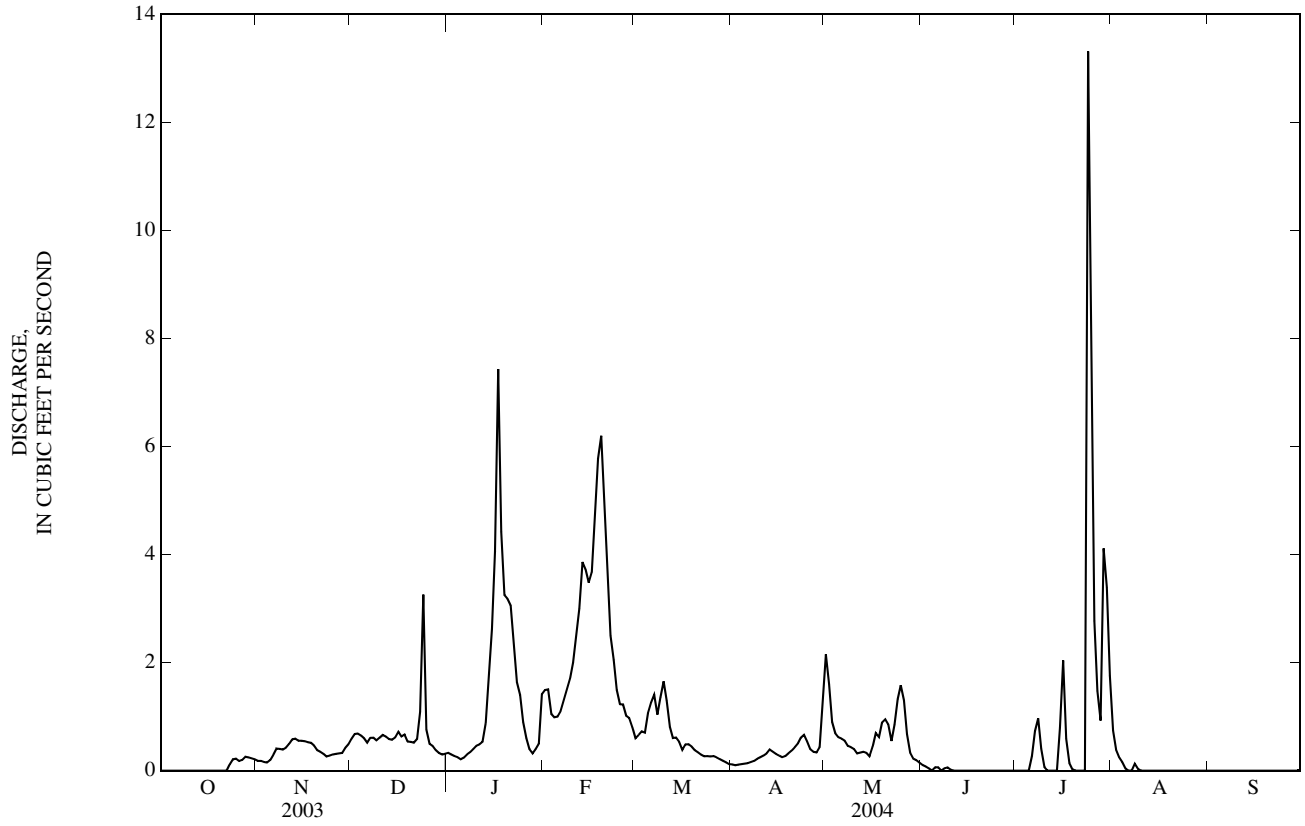
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

MEAN	0.26	0.44	0.52	0.80	1.26	2.45	1.39	5.61	1.54	0.45	0.01	0.08
MAX	0.51	0.51	0.67	1.44	2.46	4.77	2.99	18.8	3.38	1.27	0.06	0.24
(WY)	(2003)	(2003)	(2004)	(2004)	(2004)	(2003)	(2001)	(2001)	(2001)	(2004)	(2004)	(2002)
MIN	0.06	0.38	0.40	0.30	0.29	0.40	0.34	0.70	0.02	0.08	0.00	0.00
(WY)	(2004)	(2004)	(2001)	(2002)	(2002)	(2002)	(2004)	(2004)	(2004)	(2002)	(2000)	(2001)

06426130 DONKEY CREEK NEAR GILLETTE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2000 - 2004	
ANNUAL TOTAL	406.63		242.64		--	
ANNUAL MEAN	1.11		0.66		1.24	
HIGHEST ANNUAL MEAN	--		--		2.70	2001
LOWEST ANNUAL MEAN	--		--		0.44	2002
HIGHEST DAILY MEAN	13	Mar 23	13	Jul 24	442	May 29, 2001
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days, Most years
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 25	0.00	Oct 1	0.00	Most years
MAXIMUM PEAK FLOW	--		26	Jul 24	3,400[a]	May 28, 2001
MAXIMUM PEAK STAGE	--		2.83	Jul 24	10.89[b]	May 28, 2001
ANNUAL RUNOFF (AC-FT)	807		481		898	
10 PERCENT EXCEEDS	2.9		1.6		2.0	
50 PERCENT EXCEEDS	0.55		0.31		0.39	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From rating curve extended above 150 ft^3/s, on basis of slope-area measurement of peak flow.
b From floodmarks.
e Estimated.



06426160 STONEPILE CREEK AT MOUTH NEAR GILLETTE, WY

LOCATION.--Lat 44°16'04", long 105°26'17", in NW¼ NW¼ SW¼ sec. 31. T.50 N., R.71 W., Campbell County, Hydrologic Unit 10120201, on right bank 0.2 mi upstream form mouth and 3.0 mi southeast of Gillette.

DRAINAGE AREA.--14.5 mi^2.

PERIOD OF RECORD.--July 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,460 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records poor. Natural flow of stream affected by City of Gillette Wastewater Treatment Facility.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	5.4	3.7	e3.3	e2.6	3.1	1.7	2.7	2.8	8.5	2.8	4.7
2	3.1	4.5	3.6	e3.0	e2.6	2.3	1.6	2.6	2.6	4.9	3.2	3.6
3	3.2	4.1	4.3	e2.6	e2.8	2.7	1.5	2.3	2.5	7.0	2.0	3.2
4	3.0	4.0	e4.0	e2.3	e2.6	3.7	2.3	1.8	2.7	3.8	2.3	3.4
5	3.0	4.2	e3.4	e2.0	e2.4	4.3	2.9	2.5	2.9	5.9	4.2	3.0
6	3.1	4.2	e3.8	e2.5	e2.2	3.4	2.9	2.8	2.8	4.9	3.0	3.2
7	3.4	e4.0	e4.5	e2.6	e3.0	3.2	6.6	1.9	2.7	3.9	2.4	2.8
8	3.3	e4.2	e3.8	e2.7	e2.5	4.4	2.7	2.4	3.1	3.6	2.4	2.8
9	3.3	e4.4	e3.7	e3.0	e2.6	4.2	2.2	2.4	3.0	3.2	3.5	2.7
10	3.5	e5.0	e3.5	e3.4	e2.8	2.8	2.4	2.3	2.7	3.0	3.5	2.6
11	3.4	e4.5	e3.0	e2.7	e2.6	3.0	2.0	2.3	3.3	3.6	5.0	2.7
12	3.5	e3.8	e3.6	2.5	e2.5	2.6	2.4	2.6	7.0	3.5	6.4	2.8
13	3.4	e4.3	e3.8	2.3	e2.8	2.6	2.2	2.8	9.4	3.7	4.6	3.7
14	3.8	e4.1	e4.0	2.3	e3.3	2.1	2.1	2.1	4.9	11	4.0	2.3
15	3.5	e4.1	e3.5	2.4	e2.8	3.0	3.6	2.1	5.4	2.6	4.3	2.6
16	3.5	e4.1	e3.0	2.9	e2.5	2.5	3.2	2.9	4.9	3.1	3.8	2.7
17	3.7	e3.7	e3.5	2.9	e2.9	2.3	5.1	8.8	5.6	3.3	3.4	2.7
18	3.4	e4.0	e3.1	3.6	e3.4	2.5	4.4	3.3	5.0	3.9	3.2	2.6
19	3.3	e4.3	e3.4	3.6	e3.0	2.2	4.1	2.6	5.6	4.1	3.8	2.4
20	3.8	e3.8	e3.9	2.5	e2.8	1.9	3.4	2.4	5.8	4.0	4.2	1.7
21	4.2	e3.5	e3.2	2.3	e2.8	1.9	4.6	4.8	5.8	3.9	3.5	1.9
22	3.8	e3.0	e3.1	3.0	e2.6	2.1	4.1	4.3	5.1	3.0	4.0	2.0
23	3.9	e3.5	e3.3	3.0	e2.8	2.1	2.9	5.0	4.3	23	4.8	2.3
24	3.6	e4.0	e3.7	3.5	e2.8	1.7	2.3	3.5	5.5	13	5.1	2.3
25	3.7	e3.8	e3.4	3.5	e3.3	1.5	2.4	2.7	4.9	2.5	4.4	2.3
26	4.2	e4.0	e3.0	3.1	e2.8	1.7	2.3	2.5	6.3	2.2	5.5	2.4
27	3.5	e4.0	e2.8	e2.8	2.5	2.1	2.2	2.6	5.1	2.2	7.5	2.4
28	3.6	e4.5	e2.3	e2.2	2.9	1.8	2.7	2.6	4.6	7.7	5.3	2.3
29	4.2	4.2	e2.5	e2.6	2.7	2.0	4.8	2.2	5.0	3.4	5.1	2.1
30	5.4	4.0	e2.8	e3.2	---	1.7	3.0	3.2	5.9	2.8	4.9	2.3
31	3.9	---	e3.0	e2.8	---	1.7	---	2.7	---	2.7	4.4	---
TOTAL	111.1	123.2	106.2	87.1	79.9	79.1	90.6	91.7	137.2	157.9	126.5	80.5
MEAN	3.58	4.11	3.43	2.81	2.76	2.55	3.02	2.96	4.57	5.09	4.08	2.68
MAX	5.4	5.4	4.5	3.6	3.4	4.4	6.6	8.8	9.4	23	7.5	4.7
MIN	2.9	3.0	2.3	2.0	2.2	1.5	1.5	1.8	2.5	2.2	2.0	1.7
AC-FT	220	244	211	173	158	157	180	182	272	313	251	160

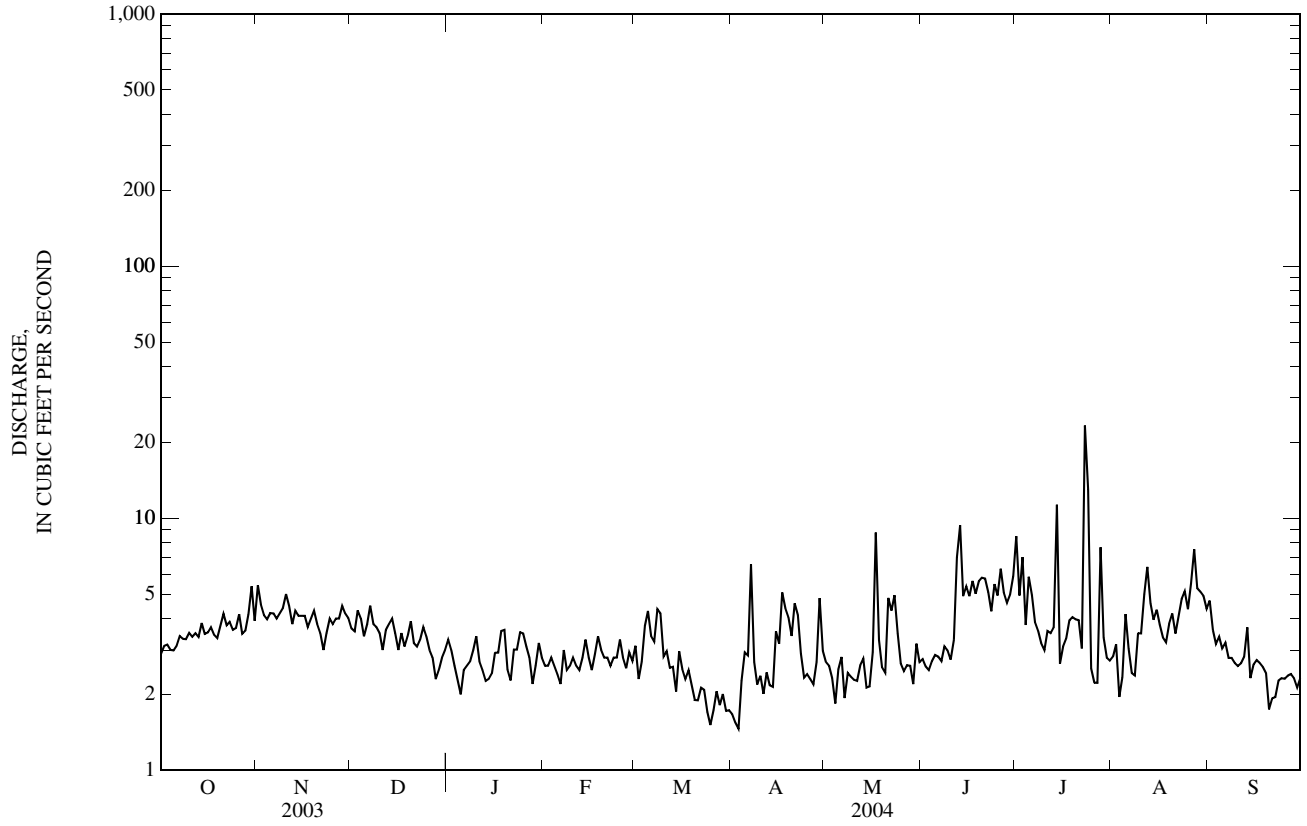
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

MEAN	3.11	3.27	3.17	3.14	3.26	4.46	3.89	5.25	4.50	4.26	3.64	3.04
MAX	3.58	4.11	3.43	3.55	4.61	6.36	4.95	10.9	5.63	5.09	4.34	4.13
(WY)	(2004)	(2004)	(2004)	(2001)	(2003)	(2003)	(2001)	(2001)	(2003)	(2004)	(2002)	(2003)
MIN	2.67	2.81	2.92	2.81	2.76	2.55	3.02	2.96	3.09	3.52	2.87	2.15
(WY)	(2002)	(2003)	(2002)	(2004)	(2004)	(2004)	(2004)	(2004)	(2002)	(2001)	(2000)	(2001)

06426160 STONEPILE CREEK AT MOUTH NEAR GILLETTE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2000 - 2004	
ANNUAL TOTAL	1,533.7		1,271.0		--	
ANNUAL MEAN	4.20		3.47		3.78	
HIGHEST ANNUAL MEAN	--		--		4.25	2001
LOWEST ANNUAL MEAN	--		--		3.35	2002
HIGHEST DAILY MEAN	21	Sep 10	23	Jul 23	192	May 29, 2001
LOWEST DAILY MEAN	2.3	May 25,Dec 29	1.5	Mar 25	1.2	Sep 14, 2001
ANNUAL SEVEN-DAY MINIMUM	2.6	May 25	1.7	Mar 28	1.7	Sep 10, 2001
MAXIMUM PEAK FLOW	--		97	Jul 23	800[a]	May 28, 2001
MAXIMUM PEAK STAGE	--		3.39	Jul 23	9.14[b]	May 28, 2001
ANNUAL RUNOFF (AC-FT)	3,040		2,520		2,740	
10 PERCENT EXCEEDS	5.3		4.9		4.9	
50 PERCENT EXCEEDS	3.8		3.1		3.2	
90 PERCENT EXCEEDS	3.0		2.2		2.4	

a From rating curve extended above 39 ft^3/s, on basis of slope-area measurement of peak flow.
b From floodmarks.
e Estimated.



06426400 DONKEY CREEK NEAR MOORCROFT, WY

LOCATION.--Lat 44°16'58", long 105°03'48", in SE¼ NE¼ SE¼ sec.30, T.50 N., R.68 W., Crook County, Hydrologic Unit 10120201, 25 ft upstream from county bridge, 1.2 mi downstream from Well Creek, and 6.0 mi west of Moorcroft.

PERIOD OF RECORD.--Water years 1977-89, 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
07...	0840	2.9	651	7.2	71	8.1	2,520	12.5	7.5	680	133	84.8	17.3
NOV													
06...	1200	2.0	659	13.4	107	8.3	3,170	-3.0	.0	970	195	118	19.1
DEC													
04...	1100	3.2	665	11.8	94	8.3	2,780	-3.5	.0	820	158	103	15.5
JAN													
08...	1010	1.1	658	6.8	55	7.7	3,550	1.5	.0	1,100	192	139	18.4
FEB													
05...	1010	2.2	658	4.0	32	7.8	2,730	-10.0	.0	810	148	106	16.3
MAR													
10...	0930	11	659	10.5	84	8.3	2,340	-3.5	.0	600	109	80.7	9.99
APR													
06...	1035	1.1	--	--	--	8.5	2,800	17.0	11.5	820	133	118	14.9
MAY													
04...	0840	3.1	660	6.8	75	8.5	2,720	17.0	12.5	830	120	128	14.1
JUN													
08...	2005	.69	659	8.1	106	8.4	3,230	18.0	20.5	1,000	152	150	15.2
JUL													
14...	1130	.79	660	12.2	178	8.5	2,860	28.5	26.5	610	88.4	94.4	14.1
AUG													
09...	2030	.65	658	8.0	106	8.6	2,470	17.5	21.5	770	122	112	14.8
SEP													
07...	1850	.12	658	6.4	82	8.4	2,690	21.5	19.5	640	101	93.5	15.2

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)
OCT													
07...	5	312	49	285	241	1.3	.56	695	1,660	2.44	14.0	1,790	526
NOV													
06...	5	355	44	281	260	1.3	5.01	1,070	2,190	3.33	13.2	2,450	365
DEC													
04...	5	302	44	297	226	1.1	4.26	825	1,810	2.69	17.1	1,980	290
JAN													
08...	5	398	45	459	320	1.6	16.0	1,010	2,370	3.58	7.83	2,640	463
FEB													
05...	5	328	46	371	254	1.3	14.0	726	1,820	2.63	11.5	1,930	383
MAR													
10...	5	272	49	224	286	.9	6.02	595	1,490	2.21	48.2	1,620	566
APR													
06...	6	379	50	346	214	1.4	1.98	917	1,990	2.87	6.27	2,110	297
MAY													
04...	5	308	44	281	211	1.5	1.54	898	1,850	2.80	17.2	2,060	1,120
JUN													
08...	5	383	45	360	196	1.4	2.23	1,210	2,320	3.58	4.90	2,630	138
JUL													
14...	8	435	60	334	172	1.4	.17	964	1,970	2.77	4.34	2,040	1,080
AUG													
09...	4	263	42	276	191	1.3	.34	795	1,660	2.46	3.18	1,810	235
SEP													
07...	6	346	53	306	192	1.3	2.57	852	1,790	2.58	.61	1,900	E4

06426400 DONKEY CREEK NEAR MOORCROFT, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll- ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
07...	2.0	42	E.05	E12	183	2.5
NOV						
06...	2.6	41	<.12	E12	158	4.7
DEC						
04...	2.9	40	<.12	20	106	5.4
JAN						
08...	3.6	43	<.12	48	259	3.6
FEB						
05...	2.8	37	<.12	47	196	2.0
MAR						
10...	1.7	35	.06	19	217	1.5
APR						
06...	3.5	32	<.12	28	301	1.4
MAY						
04...	3.6	47	E.10	E13	167	3.0
JUN						
08...	5.3	35	<.12	E16	149	1.6
JUL						
14...	10.4	44	E.07	E18	290	1.8
AUG						
09...	3.6	41	<.06	29	97.4	1.4
SEP						
07...	3.3	26	<.12	494	309	2.0

< -- Less than
E -- Estimated value

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY

LOCATION.--Lat 44°19'19", long 104°56'24", in NW¼ NW¼ sec.17, T.50 N., R.67 W., Crook County, Hydrologic Unit 10120201, on right bank 3.1 mi upstream from bridge on Highway 14, and 4.0 mi northeast of Moorcroft.

DRAINAGE AREA.--1,690 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1943 to September 1970, October 1975 to September 1983, October 1985 to September 1987, October 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,110 ft above NGVD of 1929, from topographic map. Prior to March 28, 1947, nonrecording gage, and March 28, 1947 to January 16, 1951, water-stage recorder at site 4 mi downstream at different datum. January 17, 1951 to September 1970, water-stage recorder at site 7.9 mi upstream at different datum. September 1970 to October 22, 1993, water-stage recorder at site 8.0 mi upstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Numerous small stockwater and soil conservation reservoirs upstream from station. Diversions for irrigation upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	e5.6	e5.9	e3.8	e3.6	e5.0	3.8	6.9	4.5	2.1	4.9	2.0
2	4.7	e5.4	e5.9	e4.2	e3.2	e4.4	5.0	6.3	3.0	2.2	3.8	1.7
3	3.8	e5.6	e5.9	e3.1	e3.2	e5.2	11	5.6	2.5	2.2	5.4	1.5
4	3.1	e5.4	e6.5	e2.6	e3.2	e6.2	10	5.7	2.0	2.1	3.9	1.4
5	2.8	e5.4	e6.0	e2.3	e3.4	e8.6	8.7	5.4	1.8	2.1	3.7	1.3
6	2.6	e5.3	e6.0	e2.1	e3.3	e8.6	6.8	5.0	1.2	1.5	3.2	1.2
7	2.4	e5.4	e7.2	e2.3	e3.3	e12	5.5	3.8	1.6	1.2	4.6	1.1
8	3.8	e5.6	e7.4	e2.4	e4.3	e15	4.4	3.6	1.8	0.97	3.9	0.99
9	4.7	e5.8	e7.0	e3.1	e4.3	e20	3.9	2.8	1.4	2.1	3.3	0.76
10	4.4	e6.0	e6.3	e3.6	e4.3	e28	3.8	2.5	1.3	3.1	2.6	0.52
11	4.3	e6.5	e5.6	e4.0	e4.1	e21	5.2	1.8	1.3	2.5	2.1	1.7
12	4.2	e6.5	e5.4	e4.2	e3.1	e23	10	1.4	1.4	1.5	1.9	2.5
13	4.7	e6.0	e5.4	e4.8	e3.3	e20	9.7	2.2	1.4	1.1	1.5	2.2
14	4.5	e6.9	e6.5	e4.8	e3.5	e18	8.6	2.8	1.3	0.79	1.8	1.8
15	4.6	e6.9	e6.5	e4.8	e3.7	e19	6.3	4.4	1.3	0.68	2.3	1.3
16	4.3	e7.2	e5.8	e4.5	e4.2	e16	4.9	6.4	1.4	108	2.1	0.99
17	3.8	e7.4	e5.2	e4.1	e3.8	15	4.3	5.6	1.3	98	2.0	0.79
18	4.5	e6.6	e5.4	e3.9	e5.2	16	4.4	4.5	1.4	50	1.6	5.3
19	5.1	e7.4	e5.4	e3.9	e7.0	14	5.2	2.7	1.5	31	1.3	2.0
20	5.0	e7.8	e5.4	e3.9	e90	11	5.6	1.5	1.9	21	1.1	1.3
21	4.9	e6.5	e6.0	e4.1	e80	12	6.8	2.1	1.8	15	0.91	1.0
22	6.6	e5.5	e5.4	e4.1	e50	13	9.6	2.3	1.7	13	0.77	0.81
23	6.9	e4.5	e5.0	e4.5	e25	11	8.2	2.2	1.5	12	0.63	0.66
24	5.8	e5.0	e4.8	e4.1	e17	8.5	7.3	3.5	1.5	12	1.2	0.46
25	5.3	e5.6	e5.2	e3.8	e10	7.7	7.4	5.6	1.5	31	1.5	0.36
26	5.3	e5.6	e5.2	e3.0	e8.0	5.9	7.5	6.1	1.3	26	1.3	0.81
27	5.6	e5.6	e5.2	e2.7	e7.4	5.0	6.9	5.6	1.2	19	1.1	1.8
28	5.5	e5.9	e4.4	e2.8	e6.4	4.4	6.2	5.5	1.1	12	1.0	1.9
29	5.7	e5.9	e3.7	e3.2	e5.5	5.5	7.2	5.8	1.4	9.9	0.99	1.8
30	5.8	e6.8	e3.7	e3.4	---	5.8	7.5	6.4	1.7	14	3.2	1.7
31	e5.8	---	e3.5	e3.9	---	4.2	---	5.3	---	8.5	2.2	---
TOTAL	146.6	181.6	172.8	112.0	373.3	369.0	201.7	131.3	50.0	506.54	71.80	43.65
MEAN	4.73	6.05	5.57	3.61	12.9	11.9	6.72	4.24	1.67	16.3	2.32	1.46
MAX	6.9	7.8	7.4	4.8	90	28	11	6.9	4.5	108	5.4	5.3
MIN	2.4	4.5	3.5	2.1	3.1	4.2	3.8	1.4	1.1	0.68	0.63	0.36
AC-FT	291	360	343	222	740	732	400	260	99	1,000	142	87

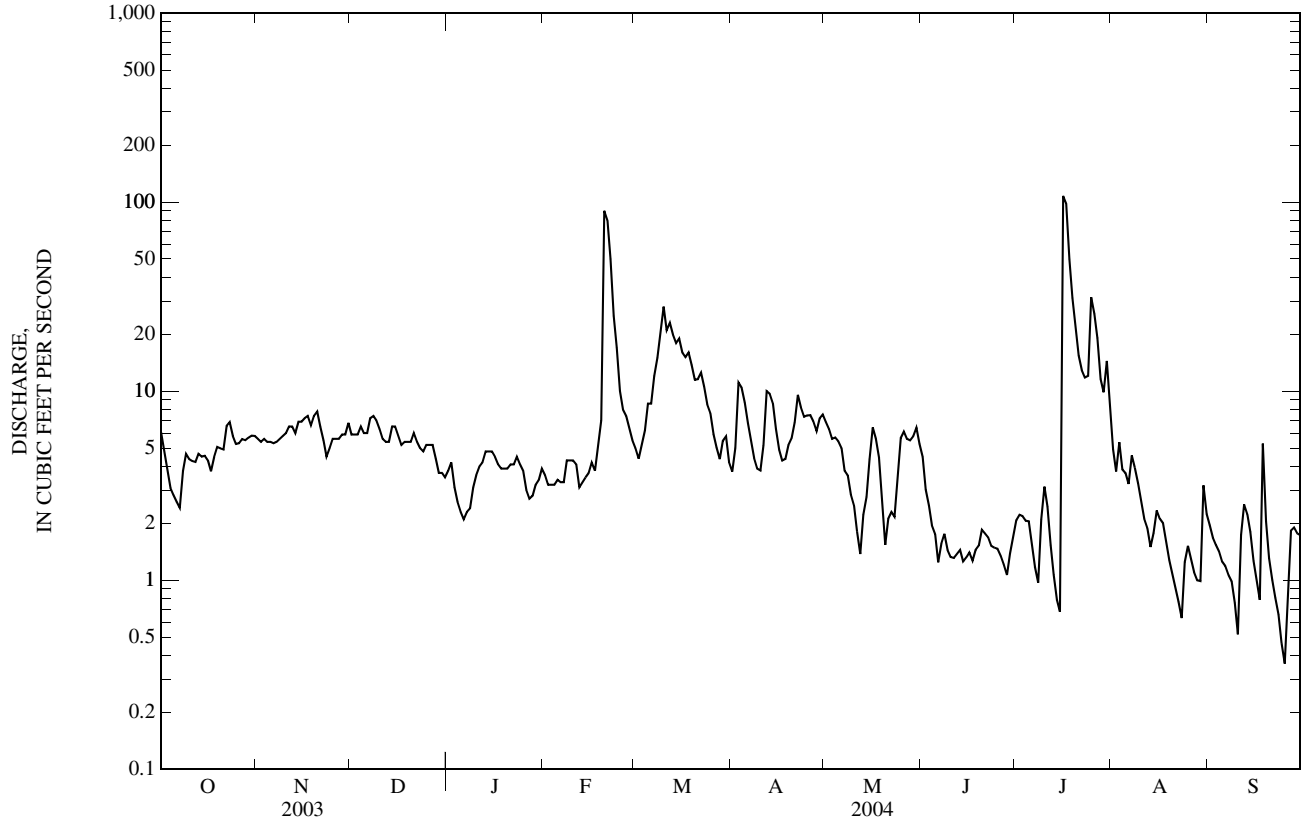
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2004, BY WATER YEAR (WY)

MEAN	5.67	2.56	2.50	3.57	17.6	58.2	26.8	64.9	60.5	19.0	10.2	5.24
MAX	68.0	23.1	22.3	53.5	260	374	190	1,057	509	72.5	57.3	63.5
(WY)	(1995)	(1999)	(1956)	(1997)	(1962)	(1978)	(1944)	(1978)	(1964)	(1948)	(1993)	(1951)
MIN	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.05	0.10	0.00	0.00	0.00
(WY)	(1944)	(1944)	(1944)	(1944)	(1944)	(1951)	(1961)	(1958)	(1966)	(1954)	(1944)	(1944)

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1944 - 2004	
ANNUAL TOTAL	7,731.86		2,360.29		--	
ANNUAL MEAN	21.2		6.45		23.1	
HIGHEST ANNUAL MEAN	--		--		136	1978
LOWEST ANNUAL MEAN	--		--		1.14	1961
HIGHEST DAILY MEAN	557	Mar 15	108	Jul 16	10,300	May 19, 1978
LOWEST DAILY MEAN	0.00	Aug 24,25	0.36	Sep 25	0.00	Several days most years
ANNUAL SEVEN-DAY MINIMUM	0.16	Aug 19	0.77	Sep 20	0.00	Most years
MAXIMUM PEAK FLOW	--		204[a]	Jul 16	15,300[b]	May 19, 1978
MAXIMUM PEAK STAGE	--		7.53[c]	Mar 15	14.60[d]	May 19, 1978
ANNUAL RUNOFF (AC-FT)	15,340		4,680		16,730	
10 PERCENT EXCEEDS	33		11		34	
50 PERCENT EXCEEDS	6.2		4.4		1.9	
90 PERCENT EXCEEDS	2.9		1.3		0.00	

a Gage height, 5.72 ft.
b From rating curve extended above 11,000 ft^3/s, site and datum then in use.
c Backwater from ice.
d From floodmarks in shelter, site and datum then in use.
e Estimated.



06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-57, 1975-93, October 1994 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
07...	0740	2.4	654	7.6	77	8.3	2,780	6.0	8.5	700	120	97.5	18.3
NOV													
06...	1015	5.3	663	11.5	91	8.4	2,640	-1.0	.0	670	122	88.1	15.5
DEC													
04...	0945	6.5	667	13.2	105	8.4	3,310	-.5	.0	890	168	113	16.6
JAN													
08...	0815	2.4	658	9.9	80	7.8	3,750	1.0	.0	1,200	231	145	17.8
FEB													
05...	0830	3.4	658	8.3	67	7.9	2,990	-10.0	.0	830	161	104	17.4
MAR													
10...	0800	28	660	10.9	87	8.4	1,570	-2.0	.0	450	85.6	56.4	8.08
APR													
06...	0900	6.9	655	9.4	101	8.5	2,530	13.5	11.5	720	120	103	14.4
MAY													
04...	0710	5.9	662	7.3	81	8.6	2,700	9.5	13.0	640	82.6	105	13.5
JUN													
08...	1855	1.7	661	12.6	169	8.4	3,060	18.0	22.0	720	108	110	15.6
JUL													
14...	1015	.82	657	8.8	121	8.0	2,800	28.5	23.0	650	103	94.8	15.9
AUG													
09...	1840	3.1	660	8.6	116	8.3	2,210	22.5	22.5	710	119	99.1	16.3
SEP													
07...	1745	1.0	662	9.4	122	8.6	2,690	22.5	20.5	610	91.0	93.8	16.1

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
07...	7	401	55	274	127	.9	.17	1,060	1,990	2.83	13.5	2,080	--
NOV													
06...	6	346	52	360	160	1.1	2.16	862	1,830	2.69	28.3	1,980	.09
DEC													
04...	6	413	50	426	167	1.1	3.65	1,160	2,300	3.31	42.8	2,440	--
JAN													
08...	6	452	45	526	131	1.0	8.57	1,480	2,790	4.18	19.9	3,070	--
FEB													
05...	6	414	51	499	154	1.2	10.9	1,010	2,190	3.13	21.2	2,310	2.24
MAR													
10...	4	179	46	205	63.9	.6	3.36	541	1,060	1.52	84.5	1,120	--
APR													
06...	6	350	51	258	144	1.0	.16	920	1,810	2.60	35.6	1,910	--
MAY													
04...	6	358	54	206	143	.9	.36	1,030	1,860	2.78	32.6	2,040	<.04
JUN													
08...	7	427	56	320	127	1.0	.22	1,160	2,140	3.11	10.5	2,290	--
JUL													
14...	6	358	54	385	271	1.5	4.19	733	1,810	2.58	4.20	1,900	--
AUG													
09...	4	225	40	294	128	1.1	1.83	730	1,500	2.26	13.9	1,660	<.04
SEP													
07...	6	316	52	285	249	1.3	.15	773	1,710	2.54	5.04	1,870	--

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	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)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
OCT												
07...	--	--	--	--	--	316	1.3	70	<.12	<19	30.5	1.9
NOV												
06...	4.30	.036	.03	E8	E10	135	1.2	41	<.12	10	54.2	2.0
DEC												
04...	--	--	--	--	--	117	1.9	45	<.12	E16	55.0	4.3
JAN												
08...	--	--	--	--	--	111	1.5	64	<.12	27	142	2.4
FEB												
05...	3.37	.016	.50	E7	E13	199	1.6	51	<.12	E17	91.7	1.4
MAR												
10...	--	--	--	--	--	696	1.1	43	.08	8	58.0	.9
APR												
06...	--	--	--	--	--	591	1.4	54	E.08	<19	83.1	1.0
MAY												
04...	<.06	<.008	<.02	55	64	681	1.6	44	E.06	E12	78.1	1.6
JUN												
08...	--	--	--	--	--	602	2.2	59	E.06	<19	215	1.4
JUL												
14...	--	--	--	--	--	1,080	2.6	65	E.07	<19	440	1.1
AUG												
09...	<.06	<.008	<.02	100	130	467	2.3	95	.07	<19	66.7	1.1
SEP												
07...	--	--	--	--	--	432	1.6	64	<.12	<19	37.5	1.7

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06428050 BELLE FOURCHE RIVER BELOW HULETT, WY

LOCATION.--Lat 44°42'04", long 104°35'07", in SW¼ NE¼ sec.6, T.54 N., R.64 W., Crook County, Hydrologic Unit 10120201, at bridge, 1.3 mi northeast of Hulett, and 4.7 mi downstream from Blacktail Creek.

PERIOD OF RECORD.--February 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
06...	1745	8.8	665	11.7	139	8.8	1,960	22.5	16.5	950	251	79.6	10.4
NOV													
06...	0800	9.8	672	11.3	88	7.9	2,250	-9.0	.0	1,100	292	82.0	9.48
DEC													
04...	0805	9.5	675	10.7	83	7.9	2,100	-2.5	.0	1,100	294	85.1	7.51
JAN													
07...	1705	3.4	663	10.3	82	7.4	2,490	-5.0	.0	1,300	369	87.7	8.43
FEB													
04...	1655	7.2	652	14.2	115	7.8	2,160	-6.0	.0	1,100	318	76.4	8.36
MAR													
09...	1825	29	660	10.7	105	8.1	1,350	10.0	8.0	630	181	44.3	7.39
APR													
06...	0725	13	664	7.4	78	7.8	2,060	9.0	11.0	1,100	302	79.8	9.19
MAY													
03...	1715	11	--	--	--	8.4	1,990	22.5	21.5	950	255	75.1	8.93
JUN													
08...	1700	6.8	672	11.8	155	8.4	2,070	17.0	22.0	940	238	83.2	11.4
JUL													
14...	0840	8.9	675	10.0	128	7.5	1,970	23.5	21.0	760	186	71.3	12.1
AUG													
09...	1710	44	670	9.9	134	8.4	1,810	23.0	23.5	500	91.4	66.0	12.9
SEP													
07...	1555	54	655	11.7	148	8.6	1,810	19.5	19.0	480	86.6	64.0	12.8

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
06...	2	134	23	131	31.2	.5	5.29	963	1,550	2.32	40.5	1,700	--
NOV													
06...	2	137	22	189	35.3	.5	9.88	1,090	1,770	2.73	53.1	2,010	<.04
DEC													
04...	2	117	19	178	33.4	.5	10.1	972	1,630	2.33	44.0	1,710	--
JAN													
07...	1	110	16	231	35.6	.5	14.1	1,220	1,980	3.03	20.4	2,230	--
FEB													
04...	1	114	18	201	21.9	.5	13.4	1,030	1,710	2.58	36.9	1,900	.09
MAR													
09...	1	59.6	17	148	9.07	.3	7.06	604	1,000	1.48	85.4	1,090	--
APR													
06...	1	99.7	17	166	12.7	.4	2.76	1,070	1,670	2.50	64.6	1,840	--
MAY													
03...	2	125	22	127	24.4	.4	3.19	995	1,560	2.36	51.6	1,740	<.04
JUN													
08...	2	141	24	110	28.9	.5	3.55	1,030	1,610	2.45	33.0	1,800	--
JUL													
14...	3	165	32	156	38.4	.6	3.59	899	1,470	2.21	39.1	1,630	--
AUG													
09...	4	205	46	170	47.9	.7	1.18	698	1,220	1.80	158	1,330	<.04
SEP													
07...	4	206	47	175	47.8	.7	.66	693	1,220	1.79	191	1,310	--

06428050 BELLE FOURCHE RIVER BELOW HULETT, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	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)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Alum-inum, water, unfltrd recover -able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover -able, ug/L (01007)	Beryll-ium, water, unfltrd recover -able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, unfltrd ug/L (01147)
OCT												
06...	--	--	--	--	--	8	.6	36	<.06	15	5.4	1.8
NOV												
06...	E.06	<.008	<.02	51	E56	28	.6	29	<.06	15	14.9	3.1
DEC												
04...	--	--	--	--	--	22	.6	22	<.06	13	13.4	2.9
JAN												
07...	--	--	--	--	--	22	.7	27	<.06	26	40.2	5.0
FEB												
04...	.12	<.008	E.01	640	E2,100	9	.7	21	<.06	20	18.2	3.6
MAR												
09...	--	--	--	--	--	82	.6	26	<.06	10	138	1.7
APR												
06...	--	--	--	--	--	12	.6	33	<.06	37	79.9	2.2
MAY												
03...	<.06	E.004	<.02	E1	E4	19	.7	23	<.06	29	31.3	2.6
JUN												
08...	--	--	--	--	--	14	.9	26	<.06	49	16.9	2.4
JUL												
14...	--	--	--	--	--	78	1.1	46	<.06	46	59.2	1.7
AUG												
09...	<.06	<.008	<.02	82	64	37	.9	48	<.06	14	9.3	1.1
SEP												
07...	--	--	--	--	--	13	.9	42	<.06	8	5.7	1.3

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°44'59", long 104°02'49", in NE¼ NW¼ NW¼ sec.18, T.9 N., R.1 E., Butte County, Hydrologic Unit 10120202, on left bank 0.3 mi downstream from State line, 3.7 mi downstream from Oak Creek, and 11 mi northwest of Belle Fourche, South Dakota.

DRAINAGE AREA.--3,280 mi^2.

PERIOD OF RECORD.--December 1946 to current year. Records for water year 1947 incomplete, yearly estimate published in WSP 1729.

GAGE.--Water-stage recorder. Elevation of gage is 3,095.7 ft above NGVD of 1929. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of about 5,000 acres. Flow regulated by Keyhole Dam, useable capacity, 191,600 acre-ft, 143 mi upstream since October 25, 1952. Maximum discharge prior to regulation, 3,620 ft^3/s, June 23, 1947, gage height, 12.51 ft; maximum gage height, 14.33 ft, March 22, 1949, backwater from ice; no flow at times some years. Station operated and record provided by the South Dakota District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	e15	e15	e12	e5.0	e48	28	14	16	5.7	57	93
2	19	e15	e15	e10	e5.0	e47	26	14	15	3.6	56	92
3	18	e14	e14	e6.5	e5.0	e45	25	14	14	3.6	58	95
4	16	e14	e14	e6.5	e5.0	e43	24	14	14	50	60	88
5	15	e14	e15	e7.0	e5.0	e43	24	15	11	132	68	63
6	14	e13	e15	e7.5	e5.0	e45	23	15	8.4	511	54	56
7	13	e14	e16	e8.0	e4.8	e48	22	14	7.5	169	47	53
8	13	e15	e16	e8.0	e4.8	e54	21	14	7.2	142	43	51
9	13	e15	e16	e8.0	e4.6	e250	20	13	5.5	108	40	49
10	13	e16	e16	e8.0	e4.6	115	19	13	5.3	67	39	48
11	12	e18	e15	e8.0	e4.5	65	19	12	9.5	49	39	47
12	13	e21	e15	e8.0	e4.3	59	19	11	9.4	36	39	47
13	13	e23	e15	e7.8	e4.3	51	18	13	9.0	26	31	47
14	12	e23	e15	e7.8	e4.5	44	18	12	8.8	21	24	52
15	13	e23	e14	e7.6	e4.5	50	18	11	8.2	18	25	76
16	14	e24	e14	e7.6	e4.8	49	17	10	7.4	13	21	59
17	13	24	e14	e7.5	e5.2	46	17	12	7.7	12	17	53
18	13	26	e14	e7.5	e9.5	43	16	11	8.5	14	12	42
19	13	24	e13	e7.5	e32	42	17	9.4	7.8	25	7.4	30
20	12	18	e13	e7.5	e28	39	17	10	7.8	26	5.4	24
21	12	19	e13	e7.5	e23	38	17	9.3	7.8	26	3.7	21
22	12	19	e13	e7.0	e23	37	18	41	8.5	25	4.4	18
23	13	14	e13	e7.0	e23	37	17	297	7.0	28	2.3	17
24	13	e14	e13	e6.3	e22	35	16	160	5.1	34	1.3	16
25	12	e15	e13	e6.0	e22	33	16	89	4.7	48	43	14
26	12	e16	e13	e5.5	e27	32	15	70	4.5	61	82	13
27	13	e16	e14	e5.2	e40	31	15	61	4.2	57	90	12
28	13	e16	e13	e5.0	e110	30	14	46	3.9	58	86	12
29	14	e16	e13	e5.0	e50	29	15	34	4.8	60	92	11
30	16	e15	e12	e5.0	---	29	14	29	3.7	62	93	11
31	16	---	e12	e5.0	---	29	---	19	---	58	93	---
TOTAL	424	529	436	222.8	490.4	1,586	565	1,106.7	242.2	1,948.9	1,333.5	1,310
MEAN	13.7	17.6	14.1	7.19	16.9	51.2	18.8	35.7	8.07	62.9	43.0	43.7
MAX	19	26	16	12	110	250	28	297	16	511	93	95
MIN	12	13	12	5.0	4.3	29	14	9.3	3.7	3.6	1.3	11
AC-FT	841	1,050	865	442	973	3,150	1,120	2,200	480	3,870	2,640	2,600

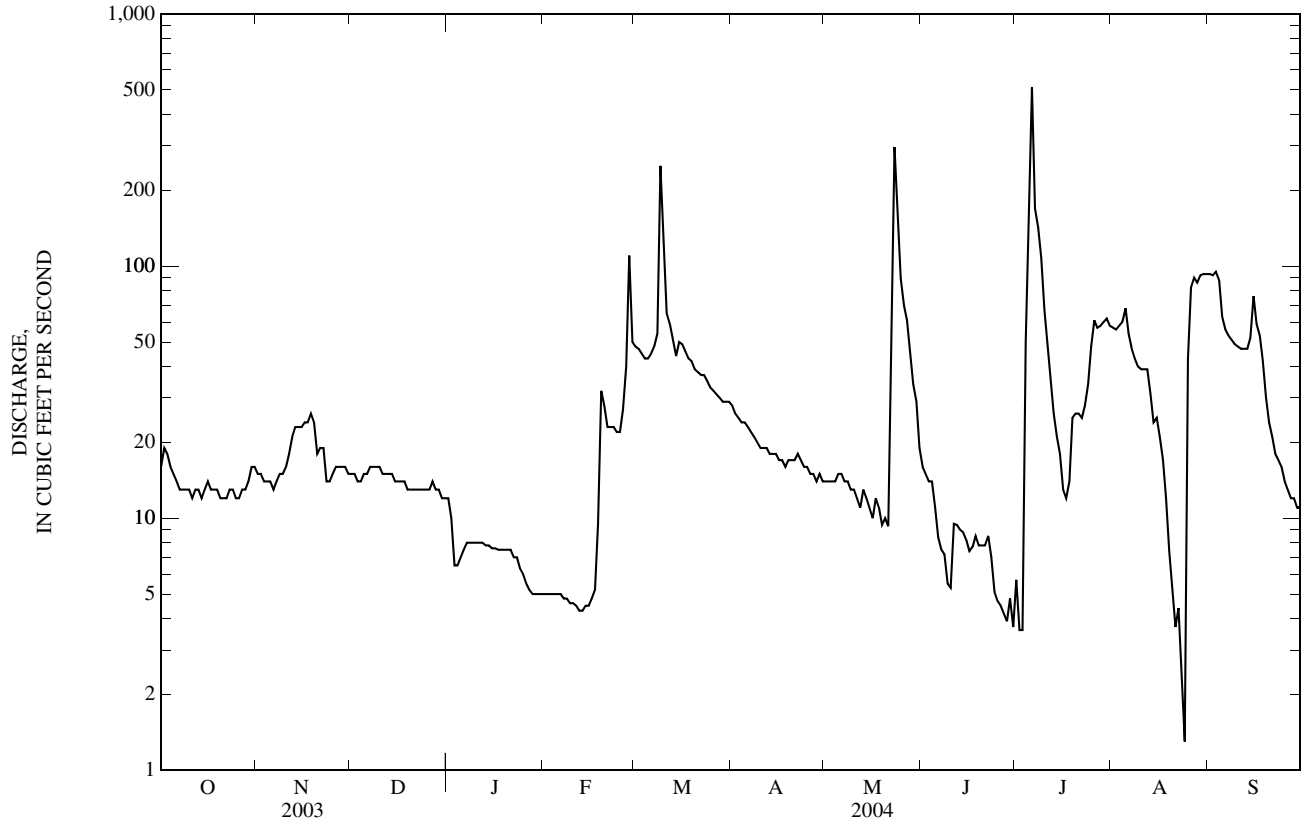
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)*

MEAN	28.3	27.6	17.6	20.7	43.1	154	159	212	178	95.4	72.4	34.6
MAX	134	277	51.5	247	459	931	823	1,104	812	303	271	109
(WY)	(1999)	(1999)	(1999)	(1997)	(1996)	(1972)	(1971)	(1978)	(1984)	(1981)	(1980)	(1955)
MIN	0.00	0.00	0.00	0.00	0.20	15.7	15.1	3.10	8.07	2.94	0.10	0.00
(WY)	(1955)	(1961)	(1961)	(1961)	(1959)	(1981)	(1992)	(1961)	(2004)	(1960)	(1961)	(1954)

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004*	
ANNUAL TOTAL	19,122.4		10,194.5		--	
ANNUAL MEAN	52.4		27.9		87.0	
HIGHEST ANNUAL MEAN	--		--		229	1978
LOWEST ANNUAL MEAN	--		--		7.69	1961
HIGHEST DAILY MEAN	842	Mar 17	511	Jul 6	4,760	May 9, 1995
LOWEST DAILY MEAN	7.0	Feb 25	1.3	Aug 24	0.00[a]	Jul 30, 1954
ANNUAL SEVEN-DAY MINIMUM	8.9	Feb 23	4.2	Jun 27	0.00	Jul 30, 1954
MAXIMUM PEAK FLOW	--		1,040	Jul 6	6,320 [b]	May 10, 1995
MAXIMUM PEAK STAGE	--		9.17	Jul 6	16.33	May 10, 1995
ANNUAL RUNOFF (AC-FT)	37,930		20,220		63,020	
10 PERCENT EXCEEDS	99		58		192	
50 PERCENT EXCEEDS	26		15		35	
90 PERCENT EXCEEDS	12		5.4		5.5	

* Regulated period only (1954-2004). See REMARKS.
a No flow at times in some years.
b Based on slope-area measurement of peak flow.
e Estimated.



06429500 COLD SPRINGS CREEK AT BUCKHORN, WY

LOCATION.--Lat 44°09'15", long 104°04'37", in NW¼ NW¼ SW¼ sec.9, T.48 N., R.60 W., Weston County, Hydrologic Unit 10120303, on right bank at downstream end of culvert at U.S. Highway 85 and 0.5 mi northeast of Buckhorn.

DRAINAGE AREA.--19.0 mi^2.

PERIOD OF RECORD.--October 1974 to September 1982, April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,050 ft above NGVD of 1929, from topographic map. October 1974 to September 1982, 200 ft upstream at different 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. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	e3.0	3.4	3.1	e3.0	e2.9	3.6	2.5	2.9	3.0	3.5	3.7
2	3.8	e3.2	3.3	3.0	e3.0	e2.9	3.7	2.3	2.8	3.0	3.5	3.7
3	3.7	3.3	3.3	e2.9	e3.0	3.0	3.7	2.2	2.7	3.0	3.5	3.7
4	3.7	3.2	e3.2	2.8	e3.0	e3.1	3.7	2.2	2.7	3.3	3.5	3.9
5	3.8	e3.1	e3.2	1.6	e3.0	3.1	3.7	2.1	2.7	3.2	3.5	3.9
6	3.6	e3.1	e3.3	1.6	e3.0	3.1	3.7	2.2	2.7	3.1	3.4	3.9
7	3.7	e3.1	3.4	2.1	e3.0	e3.2	3.7	2.2	2.7	3.0	3.5	3.9
8	3.7	e3.1	e3.4	e3.4	e3.0	3.3	3.6	2.2	2.8	3.0	3.5	3.9
9	3.6	e3.2	e3.3	e3.0	e3.0	3.5	3.4	2.1	2.8	3.0	3.5	3.9
10	3.6	e3.2	e3.4	2.9	e3.0	3.4	3.2	2.1	2.8	3.2	3.6	3.9
11	3.5	e3.2	e3.4	2.9	e3.0	e3.3	3.2	2.2	2.9	3.5	3.7	3.9
12	3.5	e3.2	e3.5	2.9	e3.0	e3.3	2.9	2.3	3.0	3.4	3.6	3.9
13	3.5	e3.3	e3.5	e2.9	e3.0	3.2	3.0	2.4	3.0	3.5	3.6	3.9
14	3.5	3.4	e3.5	e2.9	e3.0	e3.2	3.0	2.4	3.1	3.4	3.6	4.0
15	3.4	3.3	3.6	e2.9	e3.0	3.2	3.0	2.4	3.1	3.5	3.6	4.0
16	3.4	e3.2	e3.4	e2.9	e3.0	3.2	3.0	2.4	3.2	3.4	3.6	4.0
17	3.4	3.3	e2.8	e2.9	e3.0	3.2	2.9	2.4	3.2	3.4	3.7	4.1
18	3.5	e3.2	e3.0	e2.9	e3.1	3.4	3.0	2.4	3.2	3.4	3.7	4.1
19	3.5	e3.2	e3.2	e2.9	e3.1	3.9	2.8	2.4	3.2	3.4	3.7	4.2
20	3.5	3.2	e3.3	e2.9	e3.1	3.5	2.8	2.7	3.2	3.5	3.5	4.0
21	3.5	e2.3	3.3	e2.9	e3.1	3.3	2.8	2.7	3.1	3.4	3.5	4.1
22	3.5	e2.5	3.3	e2.9	e3.1	3.4	2.8	2.6	3.1	3.5	3.5	4.0
23	3.5	e2.5	e3.1	e2.9	e3.1	3.8	2.7	2.6	3.1	3.6	3.7	4.1
24	3.5	e2.3	e3.2	e2.9	e3.1	4.2	2.7	2.8	3.1	3.5	3.7	4.0
25	3.5	e2.7	3.3	e2.9	e3.1	4.3	2.7	2.8	3.1	3.5	3.7	4.0
26	3.3	e2.6	3.2	e2.9	3.1	5.8	2.6	2.8	3.1	3.5	3.7	4.0
27	3.4	e2.5	2.5	e2.9	3.0	4.6	2.5	2.8	3.0	3.5	3.7	4.1
28	3.3	e2.0	1.4	e2.9	3.0	3.6	2.6	2.8	3.0	3.5	3.7	4.1
29	3.4	e2.5	2.1	e3.0	2.9	3.5	2.6	2.9	3.0	3.6	3.7	4.2
30	3.1	e3.8	2.9	e3.0	---	3.5	2.6	3.0	3.0	3.5	3.7	4.2
31	2.8	---	2.8	e3.0	---	3.6	---	2.9	---	3.5	3.7	---
TOTAL	108.4	89.7	97.5	87.6	87.8	108.5	92.2	76.8	89.3	103.8	111.6	119.3
MEAN	3.50	2.99	3.15	2.83	3.03	3.50	3.07	2.48	2.98	3.35	3.60	3.98
MAX	3.8	3.8	3.6	3.4	3.1	5.8	3.7	3.0	3.2	3.6	3.7	4.2
MIN	2.8	2.0	1.4	1.6	2.9	2.9	2.5	2.1	2.7	3.0	3.4	3.7
AC-FT	215	178	193	174	174	215	183	152	177	206	221	237

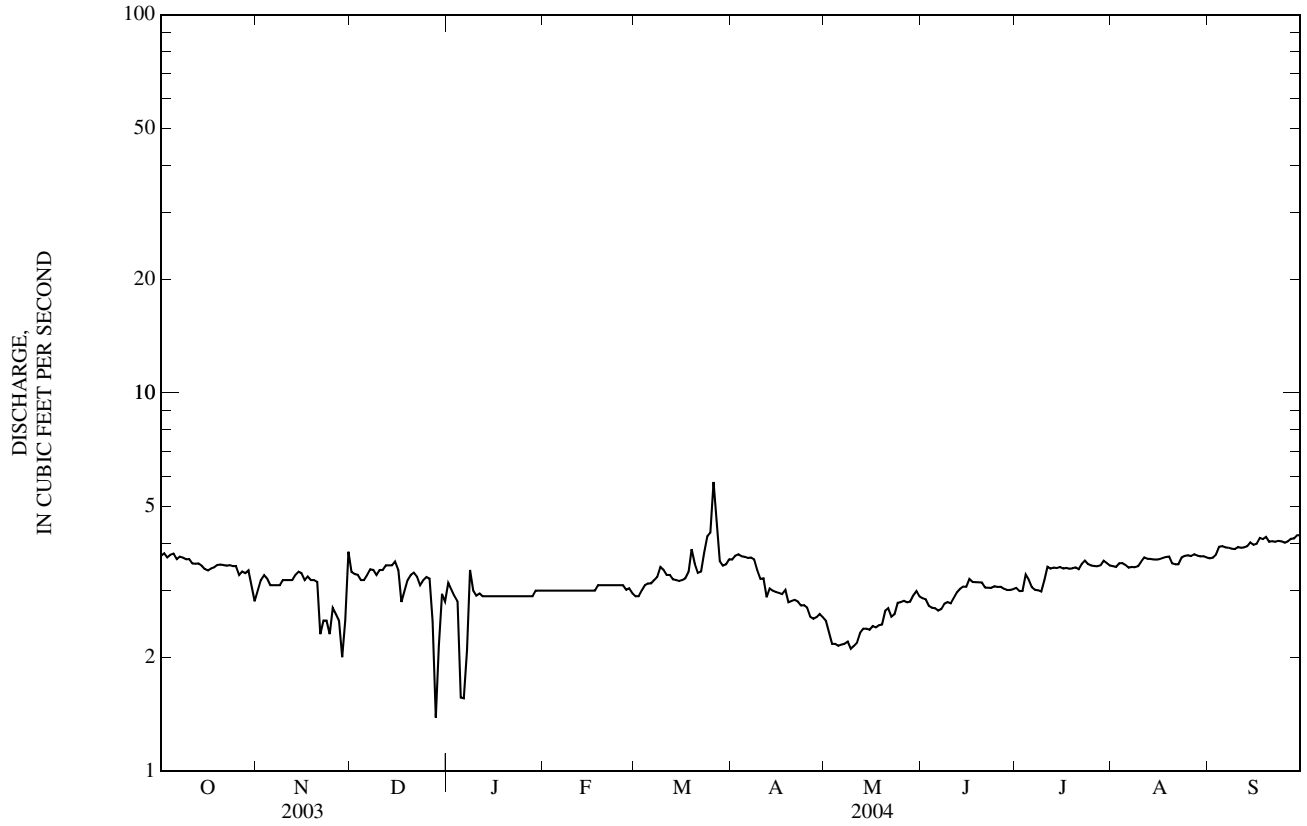
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

MEAN	4.51	4.31	4.20	4.16	4.32	4.69	4.99	4.71	4.80	4.66	4.72	4.65
MAX	7.00	7.15	7.04	7.01	6.75	8.03	7.43	7.29	7.77	7.58	7.28	7.14
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(1999)	(1999)	(1999)	(1999)	(1999)	(1999)
MIN	2.53	2.09	2.06	2.50	2.61	2.91	3.07	2.48	2.98	2.62	2.71	2.92
(WY)	(1975)	(1993)	(1993)	(1994)	(1993)	(1993)	(1993)	(2004)	(2004)	(1995)	(1995)	(1994)

06429500 COLD SPRINGS CREEK AT BUCKHORN, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1975 - 2004	
ANNUAL TOTAL	1,392.9		1,172.5		--	
ANNUAL MEAN	3.82		3.20		4.58	
HIGHEST ANNUAL MEAN	--		--		7.06	1999
LOWEST ANNUAL MEAN	--		--		2.92	1993
HIGHEST DAILY MEAN	12	Apr 11	5.8	Mar 26	22	Mar 26, 1999
LOWEST DAILY MEAN	1.4	Dec 28	1.4	Dec 28	0.30	Dec 20, 1996
ANNUAL SEVEN-DAY MINIMUM	2.4	Nov 22	2.2	May 4	0.75	Dec 18, 1996
MAXIMUM PEAK FLOW	--		10[a]	Mar 26	42[b]	Mar 26, 1999
MAXIMUM PEAK STAGE	--		4.37[c]	Mar 2	8.61[d]	Jan 12, 1978
ANNUAL RUNOFF (AC-FT)	2,760		2,330		3,320	
10 PERCENT EXCEEDS	4.3		3.7		6.5	
50 PERCENT EXCEEDS	3.8		3.2		4.5	
90 PERCENT EXCEEDS	3.2		2.6		3.0	

a Gage height, 2.48 ft.
b Gage height, 3.33 ft.
c Backwater from ice.
d Backwater from ice, site and datum then in use.
e Estimated.



06429905 SAND CREEK NEAR RANCH A, NEAR BEULAH, WY

LOCATION.--Lat 44°31'07", long 104°04'57", in SE¼ SE¼ SW¼ sec.5, T.52 N., R.60 W., Crook County, Hydrologic Unit 10120303, on right bank 1.0 mi upstream from Bear Gulch and 1.8 mi south of Beulah.

DRAINAGE AREA.--267 mi^2.

PERIOD OF RECORD.--October 1976 to September 1983, April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,580 ft above NGVD of 1929, from topographic map. October 1976 to September 1983, at site 500 ft downstream at different 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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	21	20	20	19	18	18	18	19	23	17	17
2	21	21	20	20	19	17	18	19	19	19	17	18
3	20	21	20	20	19	16	18	19	19	17	17	18
4	20	21	20	20	19	16	18	18	19	17	17	19
5	20	21	20	e20	19	15	18	17	18	18	17	19
6	20	21	20	e20	19	15	18	17	18	17	17	19
7	21	20	20	20	19	17	18	17	18	17	16	19
8	20	21	20	20	19	17	18	18	18	17	16	19
9	20	21	20	19	18	17	18	17	18	16	17	19
10	21	21	20	19	18	18	18	18	18	17	17	16
11	20	21	20	19	18	18	18	18	18	16	17	18
12	20	21	20	19	18	18	18	18	18	16	17	18
13	20	20	20	19	18	18	18	18	17	16	17	19
14	21	21	21	19	18	18	18	18	17	16	17	16
15	21	20	21	19	19	18	18	18	17	16	17	19
16	21	20	20	19	19	18	18	19	17	16	17	18
17	20	20	20	19	19	18	18	18	17	17	17	19
18	20	20	20	19	19	18	18	18	18	16	18	19
19	20	20	20	19	20	17	18	18	18	16	18	19
20	20	20	20	19	19	17	18	18	18	16	18	20
21	20	21	20	18	19	17	18	19	18	16	18	20
22	20	21	20	18	18	17	18	18	17	17	18	20
23	20	20	20	19	18	17	18	18	17	18	18	20
24	20	21	20	20	18	17	18	19	17	17	17	20
25	20	21	20	20	17	17	18	19	17	17	17	20
26	20	20	20	20	18	18	18	19	17	17	17	20
27	21	20	20	20	18	18	18	19	17	17	18	20
28	21	20	20	20	18	18	18	19	17	17	18	20
29	21	20	20	20	19	18	19	19	17	17	18	20
30	21	20	20	19	---	18	18	19	17	17	18	20
31	21	---	20	19	---	18	---	19	---	16	17	---
TOTAL	631	616	622	601	538	537	541	566	530	525	535	568
MEAN	20.4	20.5	20.1	19.4	18.6	17.3	18.0	18.3	17.7	16.9	17.3	18.9
MAX	21	21	21	20	20	18	19	19	19	23	18	20
MIN	20	20	20	18	17	15	18	17	17	16	16	16
AC-FT	1,250	1,220	1,230	1,190	1,070	1,070	1,070	1,120	1,050	1,040	1,060	1,130

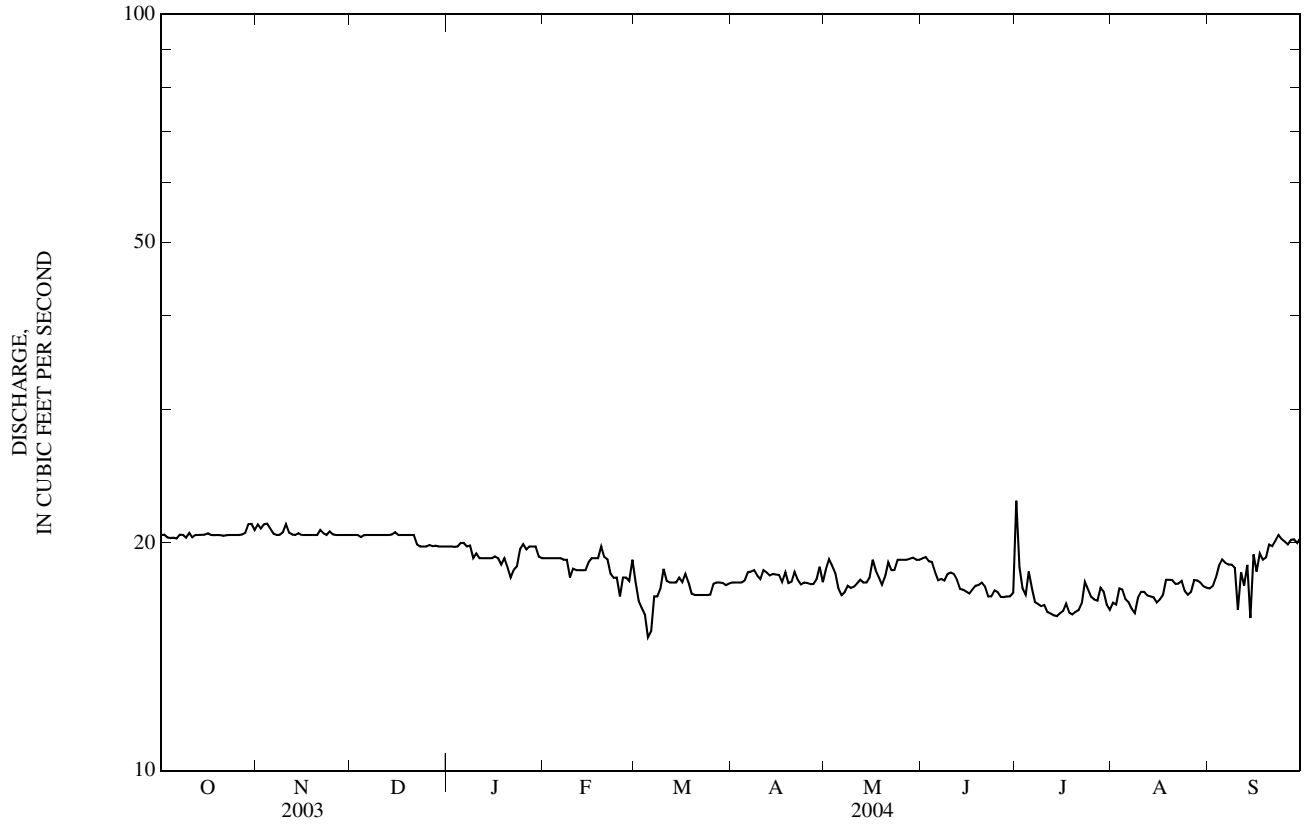
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004, BY WATER YEAR (WY)

MEAN	21.8	21.8	21.3	20.6	19.9	20.8	21.8	29.7	26.5	24.8	22.6	21.8
MAX	29.5	28.2	27.1	26.4	25.0	29.7	30.8	64.8	40.5	39.8	34.5	30.8
(WY)	(2000)	(1978)	(1999)	(1999)	(1977)	(1996)	(1978)	(1995)	(1999)	(1999)	(1999)	(1999)
MIN	15.3	16.0	15.7	15.6	14.9	14.7	15.3	15.5	15.5	15.2	14.4	15.1
(WY)	(1993)	(1993)	(1993)	(1993)	(1993)	(1992)	(1992)	(1992)	(1992)	(1992)	(1992)	(1992)

06429905 SAND CREEK NEAR RANCH A, NEAR BEULAH, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1977 - 2004	
ANNUAL TOTAL	7,799		6,810		--	
ANNUAL MEAN	21.4		18.6		23.0	
HIGHEST ANNUAL MEAN	--		--		30.5	1999
LOWEST ANNUAL MEAN	--		--		15.7	1992
HIGHEST DAILY MEAN	73	Mar 15	23	Jul 1	455	May 9, 1995
LOWEST DAILY MEAN	15	Apr 29	15	Mar 5	12	Mar 10, 1992
ANNUAL SEVEN-DAY MINIMUM	18	Apr 23	16	Mar 2	13	Mar 8, 1992
MAXIMUM PEAK FLOW	--		24[a]	Jul 1	1,230	May 8, 1995
MAXIMUM PEAK STAGE	--		2.07[b]	Jan 6	3.80[c]	May 8, 1995
ANNUAL RUNOFF (AC-FT)	15,470		13,510		16,670	
10 PERCENT EXCEEDS	24		20		30	
50 PERCENT EXCEEDS	21		18		22	
90 PERCENT EXCEEDS	20		17		16	

a Gage height, 1.67 ft.
b Backwater from ice.
c From floodmarks, present site and datum.
e Estimated.



06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'35", long 104°03'20", in SW¼ SW¼ sec.7, T.7 N., R.1 E., Butte County, Hydrologic Unit 10120203, on right bank at State line and 12 mi southwest of Belle Fourche, SD.

PERIOD OF RECORD.--April 1987 to current year.

REVISED RECORDS.--WDR SD-96-1: September 1995 daily discharges, monthly, and water year statistics.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,440 ft above NGVD of 1929, from topographic map. Prior to April 23, 1987, published as 06430000 (below diversion at site 15 ft downstream).

REMARKS.--Records good. Ditch diverts water from left bank of Redwater Creek, 2.0 mi upstream, for irrigation of about 700 acres. Flow maintained during irrigation season only. Station operated and record provided by the South Dakota District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	9.2	0.00	0.00	0.00	0.00	0.00	1.0	6.3	4.8	5.5	14
2	14	9.2	0.00	0.00	0.00	0.00	0.00	2.3	7.3	4.4	5.5	5.9
3	13	9.1	0.00	0.00	0.00	0.00	0.00	3.5	7.3	0.83	7.4	5.8
4	13	8.8	0.00	0.00	0.00	0.00	0.00	3.4	7.5	0.00	4.4	3.0
5	11	8.0	0.00	0.00	0.00	0.00	0.00	4.2	8.1	0.00	e4.6	2.2
6	9.8	8.0	0.00	0.00	0.00	0.00	0.00	13	2.6	0.00	4.6	2.2
7	9.0	8.0	0.00	0.00	0.00	0.00	0.00	8.4	2.7	0.00	4.6	3.6
8	10	8.0	0.00	0.00	0.00	0.00	0.00	3.5	2.9	0.00	4.6	3.6
9	11	7.0	0.00	0.00	0.00	0.00	0.00	3.6	3.0	0.00	4.6	3.7
10	11	0.34	0.00	0.00	0.00	0.00	0.00	4.3	5.0	0.00	3.8	3.7
11	9.4	0.00	0.00	0.00	0.00	0.00	0.00	7.5	6.7	0.53	3.7	3.7
12	9.2	0.00	0.00	0.00	0.00	0.00	0.00	2.5	8.1	24	3.7	3.8
13	9.0	0.00	0.00	0.00	0.00	0.00	0.00	2.5	11	26	3.7	3.9
14	9.0	0.00	0.00	0.00	0.00	0.00	0.00	2.8	9.7	21	3.7	4.2
15	9.4	0.00	0.00	0.00	0.00	0.00	2.8	3.7	10	13	3.7	4.2
16	10	0.00	0.00	0.00	0.00	0.00	5.6	5.1	12	12	8.1	4.2
17	11	0.00	0.00	0.00	0.00	0.00	10	5.7	12	e13	16	4.2
18	13	0.00	0.00	0.00	0.00	0.00	17	9.2	13	e14	16	4.0
19	11	0.00	0.00	0.00	0.00	0.00	5.5	12	13	14	18	4.4
20	8.6	0.00	0.00	0.00	0.00	0.00	5.7	4.3	12	15	17	4.4
21	8.9	0.00	0.00	0.00	0.00	0.00	9.4	6.4	12	14	17	4.4
22	8.7	0.00	0.00	0.00	0.00	0.00	5.4	7.3	12	14	19	4.4
23	9.0	0.00	0.00	0.00	0.00	0.00	4.4	8.4	13	14	21	4.3
24	9.0	0.00	0.00	0.00	0.00	0.00	1.9	5.0	13	15	16	4.5
25	9.2	0.00	0.00	0.00	0.00	0.00	2.7	2.1	13	12	16	4.5
26	9.1	0.00	0.00	0.00	0.00	0.00	15	1.2	13	8.0	17	4.5
27	9.0	0.00	0.00	0.00	0.00	0.00	17	1.4	9.4	4.4	19	4.6
28	9.2	0.00	0.00	0.00	0.00	0.00	11	1.9	9.3	4.5	13	4.6
29	9.2	0.00	0.00	0.00	0.00	0.00	2.1	3.0	9.4	4.7	14	4.5
30	9.2	0.00	0.00	0.00	---	0.00	1.2	6.0	8.0	5.4	14	4.7
31	9.2	---	0.00	0.00	---	0.00	---	6.5	---	5.5	14	---
TOTAL	309.6	75.64	0.00	0.00	0.00	0.00	116.70	151.7	272.3	264.06	323.2	133.7
MEAN	9.99	2.52	0.00	0.00	0.00	0.00	3.89	4.89	9.08	8.52	10.4	4.46
MAX	14	9.2	0.00	0.00	0.00	0.00	17	13	13	26	21	14
MIN	8.5	0.00	0.00	0.00	0.00	0.00	0.00	1.0	2.6	0.00	3.7	2.2
AC-FT	614	150	0.00	0.00	0.00	0.00	231	301	540	524	641	265

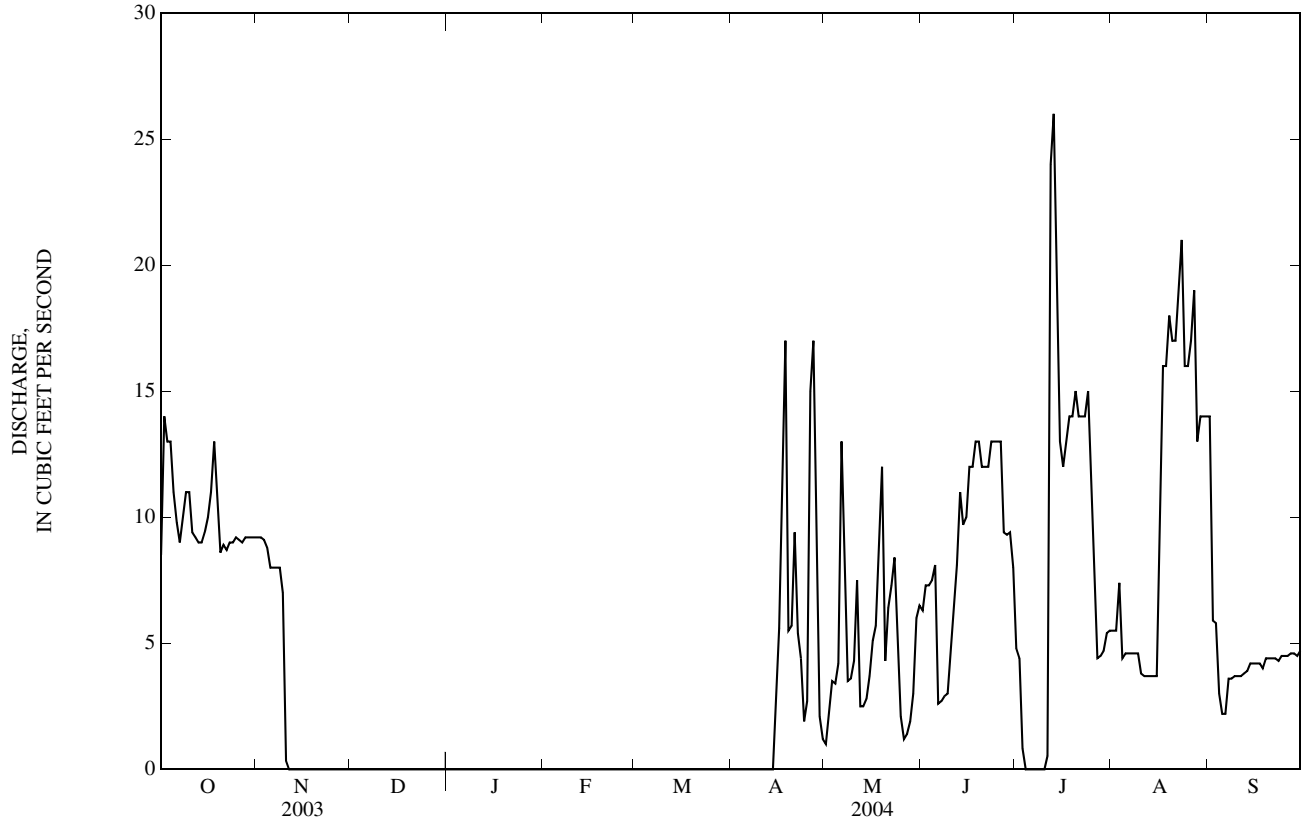
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2004, BY WATER YEAR (WY)

MEAN	6.10	0.40	0.00	0.00	0.00	0.00	0.24	2.12	5.55	9.94	8.81	7.91
MAX	20.6	2.52	0.00	0.00	0.00	0.00	3.89	6.30	13.9	16.4	18.2	18.8
(WY)	(1991)	(2004)	(1988)	(1988)	(1988)	(1988)	(2004)	(1992)	(1988)	(1991)	(1991)	(1994)
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84	2.24	0.80
(WY)	(1988)	(1988)	(1988)	(1988)	(1988)	(1988)	(1988)	(1990)	(1991)	(1993)	(1998)	(1993)

06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1988 - 2004	
ANNUAL TOTAL	1,776.87		1,646.90		--	
ANNUAL MEAN	4.87		4.50		3.45	
HIGHEST ANNUAL MEAN	--		--		5.32	1994
LOWEST ANNUAL MEAN	--		--		0.92	1993
HIGHEST DAILY MEAN	30	Jul 12	26	Jul 13	46	Oct 8, 1990
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days, each year
ANNUAL RUNOFF (AC-FT)	3,520		3,270		2,500	
10 PERCENT EXCEEDS	13		13		12	
50 PERCENT EXCEEDS	0.00		2.8		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated.



06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'26", long 104°02'54", in NW$^1/_4$ NW$^1/_4$ sec.18 T.7 N., R.1 E., Butte County, Hydrologic Unit 10120203, on left bank 800 ft downstream from State line, 5.7 mi upstream from Crow Creek, and 12 mi southwest of Belle Fourche, SD.

DRAINAGE AREA.--471 mi^2.

PERIOD OF RECORD.--April 1929 to September 1931 and February 1936 to July 1937 (published as "near Beulah, WY"), June 1954 to current year.

REVISED RECORDS.--WSP 1309: 1931(M), 1936-37(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,410 ft above NGVD of 1929, from topographic map. April 25, 1929 to September 30, 1931, and February 28, 1936 to July 31, 1937, nonrecording gage at site 2 mi upstream at different datum.

REMARKS.--Records good. Large diversions for irrigation upstream from station. Total flow passing State line may be obtained by adding flow of Murray Ditch. Satellite data-collection platform at station. Station operated and record provided by the South Dakota District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	28	30	30	30	29	32	29	17	19	25	5.5
2	19	28	31	30	30	27	33	25	17	20	24	8.1
3	21	28	31	29	29	28	34	20	16	28	29	8.8
4	21	29	30	e27	30	28	34	19	16	27	22	14
5	21	32	30	e26	30	28	33	16	16	28	22	15
6	21	31	31	e24	29	28	30	8.9	17	28	22	16
7	20	31	30	e25	e28	27	30	8.6	17	26	22	14
8	13	31	31	e26	29	28	31	16	17	26	22	14
9	13	31	30	29	29	28	31	17	17	25	22	13
10	13	32	30	29	29	28	31	17	18	25	24	13
11	14	32	30	29	29	27	32	18	17	24	24	14
12	15	31	30	29	e27	28	32	20	17	9.8	24	13
13	15	30	30	28	29	28	32	19	17	9.4	23	14
14	15	31	30	28	29	28	32	19	23	10	22	17
15	16	30	30	28	28	28	23	20	24	10	22	16
16	16	30	30	28	28	27	16	21	20	11	18	17
17	15	30	29	29	30	28	14	21	21	10	8.9	16
18	15	30	30	29	29	28	9.5	17	21	12	8.8	18
19	20	30	30	29	30	28	13	14	21	12	8.7	19
20	27	30	30	29	29	27	13	14	20	13	8.6	19
21	25	31	30	29	28	28	13	15	19	12	8.7	19
22	25	31	30	29	27	28	14	17	17	13	7.9	20
23	25	30	30	29	27	28	16	17	16	13	5.1	20
24	26	31	30	29	28	28	23	20	14	13	3.9	19
25	26	31	30	30	28	28	22	17	14	14	3.7	19
26	26	31	30	e28	28	30	13	17	14	18	3.3	19
27	26	30	30	e24	28	30	12	17	17	25	3.3	19
28	27	30	30	e22	28	30	16	18	16	25	5.5	19
29	28	31	29	e27	30	30	27	18	16	24	6.3	19
30	28	31	30	30	---	31	29	18	16	26	5.8	19
31	28	---	29	30	---	31	---	17	---	25	5.3	---
TOTAL	638	912	931	868	833	878	720.5	550.5	528	581.2	460.8	476.4
MEAN	20.6	30.4	30.0	28.0	28.7	28.3	24.0	17.8	17.6	18.7	14.9	15.9
MAX	28	32	31	30	30	31	34	29	24	28	29	20
MIN	13	28	29	22	27	27	9.5	8.6	14	9.4	3.3	5.5
AC-FT	1,270	1,810	1,850	1,720	1,650	1,740	1,430	1,090	1,050	1,150	914	945

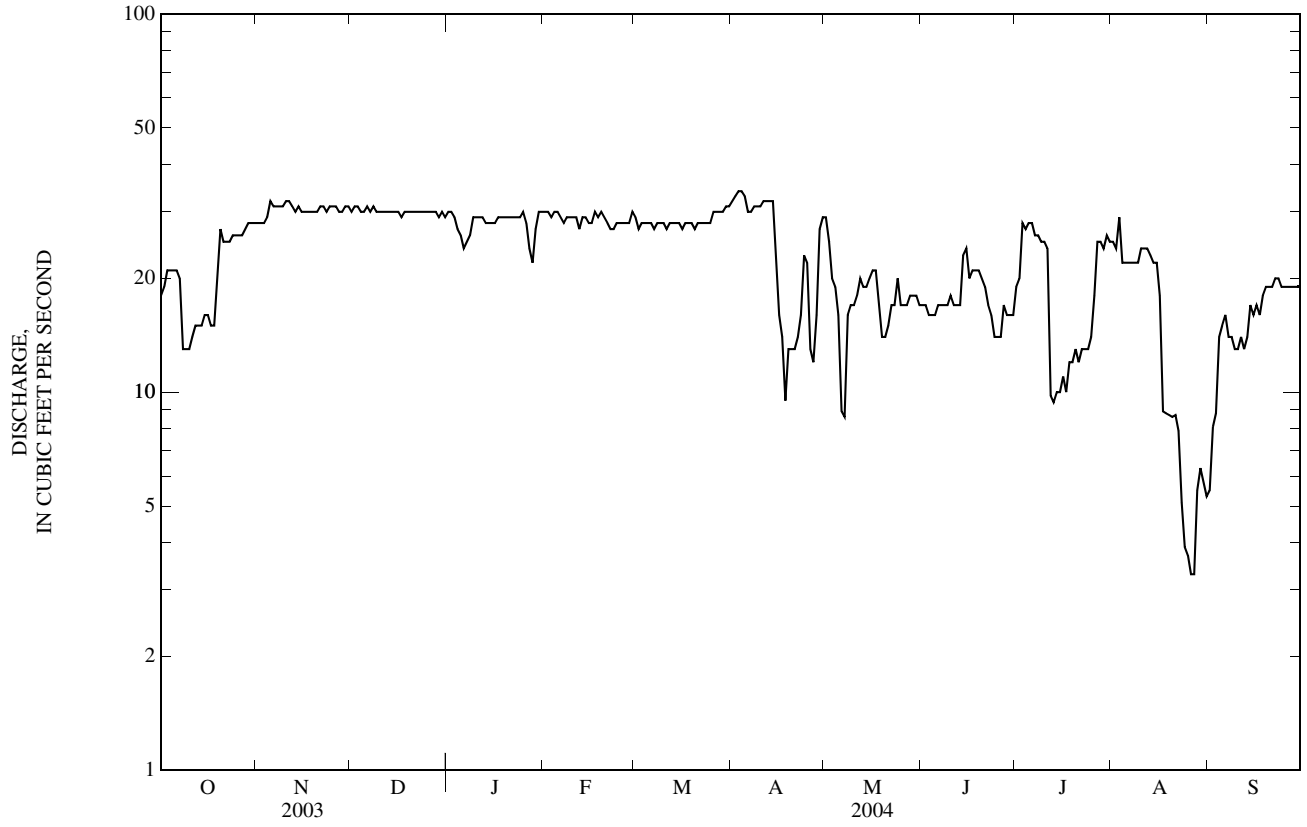
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2004, BY WATER YEAR (WY)*

MEAN	28.8	33.1	32.8	32.1	33.2	34.9	37.7	52.3	45.2	23.5	23.1	25.4
MAX	45.0	47.9	48.0	48.5	57.8	66.0	65.4	168	128	54.9	58.9	50.4
(WY)	(1973)	(1974)	(1999)	(1999)	(1971)	(1996)	(1999)	(1995)	(1976)	(1976)	(1973)	(1973)
MIN	14.2	20.8	21.5	20.7	21.2	22.1	18.8	7.44	6.29	7.62	6.78	11.8
(WY)	(1991)	(1961)	(1993)	(1993)	(1993)	(1962)	(1981)	(1985)	(1961)	(1990)	(1985)	(1985)

06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1955 - 2004*	
ANNUAL TOTAL	10,158.0		8,377.4		--	
ANNUAL MEAN	27.8		22.9		33.5	
HIGHEST ANNUAL MEAN	--		--		56.0	1973
LOWEST ANNUAL MEAN	--		--		17.9	1961
HIGHEST DAILY MEAN	128	Mar 15	34	Apr 3,4	1,330	May 9, 1995
LOWEST DAILY MEAN	6.5	Aug 16	3.3	Aug 26, 27	1.3[a]	May 22, 1985
ANNUAL SEVEN-DAY MINIMUM	8.1	Aug 12	4.4	Aug 23	1.9	May 21, 1985
MAXIMUM PEAK FLOW	--		113	Aug 3	2,440 [b]	Aug 22, 1973
MAXIMUM PEAK STAGE	--		4.15	Aug 3	12.19	Aug 22, 1973
ANNUAL RUNOFF (AC-FT)	20,150		16,620		24,260	
10 PERCENT EXCEEDS	36		30		47	
50 PERCENT EXCEEDS	30		25		31	
90 PERCENT EXCEEDS	13		13		16	

* Period using present site and datum only. See GAGE.
a No flow Aug. 13-15, 1929, during partial year.
b From rating curve extended above 1,000 ft^3/s on basis of slope-area measurement.
e Estimated.



06430532 CROW CREEK NEAR BEULAH, WY

LOCATION.--Lat 44°34'14", long 104°00'19", in NW¼ SE¼ NW¼ sec.16, T.7 N., R.1 E., Lawrence County, Hydrologic Unit 10120203, on left bank 1,500 ft upstream from confluence with Redwater River, 0.8 mi north of McNenny Fish Hatchery, and approximately 4.4 mi east of Beulah.

DRAINAGE AREA.--40.8 mi^2.

PERIOD OF RECORD.--April 1992 to current year.

REVISED RECORDS.--WDR SD-97-1: 1996.

GAGE.--Water-stage recorder. Elevation of gage is 3,360 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

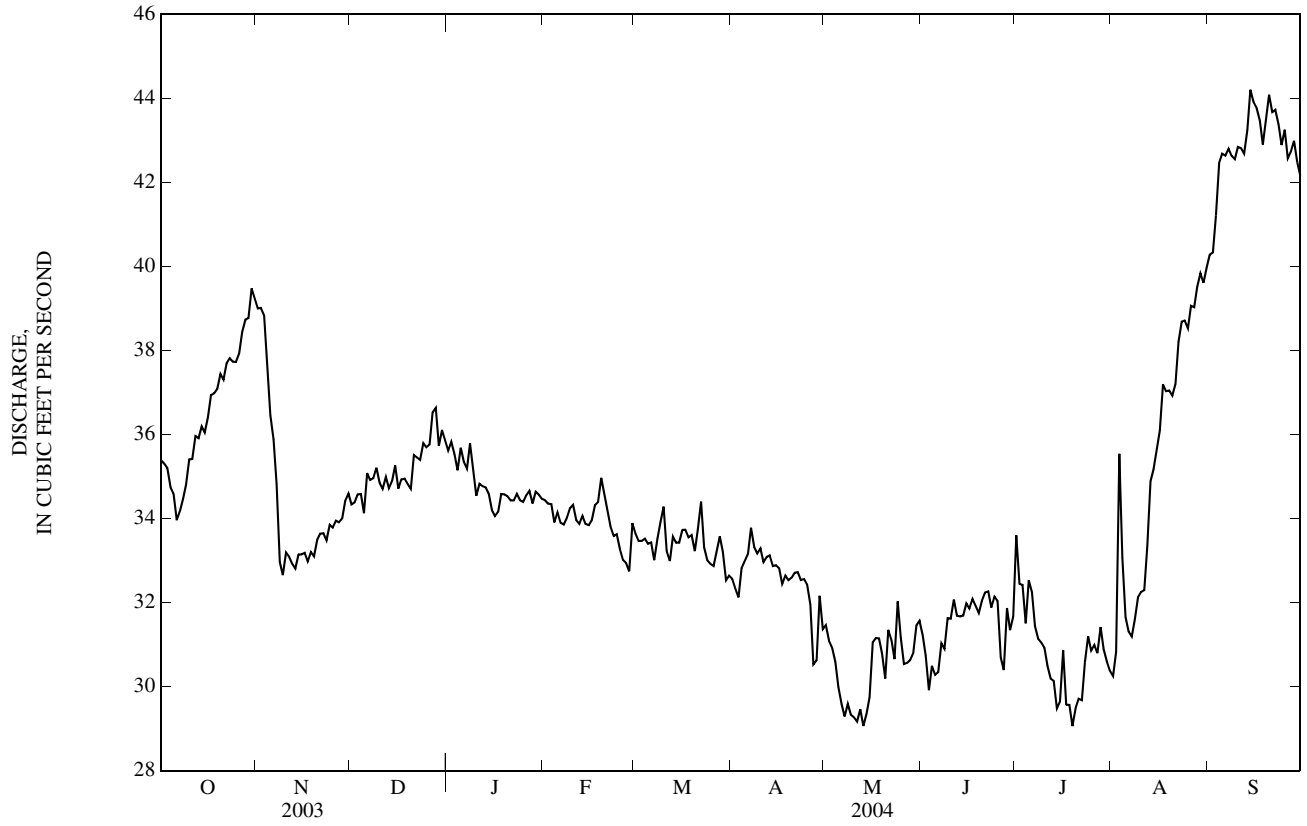
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	39	34	36	34	34	33	31	31	34	30	40
2	35	39	34	36	34	33	32	31	31	32	31	40
3	35	39	35	36	34	33	32	31	30	32	36	41
4	35	38	35	35	34	34	33	31	30	32	33	42
5	35	36	34	36	34	33	33	30	30	33	32	43
6	34	36	35	35	34	33	33	30	30	32	31	43
7	34	35	35	35	34	33	34	29	31	31	31	43
8	34	33	35	36	34	34	33	30	31	31	32	43
9	35	33	35	35	34	34	33	29	32	31	32	43
10	35	33	35	35	34	34	33	29	32	31	32	43
11	35	33	35	35	34	33	33	29	32	30	32	43
12	36	33	35	35	34	33	33	29	32	30	33	43
13	36	33	35	35	34	34	33	29	32	30	35	43
14	36	33	35	35	34	33	33	29	32	29	35	44
15	36	33	35	34	34	33	33	30	32	30	36	44
16	36	33	35	34	34	34	33	31	32	31	36	44
17	37	33	35	34	34	34	32	31	32	30	37	43
18	37	33	35	35	34	34	33	31	32	30	37	43
19	37	33	35	35	35	34	33	31	32	29	37	43
20	37	33	35	35	35	33	33	30	32	29	37	44
21	37	34	36	34	34	34	33	31	32	30	37	44
22	38	34	35	34	34	34	33	31	32	30	38	44
23	38	33	35	35	34	33	33	31	32	31	39	43
24	38	34	36	34	34	33	33	32	32	31	39	43
25	38	34	36	34	33	33	32	31	32	31	39	43
26	38	34	36	35	33	33	32	31	31	31	39	43
27	38	34	37	35	33	33	31	31	30	31	39	43
28	39	34	37	34	33	34	31	31	32	31	40	43
29	39	34	36	35	34	33	32	31	31	31	40	42
30	39	35	36	35	---	33	31	31	32	31	40	42
31	39	---	36	34	---	33	---	32	---	30	40	---
TOTAL	1,131	1,031	1,093	1,081	984	1,036	979	944	944	955	1,105	1,285
MEAN	36.5	34.4	35.3	34.9	33.9	33.4	32.6	30.5	31.5	30.8	35.6	42.8
MAX	39	39	37	36	35	34	34	32	32	34	40	44
MIN	34	33	34	34	33	33	31	29	30	29	30	40
AC-FT	2,240	2,040	2,170	2,140	1,950	2,050	1,940	1,870	1,870	1,890	2,190	2,550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

MEAN	37.6	37.0	36.1	36.3	35.9	37.4	44.4	48.8	40.3	34.8	35.8	38.0
MAX	50.0	46.7	48.3	44.8	41.7	42.7	60.3	118	54.9	43.3	41.8	42.8
(WY)	(1999)	(1999)	(1996)	(1996)	(1996)	(1996)	(1994)	(1995)	(1993)	(1999)	(1999)	(2004)
MIN	31.8	30.7	31.9	31.2	33.0	33.4	32.6	30.2	30.8	30.8	30.3	33.6
(WY)	(2000)	(2000)	(1995)	(1995)	(2000)	(2004)	(2004)	(1992)	(2002)	(2004)	(2003)	(2002)

06430532 CROW CREEK NEAR BEULAH, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1992 - 2004	
ANNUAL TOTAL	12,618		12,568		--	
ANNUAL MEAN	34.6		34.3		38.8	
HIGHEST ANNUAL MEAN	--		--		44.7	1999
LOWEST ANNUAL MEAN	--		--		33.4	2002
HIGHEST DAILY MEAN	48	Jun 8	44	Several days	502	May 9, 1995
LOWEST DAILY MEAN	28	Aug 5,7	29	Several days	21	Jul 1, 1998
ANNUAL SEVEN-DAY MINIMUM	29	Aug 2	29	May 7	22	Jun 28, 1998
MAXIMUM PEAK FLOW	--		58	Aug 3	530	May 9, 1995
MAXIMUM PEAK STAGE	--		4.54	Aug 3	10.17	May 9, 1995
ANNUAL RUNOFF (AC-FT)	25,030		24,930		28,080	
10 PERCENT EXCEEDS	37		39		46	
50 PERCENT EXCEEDS	35		34		36	
90 PERCENT EXCEEDS	31		31		32	



06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO

LOCATION.--Lat 40°56'15", long 106°20'16", in NE¼ SW¼ SE¼ 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 mi^2.

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.

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	63	e140	e86	e88	e86	286	155	289	1,030	196	100
2	42	69	e140	e84	e86	e80	289	136	247	913	179	90
3	54	88	e140	e82	e86	e83	296	118	212	660	166	81
4	62	106	e130	e80	e88	e85	290	105	188	500	152	82
5	62	e93	e120	e78	e86	e89	255	112	252	454	143	97
6	58	e72	e110	e80	e86	e90	265	162	427	426	130	134
7	56	e72	e110	e82	e86	e90	287	221	602	382	130	135
8	54	e74	e100	e84	e88	e92	282	247	635	316	113	116
9	52	e80	e90	e88	e86	e95	297	259	595	267	101	105
10	51	e83	e83	e86	e84	e97	323	271	546	247	90	99
11	50	e85	e80	e86	e84	e100	329	292	550	243	83	90
12	49	e90	e80	e84	e80	e100	327	316	493	243	81	89
13	49	e90	e80	e83	e81	e110	336	328	449	226	79	82
14	49	e93	e80	e84	e82	e110	321	302	415	245	75	79
15	49	e93	e80	e84	e84	e130	275	280	380	250	72	84
16	49	e93	e80	e84	e86	e140	235	215	394	352	68	85
17	50	e93	e80	e84	e88	e160	205	169	503	777	65	79
18	49	e92	e80	e80	e90	e200	203	144	785	606	66	73
19	49	e90	e80	e82	e90	e270	226	130	976	465	92	71
20	50	e86	e83	e84	e88	e350	248	145	823	380	153	76
21	51	e78	e86	e82	e86	e460	254	214	850	387	211	121
22	51	e70	e83	e82	e88	e600	265	273	1,150	355	214	243
23	51	e78	e80	e84	e92	e800	272	303	888	456	173	291
24	50	e86	e76	e86	e94	e930	233	288	573	442	138	314
25	48	e94	e80	e86	e96	792	236	287	467	346	117	341
26	e45	e100	e84	e84	e98	717	211	313	460	301	104	296
27	52	e110	e80	e86	e98	637	164	269	460	268	108	274
28	53	e110	e80	e88	e94	530	141	237	477	236	153	265
29	52	e120	e80	e90	e90	389	141	219	454	220	150	266
30	52	e130	e82	e92	---	348	158	269	703	206	133	299
31	56	---	e84	e90	---	316	---	323	---	201	115	---
TOTAL	1,588	2,681	2,861	2,615	2,553	9,076	7,650	7,102	16,243	12,400	3,850	4,557
MEAN	51.2	89.4	92.3	84.4	88.0	293	255	229	541	400	124	152
MAX	62	130	140	92	98	930	336	328	1,150	1,030	214	341
MIN	42	63	76	78	80	80	141	105	188	201	65	71
AC-FT	3,150	5,320	5,670	5,190	5,060	18,000	15,170	14,090	32,220	24,600	7,640	9,040

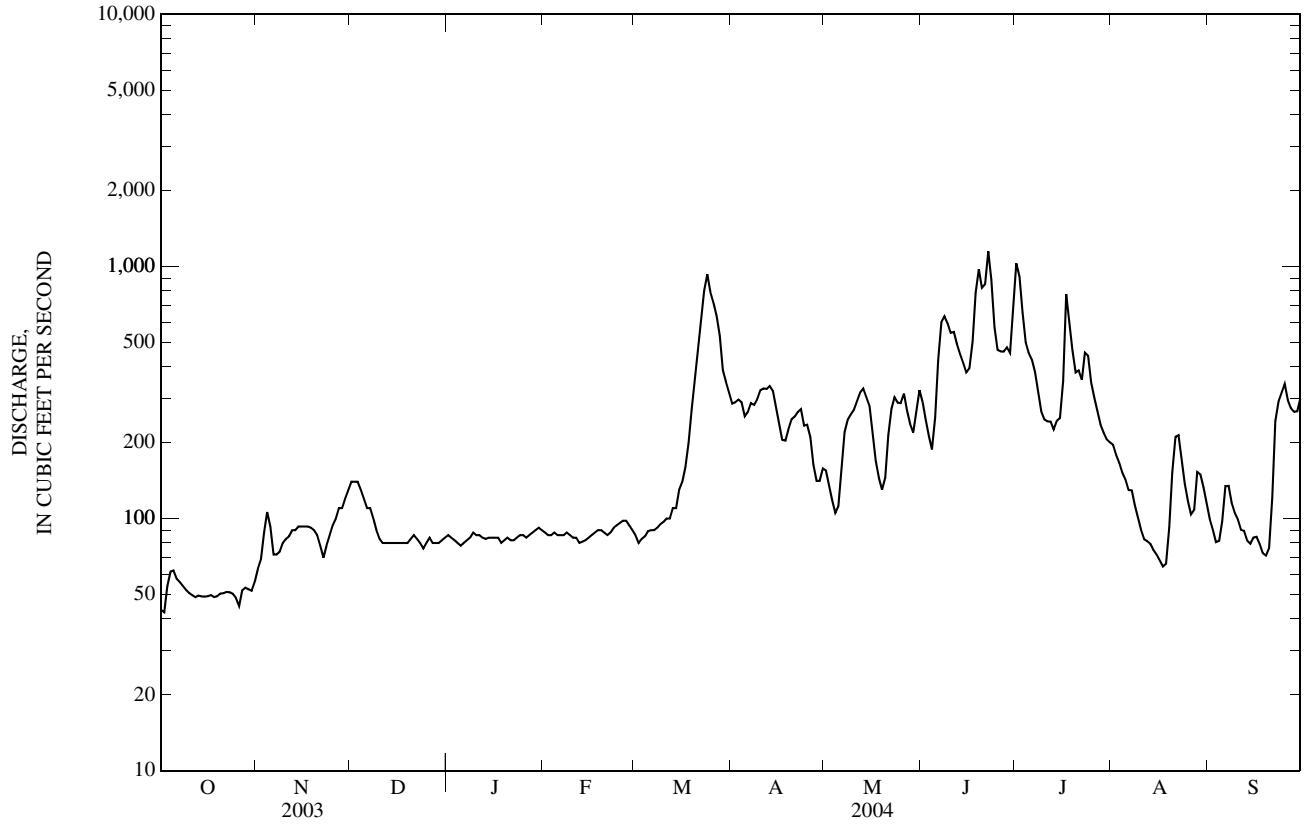
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2004, BY WATER YEAR (WY)

MEAN	158	151	104	83.5	88.9	177	737	1,111	1,449	624	259	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)

06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1904 - 2004	
ANNUAL TOTAL	109,947		73,176		--	
ANNUAL MEAN	301		200		425	
HIGHEST ANNUAL MEAN	--		--		878	1917
LOWEST ANNUAL MEAN	--		--		91.5	2002
HIGHEST DAILY MEAN	3,300	Jun 3	1,150	Jun 22	6,450	Jun 10, 1923
ANNUAL SEVEN-DAY MINIMUM	47	Jan 10	49	Oct 12	16	Sep 2, 2002
MAXIMUM PEAK FLOW	--		1,190[a]	Jun 22	6,720[b]	Jun 11, 1923
MAXIMUM PEAK STAGE	--		6.33[c]	Mar 23	9.65[d]	Apr 25, 1980
ANNUAL RUNOFF (AC-FT)	218,100		145,100		308,200	
10 PERCENT EXCEEDS	598		454		1,190	
50 PERCENT EXCEEDS	105		107		159	
90 PERCENT EXCEEDS	52		70		68	

a Gage height, 4.17 ft.
b Gage height, 6.34 ft, site and datum then in use.
c Backwater from ice.
d Backwater from ice, site and datum then in use.
e Estimated.



06622700 NORTH BRUSH CREEK NEAR SARATOGA, WY

LOCATION.--Lat 41°22'13", long 106°31'12", in NW¼ SW¼ NE¼ sec.8, T.16 N., R.81 W., Carbon County, Hydrologic Unit 10180002, Medicine Bow National Forest, on right bank 0.2 mi upstream from bridge on logging road, 0.5 mi downstream from Lincoln Creek, 1.6 mi upstream from South Brush Creek, and 16 mi southeast of Saratoga.

DRAINAGE AREA.--37.4 mi^2.

PERIOD OF RECORD.--May 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,020 ft above NGVD of 1929, from topographic map. Prior to June 17, 1971, at site 0.02 mi downstream at different datum. June 17, 1971 to August 2, 1984, at site 0.2 mi downstream at different 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. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	e8.6	9.7	9.3	9.2	e8.8	22	35	63	34	8.5	8.3
2	8.5	9.4	9.7	e9.4	9.5	e8.8	25	38	69	28	8.3	8.1
3	10	9.8	9.5	e9.4	9.6	e8.8	28	58	95	24	8.4	8.0
4	8.4	e9.6	9.1	e9.4	9.5	e9.2	33	82	109	24	8.2	12
5	8.0	e9.6	e9.0	9.7	9.0	e9.2	38	119	109	27	8.1	22
6	7.9	e9.4	e9.2	9.8	8.7	e9.0	40	164	137	21	8.6	17
7	7.7	e9.2	e9.6	9.9	8.6	e9.0	36	186	158	18	8.4	12
8	7.7	e9.6	9.6	9.8	9.3	e9.2	33	187	144	17	7.7	9.7
9	7.6	e9.6	9.1	9.5	9.1	e9.4	29	176	131	16	7.3	8.9
10	7.5	e10	9.3	9.5	e9.0	e9.5	23	178	112	15	7.1	8.5
11	7.5	10	9.6	10	e9.0	e9.4	e21	158	81	14	7.1	8.3
12	7.6	9.6	9.2	e9.8	e8.8	e9.4	e20	101	63	13	6.9	8.1
13	7.6	e9.6	9.3	e9.6	e8.6	e9.6	22	85	59	12	6.9	11
14	7.3	e9.6	9.4	e9.4	e8.8	e9.4	23	74	65	13	6.9	13
15	7.5	e9.6	9.2	e9.4	e9.2	e9.2	25	72	67	12	6.8	9.5
16	7.6	e9.6	9.7	e9.2	e9.2	9.5	26	76	61	22	6.7	8.6
17	7.6	9.5	9.7	e9.2	e9.2	8.8	30	83	77	19	6.8	8.3
18	7.6	e9.4	9.8	e9.0	e9.6	e9.4	36	112	107	14	8.3	8.1
19	7.4	e9.6	11	e9.0	e9.8	11	29	141	70	13	11	8.7
20	7.2	e9.6	12	e9.0	e9.4	e13	25	158	81	12	10	18
21	7.1	e9.8	12	e9.0	e9.2	e15	22	164	84	13	9.2	22
22	7.2	e9.4	11	e9.2	e9.0	e16	21	135	64	12	8.3	17
23	7.2	e9.2	11	e9.4	e8.8	18	20	104	47	13	8.9	16
24	7.1	e9.2	12	e9.4	e8.8	21	20	96	42	12	11	22
25	e6.6	e9.4	12	e9.4	e8.8	23	20	82	41	11	8.7	26
26	e7.0	e10	12	e9.2	e9.0	25	21	77	55	10	25	25
27	7.7	10	11	e9.2	8.8	23	32	86	48	11	24	23
28	7.8	9.7	10	e9.2	9.2	18	45	101	45	10	16	20
29	8.3	9.7	10	e9.4	e9.0	e18	49	120	37	11	11	19
30	8.4	9.7	10	e9.6	---	e17	42	84	36	9.9	9.7	50
31	e8.0	---	9.7	e9.6	---	e18	---	68	---	9.2	8.7	---
TOTAL	238.2	287.0	313.4	291.9	263.7	401.6	856	3,400	2,357	490.1	298.5	456.1
MEAN	7.68	9.57	10.1	9.42	9.09	13.0	28.5	110	78.6	15.8	9.63	15.2
MAX	10	10	12	10	9.8	25	49	187	158	34	25	50
MIN	6.6	8.6	9.0	9.0	8.6	8.8	20	35	36	9.2	6.7	8.0
AC-FT	472	569	622	579	523	797	1,700	6,740	4,680	972	592	905

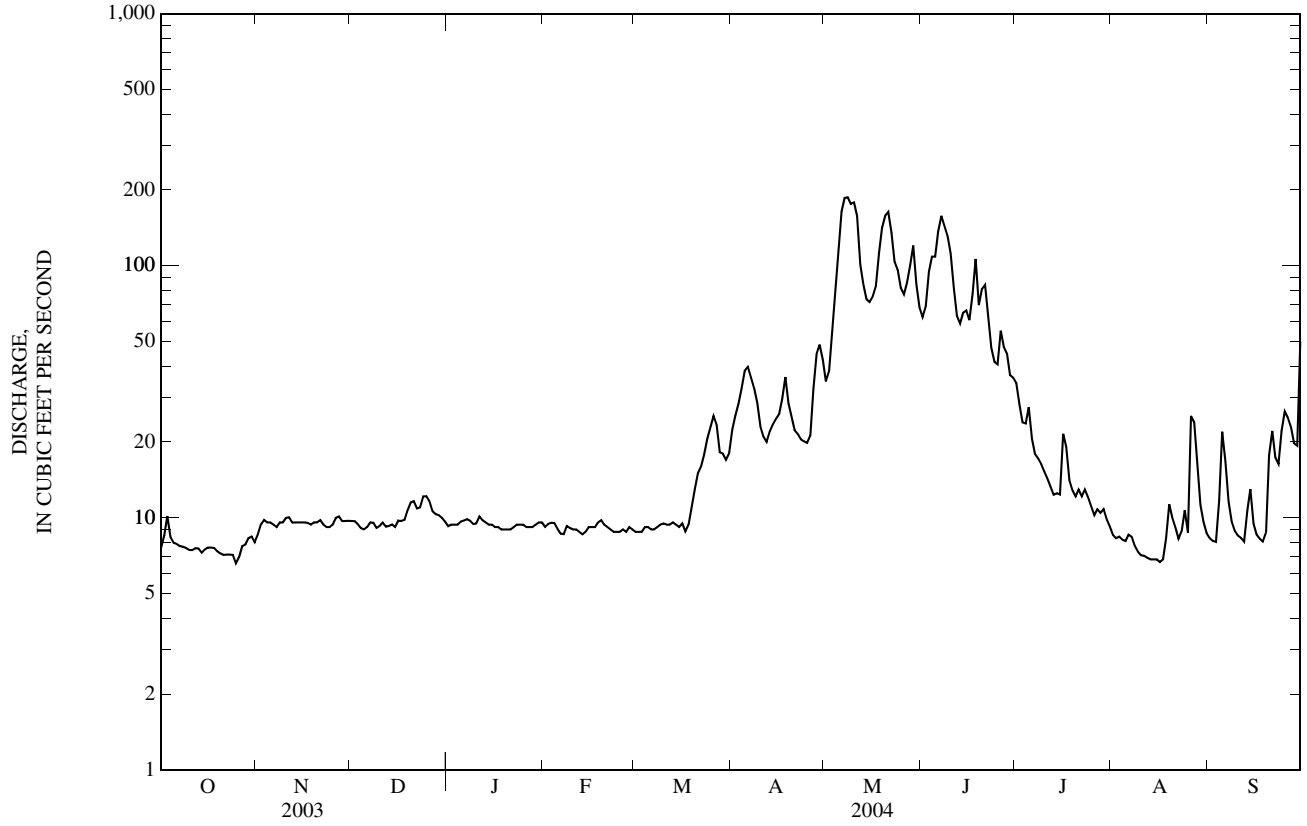
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

MEAN	13.7	11.3	9.96	9.23	9.16	10.4	23.6	167	250	53.8	13.4	12.4
MAX	38.7	21.3	15.1	14.0	12.7	20.1	73.4	272	534	224	29.5	27.2
(WY)	(1966)	(1962)	(1984)	(1999)	(1999)	(1966)	(1962)	(2000)	(1983)	(1983)	(1983)	(1965)
MIN	7.68	7.59	6.67	6.15	6.55	6.80	12.3	53.5	52.0	6.17	5.10	6.12
(WY)	(2004)	(2003)	(1991)	(1970)	(1970)	(1970)	(1993)	(1995)	(2002)	(2002)	(2002)	(2002)

06622700 NORTH BRUSH CREEK NEAR SARATOGA, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	18,788.0		9,653.5		--	
ANNUAL MEAN	51.5		26.4		48.6	
HIGHEST ANNUAL MEAN	--		--		82.0	1983
LOWEST ANNUAL MEAN	--		--		17.8	2002
HIGHEST DAILY MEAN	982	May 31	187	May 8	982	May 31, 2003
LOWEST DAILY MEAN	6.6	Several days	6.6	Oct 25	3.7	Aug 18, 2002
ANNUAL SEVEN-DAY MINIMUM	7.0	Feb 5	6.9	Aug 11	4.0	Aug 14, 2002
MAXIMUM PEAK FLOW	--		281	May 7	1,380	May 31, 2003
MAXIMUM PEAK STAGE	--		3.33	May 7	5.75[a]	Jun 7, 1964
ANNUAL RUNOFF (AC-FT)	37,270		19,150		35,240	
10 PERCENT EXCEEDS	150		77		150	
50 PERCENT EXCEEDS	9.6		9.8		12	
90 PERCENT EXCEEDS	7.5		8.0		8.0	

a Site and datum then in use.
e Estimated.



06622900 SOUTH BRUSH CREEK NEAR SARATOGA, WY

LOCATION.--Lat 41°20'38", long 106°31'33", in NE¼ NW¼ sec.20, T.16 N., R.81 W., Carbon County, Hydrologic Unit 10180002, Medicine Bow National Forest, on left bank 300 ft upstream from culvert on State Highway 130, 1.6 mi upstream from North Brush Creek, and 17 mi southeast of Saratoga.

DRAINAGE AREA.--22.8 mi^2.

PERIOD OF RECORD.--May 1960 to September 1974, May 1976 to September 1977, May 1979 to current year (no winter records since 1972). All values of discharge greater than 200 ft^3/s April, 1973 through September, 2002, are unreliable and should not be used.

GAGE.--Water-stage recorder. Elevation of gage is 8,100 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. Transbasin diversion 0.3 mi upstream from station for irrigation in North Brush Creek basin.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	14	20	22	7.7	10	7.4
2	---	---	---	---	---	---	14	24	38	5.5	10	7.1
3	---	---	---	---	---	---	14	39	86	4.1	10	6.4
4	---	---	---	---	---	---	17	61	99	4.0	9.9	8.9
5	---	---	---	---	---	---	23	88	123	4.5	9.8	16
6	---	---	---	---	---	---	25	109	207	3.3	10	12
7	---	---	---	---	---	---	22	129	216	3.1	9.7	9.1
8	---	---	---	---	---	---	20	134	165	9.1	9.3	8.0
9	---	---	---	---	---	---	17	146	133	22	8.8	7.4
10	---	---	---	---	---	---	14	155	85	20	8.6	7.1
11	---	---	---	---	---	---	14	104	39	18	8.4	7.0
12	---	---	---	---	---	---	14	44	23	16	8.5	7.0
13	---	---	---	---	---	---	13	29	18	15	8.6	8.8
14	---	---	---	---	---	---	14	21	24	15	8.6	8.7
15	---	---	---	---	---	---	14	21	23	16	8.3	7.3
16	---	---	---	---	---	---	14	22	19	28	8.3	6.9
17	---	---	---	---	---	---	17	24	57	19	8.1	6.6
18	---	---	---	---	---	---	21	43	53	15	9.3	6.4
19	---	---	---	---	---	---	17	65	24	13	11	6.8
20	---	---	---	---	---	---	15	96	35	12	9.7	12
21	---	---	---	---	---	---	15	110	34	13	9.3	12
22	---	---	---	---	---	---	14	79	19	11	8.9	9.4
23	---	---	---	---	---	---	14	49	12	12	11	8.7
24	---	---	---	---	---	---	13	46	10	11	11	9.9
25	---	---	---	---	---	---	13	33	9.5	11	9.2	12
26	---	---	---	---	---	---	13	27	14	10	18	16
27	---	---	---	---	---	---	19	31	10	11	17	14
28	---	---	---	---	---	---	27	50	9.0	12	12	12
29	---	---	---	---	---	---	28	64	8.0	12	9.4	13
30	---	---	---	---	---	---	25	31	12	12	8.2	27
31	---	---	---	---	---	---	---	23	---	11	7.7	---
TOTAL	---	---	---	---	---	---	514	1,917	1,626.5	376.3	306.6	300.9
MEAN	---	---	---	---	---	---	17.1	61.8	54.2	12.1	9.89	10.0
MAX	---	---	---	---	---	---	28	155	216	28	18	27
MIN	---	---	---	---	---	---	13	20	8.0	3.1	7.7	6.4
AC-FT	---	---	---	---	---	---	1,020	3,800	3,230	746	608	597

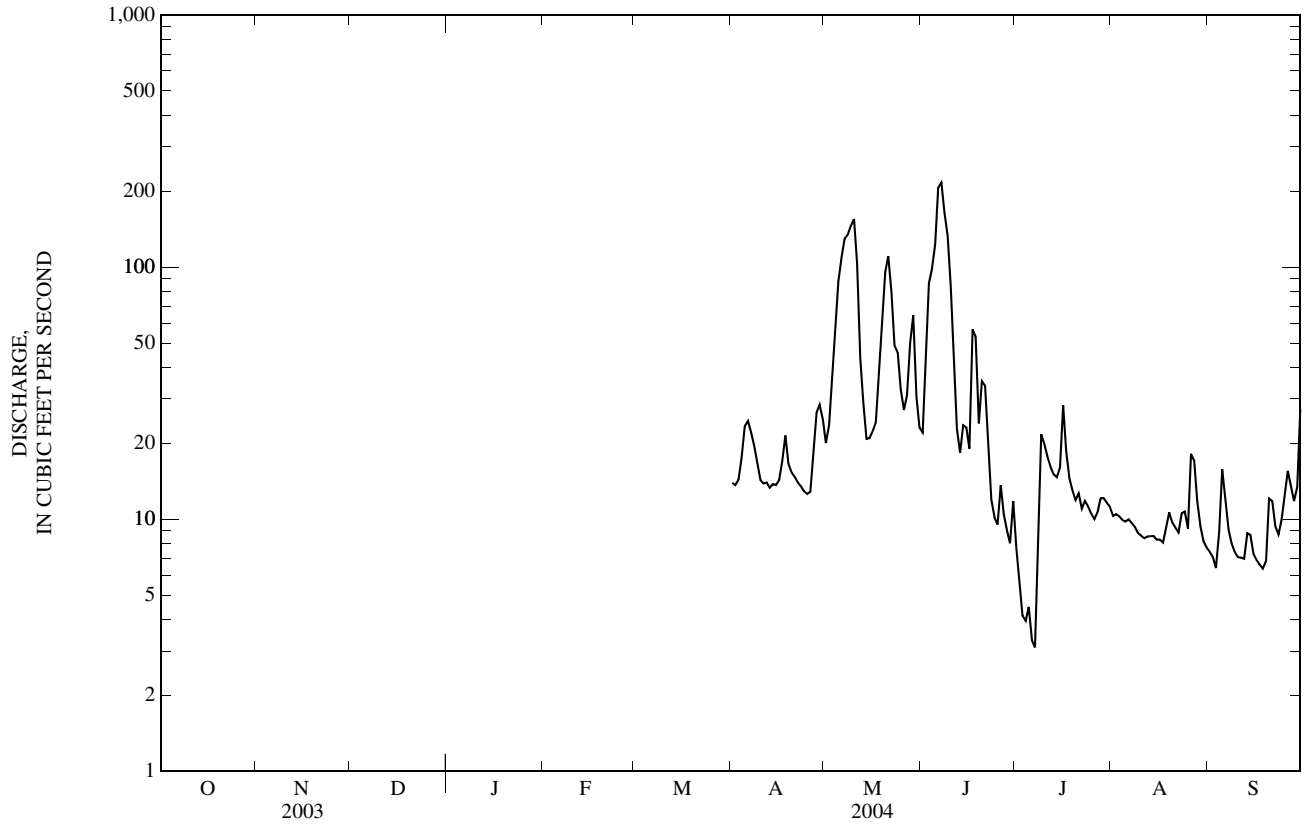
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)*

MEAN	11.7	9.02	7.14	5.83	6.01	6.63	15.1	89.6	144	39.6	9.70	7.94
MAX	33.8	25.9	17.2	9.61	9.46	11.3	54.2	181	295	139	29.4	24.8
(WY)	(1962)	(1962)	(1962)	(1962)	(1962)	(1966)	(1962)	(2003)	(1968)	(1983)	(1983)	(1961)
MIN	3.59	5.41	4.04	2.40	3.71	4.61	7.53	34.9	20.9	1.26	1.10	1.27
(WY)	(1965)	(1964)	(1965)	(1965)	(1965)	(1963)	(1968)	(1982)	(1987)	(2001)	(2001)	(1998)

06622900 SOUTH BRUSH CREEK NEAR SARATOGA, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1961 - 2004**	
HIGHEST DAILY MEAN	216	Jun 7	725[a]	May 31, 2003
LOWEST DAILY MEAN	3.1	Jul 7	0.43	Aug 5, 2001
MAXIMUM PEAK FLOW	383	Jun 6	1,230[a]	May 31, 2003
MAXIMUM PEAK STAGE	2.94	Jun 6	4.09	Jun 10, 1965

* For period of operation.
** All values of discharge greater than 200 ft^3/s April 1973 to September 2002 are unreliable and should not be used.
a May have been higher 1973-2002.



06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY
(Hydrologic Benchmark Station)

LOCATION.--Lat 41°01'25", long 106°49'27", in NE$^1/_4$ SW$^1/_4$ sec.10, T.12 N., R.84 W., Carbon County, Hydrologic Unit 10180002, Medicine Bow National Forest, on left bank 0.6 mi upstream from Hog Park Creek and 13 mi south of Encampment.

DRAINAGE AREA.--72.7 mi^2.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,270 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversion upstream from gage.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	e19	e18	e17	e16	e18	48	81	279	238	42	23
2	21	e20	e19	e16	e15	e17	55	97	306	180	41	22
3	30	e20	e18	e15	e16	e18	58	134	373	159	40	22
4	25	e19	e17	e13	e17	e19	60	184	429	151	37	28
5	23	e17	e16	e12	e16	e19	67	260	452	146	38	40
6	22	e17	e18	e13	e15	19	75	326	497	131	39	33
7	22	e16	e19	e13	e16	e19	76	364	534	117	40	27
8	21	e17	e18	e14	e17	e19	81	384	518	111	34	24
9	21	e19	e17	e16	e16	e18	76	402	492	103	32	23
10	21	e20	e16	e17	e15	e17	60	427	447	98	31	23
11	21	e19	e17	e16	e14	e17	54	433	360	93	30	23
12	20	e19	e16	e16	e12	e18	49	355	322	87	29	21
13	20	e20	e17	e15	e11	e20	48	289	300	82	28	27
14	20	e20	e19	e14	e13	e20	58	253	304	81	27	27
15	20	e19	e18	e14	e14	e20	62	241	306	78	27	23
16	21	e18	e16	e14	e16	e22	70	247	298	104	26	21
17	20	e18	e16	e13	e18	e23	84	268	356	85	26	20
18	20	e17	e17	e13	e19	e24	82	325	361	75	34	19
19	20	e18	e18	e13	e19	e26	66	390	289	71	52	23
20	19	e20	e19	e13	e18	e27	63	419	267	67	40	63
21	19	e19	e19	e13	e17	e26	57	458	361	66	38	64
22	19	e17	e18	e14	e18	e25	52	426	270	68	36	44
23	19	e15	e16	e15	e18	33	50	381	219	80	33	41
24	18	e17	e16	e16	e18	41	49	368	208	69	29	49
25	15	e19	e17	e15	e18	48	50	365	206	61	28	62
26	18	e18	e18	e14	e19	54	58	326	222	54	29	59
27	21	e16	e17	e13	20	51	86	352	213	52	38	56
28	20	e15	e15	e14	19	39	113	395	194	51	31	51
29	20	e16	e14	e16	19	e36	117	443	188	47	27	53
30	20	e19	e15	e18	---	e36	93	329	301	46	25	97
31	e18	---	e16	e17	---	e37	---	287	---	45	24	---
TOTAL	635	543	530	452	479	826	2,017	10,009	9,872	2,896	1,031	1,108
MEAN	20.5	18.1	17.1	14.6	16.5	26.6	67.2	323	329	93.4	33.3	36.9
MAX	30	20	19	18	20	54	117	458	534	238	52	97
MIN	15	15	14	12	11	17	48	81	188	45	24	19
AC-FT	1,260	1,080	1,050	897	950	1,640	4,000	19,850	19,580	5,740	2,040	2,200

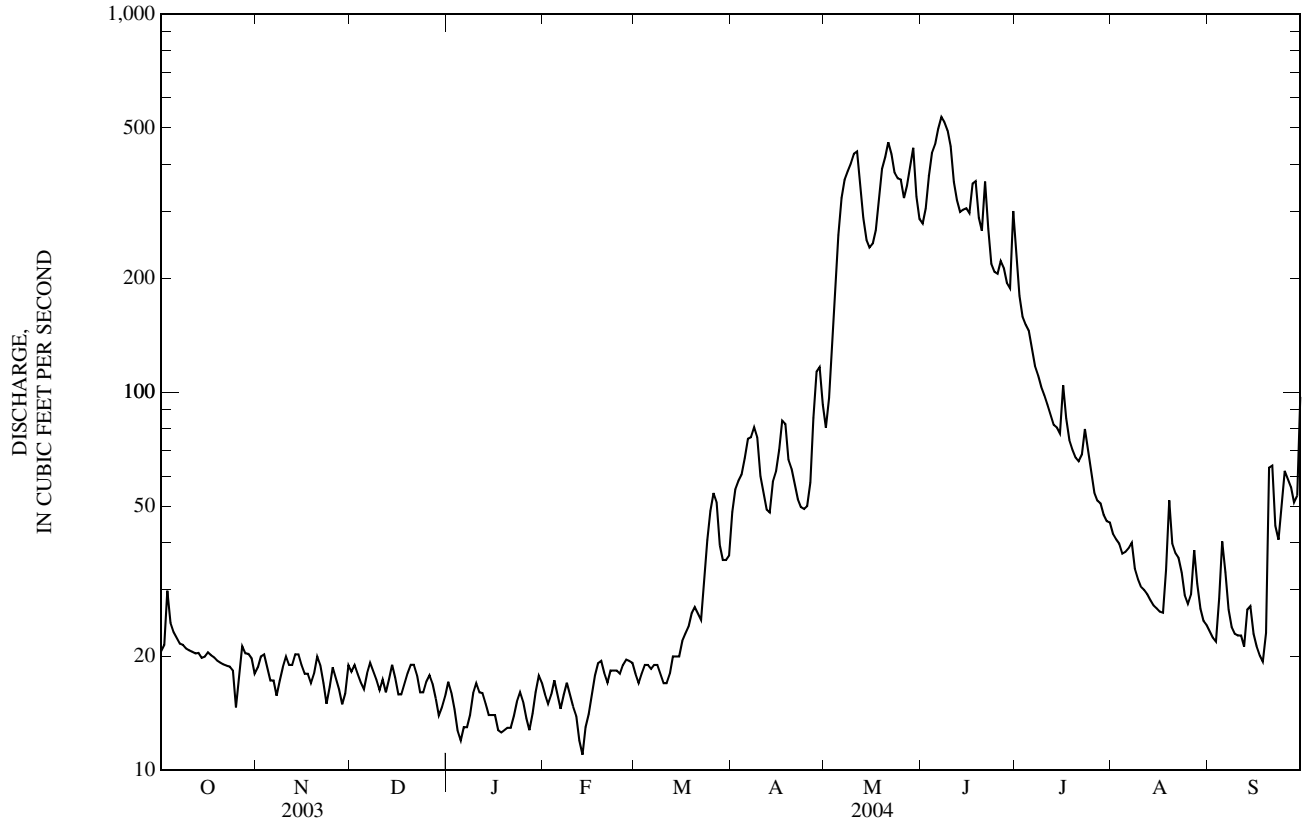
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2004, BY WATER YEAR (WY)

MEAN	30.3	24.6	22.0	19.6	18.6	19.9	41.7	284	584	195	45.8	32.5
MAX	71.5	45.2	33.9	28.9	28.1	31.4	76.5	471	919	581	83.3	82.2
(WY)	(1998)	(1998)	(1998)	(1971)	(1971)	(1997)	(1989)	(2000)	(1997)	(1995)	(1995)	(1997)
MIN	17.5	15.6	11.7	10.9	10.8	10.9	19.3	120	162	29.5	15.6	17.8
(WY)	(1992)	(1978)	(1969)	(1969)	(1969)	(1969)	(1975)	(1995)	(2002)	(2002)	(2002)	(2002)

06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1965 - 2004	
ANNUAL TOTAL	37,353		30,398		--	
ANNUAL MEAN	102		83.1		110	
HIGHEST ANNUAL MEAN	--		--		159	1982
LOWEST ANNUAL MEAN	--		--		45.5	2002
HIGHEST DAILY MEAN	1,300	Jun 1	534	Jun 7	1,360	Jun 25, 1983
LOWEST DAILY MEAN	11	Feb 6,7	11	Feb 13	9.5	Dec 31, 1968
ANNUAL SEVEN-DAY MINIMUM	12	Feb 2	13	Jan 15	10	Mar 8, 1969
MAXIMUM PEAK FLOW	--		640	Jun 7	1,680[a]	Jun 13, 1965
MAXIMUM PEAK STAGE	--		3.70	Jun 7	5.04[b]	Jun 1, 2003
ANNUAL RUNOFF (AC-FT)	74,090		60,290		79,600	
10 PERCENT EXCEEDS	374		302		364	
50 PERCENT EXCEEDS	21		25		28	
90 PERCENT EXCEEDS	14		16		16	

a About June 13, 1965; from slope-area measuiement of peak flow; gage height not determined.
b Highest recorded.
e Estimated.



06625000 ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY

LOCATION.--Lat 41°18'12", long 106°42'53", in NE¼ NW¼ sec.3, T.15 N., R.83 W., Carbon County, Hydrologic Unit 10180002, on left bank 0.5 mi upstream from mouth and 8.0 mi northeast of Encampment.

DRAINAGE AREA.--265 mi^2.

PERIOD OF RECORD.--April 1940 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1710: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,970 ft above NGVD of 1929, from topographic map. Prior to June 28, 1961, water-stage recorder at site 660 ft upstream at datum 2.00 ft higher. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Five small reservoirs upstream from station for irrigation, total capacity, about 400 acre-ft. Slight regulation by Hog Park Creek Reservoir, capacity, about 2,970 acre-ft. Diversions for irrigation of about 8,800 acres upstream from station. Transbasin diversion upstream from station into Hog Park Creek (tributary to Encampment River) from North Fork Little Snake River for municipal, industrial, and irrigation uses began September 1964.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	78	97	e69	e48	e55	138	410	434	386	22	21
2	83	87	93	e71	e45	e53	171	413	437	275	22	20
3	97	96	e85	e66	e46	e54	225	485	488	236	21	19
4	99	88	e81	e58	e50	e56	228	543	586	222	20	29
5	90	83	e78	e53	e48	e59	245	624	648	217	20	59
6	76	e82	85	e53	e46	e62	275	708	712	202	23	54
7	83	e80	89	e56	e47	e66	285	777	813	167	26	40
8	69	e82	89	e58	e50	e72	303	872	830	141	22	33
9	65	94	e86	e61	e49	e84	315	899	798	122	21	32
10	68	105	e83	e64	e47	e93	281	926	735	99	20	32
11	70	98	e85	e63	e46	e89	251	970	550	92	22	33
12	77	93	e78	e60	e45	91	252	806	445	87	20	34
13	79	96	e77	e58	e44	90	251	689	414	83	20	41
14	65	102	e80	e57	e45	85	293	537	414	71	19	53
15	64	96	e76	e57	e48	85	298	476	425	59	18	44
16	65	93	e72	e56	e49	85	302	458	400	84	19	39
17	65	94	e70	e54	e54	88	336	471	431	96	19	36
18	62	90	e74	e51	e53	89	358	544	703	71	26	36
19	63	87	e78	e49	e54	94	325	632	451	62	51	37
20	62	91	e82	e49	e51	101	329	664	400	44	59	73
21	62	93	e82	e48	e50	105	326	778	506	47	51	148
22	62	e82	e77	e49	e50	110	317	778	466	46	37	108
23	61	e74	e73	e51	e52	123	342	680	339	78	34	87
24	61	e76	e69	e54	e52	136	344	640	296	72	33	88
25	61	e82	e71	e52	e53	158	345	603	301	57	34	103
26	58	e84	e73	e48	e53	170	344	570	348	49	43	100
27	65	e81	e72	e47	e57	176	391	552	296	53	48	96
28	64	e79	e68	e48	e59	153	469	559	314	46	46	87
29	63	e86	e66	e51	e57	128	503	687	271	40	35	104
30	65	e100	e65	e52	---	128	455	556	362	26	31	171
31	68	---	e67	e51	---	124	---	470	---	23	28	---
TOTAL	2,173	2,652	2,421	1,714	1,448	3,062	9,297	19,777	14,613	3,353	910	1,857
MEAN	70.1	88.4	78.1	55.3	49.9	98.8	310	638	487	108	29.4	61.9
MAX	99	105	97	71	59	176	503	970	830	386	59	171
MIN	58	74	65	47	44	53	138	410	271	23	18	19
AC-FT	4,310	5,260	4,800	3,400	2,870	6,070	18,440	39,230	28,980	6,650	1,800	3,680

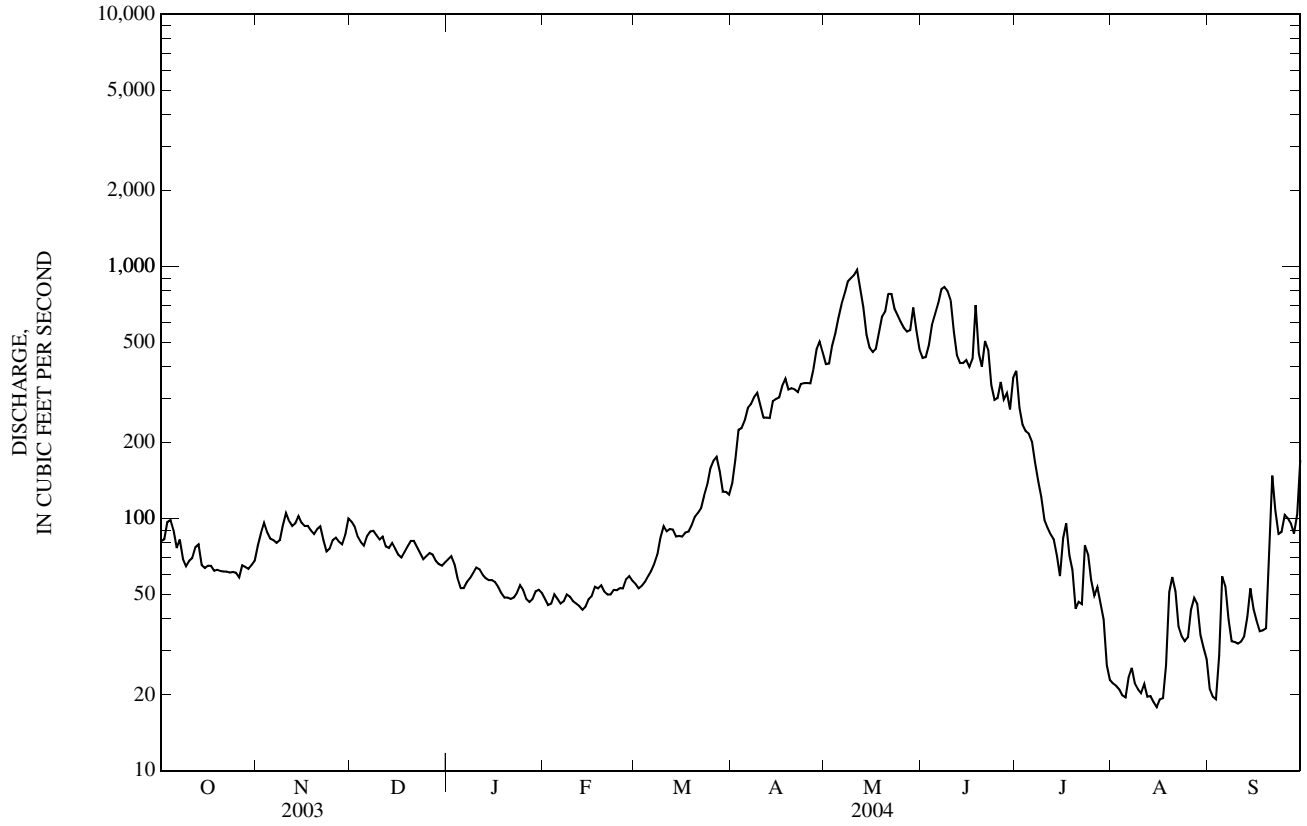
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)

MEAN	78.6	79.0	69.7	62.1	62.9	71.7	152	760	1,154	273	65.9	55.4
MAX	167	156	131	122	115	117	352	1,258	2,029	942	178	174
(WY)	(1998)	(1998)	(1998)	(1998)	(1962)	(1989)	(1962)	(1952)	(1971)	(1995)	(1982)	(1997)
MIN	29.4	42.6	49.2	34.2	35.8	44.5	71.3	209	162	23.1	19.7	14.2
(WY)	(1980)	(1977)	(1964)	(1963)	(1955)	(1964)	(1944)	(2002)	(2002)	(2002)	(2002)	(1954)

06625000 ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004	
ANNUAL TOTAL	75,978		63,277		--	
ANNUAL MEAN	208		173		240	
HIGHEST ANNUAL MEAN	--		--		375	1997
LOWEST ANNUAL MEAN	--		--		83.4	2002
HIGHEST DAILY MEAN	2,450	Jun 1	970	May 11	3,640	Jun 4, 1952
LOWEST DAILY MEAN	14	Aug 8-10	18	Aug 15	8.0[a]	Sep 1, 1954
ANNUAL SEVEN-DAY MINIMUM	15	Aug 4	20	Aug 11	8.9	Aug 28, 1954
MAXIMUM PEAK FLOW	--		1,080	May 11	4,510[b]	Jun 1, 1943
MAXIMUM PEAK STAGE	--		4.35	May 11	10.33[c]	Jun 4, 1952
ANNUAL RUNOFF (AC-FT)	150,700		125,500		174,200	
10 PERCENT EXCEEDS	591		486		764	
50 PERCENT EXCEEDS	76		80		75	
90 PERCENT EXCEEDS	30		36		41	

a Minimum daily discharge for period of record, 5.2 ft^3/s, Aug 15, 16, 1940.
b Gage height, 10.25 ft, present datum.
c Present datum.
e Estimated.



06627800 JACK CREEK ABOVE COYOTE DRAW, NEAR SARATOGA, WY

LOCATION.--Lat 41°26'21", long 106°58'16", in NW¼ NE¼ NW¼ sec.21, T.17 N., R.85 W., Carbon County, Hydrologic Unit 10180002, on left bank 1.2 mi upstream from Coyote Draw and Blydenburg and Morgan Ditches, 2.0 mi downstream from Gartman Creek, and 8.2 mi west of Saratoga.

DRAINAGE AREA.-- 109 mi^2.

PERIOD OF RECORD.--April 1990 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 7,050 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. Diversions for irrigation of about 2,000 acres upstream from station.

COOPERATION.--Station operated and record provided by Office of the Wyoming State Engineer; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	---	---	---	---	---	22	42	51	32	3.5	2.4
2	2.2	---	---	---	---	---	28	40	49	27	3.1	1.9
3	3.0	---	---	---	---	---	30	45	48	25	3.1	1.7
4	2.1	---	---	---	---	---	31	54	50	23	2.6	1.9
5	2.4	---	---	---	---	---	38	61	54	22	2.4	2.8
6	2.2	---	---	---	---	---	39	75	58	20	2.5	3.3
7	---	---	---	---	---	---	38	81	65	19	2.6	3.3
8	---	---	---	---	---	---	42	74	71	17	2.2	2.9
9	---	---	---	---	---	---	48	72	70	16	1.9	2.1
10	---	---	---	---	---	---	41	72	67	15	1.6	1.8
11	---	---	---	---	---	---	30	78	62	14	1.6	1.8
12	---	---	---	---	---	---	29	84	55	12	1.5	1.9
13	---	---	---	---	---	---	27	88	48	11	1.6	2.3
14	---	---	---	---	---	---	27	75	42	10	1.5	3.5
15	---	---	---	---	---	---	27	63	42	9.3	1.3	3.8
16	---	---	---	---	---	---	27	56	42	10	1.3	3.4
17	---	---	---	---	---	---	36	54	42	11	1.2	2.8
18	---	---	---	---	---	---	44	54	53	9.0	1.8	2.2
19	---	---	---	---	---	---	41	56	52	7.3	5.4	2.2
20	---	---	---	---	---	---	32	65	50	6.1	6.1	5.6
21	---	---	---	---	---	---	33	67	55	5.5	9.8	15
22	---	---	---	---	---	---	35	69	53	5.2	6.7	15
23	---	---	---	---	---	27	28	80	40	6.5	4.7	11
24	---	---	---	---	---	30	28	71	34	7.5	3.8	9.1
25	---	---	---	---	---	43	31	66	33	6.5	3.5	8.1
26	---	---	---	---	---	45	31	63	37	5.3	5.1	7.6
27	---	---	---	---	---	39	36	56	36	4.8	9.1	6.6
28	---	---	---	---	---	29	46	57	34	5.0	7.8	5.8
29	---	---	---	---	---	22	54	63	32	5.2	5.2	5.4
30	---	---	---	---	---	20	52	70	34	4.5	3.8	7.3
31	---	---	---	---	---	19	---	58	---	4.0	3.1	---
TOTAL	---	---	---	---	---	---	1,051	2,009	1,459	375.7	111.4	144.5
MEAN	---	---	---	---	---	---	35.0	64.8	48.6	12.1	3.59	4.82
MAX	---	---	---	---	---	---	54	88	71	32	9.8	15
MIN	---	---	---	---	---	---	22	40	32	4.0	1.2	1.7
AC-FT	---	---	---	---	---	---	2,080	3,980	2,890	745	221	287

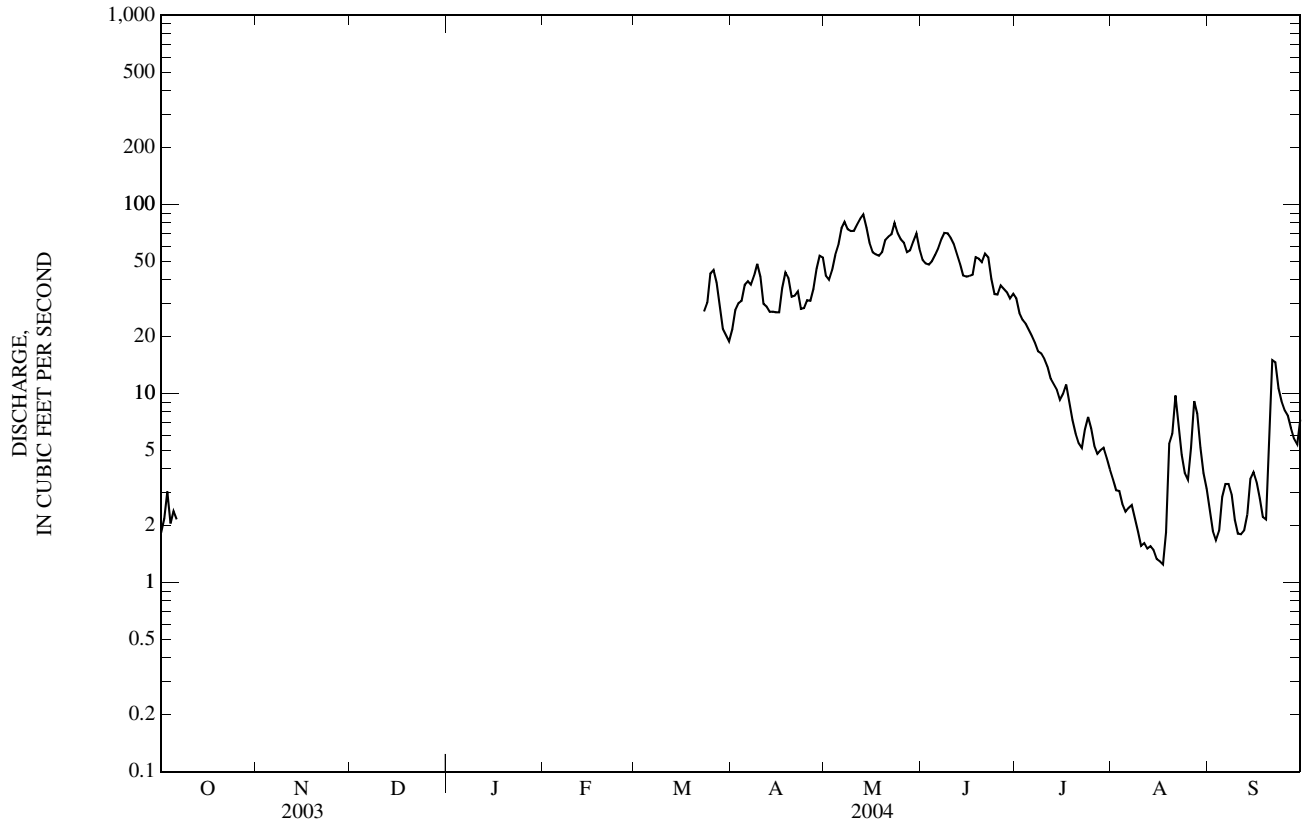
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)*

MEAN	---	---	---	---	---	---	29.9	96.5	86.4	21.8	6.07	5.20
MAX	---	---	---	---	---	---	44.0	175	230	84.0	14.0	10.9
(WY)	---	---	---	---	---	---	(1997)	(1997)	(1995)	(1995)	(1995)	(1997)
MIN	---	---	---	---	---	---	15.6	33.5	24.9	2.94	0.40	1.90
(WY)	---	---	---	---	---	---	(1991)	(2002)	(2002)	(2002)	(2002)	(2002)

06627800 JACK CREEK ABOVE COYOTE DRAW, NEAR SARATOGA, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1990 - 2004*	
HIGHEST DAILY MEAN	88	May 13	379	Jun 9, 1995
LOWEST DAILY MEAN	1.2	Aug 17	0.00	Aug17-29,2002
MAXIMUM PEAK FLOW	93	May 7	461 [a]	Jun 9, 1993
MAXIMUM PEAK STAGE	4.83	May 7	7.22	Jun 9, 1995

* For period of operation.
a Gage height, 7.08 ft.
e Estimated.



06628900 PASS CREEK NEAR ELK MOUNTAIN, WY

LOCATION.--Lat 41°35'12", long 106°36'40", in NE¼ SE¼ SE¼ sec.28, T.19 N., R.82 W., Carbon County, Hydrologic Unit 10180002, on right bank 500 ft upstream from bridge on county road, 700 ft upstream from Brush Creek, 12 mi southwest of town of Elk Mountain, and 14 mi northeast of Saratoga.

DRAINAGE AREA.--91.5 mi^2. Area at mouth, 279 mi^2.

PERIOD OF RECORD.--April 1957 to current year (no winter records since 1992).

GAGE.--Water-stage recorder. Elevation of gage is 7,230 ft above NGVD of 1929, from topographic map. April 18, 1957 to October 6, 1966, 274 ft upstream at datum 6.00 ft higher. October 7, 1966 to September 23, 1987, at site 289 ft upstream at datum 6.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 6,300 acres upstream from station. Diversion to Kerr Ditch 7.5mi upstream.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	---	---	---	---	---	e35	25	40	15	2.3	2.6
2	10	---	---	---	---	---	e37	24	39	15	2.2	2.5
3	11	---	---	---	---	---	e39	35	36	13	2.2	2.2
4	12	---	---	---	---	---	e44	46	34	12	1.9	2.3
5	11	---	---	---	---	---	e50	64	34	e8.1	1.8	4.6
6	11	---	---	---	---	---	e53	83	32	e7.5	1.9	6.1
7	---	---	---	---	---	---	48	65	27	6.2	2.1	4.6
8	---	---	---	---	---	---	44	58	24	5.6	1.7	3.8
9	---	---	---	---	---	---	43	52	27	5.2	1.4	3.1
10	---	---	---	---	---	---	29	48	29	5.0	1.3	2.7
11	---	---	---	---	---	---	23	49	28	5.0	1.4	2.7
12	---	---	---	---	---	---	25	46	31	4.1	1.3	2.8
13	---	---	---	---	---	---	36	48	41	4.1	1.3	2.9
14	---	---	---	---	---	---	45	50	39	3.9	1.3	3.6
15	---	---	---	---	---	---	37	49	38	3.6	1.3	3.6
16	---	---	---	---	---	---	36	39	39	3.4	1.3	3.0
17	---	---	---	---	---	---	38	38	40	3.8	1.2	2.8
18	---	---	---	---	---	---	40	40	59	3.7	1.3	2.6
19	---	---	---	---	---	---	30	40	48	3.2	2.1	2.4
20	---	---	---	---	---	---	31	47	51	2.7	3.2	3.7
21	---	---	---	---	---	---	26	52	58	2.6	3.7	6.0
22	---	---	---	---	---	---	24	55	56	2.5	3.6	9.1
23	---	---	---	---	---	---	19	65	42	3.3	3.4	7.2
24	---	---	---	---	---	---	19	47	35	3.9	3.4	6.7
25	---	---	---	---	---	---	29	45	21	4.0	3.5	6.3
26	---	---	---	---	---	---	27	56	21	3.5	9.3	5.9
27	---	---	---	---	---	---	31	51	17	3.3	13	5.4
28	---	---	---	---	---	---	44	55	16	3.5	7.5	5.4
29	---	---	---	---	---	---	45	54	15	3.8	5.0	5.7
30	---	---	---	---	---	---	36	56	13	3.1	3.4	12
31	---	---	---	---	---	---	---	47	---	2.6	3.1	---
TOTAL	---	---	---	---	---	---	1,063	1,529	1,030	166.2	93.4	134.3
MEAN	---	---	---	---	---	---	35.4	49.3	34.3	5.36	3.01	4.48
MAX	---	---	---	---	---	---	53	83	59	15	13	12
MIN	---	---	---	---	---	---	19	24	13	2.5	1.2	2.2
AC-FT	---	---	---	---	---	---	2,110	3,030	2,040	330	185	266

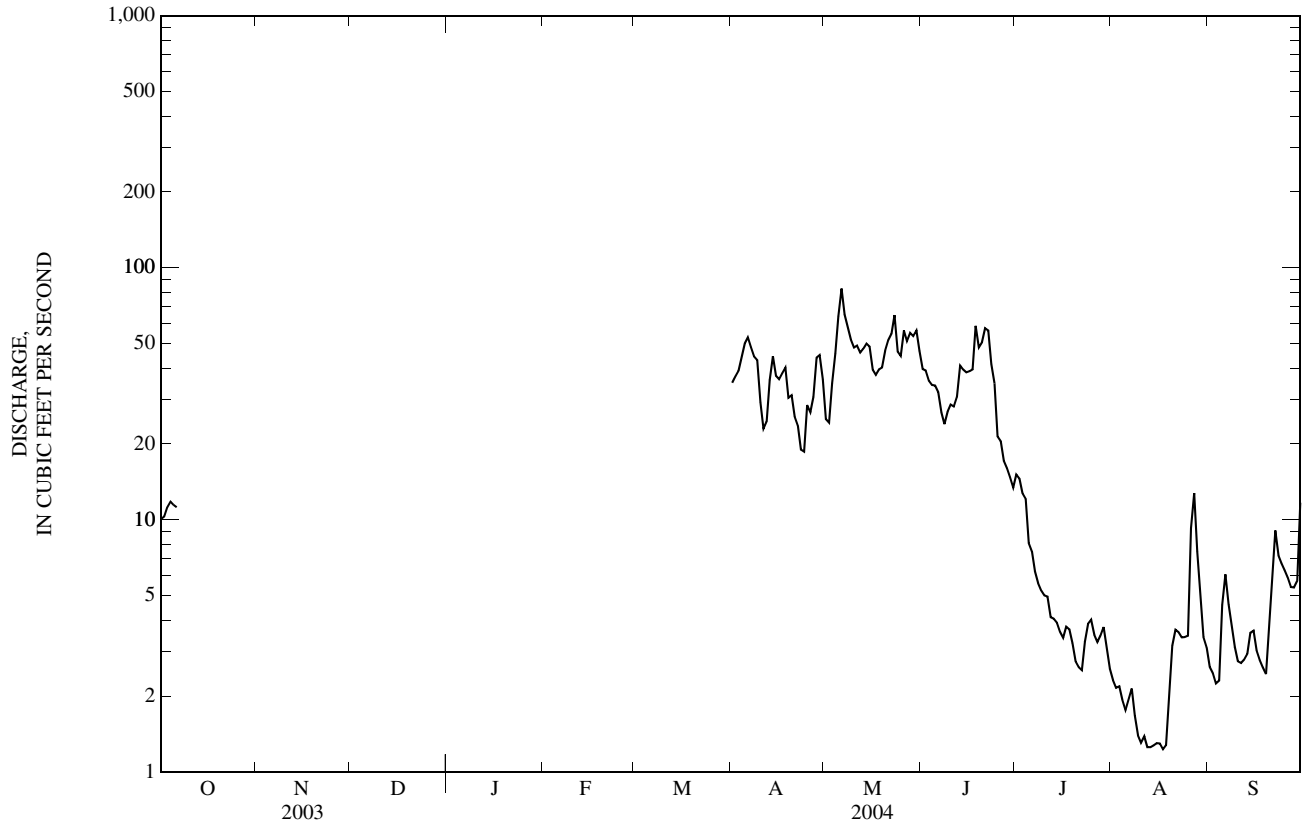
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2004, BY WATER YEAR (WY)*

MEAN	12.1	11.8	10.2	9.56	10.2	18.1	63.7	172	125	28.9	12.1	9.78
MAX	20.5	24.9	17.6	15.3	23.6	44.5	151	540	360	85.9	31.9	23.8
(WY)	(1971)	(1974)	(1974)	(1984)	(1962)	(1960)	(1971)	(1984)	(1983)	(1983)	(1983)	(1982)
MIN	4.98	5.20	6.87	5.43	4.37	7.31	14.8	24.9	28.6	2.39	1.44	3.37
(WY)	(1964)	(1978)	(1978)	(1981)	(1982)	(1965)	(1966)	(2002)	(2002)	(2002)	(2002)	(1977)

06628900 PASS CREEK NEAR ELK MOUNTAIN, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1957 - 2004*	
ANNUAL MEAN	--		41.1	
HIGHEST ANNUAL MEAN	--		86.4	1984
LOWEST ANNUAL MEAN	--		20.2	1959
HIGHEST DAILY MEAN	83	May 6	1,780	May 12, 1984
LOWEST DAILY MEAN	1.2	Aug17	0.29	Aug 20, 2002
MAXIMUM PEAK FLOW	100	May 6	4,660[a]	May 12, 1984
MAXIMUM PEAK STAGE	5.64	May 6	9.12[b]	May 12, 1984
ANNUAL RUNOFF (AC-FT)	--		29,790	

* For period of operation.
a From rating curve extended above 1,600 ft^3/s, on basis of slope-area measurement of peak flow.
b From floodmarks, site and datum then in use.
e Estimated.



06630000 NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY

LOCATION.--Lat 41°52'20", long 107°03'25", in SW¼ SW¼ sec.13, T.22 N., R.86 W., Carbon County, Hydrologic Unit 10180002, on left bank 6.5 mi northeast of Sinclair and 14 mi upstream from high-water line of Seminoe Reservoir at elevation 6,357 ft.

DRAINAGE AREA.--4,175 mi^2, of which 114 mi^2 probably is non-contributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1939 to current year. Prior to October 1943, published as "near Parco."

REVISED RECORDS.--WDR-76-1: Drainage area.

GAGE.--Water-stage recorder. Sharp-crested weir since March 25, 1993. Elevation of gage is 6,400.75 ft above NGVD of 1929. Wyoming State Engineer's Office 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 215,000 acres upstream from station. Transbasin diversions upstream from station.

COOPERATION.--Seven discharge measurements provided by the Wyoming State Engineer's Office, and four discharge measurements provided by the Bureau of Reclamation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	e235	e356	e290	e310	e370	747	912	1,090	1,320	337	274
2	197	e248	e353	e290	e310	e360	741	838	1,030	1,670	315	243
3	206	291	e340	e280	e320	e350	767	773	976	1,560	308	219
4	214	351	e320	e270	e320	e350	832	816	962	1,270	286	211
5	223	344	e300	e260	e310	e350	824	888	1,030	1,090	267	217
6	225	e320	e300	e270	e310	e360	863	987	1,110	970	250	264
7	221	e279	e310	e270	e320	e370	932	1,130	1,220	871	241	306
8	219	e266	e290	e280	e320	e383	974	1,290	1,480	772	240	292
9	219	e291	e270	e290	e310	e400	1,040	1,440	1,690	684	229	284
10	207	e306	e270	e300	e310	e414	1,100	1,460	1,730	596	223	265
11	208	e342	e270	e300	e300	e429	994	1,530	1,620	535	204	246
12	209	386	e270	e290	e280	e444	891	1,560	1,440	500	187	239
13	213	384	e270	e290	e290	e467	862	1,550	1,310	479	177	243
14	219	393	e280	e300	e300	e476	855	1,560	1,230	490	167	230
15	222	408	e270	e300	e310	e484	893	1,340	1,140	432	158	255
16	213	408	e260	e300	e320	e492	867	1,220	1,090	410	146	257
17	219	423	e270	e290	e330	e519	814	1,120	1,010	459	135	236
18	222	e390	e270	e280	e340	e601	814	1,050	1,280	644	132	219
19	218	405	e280	e290	e350	697	847	1,070	1,870	942	215	214
20	213	357	e280	e290	e340	841	810	1,150	1,880	702	456	228
21	213	339	e290	e280	e340	1,030	824	1,170	1,820	619	289	334
22	215	e282	e280	e280	e350	1,290	867	1,340	1,950	559	339	482
23	218	e221	e280	e290	e360	1,380	853	1,400	2,110	575	317	556
24	217	e228	e270	e310	e370	1,710	864	1,350	1,780	629	336	555
25	218	e255	e280	e300	e380	1,780	855	1,320	1,390	668	318	597
26	218	e245	e290	e300	e400	1,560	799	1,410	1,220	611	285	648
27	214	e250	e280	e300	e400	1,460	805	1,380	1,300	534	279	670
28	199	e277	e270	e310	e390	1,330	836	1,280	1,190	525	316	635
29	212	e303	e270	e320	e380	1,140	899	1,170	1,260	454	317	606
30	236	e332	e280	e330	---	905	950	1,280	1,130	414	296	683
31	e230	---	e290	e320	---	783	---	1,180	---	369	295	---
TOTAL	6,673	9,559	8,909	9,070	9,670	23,525	26,019	37,964	41,338	22,353	8,060	10,708
MEAN	215	319	287	293	333	759	867	1,225	1,378	721	260	357
MAX	236	423	356	330	400	1,780	1,100	1,560	2,110	1,670	456	683
MIN	196	221	260	260	280	350	741	773	962	369	132	211
AC-FT	13,240	18,960	17,670	17,990	19,180	46,660	51,610	75,300	81,990	44,340	15,990	21,240

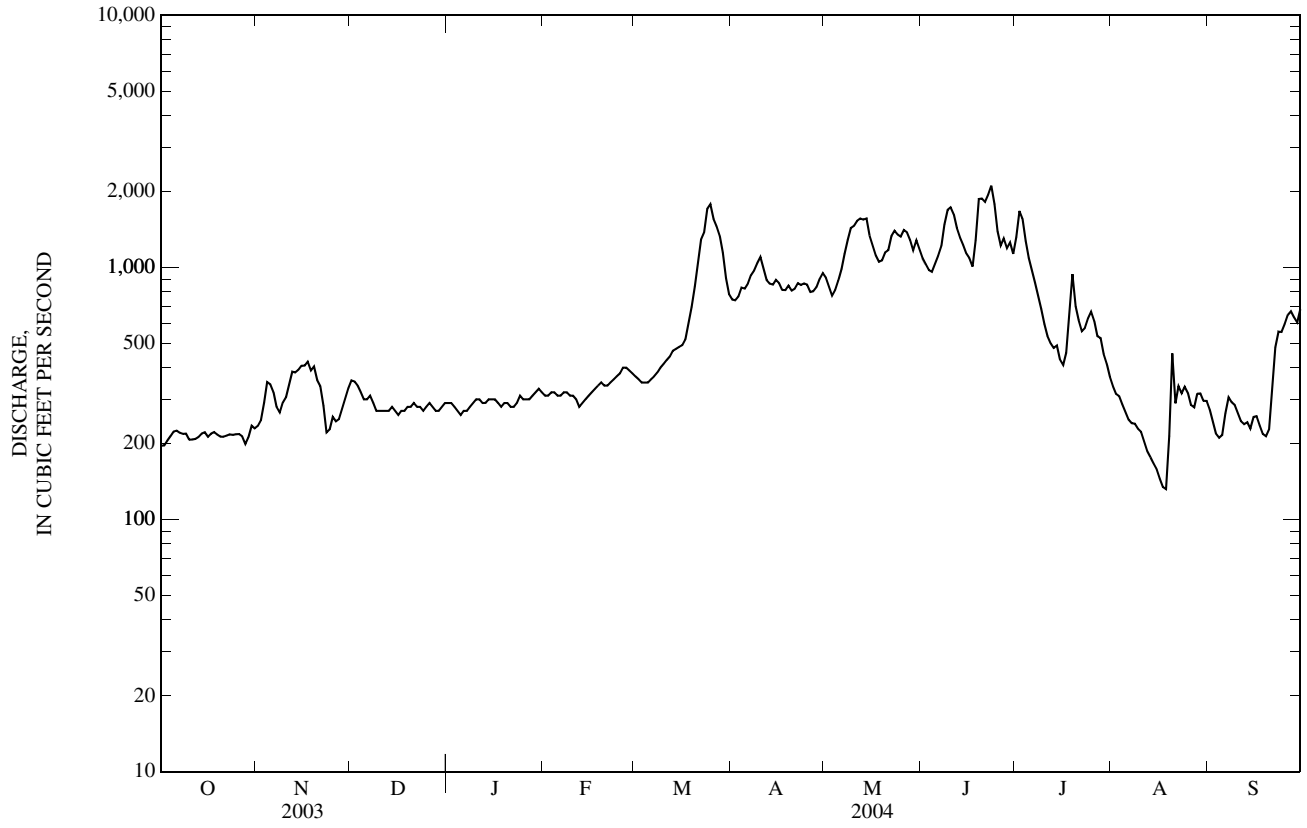
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	405	422	348	316	345	551	1,389	3,074	4,267	1,369	487	310
MAX	1,036	745	562	515	654	1,190	4,390	8,568	9,999	5,256	1,484	1,198
(WY)	(1966)	(1966)	(1998)	(1998)	(1996)	(1986)	(1962)	(1984)	(1983)	(1983)	(1983)	(1997)
MIN	157	240	224	181	191	205	492	384	471	107	67.9	59.7
(WY)	(1957)	(1953)	(2003)	(1963)	(2002)	(1964)	(1995)	(2002)	(2002)	(2002)	(2002)	(2002)

06630000 NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	296,144		213,848		--	
ANNUAL MEAN	811		584		1,109	
HIGHEST ANNUAL MEAN	--		--		2,169	1984
LOWEST ANNUAL MEAN	--		--		270	2002
HIGHEST DAILY MEAN	8,350	Jun 2	2,110	Jun 23	14,800	Jun 11, 1986
LOWEST DAILY MEAN	163	Aug 17	132	Aug 18	37	Sep 9, 2002
ANNUAL SEVEN-DAY MINIMUM	188	Sep 1	157	Aug 12	39	Sep 5, 2002
MAXIMUM PEAK FLOW	--		2,150	Jun 23	16,200	Jun 11, 1986
MAXIMUM PEAK STAGE	--		4.80	Jun 23	11.30	Jun 11, 1986
ANNUAL RUNOFF (AC-FT)	587,400		424,200		803,700	
10 PERCENT EXCEEDS	2,330		1,290		3,070	
50 PERCENT EXCEEDS	290		350		440	
90 PERCENT EXCEEDS	209		219		225	

e Estimated



06630000 NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-2001, October 2003 to September 2004.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: March to October 1978.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
OCT													
09...	0845	223	604	8.0	91	8.3	453	8.0	10.5	<.04	<.06	<.008	<.02
MAR													
08...	1540	380	613	11.7	100	8.5	421	8.0	.0	<.04	<.06	<.008	<.02
MAY													
18...	1050	1,010	601	8.0	99	7.6	233	21.0	14.0	<.04	<.06	<.008	<.02
AUG													
16...	1230	148	610	8.4	125	8.6	404	27.0	23.5	<.04	<.06	<.008	<.02

Date	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)	Suspended sediment discharge, tons/d (80155)
OCT				
09...	40	47	6	3.6
MAR				
08...	<1	<1	25	26
MAY				
18...	E9	E10	16	44
AUG				
16...	E4	E3	6	2.4

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06632400 ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY

LOCATION.--Lat 41°35'07", long 106°13'20", in SE¼ SW¼ sec. 25, T.19 N., R.79 W., Carbon County, Hydrologic Unit 10180004, on left bank 200 ft upstream from point of diversion to King Canyon Canal, 0.4 mi downstream from Overland Creek, 1.0 mi southwest of Arlington, and 6.9 mi southwest of McFadden.

DRAINAGE AREA.--62.9 mi^2.

PERIOD OF RECORD.--October 1954 to current year. Prior to 1965, includes records for 06632500 Rock Creek at Arlington, adjusted for diversion by King Canyon Canal.

REVISED RECORDS.--WDR WY-86: 1985(m). WDR WY-87: 1985.

GAGE.--Water-stage recorder. Elevation of gage is 7,790 ft above NGVD of 1929, from topographic map. October 1955 to September 1965, records from 06625000, Rock Creek at Arlington, collected at non-equivalent site 500 ft downstream (see PERIOD OF RECORD). U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Minor regulation by Sand Lake, capacity, 1,100 acre-ft, on Deep Creek, 12 mi upstream. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	12	10	e8.8	e7.6	e7.4	20	41	154	83	15	13
2	9.8	12	9.8	e8.4	e7.4	e7.4	22	40	165	75	15	12
3	11	12	e9.8	e8.4	e7.6	e7.6	22	63	223	66	15	11
4	10	9.7	e9.6	e8.4	e7.6	e8.2	23	110	260	64	15	13
5	10	11	e9.4	8.9	e7.4	e8.4	26	166	257	67	14	29
6	9.9	e10	9.8	8.8	e7.2	e8.4	25	225	304	57	14	24
7	9.9	e9.8	9.4	8.8	e7.4	e8.8	27	256	362	50	13	17
8	9.9	e10	9.9	8.7	e7.6	8.8	25	274	345	48	12	15
9	9.8	11	e9.0	8.5	e7.4	e9.4	e24	303	338	45	12	13
10	9.5	11	e9.0	8.1	e7.2	e9.8	e23	319	284	41	11	12
11	9.8	12	e9.4	8.0	e6.8	e10	e22	307	210	38	11	12
12	9.6	e11	e9.2	7.8	e6.4	e10	e21	220	159	35	11	11
13	9.6	e11	e9.4	7.9	e6.6	e11	e22	165	149	32	11	13
14	9.6	12	10	7.9	e6.8	e11	23	136	170	31	10	18
15	9.8	e11	e9.8	7.8	e7.2	e10	24	133	173	30	10	14
16	10	11	e9.0	7.6	e7.2	e10	24	142	159	42	9.7	12
17	9.9	e11	e9.2	e7.2	e7.4	e11	28	149	183	46	9.7	11
18	9.5	e10	e9.4	e7.0	e7.8	e11	37	203	239	31	12	10
19	9.1	11	e9.6	e7.0	7.5	11	31	256	206	26	21	11
20	8.9	11	10	e7.0	7.4	13	28	306	216	25	18	14
21	8.9	11	9.2	e7.0	e7.0	e16	26	329	205	26	18	23
22	8.8	e10	e9.0	e7.2	e6.6	e17	26	296	157	24	14	21
23	9.0	e10	e8.8	e7.4	e6.8	18	27	242	123	25	13	19
24	8.9	e10	e9.2	e7.6	7.0	21	22	237	113	25	16	23
25	7.9	12	8.9	e7.4	6.7	23	23	207	110	22	14	28
26	8.0	11	e8.8	e7.0	7.0	23	22	186	143	20	39	29
27	9.9	11	e8.6	e7.0	e7.2	e25	30	216	119	19	43	32
28	9.6	11	e8.4	e7.4	e7.2	e25	45	281	105	19	32	31
29	9.7	10	e8.4	e7.6	e7.6	e22	58	308	96	18	21	26
30	9.9	11	e8.6	e7.8	---	e19	53	202	89	17	17	37
31	6.7	---	e8.8	e7.8	---	18	---	162	---	16	14	---
TOTAL	292.5	326.5	287.4	242.2	208.6	419.2	829	6,480	5,816	1,163	500.4	554
MEAN	9.44	10.9	9.27	7.81	7.19	13.5	27.6	209	194	37.5	16.1	18.5
MAX	11	12	10	8.9	7.8	25	58	329	362	83	43	37
MIN	6.7	9.7	8.4	7.0	6.4	7.4	20	40	89	16	9.7	10
AC-FT	580	648	570	480	414	831	1,640	12,850	11,540	2,310	993	1,100

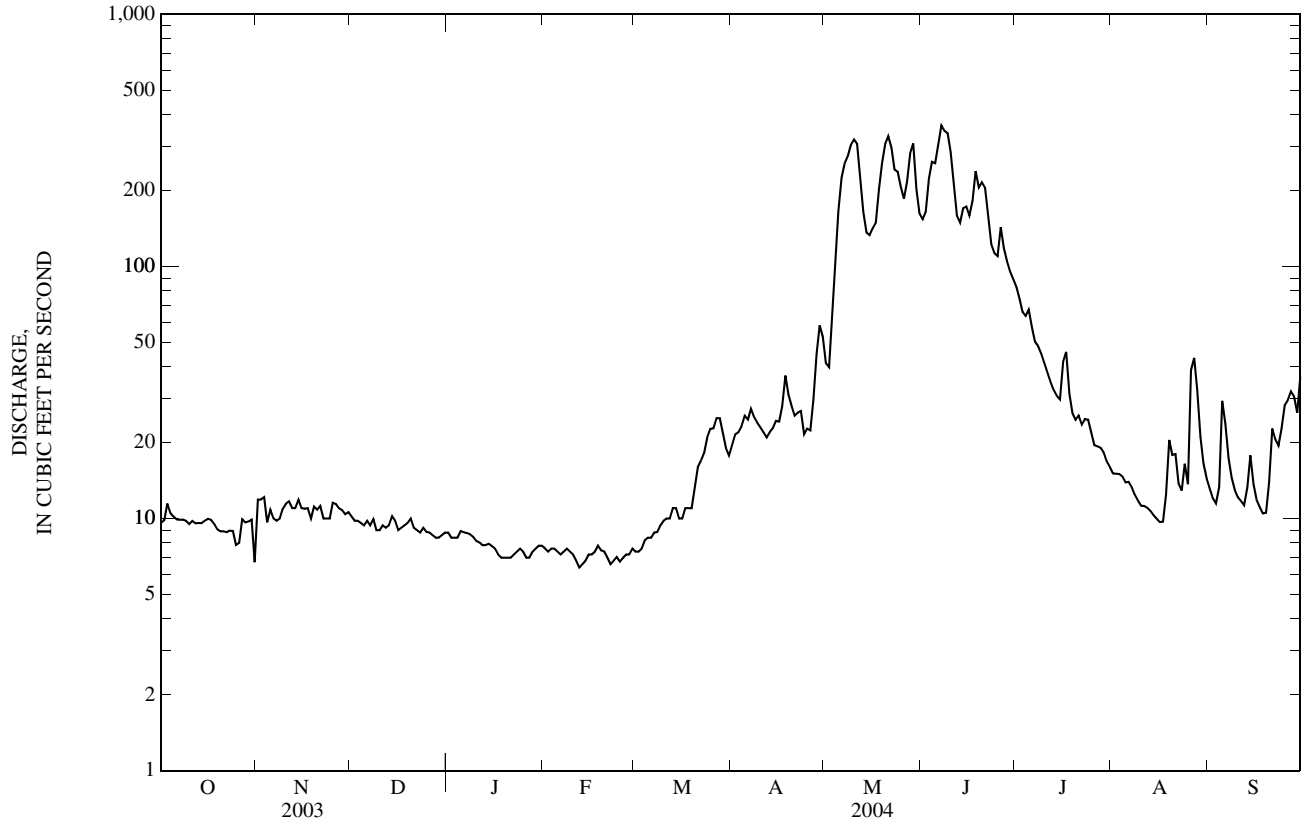
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2004, BY WATER YEAR (WY)

MEAN	15.6	12.7	11.0	10.1	9.80	10.0	22.3	228	471	117	28.5	19.9
MAX	40.0	23.3	18.8	15.3	17.0	15.6	56.4	409	1,024	420	66.9	40.1
(WY)	(1983)	(1999)	(1973)	(1966)	(1974)	(1979)	(1962)	(1974)	(1971)	(1982)	(1982)	(1971)
MIN	7.71	5.65	6.64	6.01	5.56	6.65	10.9	59.3	141	21.3	9.39	7.19
(WY)	(1957)	(1955)	(1955)	(1955)	(1955)	(1955)	(1995)	(1968)	(2002)	(2002)	(2002)	(2002)

06632400 ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1955 - 2004	
ANNUAL TOTAL	26,650.0		17,118.8		--	
ANNUAL MEAN	73.0		46.8		79.6	
HIGHEST ANNUAL MEAN	--		--		142	1971
LOWEST ANNUAL MEAN	--		--		31.0	2002
HIGHEST DAILY MEAN	1,460	May 31	362	Jun 7	1,690	Jun 19, 1971
LOWEST DAILY MEAN	6.6	Feb 8	6.4	Feb 12	3.8	Nov 1, 1963
ANNUAL SEVEN-DAY MINIMUM	6.9	Jan 11	6.9	Feb 10	4.4	Nov 26, 1954
MAXIMUM PEAK FLOW	--		477[a]	Jun 7	2,590[b]	Jun 19, 1971
MAXIMUM PEAK STAGE	--		3.77[c]	Mar 18	5.92	Jun 24, 1983
ANNUAL RUNOFF (AC-FT)	52,860		33,960		57,670	
10 PERCENT EXCEEDS	220		167		256	
50 PERCENT EXCEEDS	11		12		15	
90 PERCENT EXCEEDS	7.3		7.5		8.0	

a Gage height, 3.24 ft.
b Gage height, 5.83 ft.
c Backwater from ice.
e Estimated.



06634620 LITTLE MEDICINE BOW RIVER AT BOLES SPRING, NEAR MEDICINE BOW, WY

LOCATION.--Lat 41°57'40", long 106°12'31", in NW¼ SW¼ SW¼ sec.17, T.23 N., R.78 W., Carbon County, Hydrologic Unit 10180005, on right bank 50 ft downstream from Boles Spring, 3.9 mi downstream from State Highway 487, 4.3 mi north of Medicine Bow, and 8.7 mi downstream from Muddy Creek.

DRAINAGE AREA.--969 mi^2.

PERIOD OF RECORD.--October 1973 to current year. Records for October 1973 to September 1984 at site 5.5 mi upstream published as "near Medicine Bow" (station 06634600) do not include flow of Boles Spring. Discharge records considered equivalent except for low flow.

GAGE.--Water-stage recorder. Elevation of gage is 6,570 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	e2.5	e9.8	4.9	1.0	2.9	68	32	6.1	12	0.31	0.36
2	4.3	2.9	e10	4.1	0.87	3.1	67	32	5.7	15	0.31	0.37
3	4.1	e3.5	8.8	4.3	0.68	3.1	73	29	5.3	9.9	0.32	0.34
4	3.5	e5.0	9.7	3.8	0.73	3.7	75	27	4.6	7.1	0.31	7.3
5	3.0	e5.8	e9.6	2.5	0.75	e3.4	72	25	4.1	5.5	0.35	7.2
6	2.8	e5.6	e11	1.2	e0.72	e4.7	76	22	3.6	4.8	0.36	7.7
7	2.7	e5.4	12	0.70	e0.76	11	85	20	2.8	3.9	0.39	5.2
8	2.6	e5.6	9.7	0.67	0.79	12	89	19	2.2	3.0	0.39	3.0
9	2.5	e6.4	e8.0	0.85	0.70	18	88	18	1.7	2.5	0.39	2.0
10	2.5	7.6	e7.6	1.2	0.61	27	88	17	1.6	1.8	0.37	1.4
11	2.4	6.9	e7.4	1.4	0.43	24	80	17	1.4	1.3	0.33	1.1
12	2.3	e7.4	e7.4	1.4	e0.40	34	68	17	1.1	0.94	0.36	0.87
13	2.2	e6.8	e7.6	1.5	e0.34	41	61	22	1.1	0.73	0.37	1.4
14	2.3	e7.4	e8.4	1.5	e0.30	35	57	22	0.80	0.58	0.37	4.4
15	2.3	e7.8	e8.4	1.6	0.24	30	62	20	0.64	0.48	0.37	4.2
16	2.5	e7.8	e8.0	1.9	0.16	26	59	19	0.54	0.48	0.36	2.9
17	2.5	e8.0	e8.0	1.8	0.26	35	56	18	0.84	0.46	0.37	2.1
18	2.6	e7.7	e8.6	1.8	1.1	62	53	18	3.3	0.65	0.42	1.8
19	2.6	e7.8	e9.0	1.7	0.66	130	53	17	5.6	0.43	0.44	1.8
20	2.6	e7.8	e9.6	1.8	0.53	183	55	15	6.6	0.34	1.7	2.3
21	2.6	e6.2	e9.2	1.7	0.47	201	51	14	6.9	0.28	0.61	4.0
22	2.8	e5.8	e8.6	1.4	0.59	177	48	15	6.8	0.27	0.34	6.8
23	2.9	e5.6	e8.4	1.2	1.0	157	45	14	5.9	3.3	0.32	6.4
24	2.8	e5.8	e8.6	1.5	1.4	192	42	12	4.5	6.4	0.30	5.5
25	2.5	e6.2	e8.6	1.3	1.6	191	41	11	6.3	2.3	0.28	5.0
26	2.5	e6.4	e8.4	e1.2	1.5	185	39	11	29	1.5	0.49	4.8
27	3.0	e6.4	e8.0	e1.2	2.1	147	37	9.7	31	1.2	0.38	4.4
28	3.2	e6.6	7.5	e1.3	2.7	135	35	8.7	17	1.0	0.34	16
29	3.1	e7.6	7.3	1.3	1.6	107	33	8.0	16	0.64	0.31	12
30	2.7	e8.8	6.5	0.98	---	84	32	7.5	12	0.48	0.36	8.9
31	1.6	---	5.6	0.92	---	72	---	6.8	---	0.35	0.36	---
TOTAL	84.8	191.1	265.3	54.62	24.99	2,336.9	1,788	543.7	195.02	89.61	12.68	131.54
MEAN	2.74	6.37	8.56	1.76	0.86	75.4	59.6	17.5	6.50	2.89	0.41	4.38
MAX	4.3	8.8	12	4.9	2.7	201	89	32	31	15	1.7	16
MIN	1.6	2.5	5.6	0.67	0.16	2.9	32	6.8	0.54	0.27	0.28	0.34
AC-FT	168	379	526	108	50	4,640	3,550	1,080	387	178	25	261

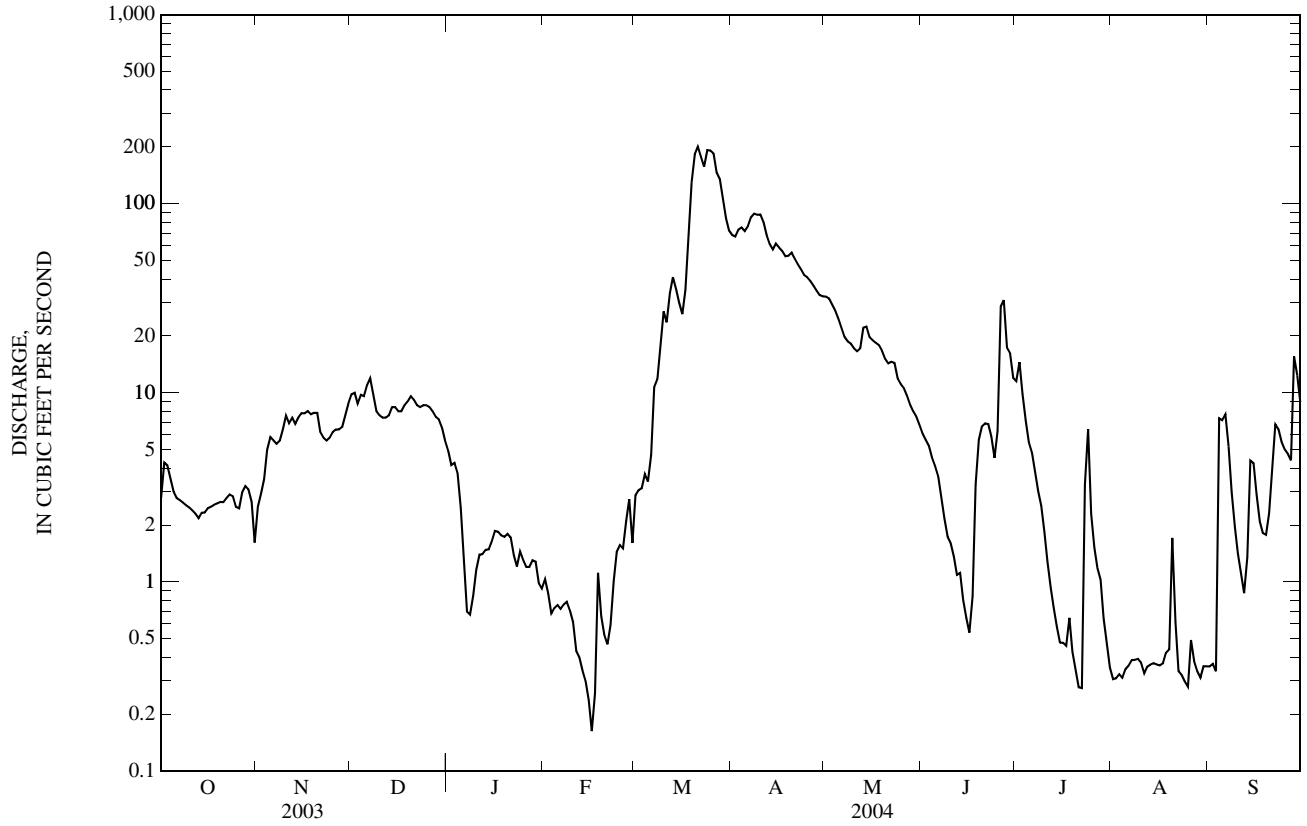
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2004, BY WATER YEAR (WY)

MEAN	8.80	9.74	4.71	2.20	10.6	63.3	117	154	74.0	15.4	6.66	6.34
MAX	18.0	36.0	11.5	7.50	110	286	246	388	419	46.0	22.1	19.5
(WY)	(1985)	(1999)	(1987)	(1997)	(1986)	(1997)	(1988)	(1995)	(1995)	(1995)	(1990)	(1985)
MIN	2.74	2.87	1.11	0.56	0.48	8.96	28.5	17.5	4.90	1.38	0.39	0.89
(WY)	(2004)	(2003)	(2001)	(2001)	(2001)	(2002)	(1992)	(2004)	(2002)	(2002)	(2003)	(1994)

06634620 LITTLE MEDICINE BOW RIVER AT BOLES SPRING, NEAR MEDICINE BOW, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1985 - 2004	
ANNUAL TOTAL	8,270.72		5,718.26		--	
ANNUAL MEAN	22.7		15.6		39.5[a]	
HIGHEST ANNUAL MEAN	--		--		90.1	1999
LOWEST ANNUAL MEAN	--		--		12.7	1992
HIGHEST DAILY MEAN	207	May 3	201	Mar 21	1,450	Mar 20, 1997
LOWEST DAILY MEAN	0.21	Aug 26,28	0.16	Feb 16	0.12[b]	Jan 24, 1998
ANNUAL SEVEN-DAY MINIMUM	0.23	Aug 23	0.30	Feb 11	0.16	Jan 23, 1998
MAXIMUM PEAK FLOW	--		230	Mar 21	9,500[c]	May 17, 1978
MAXIMUM PEAK STAGE	--		3.11	Mar 21	14.10[d]	May 17, 1978
ANNUAL RUNOFF (AC-FT)	16,400		11,340		28,600	
10 PERCENT EXCEEDS	76		46		117	
50 PERCENT EXCEEDS	6.4		4.4		7.9	
90 PERCENT EXCEEDS	0.53		0.39		1.2	

a Average discharge, water years 1974-2004, 48.6 ft^3/s, unadjusted for flow from Boles Spring.
b No flow at times, water years 1974-84, site then in use.
c From slope-area measurement of peak flow, site then in use.
d From floodmarks, site and datum then in use.
e Estimated.



06635000 MEDICINE BOW RIVER ABOVE SEMINOE RESERVOIR, NEAR HANNA, WY

LOCATION.--Lat 42°00'35", long 106°30'45", in SE¼ NW¼ sec.34, T.24 N., R.81 W., Carbon County, Hydrologic Unit 10180004, on left bank 25 ft upstream from county highway bridge, 2.0 mi upstream from Troublesome Creek, 9.0 mi upstream from high-water line of Seminoe Reservoir at elevation 6,357 ft, and 10 mi north of Hanna.

DRAINAGE AREA.--2,338 mi^2, of which 396 mi^2 probably is non-contributing.

PERIOD OF RECORD.--July 1939 to current year.

REVISED RECORDS.--WSP 956: 1941(M). WSP 1440: 1940(M), 1941. WSP 1710: Drainage area. WDR WY-83-1: 1943.

GAGE.--Water-stage recorder. Concrete control since November 20, 1990. Elevation of gage is 6,415.40 ft above NGVD of 1929. Wyoming State Engineer's Office data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Many small reservoirs upstream from station, total capacity, about 6,000 acre-ft, for irrigation. Diversions for irrigation of about 43,000 acres upstream from station.

COOPERATION.--Seven discharge measurements provided by the Wyoming State Engineer's Office and two discharge measurements provided by the Bureau of Reclamation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	14	e28	e24	e22	e30	150	118	39	89	14	9.0
2	17	18	e30	e24	e20	e28	141	e110	37	94	12	17
3	35	30	e30	e22	e20	e30	143	e81	32	78	11	14
4	25	35	e30	e20	e22	e30	151	e60	30	67	10	13
5	22	36	e28	e18	e20	e28	158	e48	34	57	8.6	37
6	23	32	e28	e16	e18	e32	160	e41	33	52	7.3	39
7	20	30	e30	e18	e20	e36	172	e41	31	46	6.2	40
8	18	31	e30	e20	e20	e40	185	e43	33	36	5.9	29
9	17	40	e28	e22	e18	e46	189	e43	32	23	5.5	23
10	16	39	e26	e22	e17	e60	187	e45	73	23	5.3	18
11	16	40	e24	e20	e16	e80	184	36	82	20	5.2	20
12	14	40	e24	e18	e15	e120	170	32	73	17	5.2	16
13	15	35	e24	e18	e16	e155	147	38	57	14	5.2	35
14	16	40	e26	e18	e18	e145	137	38	45	13	5.1	30
15	17	46	e26	e18	e20	e130	142	39	38	11	5.0	15
16	17	42	e24	e18	e22	e155	142	58	39	12	4.9	15
17	17	44	e24	e17	e24	170	138	44	35	10	4.8	14
18	17	33	e24	e18	e26	186	133	30	38	9.1	5.3	13
19	17	39	e26	e18	e28	191	129	27	42	9.0	5.5	13
20	18	43	e28	e18	e28	239	132	29	68	8.6	5.4	15
21	18	38	e28	e17	e26	278	142	35	129	7.7	5.6	17
22	18	24	e26	e17	e24	294	134	31	129	7.2	6.2	25
23	19	e22	e24	e18	e26	265	127	31	130	7.2	5.8	21
24	19	e24	e26	e20	e28	260	123	30	154	9.1	5.9	22
25	19	e26	e24	e20	e30	285	121	35	109	13	5.6	22
26	19	e26	e24	e18	e34	293	104	57	91	16	14	21
27	20	e24	e22	e18	e36	286	103	85	114	19	10	19
28	19	e24	e22	e20	e36	264	97	57	103	20	9.0	19
29	21	e26	e20	e22	e32	241	91	51	79	19	7.8	19
30	22	e28	e22	e24	---	199	96	55	75	19	7.2	42
31	11	---	e24	e24	---	168	---	48	---	16	6.9	---
TOTAL	579	969	800	605	682	4,764	4,228	1,516	2,004	841.9	221.4	652.0
MEAN	18.7	32.3	25.8	19.5	23.5	154	141	48.9	66.8	27.2	7.14	21.7
MAX	35	46	30	24	36	294	189	118	154	94	14	42
MIN	11	14	20	16	15	28	91	27	30	7.2	4.8	9.0
AC-FT	1,150	1,920	1,590	1,200	1,350	9,450	8,390	3,010	3,970	1,670	439	1,290

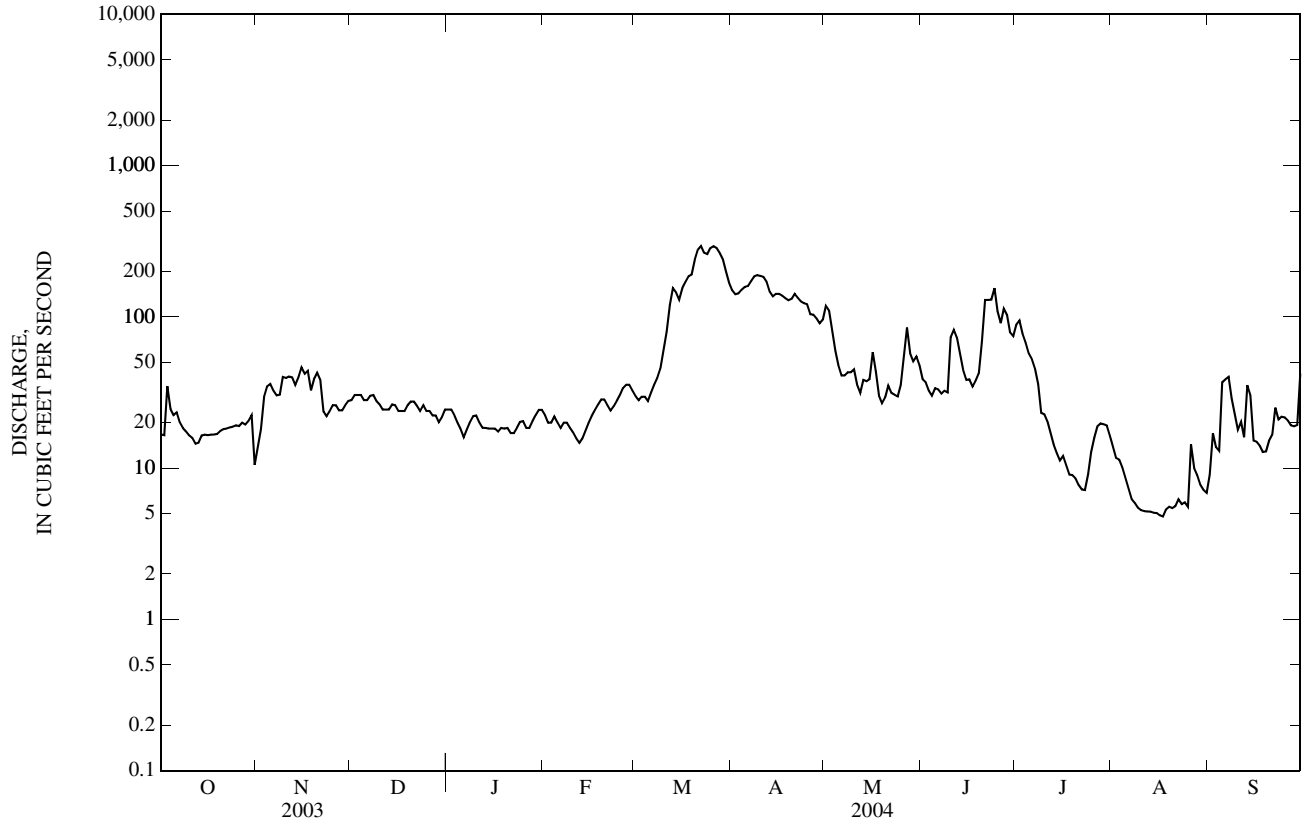
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	42.2	50.1	38.0	31.9	48.0	140	320	550	650	173	52.2	28.8
MAX	132	121	72.9	69.0	397	516	950	3,059	2,076	1,030	246	236
(WY)	(1963)	(1999)	(1974)	(1997)	(1962)	(1943)	(1983)	(1973)	(1983)	(1983)	(1983)	(1973)
MIN	9.65	16.3	8.70	7.76	10.0	20.4	66.4	45.6	32.8	5.71	1.53	3.78
(WY)	(1957)	(1940)	(1979)	(1979)	(1949)	(1944)	(1995)	(2002)	(2002)	(1939)	(2000)	(1956)

06635000 MEDICINE BOW RIVER ABOVE SEMINOE RESERVOIR, NEAR HANNA, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	41,143.4		17,862.3		--	
ANNUAL MEAN	113		48.8		177	
HIGHEST ANNUAL MEAN	--		--		531	1973
LOWEST ANNUAL MEAN	--		--		35.8	2002
HIGHEST DAILY MEAN	1,530	Jun 4	294	Mar 22	5,330	May 11, 1973
LOWEST DAILY MEAN	2.2	Aug 15,16	4.8	Aug 17	0.04	Aug 26, 2002
ANNUAL SEVEN-DAY MINIMUM	3.1	Aug 23	5.1	Aug 11	0.33	Aug 19, 2000
MAXIMUM PEAK FLOW	--		304[a]	Mar 22	6,010[b]	May 12, 1973
MAXIMUM PEAK STAGE	--		3.50[c]	Mar 14	8.20[c]	Feb 26, 1986
ANNUAL RUNOFF (AC-FT)	81,610		35,430		128,500	
10 PERCENT EXCEEDS	360		137		520	
50 PERCENT EXCEEDS	24		26		51	
90 PERCENT EXCEEDS	9.0		11		15	

a Gage height, 3.26 ft.
b Gage height, 6.74 ft.
c Backwater from ice.
e Estimated.



06639000 SWEETWATER RIVER NEAR ALCOVA, WY

LOCATION.--Lat 42°29'24", long 107°08'00", in SE¼ NE¼ NE¼ sec.16, T.29 N., R.86 W., Natrona County, Hydrologic Unit 10180006, on left bank 270 ft upstream from State Highway 220, 0.2 mi southwest of Independence Rock, 7 mi upstream from high-water line of Pathfinder Reservoir at elevation 5,850 ft, and 22 mi southwest of Alcova.

DRAINAGE AREA.--2,338 mi^2. Area at site prior to April 1, 1992, 2,327 mi^2.

PERIOD OF RECORD.--August 1913 to September 1924, October 1938 to current year (no winter records during 1974, 1975, 1977-81, and since 1983). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1921, 1923-24. WSP 1710: Drainage area.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 5,890 ft above NGVD of 1929, from topographic map. August 28, 1913 to September 30, 1924, nonrecording gages at site 7.0 mi upstream at different datums. October 1, 1938 to March 31, 1992, at site 6.6 mi upstream at different datum. Wyoming State Engineer's data collection platform with satellite telemetry at station.

REMARKS.--Records fair. Several small reservoirs upstream from station, combined capacity, about 5,000 acre-ft, for irrigation. Diversions for irrigation of about 24,000 acres upstream from station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	208	191	95	102	52	24
2	---	---	---	---	---	---	201	201	88	134	51	13
3	---	---	---	---	---	---	200	205	91	160	46	14
4	---	---	---	---	---	---	214	206	86	163	44	18
5	---	---	---	---	---	---	225	206	82	150	41	17
6	---	---	---	---	---	---	209	204	80	139	36	17
7	---	---	---	---	---	---	207	193	74	135	34	17
8	---	---	---	---	---	---	224	207	66	128	31	14
9	---	---	---	---	---	---	247	214	63	116	30	12
10	---	---	---	---	---	---	258	218	66	107	29	11
11	---	---	---	---	---	---	245	222	74	97	28	10
12	---	---	---	---	---	---	242	223	85	84	24	9.4
13	---	---	---	---	---	---	233	215	89	75	13	9.3
14	---	---	---	---	---	---	220	212	95	69	11	8.8
15	---	---	---	---	---	---	203	208	105	61	10	8.6
16	---	---	---	---	---	---	198	194	98	58	9.4	8.5
17	---	---	---	---	---	---	198	180	97	58	8.3	8.4
18	---	---	---	---	---	---	200	170	95	56	9.3	8.5
19	---	---	---	---	---	---	201	161	90	58	8.8	8.4
20	---	---	---	---	---	---	188	156	90	65	8.8	8.7
21	---	---	---	---	---	---	172	148	92	57	8.6	8.7
22	---	---	---	---	---	---	164	147	92	54	12	8.9
23	---	---	---	---	---	---	152	144	89	53	13	8.7
24	---	---	---	---	---	---	145	143	85	52	13	18
25	---	---	---	---	---	---	146	142	91	56	13	19
26	---	---	---	---	---	---	162	141	92	56	15	19
27	---	---	---	---	---	---	157	128	85	59	31	19
28	---	---	---	---	---	---	153	117	85	60	32	20
29	---	---	---	---	---	---	165	112	82	56	32	20
30	---	---	---	---	---	---	185	108	92	54	30	28
31	---	---	---	---	---	---	---	101	---	50	28	---
TOTAL	---	---	---	---	---	---	5,922	5,417	2,594	2,622	752.2	414.9
MEAN	---	---	---	---	---	---	197	175	86.5	84.6	24.3	13.8
MAX	---	---	---	---	---	---	258	223	105	163	52	28
MIN	---	---	---	---	---	---	145	101	63	50	8.3	8.4
AC-FT	---	---	---	---	---	---	11,750	10,740	5,150	5,200	1,490	823

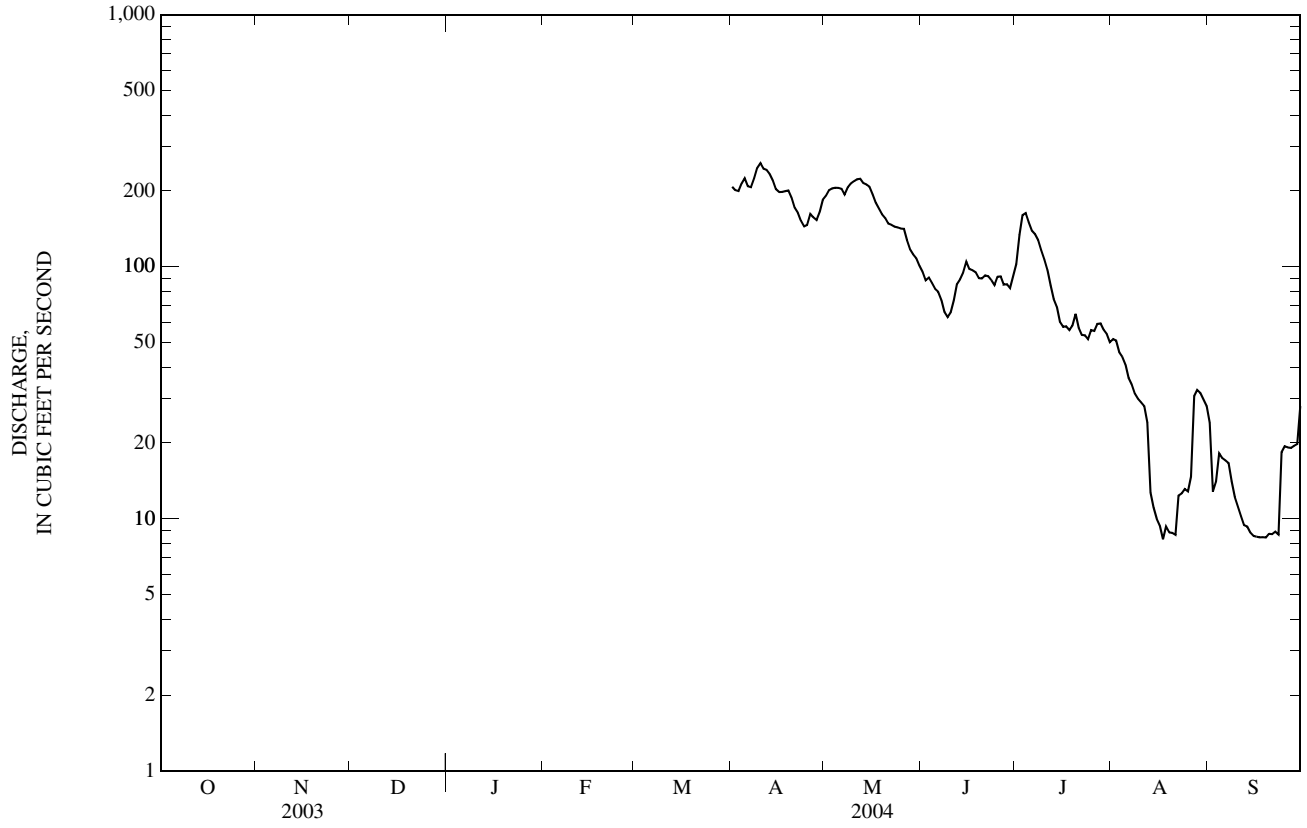
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2004, BY WATER YEAR (WY)*

MEAN	45.8	50.2	38.7	31.6	36.9	80.0	244	401	379	107	41.1	29.1
MAX	86.6	83.3	59.4	54.5	69.1	210	1,869	1,296	1,130	436	104	114
(WY)	(1916)	(1972)	(1972)	(1953)	(1968)	(1916)	(1924)	(1980)	(1983)	(1995)	(1998)	(1973)
MIN	16.0	20.0	20.0	10.8	12.3	33.0	74.4	20.7	12.6	5.01	0.92	1.90
(WY)	(1941)	(1961)	(1941)	(1962)	(1949)	(1924)	(1963)	(1940)	(1977)	(1940)	(1940)	(1940)

06639000 SWEETWATER RIVER NEAR ALCOVA, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1914 - 2004*	
ANNUAL MEAN	--		126	
HIGHEST ANNUAL MEAN	--		312	1924
LOWEST ANNUAL MEAN	--		25.8	1940
HIGHEST DAILY MEAN	258	Apr 10	4,290	Apr 13, 1924
LOWEST DAILY MEAN	8.3	Aug 17	0.50	Jul 30 to Aug 12, 1940
MAXIMUM PEAK FLOW	265	Apr 10	4,290	Apr 13, 1924
MAXIMUM PEAK STAGE	2.85	Apr 10	9.90	Apr 27, 1983
ANNUAL RUNOFF (AC-FT)	--		91,260	
10 PERCENT EXCEEDS	--		339	
50 PERCENT EXCEEDS	--		48	
90 PERCENT EXCEEDS	--		18	

* For period of operation.



06639000 SWEETWATER RIVER NEAR ALCOVA, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-90, October 2003 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
09...	1215	4.8	614	9.3	111	8.3	549	26.5	13.5	180	52.1	12.6	6.89
JAN													
14...	0930	28	620	11.0	93	7.7	564	-3.5	.0	180	55.1	11.5	6.76
APR													
06...	0940	209	618	9.1	95	7.9	287	12.0	8.0	93	29.1	4.92	4.23
JUL													
30...	0805	27	614	7.9	99	8.1	404	20.0	15.5	130	38.2	8.10	5.78

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	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)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
09...	1	44.3	34	179	21.8	.4	30.9	70.0	347	.47	4.45	<.04	<.06
JAN													
14...	1	42.2	32	174	19.9	.4	39.5	70.0	350	.48	26.4	<.04	<.06
APR													
06...	1	23.4	34	92	9.16	.3	15.5	33.2	175	.24	98.8	<.04	<.06
JUL													
30...	1	31.1	33	143	14.1	.4	22.0	45.1	251	.34	18.3	<.04	<.06

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT				
09...	<.008	<.02	2	.03
JAN				
14...	<.008	<.02	4	.30
APR				
06...	<.008	<.02	102	58
JUL				
30...	<.008	<.02	14	1.0

< -- Less than

06645000 NORTH PLATTE RIVER BELOW CASPER, WY

LOCATION.--Lat 42°51'32", long 106°12'41", in SE¼ SE¼ NW¼ sec.4, T.33 N., R.78 W., Natrona County, Hydrologic Unit 10180007, at New Mystery Bridge, 0.1 mi upstream from Claude Creek, 0.6 mi north of U.S. Highways 20 and 87, 5.8 mi east of city hall in Casper, and 9.5 mi downstream from Casper Creek.

DRAINAGE AREA.--12,574 mi^2, of which 831 mi^2 probably is noncontributing.

PERIOD OF RECORD.--Water years 1947-52, 1957-59, 1968-89, October 1990 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
DEC													
19...	0950	482	639	12.1	99	8.3	845	10.0	.0	.24	.33	.027	.04
MAR													
19...	0850	519	627	--	--	7.8	863	18.5	8.0	.27	.35	E.007	.03
JUN													
10...	1140	2,400	625	8.8	107	8.0	535	17.0	15.0	E.03	E.05	.008	<.04
AUG													
17...	1245	866	644	11.8	155	8.4	600	28.0	20.0	<.04	E.04	<.008	E.01

Date	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	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)
DEC													
19...	E13	23	M	E.14	1.9	53	<.06	85	.17	<.8	.318	1.3	E3
MAR													
19...	E1	E9	2	E.16	2.1	51	<.06	94	E.02	<.8	.311	2.1	E6
JUN													
10...	97	120	2	E.17	2.2	47	<.06	53	E.03	<.8	.201	1.7	<6
AUG													
17...	E17	E17	2	E.18	2.4	48	<.06	74	E.02	<.8	.218	1.7	<6

Date	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	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)	Oil and grease, water, unfltrd freon extract mg/L (00556)	Uranium natural water, fltrd, ug/L (22703)
DEC													
19...	<.08	47	34.9	E.01	3.1	1.58	5.2	<.2	686	<5	1.6	<7	10.1
MAR													
19...	<.08	52	42.4	E.01	3.4	2.57	6.7	<.2	691	<5	1.8	<7	10.4
JUN													
10...	<.08	28	4.1	E.01	2.8	1.53	1.5	<.2	412	E2	.9	<7	7.20
AUG													
17...	E.05	29	9.3	<.02	2.9	1.38	2.3	<.2	495	E2	1.4	<7	7.57

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

M-- Presence verified, not quantified

06647500 BOX ELDER CREEK AT BOXELDER, WY

LOCATION.--Lat 42°36'43", long 105°51'33", in NE¼ NE¼ SW¼ sec.32, T.31 N., R.75 W., Converse County, Hydrologic Unit 10180007, on left bank at Echo Mountain Ranch (old Boxelder Post Office), 0.8 mi downstream from Snowshoe Creek, and 17 mi south of Glenrock.

DRAINAGE AREA.--63.0 mi^2.

PERIOD OF RECORD.--April 1946 to September 1951, October 1961 to September 1967, October 1971 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,710 ft above NGVD of 1929, from topographic map. Prior to June 7, 1946, non-recording gage, and June 8, 1946 to July 21, 1976, water-stage recorder at site 400 ft downstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records poor. Diversions upstream from station for irrigation of about 60 acres, of which about 40 acres are downstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.85	e0.90	e1.9	e2.0	e1.8	e1.7	e40	52	13	7.2	0.78	0.09
2	1.1	e0.90	e1.9	e1.9	e1.9	e1.9	49	48	12	5.4	0.67	0.07
3	e1.0	e0.90	e1.9	e1.8	e2.0	e2.1	44	49	11	5.3	0.59	0.05
4	e1.0	e0.90	e1.8	e1.8	e1.9	e2.3	48	51	9.9	5.3	0.49	0.12
5	e0.95	e0.85	e1.8	e1.7	e1.9	e3.5	57	53	9.4	5.4	0.46	0.19
6	e0.90	e0.85	e1.9	e1.7	e1.9	e4.0	60	54	8.9	5.4	0.47	0.30
7	e0.90	e0.90	e2.0	e1.8	e1.9	e5.0	65	56	7.1	5.7	0.38	0.50
8	e0.90	e1.0	e2.1	e2.0	e1.8	e6.0	61	57	6.3	5.8	0.28	0.35
9	e0.90	e1.2	e2.0	e2.1	e1.8	e7.0	62	57	e5.8	e5.0	0.24	0.26
10	e0.90	e1.5	e1.9	e2.1	e1.8	e8.0	e50	55	e5.0	e4.4	e0.20	0.19
11	e0.90	e1.6	e1.9	e2.0	e1.7	e9.0	e46	52	e4.4	e4.0	e0.15	0.15
12	e0.90	e1.5	e2.0	e2.0	e1.7	e10	e44	50	e4.2	e3.4	e0.10	0.12
13	e0.90	e1.5	e2.1	e2.0	e1.8	e13	e52	50	e4.6	e3.0	0.09	0.13
14	e0.90	e1.6	e2.1	e2.0	e1.9	e15	56	49	e5.0	e2.5	0.08	0.13
15	e0.90	e1.7	e2.0	e2.0	e2.0	e17	55	47	e6.0	e2.6	0.08	0.12
16	e0.95	e1.8	e2.0	e2.0	e2.0	18	54	41	6.2	e2.7	0.22	0.11
17	e0.95	e1.9	e1.9	e1.9	e2.1	19	57	38	7.2	e2.1	0.09	0.11
18	e0.95	e1.8	e2.0	e1.9	e2.1	21	65	37	8.0	e1.6	0.08	0.11
19	e0.95	e2.1	e2.1	e2.0	e2.1	28	62	31	8.4	e1.2	0.15	0.10
20	e0.95	e2.0	e2.2	e2.0	e2.1	29	58	28	9.0	e1.0	0.10	0.11
21	e1.0	e1.9	e2.1	e1.9	e2.0	26	54	29	6.1	e0.80	0.05	0.19
22	e1.0	e1.9	e2.0	e2.0	e2.0	28	54	25	4.2	e0.60	0.13	0.36
23	e0.95	e1.9	e2.0	e2.1	e2.0	28	50	23	3.6	e0.80	0.06	0.43
24	e0.95	e1.8	e2.0	e2.0	e2.0	30	50	21	4.2	2.0	0.06	0.42
25	e0.90	e1.8	e2.0	e1.9	e2.0	39	49	20	4.8	1.7	0.07	0.48
26	e0.95	e1.9	e2.0	e1.9	e2.1	e44	44	19	4.9	1.4	0.09	0.41
27	e1.0	e2.0	e1.9	e2.0	e2.0	e40	44	17	4.5	1.4	0.11	0.37
28	e1.1	e2.1	e1.9	e2.0	e1.9	e32	49	16	4.6	1.5	0.09	0.32
29	e1.1	e2.0	e2.0	e2.1	e1.8	e30	53	15	5.4	1.3	0.09	0.29
30	e1.0	e2.0	e2.0	e2.0	---	e30	51	15	5.0	1.1	0.11	0.50
31	e0.95	---	e2.0	e1.9	---	e33	---	14	---	0.94	0.11	---
TOTAL	29.55	46.70	61.4	60.5	56.0	580.5	1,583	1,169	198.7	92.54	6.67	7.08
MEAN	0.95	1.56	1.98	1.95	1.93	18.7	52.8	37.7	6.62	2.99	0.22	0.24
MAX	1.1	2.1	2.2	2.1	2.1	44	65	57	13	7.2	0.78	0.50
MIN	0.85	0.85	1.8	1.7	1.7	1.7	40	14	3.6	0.60	0.05	0.05
AC-FT	59	93	122	120	111	1,150	3,140	2,320	394	184	13	14

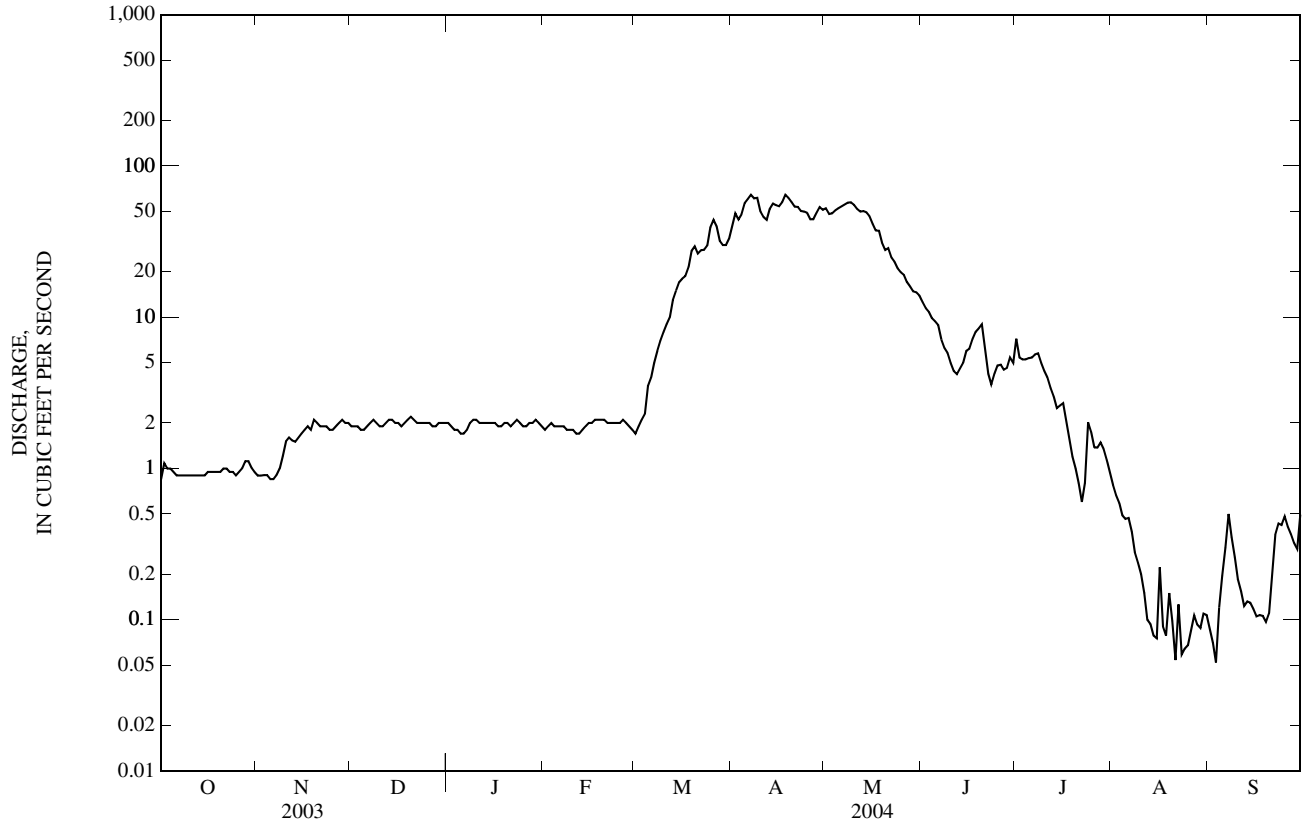
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004, BY WATER YEAR (WY)

MEAN	2.63	3.70	2.82	2.50	2.76	9.19	80.0	230	74.6	8.65	1.60	0.84
MAX	20.8	29.7	15.0	8.12	9.25	31.8	220	562	332	48.8	12.3	4.11
(WY)	(1999)	(1999)	(1996)	(1997)	(1962)	(1997)	(1962)	(1973)	(1995)	(1947)	(1998)	(1973)
MIN	0.24	0.60	0.46	0.66	0.09	1.47	9.33	37.7	6.62	0.19	0.02	0.06
(WY)	(1965)	(1964)	(1964)	(1981)	(1966)	(1981)	(1981)	(2004)	(2004)	(2002)	(1989)	(1981)

06647500 BOX ELDER CREEK AT BOXELDER, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1946 - 2004	
ANNUAL TOTAL	10,040.26		3,891.64		--	
ANNUAL MEAN	27.5		10.6		35.0	
HIGHEST ANNUAL MEAN	--		--		85.8	1983
LOWEST ANNUAL MEAN	--		--		6.95	1989
HIGHEST DAILY MEAN	277	Apr 26	65	Apr 7	2,460	May 14, 1965
LOWEST DAILY MEAN	0.05	Sep 16	0.05	Aug 21,Sep 3	0.00	Several days, some years
ANNUAL SEVEN-DAY MINIMUM	0.12	Sep 12	0.08	Aug 20	0.00	Some years
MAXIMUM PEAK FLOW	--		69[a]	Apr 7	4,530	May 14, 1965
MAXIMUM PEAK STAGE	--		2.41[b]	Apr 12	8.58[c]	May 14, 1965
ANNUAL RUNOFF (AC-FT)	19,910		7,720		25,390	
10 PERCENT EXCEEDS	124		48		102	
50 PERCENT EXCEEDS	1.8		2.0		3.0	
90 PERCENT EXCEEDS	0.40		0.19		0.40	

a Gage height, 2.37 ft.
b Backwater from dam.
c Site and datum then in use.
e Estimated.



06652000 NORTH PLATTE RIVER AT ORIN, WY

LOCATION.--Lat 42°39'09", long 105°09'31", in NE¼ SE¼ SW¼ sec.17, T.31 N., R.69 W., Converse County, Hydrologic Unit 10180008, on right bank 0.5 mi downstream from bridge on State Highway 319, 0.1 mi downstream from Shawnee Creek, and 1.5 mi east of Orin. Prior to Mar. 6, 1994, at site 0.3 mi upstream.

DRAINAGE AREA.--15,025 mi^2, of which 1,203 mi^2 probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January, April to November 1895, April to October 1896, January 1897 to December 1898, April to November 1899, April to September 1917, April to September 1918, May to September 1924, April 1958 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "at Orin Junction" 1895, 1897-99 and as "at McKinley" 1917-18.

REVISED RECORDS.--WSP 1310: 1896, 1899. WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder, and concrete weir since March 6, 1994. Elevation of gage is 4,660 ft above NGVD of 1929, from topographic map. January 1, 1895 to November 30, 1899, and May 1 to September 30, 1924, nonrecording gage at railroad bridge just upstream from State Highway 319 at different datum. April 1, 1917 to September 30, 1918, nonrecording gage at site 1.9 mi downstream at different datum. April 1958 to March 5, 1994, at site 0.3 mi upstream at different datum. Wyoming State Engineer's Office data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Major regulation began after completion of Pathfinder Reservoir in April 1909. Natural flow of stream affected by storage reservoirs, power development, diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Ten discharge measurements provided by the Wyoming State Engineer's Office and three discharge measurements provided by the Bureau of Reclamation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	539	636	670	382	592	644	690	741	1,710	2,110	867	495
2	545	612	650	466	539	582	699	690	1,690	1,850	850	496
3	542	604	635	542	470	563	697	630	1,700	1,680	821	491
4	543	606	617	463	486	551	695	581	1,690	1,690	806	515
5	543	588	587	278	569	551	691	537	1,710	1,680	773	572
6	545	570	502	e300	563	556	679	712	1,690	1,660	795	594
7	543	555	598	e400	483	540	703	753	1,670	1,640	807	574
8	543	539	651	e450	519	564	720	760	1,670	1,620	782	544
9	542	567	591	e500	541	586	736	745	1,640	1,570	790	526
10	532	576	569	e540	520	1,120	802	711	1,680	1,570	778	521
11	522	588	522	e560	485	1,540	806	728	1,860	1,570	780	528
12	528	580	543	e620	477	1,570	722	727	2,090	1,560	759	514
13	534	571	544	e600	451	1,590	695	775	2,100	1,530	754	521
14	536	560	526	e580	420	1,420	695	802	2,110	1,580	778	530
15	539	555	632	e580	432	781	679	757	2,090	1,620	773	541
16	536	556	563	579	528	754	667	733	2,070	1,620	761	528
17	534	569	511	583	556	713	664	708	2,110	1,630	771	527
18	532	574	493	554	585	678	682	708	2,200	1,620	782	527
19	531	565	469	546	624	682	723	735	2,280	1,610	790	520
20	528	555	519	549	614	673	782	699	2,430	1,610	757	532
21	523	535	586	576	581	757	717	703	2,370	1,610	696	546
22	522	538	616	521	552	760	703	805	2,290	1,580	621	567
23	523	539	556	523	588	721	681	873	2,280	1,650	559	555
24	526	406	527	518	576	714	673	995	2,280	1,720	530	562
25	527	312	511	546	623	713	645	1,120	2,320	1,690	520	551
26	535	400	571	506	596	735	654	1,210	2,360	1,420	509	555
27	538	405	610	457	569	744	644	1,280	2,350	1,220	512	545
28	541	436	520	409	565	762	608	1,370	2,380	1,050	538	535
29	544	535	449	433	605	737	623	1,460	2,420	987	537	553
30	566	586	313	469	---	698	682	1,590	2,430	1,000	527	601
31	603	---	285	605	---	683	---	1,630	---	938	512	---
TOTAL	16,685	16,218	16,936	15,635	15,709	24,682	20,857	27,268	61,670	47,885	21,835	16,166
MEAN	538	541	546	504	542	796	695	880	2,056	1,545	704	539
MAX	603	636	670	620	624	1,590	806	1,630	2,430	2,110	867	601
MIN	522	312	285	278	420	540	608	537	1,640	938	509	491
AC-FT	33,090	32,170	33,590	31,010	31,160	48,960	41,370	54,090	122,300	94,980	43,310	32,070

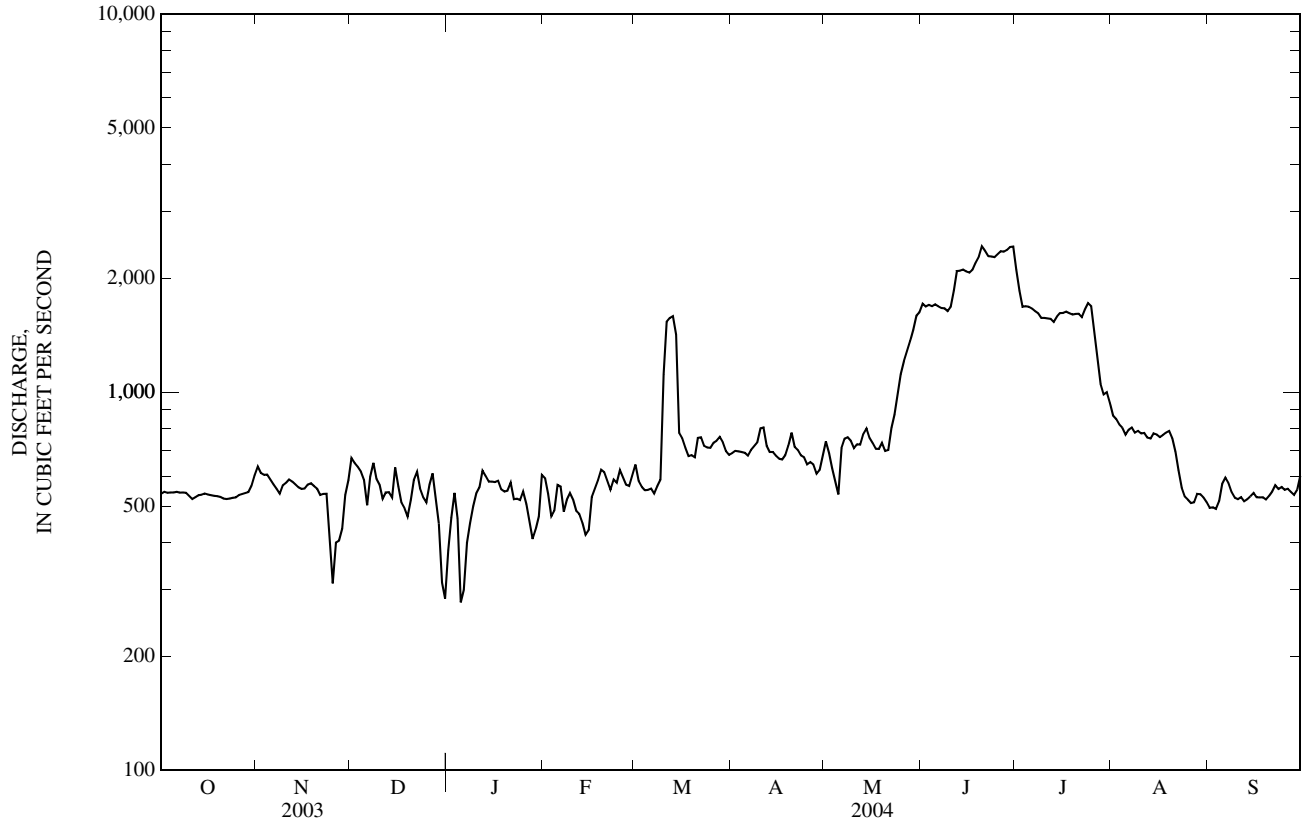
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 2004, BY WATER YEAR (WY)

MEAN	1,143	1,034	869	880	962	1,196	1,866	3,181	3,152	2,608	2,233	1,567
MAX	1,708	2,191	1,223	1,171	1,472	2,911	4,578	9,274	14,430	9,970	5,258	4,150
(WY)	(1986)	(1987)	(1974)	(1986)	(1980)	(1984)	(1974)	(1973)	(1917)	(1917)	(1924)	(1917)
MIN	535	516	472	490	472	618	670	626	958	982	583	399
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(1981)	(1981)	(2002)	(1990)	(1967)	(1898)	(1898)

06652000 NORTH PLATTE RIVER AT ORIN, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1895 - 2004	
ANNUAL TOTAL	373,552		301,546		--	
ANNUAL MEAN	1,023		824		1,599	
HIGHEST ANNUAL MEAN	--		--		3,110	1984
LOWEST ANNUAL MEAN	--		--		824	2004
HIGHEST DAILY MEAN	3,350	Apr 25	2,430	Jun 20,30	20,300	Jun 27, 1917
LOWEST DAILY MEAN	285	Dec 31	278	Jan 5	140	Dec 21, 1990
ANNUAL SEVEN-DAY MINIMUM	426	Feb 21	388	Dec 31	324	Sep 25, 1966
MAXIMUM PEAK FLOW	--		2,610	Jun 30	23,800[a]	May 15, 1965
MAXIMUM PEAK STAGE	--		4.95	Jun 30	10.45[b]	Jun 12, 1970
ANNUAL RUNOFF (AC-FT)	740,900		598,100		1,158,000	
10 PERCENT EXCEEDS	2,350		1,660		2,870	
50 PERCENT EXCEEDS	606		604		1,210	
90 PERCENT EXCEEDS	490		510		663	

a Gage height, 10.00 ft, site and datum then in use.
b Backwater from ice, site and datum then in use.
e Estimated.



06652000 NORTH PLATTE RIVER AT ORIN, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-89, October 2003 to September 2004.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: May to September 1979.
SUSPENDED-SEDITMENT DISCHARGE: May to September 1979.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
OCT													
23...	1145	523	642	9.0	101	8.5	888	26.5	12.5	<.04	<.06	<.008	<.02
MAR													
17...	0950	720	638	10.0	99	8.2	890	4.5	7.0	.15	.43	.018	<.02
JUN													
10...	1215	1,700	635	9.2	119	8.7	567	32.5	18.5	<.04	<.06	<.008	<.04
SEP													
15...	1015	529	644	9.7	114	8.3	824	19.5	15.0	<.04	<.06	<.008	.58

Date	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
OCT		
23...	E9	E9
MAR		
17...	E9	E6
JUN		
10...	34	28
SEP		
15...	E13	21

<-- Less than
E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06652800 NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY

LOCATION.--Lat 42°27'25", long 104°56'50", in SW¼ SW¼ NW¼ sec.30, T.29 N., R.67 W., Platte County, Hydrologic Unit 10180008, on right bank opposite Sand Draw, 1.3 mi upstream from Horseshoe Creek, 3.1 mi downstream from Glendo Dam, and 5.2 mi southeast of Glendo.

DRAINAGE AREA.--15,548 mi^2, of which 1,215 mi^2 probably is non-contributing.

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,488.94 ft above NGVD of 1929 (levels by Bureau of Reclamation). Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated by Glendo Reservoir since October 17, 1957. Natural flow of stream affected by transbasin diversions, storage reservoirs, power generation, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	27	25	26	26	e25	25	25	1,340	3,350	7,380	42
2	26	27	26	26	e25	26	25	25	1,300	4,140	7,470	42
3	26	27	26	e25	26	25	25	26	1,360	4,500	7,180	43
4	25	27	26	e24	26	25	25	29	1,270	5,050	5,010	45
5	26	26	e26	e24	e25	25	25	32	1,250	5,140	4,650	49
6	26	26	26	e24	e24	26	25	32	1,250	3,030	4,700	42
7	26	26	26	e25	e25	25	25	32	1,250	2,470	4,710	42
8	26	26	27	e25	26	26	25	32	1,320	2,210	4,700	41
9	26	26	27	e26	e25	26	26	33	1,470	1,770	4,610	40
10	26	26	27	e27	e25	27	25	34	1,420	3,720	4,540	39
11	25	25	26	27	e24	27	26	35	1,390	5,240	4,570	37
12	25	25	e25	e27	e24	27	25	41	1,380	5,120	4,610	37
13	25	25	e26	e27	e24	26	25	41	1,370	4,990	4,660	36
14	25	25	27	27	e25	27	25	41	1,460	4,980	4,680	35
15	23	25	e26	e27	25	27	25	41	1,790	5,000	4,670	35
16	24	25	e25	26	26	27	24	41	2,950	4,760	4,460	31
17	25	27	26	26	25	27	24	240	3,360	4,670	4,080	25
18	25	26	27	26	26	27	25	404	2,950	4,730	4,400	26
19	25	26	e25	26	26	26	25	461	2,690	4,760	3,920	25
20	25	26	26	26	25	26	25	618	2,490	4,790	3,690	25
21	25	26	26	e25	25	27	24	626	1,840	4,800	3,310	26
22	26	e25	26	e25	25	26	25	619	626	4,820	2,570	25
23	26	e24	e25	25	25	26	25	628	754	4,720	367	25
24	25	e26	e25	25	26	26	25	859	1,250	4,370	241	24
25	26	26	26	e25	26	26	24	1,100	1,540	4,200	181	24
26	26	25	26	e24	26	27	25	1,140	1,460	4,190	32	24
27	26	25	e25	e24	26	26	24	1,220	1,460	4,110	32	25
28	26	25	e24	e25	26	26	25	1,190	1,670	4,070	34	25
29	26	25	e25	26	e25	25	25	1,390	2,580	4,170	37	25
30	e26	25	e25	26	---	25	25	1,390	2,900	4,750	40	28
31	27	---	e26	26	---	25	---	1,400	---	7,280	43	---
TOTAL	791	771	800	793	733	808	747	13,825	51,140	135,900	105,577	988
MEAN	25.5	25.7	25.8	25.6	25.3	26.1	24.9	446	1,705	4,384	3,406	32.9
MAX	27	27	27	27	26	27	26	1,400	3,360	7,280	7,470	49
MIN	23	24	24	24	24	25	24	25	626	1,770	32	24
AC-FT	1,570	1,530	1,590	1,570	1,450	1,600	1,480	27,420	101,400	269,600	209,400	1,960

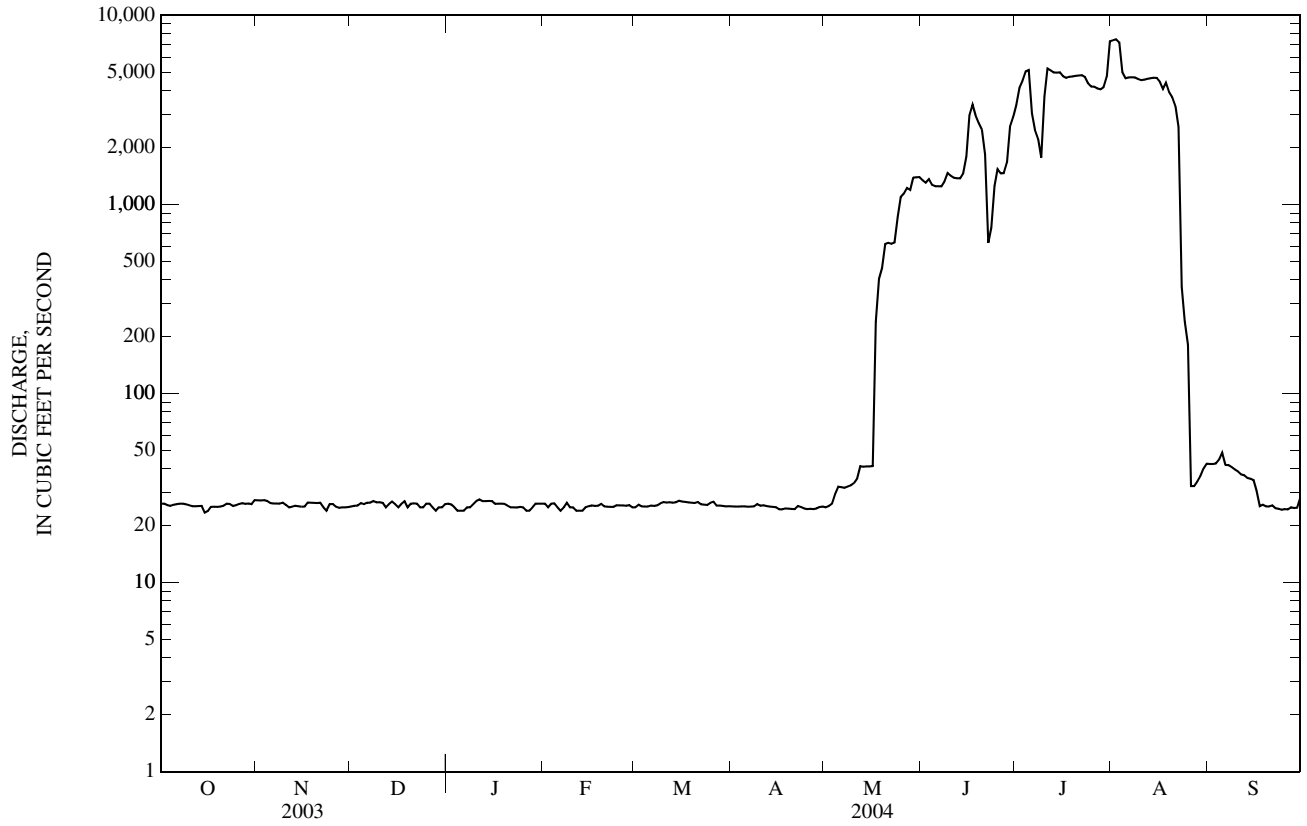
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004, BY WATER YEAR (WY)

MEAN	64.8	30.0	17.5	15.7	96.8	462	1,121	2,130	2,775	4,909	4,838	2,336
MAX	951	857	324	173	1,054	3,837	3,868	4,688	8,916	8,681	8,923	6,027
(WY)	(1987)	(1987)	(1959)	(1963)	(1984)	(1974)	(1974)	(1984)	(1973)	(1983)	(1983)	(1983)
MIN	1.51	1.09	1.00	1.30	1.33	1.58	24.9	15.4	66.1	3,104	2,428	30.1
(WY)	(1992)	(1991)	(1991)	(1992)	(1990)	(1990)	(2004)	(1990)	(1962)	(1962)	(2002)	(2003)

06652800 NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1958 - 2004	
ANNUAL TOTAL	352,232		312,873		--	
ANNUAL MEAN	965		855		1,577	
HIGHEST ANNUAL MEAN	--		--		3,126	1984
LOWEST ANNUAL MEAN	--		--		855	2004
HIGHEST DAILY MEAN	7,610	Aug 1	7,470	Aug 2	10,300	Jun 30, 1984
LOWEST DAILY MEAN	23	Oct 15	23	Oct 15	0.41	Oct 17, 1977
ANNUAL SEVEN-DAY MINIMUM	24	Apr 7	25	Oct 11	0.64	Dec 20, 1990
MAXIMUM PEAK FLOW	--		7,500	Aug 3	10,300	Jun 29, 1984
MAXIMUM PEAK STAGE	--		9.97	Aug 3	11.16	Jun 29, 1984
ANNUAL RUNOFF (AC-FT)	698,700		620,600		1,143,000	
10 PERCENT EXCEEDS	4,980		4,250		4,920	
50 PERCENT EXCEEDS	27		26		48	
90 PERCENT EXCEEDS	25		25		2.2	

e Estimated.



06657000 NORTH PLATTE RIVER BELOW WHALEN DIVERSION DAM, WY

LOCATION.--Lat 42°14'17", long 104°37'41", in SW¼ SW¼ sec.11, T.26 N., R.65 W., Goshen County, Hydrologic Unit 10180009, on left bank 0.7 mi downstream from Whalen diversion dam, and 6.0 mi northwest of Fort Laramie.

DRAINAGE AREA.--16,237 mi^2, of which 1,219 mi^2 probably is noncontributing.

PERIOD OF RECORD.--May 1909 to current year. Monthly discharge only, prior to January 1915, published in WSP 1910. Prior to April 16, 1938, published as "below Whalen", and April 16, 1938, to September 30, 1974, as "at recorder station, below Whalen".

REVISED RECORDS.--WSP 1310: 1924. WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder and sheet piling weir since April 25, 1994. Elevation of gage is 4,280 ft above NGVD of 1929, from topographic map. Prior to April 16, 1938, nonrecording gages at Whalen Diversion Dam and canals 0.7 mi upstream at different datums. April 16, 1938 to November 17, 1955, water-stage recorder at site 1.9 mi downstream, and November 18, 1955 to April 25, 1994, at site 1.8 mi downstream at different datum. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records good except for periods of estimated discharges, which are poor. Flow regulated by Whalen Diversion Dam 0.7 mi upstream. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Five discharge measurements provided by the Wyoming State Engineer's Office.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	e6.6	5.6	e3.7	8.3	e9.0	6.4	5.5	293	306	1,540	322
2	25	e7.0	5.2	e3.7	8.1	e11	6.1	4.6	279	966	1,590	163
3	22	e7.4	4.6	e3.5	8.3	12	6.3	3.8	331	1,390	1,640	70
4	19	e7.6	4.2	e3.2	e8.0	11	6.6	3.3	338	1,740	1,570	61
5	18	7.9	3.8	e3.0	e7.4	11	6.8	3.1	338	1,930	1,550	68
6	16	7.4	4.3	e2.7	e7.0	11	6.9	2.6	325	2,060	1,570	46
7	16	6.9	4.3	e4.0	e8.0	11	6.6	2.8	356	2,050	1,580	38
8	14	6.8	4.3	e5.0	e9.0	10	6.8	2.6	339	2,160	1,560	33
9	13	6.6	e4.0	5.6	e8.0	10	7.2	2.3	354	1,990	1,500	30
10	12	6.5	e4.1	5.3	e7.6	9.8	7.8	1.8	325	2,010	1,410	27
11	11	6.7	e4.2	5.1	e7.0	11	7.2	1.7	292	1,940	1,380	25
12	11	5.2	e4.6	4.9	e6.6	11	7.7	3.7	290	1,950	1,420	23
13	10	5.4	e5.0	4.7	e7.0	11	7.0	4.5	290	1,890	1,430	21
14	10	5.7	5.8	4.5	e7.8	11	6.8	4.1	299	2,030	1,450	20
15	9.7	5.3	4.8	4.4	e10	12	6.3	4.1	314	1,880	1,450	18
16	9.7	5.1	e3.3	4.1	11	11	5.9	3.7	369	1,820	1,450	18
17	9.4	5.5	e3.4	3.9	12	12	5.2	3.2	464	1,630	1,450	16
18	9.0	5.2	e3.3	3.8	12	12	5.7	2.9	476	1,630	1,460	16
19	8.9	5.2	e3.8	3.9	12	13	5.8	3.0	342	1,670	1,120	15
20	8.5	4.3	e4.4	3.8	12	11	5.9	2.5	308	1,770	717	14
21	8.1	4.4	4.7	3.7	11	11	5.5	2.1	174	1,810	601	16
22	8.1	e3.5	e4.4	3.7	11	11	6.9	1.9	126	1,800	628	16
23	7.8	e3.0	e4.2	5.5	10	11	7.6	13	137	1,850	503	14
24	7.4	e3.4	e4.0	6.5	10	11	6.3	64	90	1,810	433	13
25	7.5	e3.6	4.7	e5.6	10	11	6.0	44	78	1,660	412	12
26	7.7	e3.8	4.6	e5.4	9.8	11	5.7	58	124	1,600	432	11
27	7.6	e4.0	3.8	e6.0	10	10	5.3	70	118	1,530	395	11
28	7.1	e4.3	e3.4	e7.0	10	9.4	4.9	84	113	1,490	417	11
29	7.2	e4.6	e3.7	e8.0	e9.6	8.5	5.6	275	97	1,500	374	11
30	e7.0	5.4	e3.8	8.5	---	7.8	6.1	295	246	1,480	364	55
31	e6.6	---	e3.6	8.4	---	7.2	---	311	---	1,480	363	---
TOTAL	362.3	164.3	131.9	151.1	268.5	329.7	190.9	1,283.8	8,025	52,822	33,759	1,214
MEAN	11.7	5.48	4.25	4.87	9.26	10.6	6.36	41.4	268	1,704	1,089	40.5
MAX	28	7.9	5.8	8.5	12	13	7.8	311	476	2,160	1,640	322
MIN	6.6	3.0	3.3	2.7	6.6	7.2	4.9	1.7	78	306	363	11
AC-FT	719	326	262	300	533	654	379	2,550	15,920	104,800	66,960	2,410

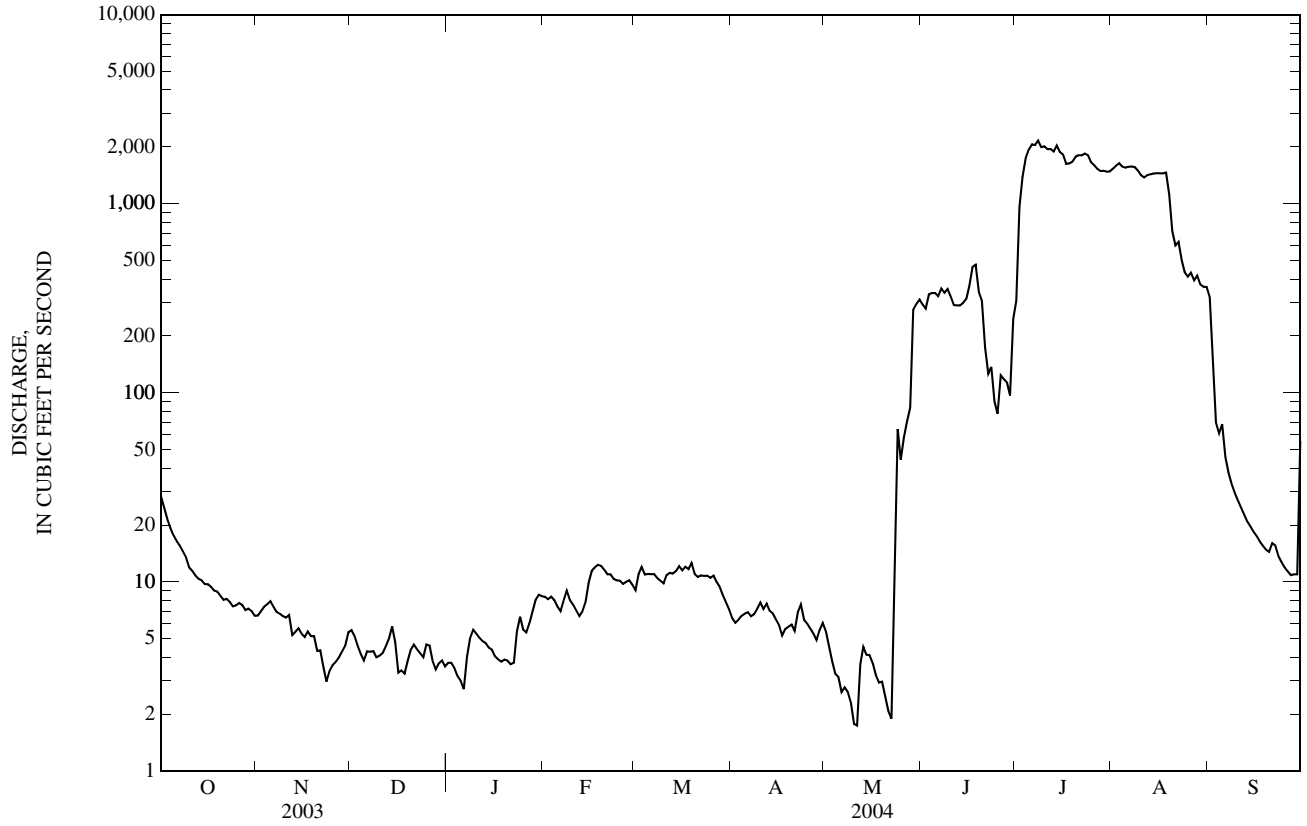
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2004, BY WATER YEAR (WY)*

MEAN	180	91.2	59.0	52.6	76.9	260	488	1,209	1,934	1,852	1,378	664
MAX	1,389	1,130	405	494	604	3,885	5,410	6,175	14,360	8,330	5,465	3,976
(WY)	(1918)	(1987)	(1930)	(1927)	(1930)	(1974)	(1924)	(1924)	(1917)	(1917)	(1983)	(1983)
MIN	4.20	0.71	0.30	0.24	0.01	0.00	2.83	13.6	126	559	86.6	40.5
(WY)	(1967)	(1967)	(1967)	(1962)	(1967)	(1976)	(1954)	(1990)	(1982)	(1934)	(1934)	(2004)

06657000 NORTH PLATTE RIVER BELOW WHALEN DIVERSION DAM, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1917 - 2004*	
ANNUAL TOTAL	107,043.5		98,702.5		--	
ANNUAL MEAN	293		270		690	
HIGHEST ANNUAL MEAN	--		--		2,992	1917
LOWEST ANNUAL MEAN	--		--		178	1954
HIGHEST DAILY MEAN	1,980	Jul 3	2,160	Jul 8	19,500	Jun 28, 1917
LOWEST DAILY MEAN	2.7	Mar 8	1.7	May 11	0.00	Many days, several years
ANNUAL SEVEN-DAY MINIMUM	3.1	Feb 17	2.4	May 5	0.00	Several years
MAXIMUM PEAK FLOW	--		2,600	Jul 8	22,000[a]	Jun 26, 1955
MAXIMUM PEAK STAGE	--		7.15	Jul 8	9.85[b]	Jun 26, 1955
ANNUAL RUNOFF (AC-FT)	212,300		195,800		500,200	
10 PERCENT EXCEEDS	1,490		1,480		1,850	
50 PERCENT EXCEEDS	8.0		9.9		130	
90 PERCENT EXCEEDS	3.6		3.8		4.0	

* Period of record to 1917 not used in computation, monthly and seasonal records only.
a From rating curve extended above 4,500 ft^3/s, on basis of peak-flow measurement of upstream floods.
b Site and datum then in use.
e Estimated.



06659500 LARAMIE RIVER AND PIONEER CANAL NEAR WOODS, WY

LOCATION.--River: Lat 41°08'17", long 105°58'49", in NW¼ SE¼ sec.36, T.14 N., R.77 W., Albany County, Hydrologic Unit 10180010, on left bank 100 ft upstream from diversion dam for Pioneer Canal, 2.2 mi downstream from Fox Creek, 2.5 mi northeast of Woods, and 23 mi southwest of Laramie.

Canal: Lat 41°08'21", long 105°58'45", in SE¼ NE¼ sec.36, T.14 N., R.77 W., Albany County, on left bank 400 ft downstream from headgate.

DRAINAGE AREA.--434 mi^2.

PERIOD OF RECORD.--April 1912 to September 1924, October 1926 to September 1927, October 1931 to current year (no winter records for river since 1972; no winter records for canal 1972 to 1996). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1918-20, 1922, 1924. WSP 1710: Drainage area. WDR WY-84-1: 1983.

GAGE.--River: Water-stage recorder and concrete control. Elevation of gage is 7,388.99 ft above NGVD of 1929. April 16 to November 15, 1912, nonrecording gage and November 16, 1912 to September 22, 1915, water-stage recorder 90 ft downstream between dam crest and canal headgates at datum 1.00 ft higher. September 23, 1915 to September 30, 1924, April 19 to September 30, 1927, and April ll, 1932 to September 30, 1935, water-stage recorder at site 50 ft downstream at datum 1.00 ft higher. October 1, 1935 to July 13, 1950, water-stage recorder at site 50 ft downstream at present datum.

Canal: Water-stage recorder and Parshall flume. Elevation of gage is 7,390 ft above NGVD of 1929, from topographic map. April 16, 1912 to April 10, 1923, nonrecording gage; April 11, 1923 to September 30, 1924, and April 19 to June 9, 1927, water-stage recorder; June 10 to September 30, 1927, and April 11, 1932 to May 8, 1938, nonrecording gage; May 9, 1938 to April 26, 1966, water-stage recorder at site 1.5 mi downstream at different datums. April 27, 1966 to May 8, 1967, at present site, at datum 0.06 ft lower. The City of Laramie pipeline diversion, installed in 2002, is immediately adjacent and merges with Pioneer Canal just below the flume.

REMARKS.--Records fair. Pioneer Canal diverts from left bank of river at diversion dam 100 ft downstream for irrigation in vicinity of Laramie. Records show combined flow of river and canal. Three small reservoirs upstream from station in Wyoming, total capacity, about 600 acre-ft for irrigation, stock water, and domestic use. Diversions for irrigation of about 5,200 acres upstream from station. Transbasin diversions upstream from station to Cache la Poudre River and tributaries. National Weather Service, in cooperation with Wyoming State Engineer's Office, has data collection platform with satellite telemetry at station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	80	140	191	406	60	67
2	---	---	---	---	---	---	87	126	170	263	60	63
3	---	---	---	---	---	---	92	132	157	185	61	59
4	---	---	---	---	---	---	90	189	172	156	56	61
5	---	---	---	---	---	---	90	241	175	144	52	110
6	---	---	---	---	---	---	118	308	185	158	50	116
7	---	---	---	---	---	---	122	326	196	118	48	91
8	---	---	---	---	---	---	109	316	229	100	44	76
9	---	---	---	---	---	---	114	320	225	89	42	67
10	---	---	---	---	---	---	111	324	242	74	39	65
11	---	---	---	---	---	---	88	339	222	69	36	63
12	---	---	---	---	---	---	88	349	191	66	35	62
13	---	---	---	---	---	---	92	344	187	66	34	58
14	---	---	---	---	---	---	93	318	166	62	33	63
15	---	---	---	---	---	---	97	298	151	82	32	66
16	---	---	---	---	---	---	92	284	154	91	32	62
17	---	---	---	---	---	---	90	265	183	145	32	54
18	---	---	---	---	---	---	102	251	354	103	34	50
19	---	---	---	---	---	---	115	253	376	80	60	49
20	---	---	---	---	---	---	110	267	250	68	107	50
21	---	---	---	---	---	---	111	275	297	67	94	102
22	---	---	---	---	---	---	112	265	398	65	90	128
23	---	---	---	---	---	---	106	254	263	75	79	113
24	---	---	---	---	---	---	99	248	200	87	83	106
25	---	---	---	---	---	---	103	245	186	81	75	114
26	---	---	---	---	---	---	105	281	191	74	70	131
27	---	---	---	---	---	---	106	247	185	66	88	122
28	---	---	---	---	---	---	126	232	248	72	131	117
29	---	---	---	---	---	---	164	241	197	73	104	106
30	---	---	---	---	---	---	167	250	223	68	83	113
31	---	---	---	---	---	---	---	215	---	62	72	---
TOTAL	---	---	---	---	---	---	3,179	8,143	6,564	3,315	1,916	2,504
MEAN	---	---	---	---	---	---	106	263	219	107	61.8	83.5
MAX	---	---	---	---	---	---	167	349	398	406	131	131
MIN	---	---	---	---	---	---	80	126	151	62	32	49
AC-FT	---	---	---	---	---	---	6,310	16,150	13,020	6,580	3,800	4,970

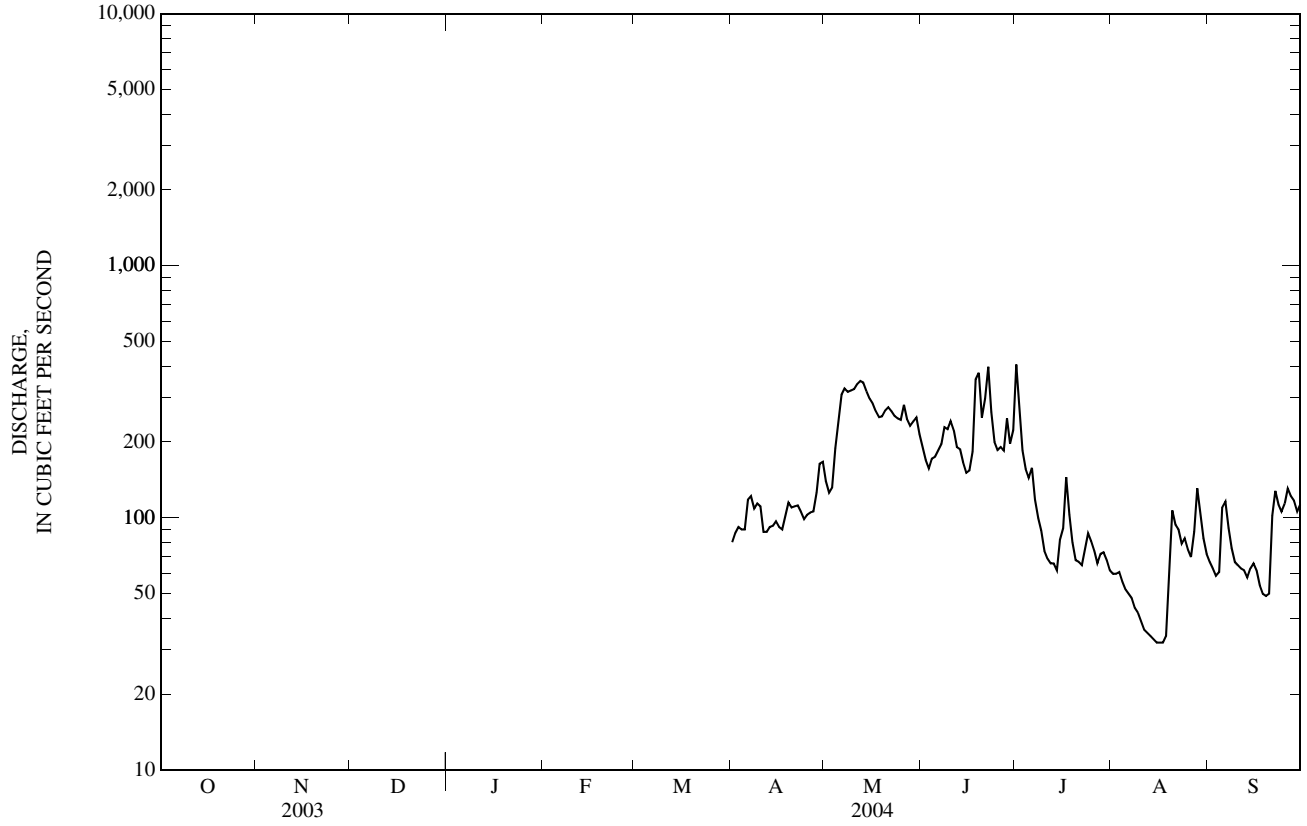
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2004, BY WATER YEAR (WY)*

MEAN	63.4	51.9	42.0	38.5	40.1	51.0	126	546	779	196	78.3	57.9
MAX	160	94.9	77.4	57.1	74.5	84.9	355	1,131	2,441	1,019	194	190
(WY)	(1962)	(1962)	(1966)	(1966)	(1962)	(1966)	(1962)	(1984)	(1983)	(1983)	(1983)	(1997)
MIN	33.7	32.0	28.3	24.3	24.6	27.7	51.7	63.5	55.8	19.6	18.9	15.1
(WY)	(1953)	(1934)	(1961)	(1961)	(1955)	(1964)	(1995)	(2002)	(2002)	(2002)	(2002)	(1934)

06659500 LARAMIE RIVER AND PIONEER CANAL NEAR WOODS, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1912 - 2004*	
ANNUAL MEAN	--		170	
HIGHEST ANNUAL MEAN	--		319	1957
LOWEST ANNUAL MEAN	--		64.9	1934
HIGHEST DAILY MEAN	406	Jul 1	3,320	Jun 14, 1957
LOWEST DAILY MEAN	32	Aug 15-17	0.00	May 1, 1912
MAXIMUM PEAK FLOW	497	Jul 1	5,060	Jun 10, 1923
ANNUAL RUNOFF (AC-FT)	--		123,100	

* For period of operation.



06659580 SAND CREEK AT COLORADO-WYOMING STATE LINE

LOCATION.--Lat 40°59'37", long 105°45'35", in NW¼ NW¼ SW¼ sec.24, T.12 N., R.75 W., Larimer County, CO, Hydrologic Unit 10180010, on right bank 1,200 ft south of Colorado-Wyoming State line and 17 mi southwest of Tie Siding, WY.

DRAINAGE AREA.--29.2 mi^2.

PERIOD OF RECORD.--October 1968 to current year (no winter records since 1971).

GAGE.--Water-stage recorder. Elevation of gage is 7,580 ft above NGVD of 1929, from topographic map. Prior to July 19, 1977, gage at site 700 ft upstream at different datum. State of Colorado data collection platform with satellite telemetry at station.

REMARKS.--Records good. Natural flow affected by diversion upstream from station to Cache la Poudre River basin through Wilson Supply ditch. Water imported upstream from station from Deadman Creek in Laramie River basin is rediverted through Wilson Supply ditch, but is wasted down Sand Creek at times. Diversions for irrigation of about 170 acres upstream from station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	5.7	16	17	22	2.9	2.4
2	---	---	---	---	---	---	5.9	14	17	16	2.6	2.2
3	---	---	---	---	---	---	6.6	14	16	11	2.4	1.8
4	---	---	---	---	---	---	7.2	16	16	9.6	2.1	2.2
5	---	---	---	---	---	---	9.0	20	16	8.6	2.0	2.7
6	---	---	---	---	---	---	12	25	13	8.9	1.9	2.8
7	---	---	---	---	---	---	13	30	11	8.8	1.6	2.9
8	---	---	---	---	---	---	11	28	9.9	6.0	1.5	2.5
9	---	---	---	---	---	---	13	28	9.5	5.1	1.2	2.2
10	---	---	---	---	---	---	11	26	9.6	4.6	1.2	1.9
11	---	---	---	---	---	---	9.0	27	9.1	4.4	1.1	1.9
12	---	---	---	---	---	---	9.6	27	8.5	4.1	0.96	1.8
13	---	---	---	---	---	---	9.8	26	8.7	3.9	0.85	1.9
14	---	---	---	---	---	---	10	24	8.2	3.6	0.85	2.0
15	---	---	---	---	---	---	10	24	7.4	3.9	0.78	1.9
16	---	---	---	---	---	---	10	25	6.5	4.4	0.66	1.9
17	---	---	---	---	---	---	10	23	8.3	5.4	0.60	1.8
18	---	---	---	---	---	---	12	22	18	5.3	1.6	1.8
19	---	---	---	---	---	---	13	22	19	4.2	4.2	1.7
20	---	---	---	---	---	---	13	23	12	3.6	6.3	1.7
21	---	---	---	---	---	---	13	25	11	3.3	5.6	3.8
22	---	---	---	---	---	---	13	23	16	3.3	4.2	5.1
23	---	---	---	---	---	---	12	22	12	3.7	3.7	5.0
24	---	---	---	---	---	---	11	22	9.0	5.1	3.1	5.0
25	---	---	---	---	---	---	12	23	8.5	5.2	2.7	5.4
26	---	---	---	---	---	---	12	27	9.8	4.6	2.4	5.9
27	---	---	---	---	---	---	11	22	13	4.0	3.4	6.2
28	---	---	---	---	---	---	12	21	15	3.9	5.1	6.0
29	---	---	---	---	---	---	16	21	14	4.8	4.8	5.1
30	---	---	---	---	---	---	16	22	12	4.1	3.5	6.0
31	---	---	---	---	---	---	---	19	---	3.5	2.9	---
TOTAL	---	---	---	---	---	---	328.8	707	361.0	188.9	78.70	95.5
MEAN	---	---	---	---	---	---	11.0	22.8	12.0	6.09	2.54	3.18
MAX	---	---	---	---	---	---	16	30	19	22	6.3	6.2
MIN	---	---	---	---	---	---	5.7	14	6.5	3.3	0.60	1.7
AC-FT	---	---	---	---	---	---	652	1,400	716	375	156	189

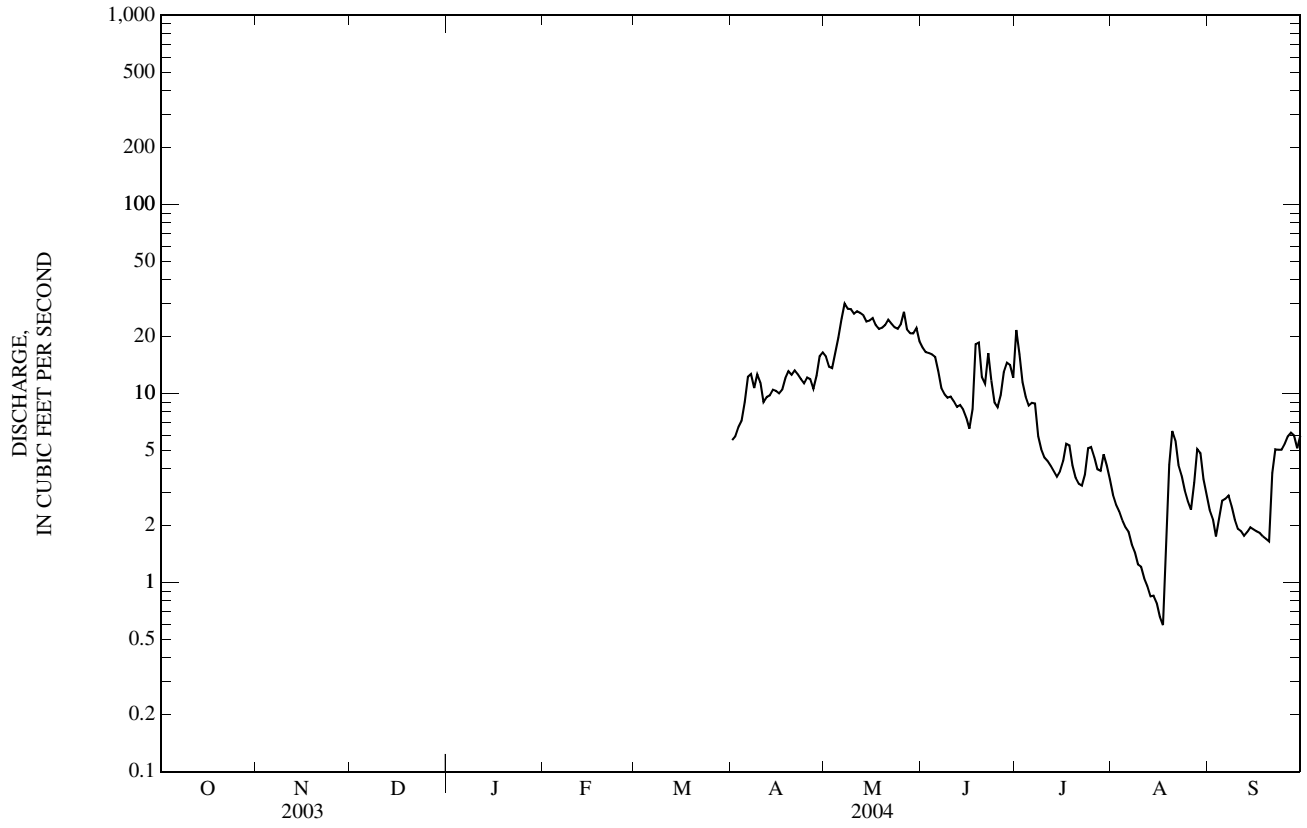
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2004, BY WATER YEAR (WY)*

MEAN	3.13	3.34	2.66	2.27	2.46	2.73	8.64	38.1	47.6	8.90	2.27	1.75
MAX	3.68	4.41	2.97	2.53	3.19	2.85	18.7	95.0	234	72.6	8.58	6.85
(WY)	(1971)	(1971)	(1971)	(1971)	(1971)	(1971)	(1986)	(1984)	(1983)	(1977)	(1983)	(1997)
MIN	2.75	2.47	2.39	1.83	1.84	2.65	2.90	5.63	2.32	0.03	0.00	0.00
(WY)	(1970)	(1969)	(1970)	(1970)	(1969)	(1969)	(1995)	(2002)	(2002)	(2002)	(2002)	(2002)

06659580 SAND CREEK AT COLORADO-WYOMING STATE LINE—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1969 - 2004*	
HIGHEST DAILY MEAN	30	May 7	1,500	Jul 19, 1977
LOWEST DAILY MEAN	0.60	Aug 17	0.00	Jul 13, 2002
MAXIMUM PEAK FLOW	38	May 7	6,710[a]	Jul 19, 1977
MAXIMUM PEAK STAGE	1.16	May 7	6.65[b]	Jul 19, 1977

* For period of operation.
a From slope-area measurement of peak flow.
b From floodmarks.



06661000 LITTLE LARAMIE RIVER NEAR FILMORE, WY

LOCATION.--Lat 41°17'42", long 106°02'03", in SE¼ NE¼ SE¼ sec.4, T.15 N., R.77 W., Albany County, Hydrologic Unit 10180010, on right bank 40 ft downstream from State Highway 130, 1.2 mi west of Filmore, and 4.4 mi downstream from North Fork.

DRAINAGE AREA.--157 mi^2. Area at site used prior to September 8, 1976, 156 mi^2.

PERIOD OF RECORD.--July 1902 to September 1903 (published as "near Hatton"), May 1911 to November 1926, October 1932 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1903, 1914, 1922-26. WSP 1440: 1902. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,610 ft above NGVD of 1929, from topographic map. Prior to September 16, 1938, nonrecording gages, and September 16, 1938 to September 7, 1976, water-stage recorder, at sites 0.7 mi upstream at different datums.

REMARKS.--Records fair. At least ten small reservoirs upstream from station, combined capacity, more than 160 acre-ft, for irrigation, stock water, recreation, and domestic use. Diversions upstream from station for irrigation of about 11,020 acres, of which about 20 acres are downstream from station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	18	42	174	146	23	18
2	---	---	---	---	---	---	18	39	172	122	22	18
3	---	---	---	---	---	---	20	41	189	106	22	17
4	---	---	---	---	---	---	20	57	225	96	21	19
5	---	---	---	---	---	---	21	81	219	95	21	38
6	---	---	---	---	---	---	31	131	243	86	22	29
7	---	---	---	---	---	---	29	148	275	74	21	23
8	---	---	---	---	---	---	28	161	279	67	20	21
9	---	---	---	---	---	---	39	177	267	63	18	18
10	---	---	---	---	---	---	34	199	248	61	16	19
11	---	---	---	---	---	---	29	220	212	57	11	17
12	---	---	---	---	---	---	27	209	185	53	10	16
13	---	---	---	---	---	---	37	196	173	51	12	17
14	---	---	---	---	---	---	57	180	168	49	7.3	22
15	---	---	---	---	---	---	36	160	172	53	7.9	21
16	---	---	---	---	---	---	27	151	174	100	12	19
17	---	---	---	---	---	---	24	147	229	124	6.4	17
18	---	---	---	---	---	---	25	154	365	72	13	17
19	---	---	---	---	---	---	26	182	289	58	45	16
20	---	---	---	---	---	---	24	226	239	49	39	18
21	---	---	---	---	---	---	25	262	256	47	37	32
22	---	---	---	---	---	---	35	246	234	50	29	44
23	---	---	---	---	---	---	36	216	176	68	25	44
24	---	---	---	---	---	---	44	204	161	59	24	39
25	---	---	---	---	---	---	57	214	165	51	25	38
26	---	---	---	---	---	---	46	211	182	43	23	38
27	---	---	---	---	---	---	35	190	169	38	32	38
28	---	---	---	---	---	---	37	224	188	35	29	41
29	---	---	---	---	---	---	46	256	155	37	24	41
30	---	---	---	---	---	---	46	214	164	29	21	45
31	---	---	---	---	---	---	---	183	---	27	19	---
TOTAL	---	---	---	---	---	---	977	5,321	6,347	2,066	657.6	800
MEAN	---	---	---	---	---	---	32.6	172	212	66.6	21.2	26.7
MAX	---	---	---	---	---	---	57	262	365	146	45	45
MIN	---	---	---	---	---	---	18	39	155	27	6.4	16
AC-FT	---	---	---	---	---	---	1,940	10,550	12,590	4,100	1,300	1,590

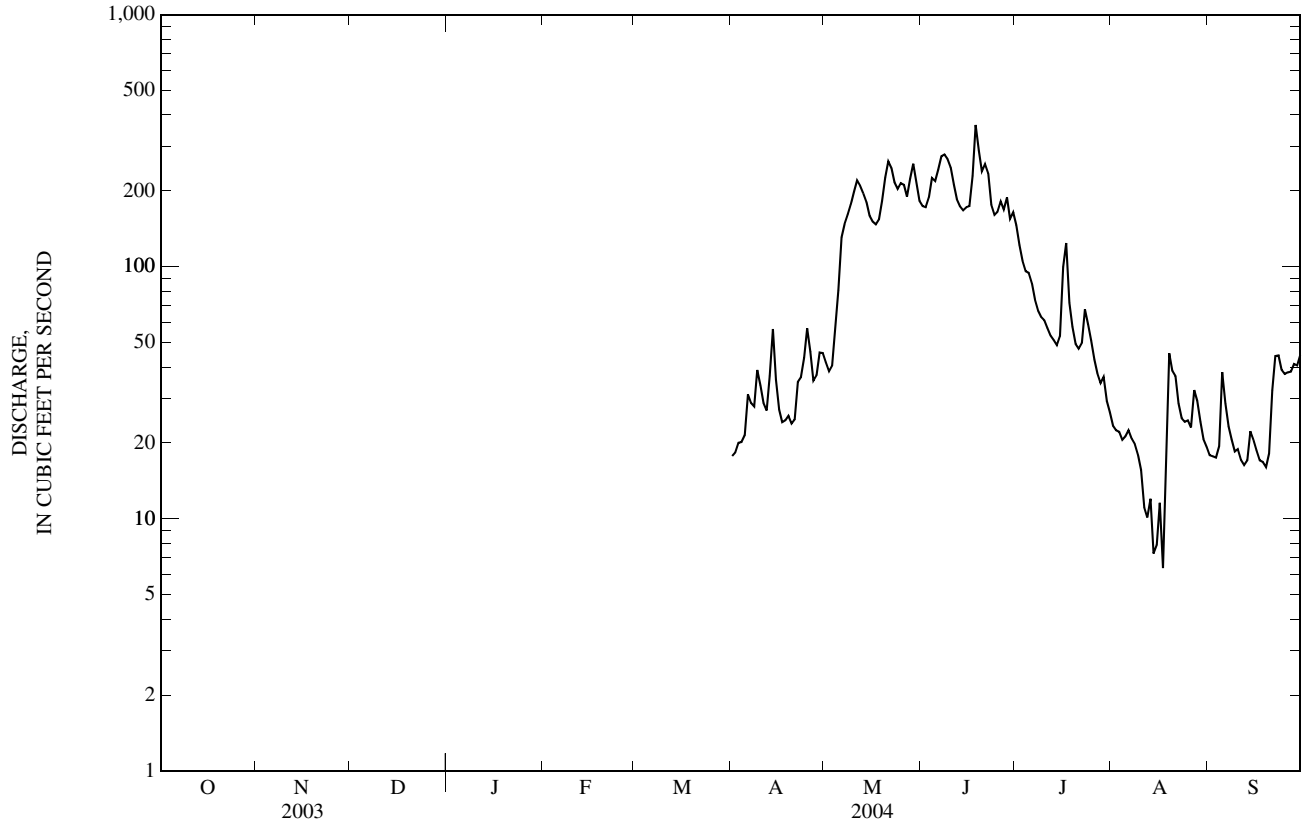
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2004, BY WATER YEAR (WY)*

MEAN	31.1	28.2	23.9	19.6	20.5	26.4	52.9	232	520	156	49.7	28.9
MAX	77.2	50.0	40.0	35.0	53.8	47.9	136	502	1,217	572	126	74.7
(WY)	(1913)	(1913)	(1913)	(1913)	(1962)	(1971)	(1924)	(1926)	(1903)	(1917)	(1984)	(1912)
MIN	13.2	10.0	10.0	8.76	8.00	9.97	17.6	69.5	48.3	17.9	11.0	8.80
(WY)	(1936)	(1920)	(1934)	(1955)	(1955)	(1955)	(1955)	(1968)	(1934)	(1934)	(2002)	(1913)

06661000 LITTLE LARAMIE RIVER NEAR FILMORE, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1903 - 2004*	
HIGHEST DAILY MEAN	365	Jun 18	2,400	Jun 1, 1914
LOWEST DAILY MEAN	6.4	Aug 17	1.0	Sep 17, 1913
MAXIMUM PEAK FLOW	414	Jun 18	3,450	Jun 10, 1965
MAXIMUM PEAK STAGE	2.67	Jun 18	5.33	Jun 10, 1965

* For period of operation.



06661585 LARAMIE RIVER NEAR BOSLER, WY

LOCATION.--Lat 41°33'17", long 105°40'58", in NW¼ NW¼ NE¼ sec.10, T.18 N., R.74 W., Albany County, Hydrologic Unit 10180010, on left bank 50 ft upstream from bridge on U.S. Highways 30 and 287, 0.2 mi northwest of Bosler Junction, 1.7 mi south of Bosler, and 2.0 mi downstream from Soil Bank Boughton Canal diversion dam.

DRAINAGE AREA.--1,790 mi^2, of which 283 mi^2 probably is noncontributing.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,030 ft above NGVD of 1929, from topographic map. National Weather Service data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversion upstream from station for irrigation of about 54,700 acres, of which about 2,300 acres are downstream from station, and return flow from irrigated areas.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	19	e44	e37	e32	e51	52	17	93	141	46	46
2	10	36	e44	e37	e29	e48	51	18	91	137	40	41
3	11	41	e41	e33	e33	e48	48	18	83	116	36	34
4	14	46	e39	e29	e34	e50	43	15	70	120	31	37
5	19	50	e36	e25	e31	e48	39	13	59	121	28	44
6	18	e43	e40	e26	e31	e50	39	12	58	98	26	75
7	19	e41	e45	e27	e33	e56	46	10	57	88	23	60
8	20	e51	e42	e28	e33	e65	46	10	56	79	21	52
9	19	69	e37	e29	e32	e78	46	10	59	68	19	53
10	21	62	e35	e30	e31	e82	53	18	65	62	18	50
11	21	e57	e35	e31	e28	e81	48	51	70	62	17	44
12	21	e51	e35	e29	e25	e98	45	73	74	54	16	41
13	20	e65	e37	e29	e25	e98	43	102	76	48	15	36
14	20	69	e39	e30	e29	e93	42	137	75	46	14	32
15	22	69	e38	e30	e34	e89	39	179	66	38	13	29
16	26	69	e36	e28	e38	e108	36	190	54	34	12	28
17	28	65	e38	e27	e43	e116	34	135	49	38	11	28
18	29	35	e37	e27	e49	e104	31	104	98	43	11	27
19	29	63	e37	e29	e57	92	30	86	259	53	16	26
20	29	61	e40	e28	e54	87	29	72	351	57	18	26
21	30	78	e42	e27	e48	80	27	64	457	57	25	30
22	29	39	e39	e28	e48	77	30	62	412	48	31	39
23	29	e30	e35	e30	e52	70	33	66	270	48	36	60
24	29	e36	e37	e33	e55	64	28	65	194	46	41	69
25	29	e36	e38	e32	e59	66	22	63	145	56	40	76
26	28	e33	e40	e28	e66	68	20	78	127	55	43	80
27	29	e30	e38	e28	e65	66	20	83	152	50	43	71
28	29	e30	e35	e30	e62	63	19	86	160	53	45	66
29	29	e35	e33	e32	e56	58	20	87	141	62	47	69
30	29	e40	e33	e37	---	56	19	89	144	64	45	86
31	19	---	e35	e36	---	55	---	94	---	56	45	---
TOTAL	713.8	1,449	1,180	930	1,212	2,265	1,078	2,107	4,065	2,098	872	1,455
MEAN	23.0	48.3	38.1	30.0	41.8	73.1	35.9	68.0	136	67.7	28.1	48.5
MAX	30	78	45	37	66	116	53	190	457	141	47	86
MIN	8.8	19	33	25	25	48	19	10	49	34	11	26
AC-FT	1,420	2,870	2,340	1,840	2,400	4,490	2,140	4,180	8,060	4,160	1,730	2,890

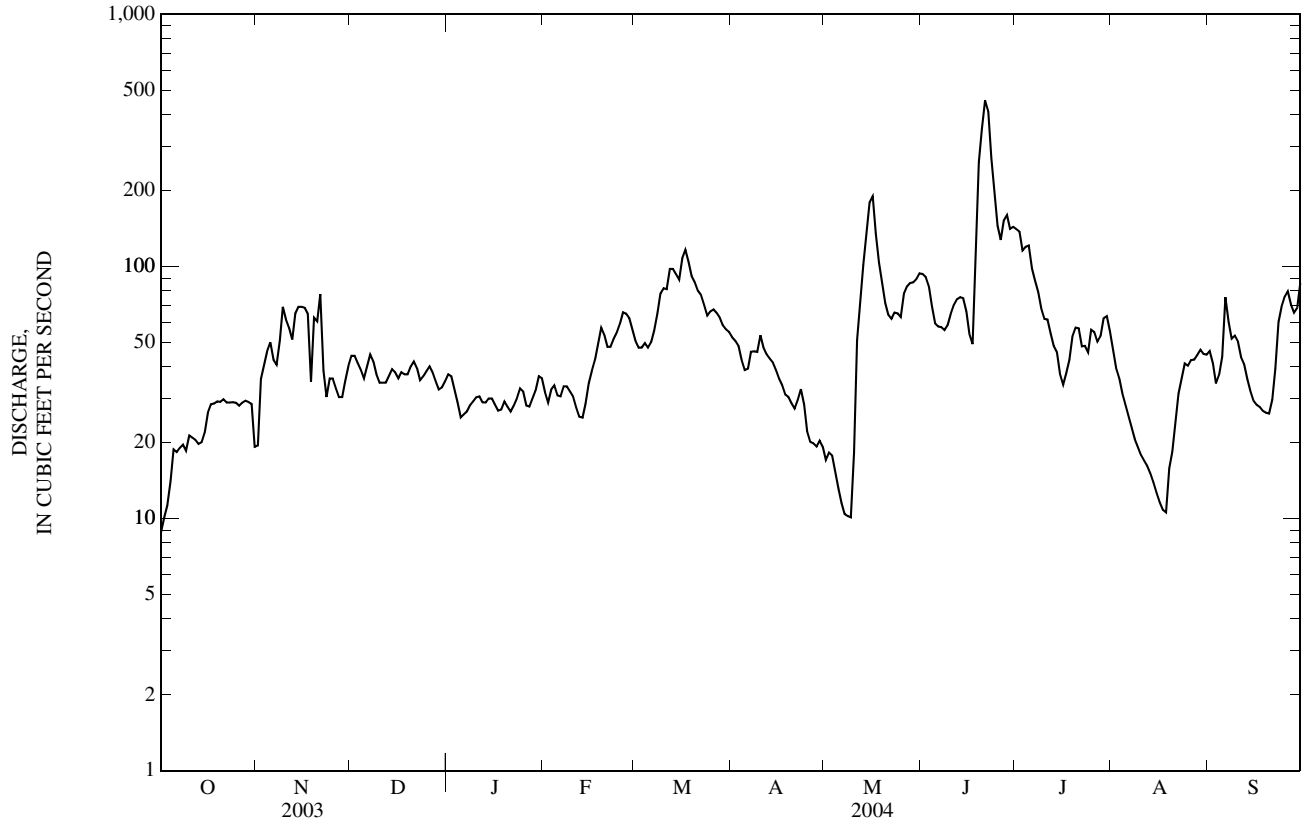
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2004, BY WATER YEAR (WY)

MEAN	54.2	71.6	54.3	45.3	54.8	105	144	264	669	231	73.4	30.1
MAX	196	155	101	92.7	120	209	531	1,198	2,512	1,529	428	140
(WY)	(1985)	(1987)	(1984)	(1986)	(1986)	(1986)	(1984)	(1984)	(1983)	(1983)	(1984)	(1984)
MIN	3.26	7.37	8.09	18.8	26.2	38.7	10.3	8.74	4.20	0.02	0.00	0.00
(WY)	(1993)	(1995)	(1995)	(1991)	(2002)	(2002)	(1995)	(2002)	(2002)	(2002)	(2002)	(2002)

06661585 LARAMIE RIVER NEAR BOSLER, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1973 - 2004	
ANNUAL TOTAL	39,019.5		19,424.8		--	
ANNUAL MEAN	107		53.1		150	
HIGHEST ANNUAL MEAN	--		--		475	1983
LOWEST ANNUAL MEAN	--		--		18.9	2002
HIGHEST DAILY MEAN	1,410	Jun 6	457	Jun 21	4,390	Jun 28, 1983
LOWEST DAILY MEAN	8.8	Oct 1	8.8	Oct 1	0.00	Some days, some years
ANNUAL SEVEN-DAY MINIMUM	9.2	Sep 26	13	May 3	0.00	Jul 10, 2002
MAXIMUM PEAK FLOW	--		483	Jun 21	4,480[a]	Jun 11, 1986
MAXIMUM PEAK STAGE	--		2.76	Jun 21	8.40[b]	Apr 22, 1973
ANNUAL RUNOFF (AC-FT)	77,400		38,530		108,400	
10 PERCENT EXCEEDS	219		89		335	
50 PERCENT EXCEEDS	35		41		60	
90 PERCENT EXCEEDS	15		20		12	

a Gage height, 7.39 ft.
b Ice jam.
e Estimated.



06664400 SYBILLE CREEK ABOVE MULE CREEK, NEAR WHEATLAND, WY

LOCATION.--Lat 41°50'39", long 105°13'15", in NE¼ SW¼ SE¼ sec.27, T.22 N., R.70 W., Platte County, Hydrologic Unit 10180011, on right bank just upstream from bridge on State Highway 34, 900 ft upstream from Mule Creek, 2.9 mi upstream from Bluegrass Creek, and 20 mi southwest of Wheatland.

DRAINAGE AREA.--194 mi^2.

PERIOD OF RECORD.--April 1974 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,340 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for discharges greater than 100 ft^3/s, which are poor. Seven small diversions upstream from station, combined capacity, about 400 acre-ft, for irrigation. Diversions upstream from station for irrigation of about 2,020 acres, of which about 80 acres are downstream from station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	2.5	3.7	3.7	3.1	0.94	0.68
2	---	---	---	---	---	---	2.7	3.5	4.1	2.4	0.85	0.64
3	---	---	---	---	---	---	3.3	3.3	3.9	2.0	0.75	0.68
4	---	---	---	---	---	---	3.4	2.7	3.5	1.8	0.63	1.2
5	---	---	---	---	---	---	2.6	2.6	3.2	1.8	0.55	1.8
6	---	---	---	---	---	---	3.5	2.4	2.8	1.8	0.58	1.3
7	---	---	---	---	---	---	3.0	2.2	2.4	1.7	0.52	1.1
8	---	---	---	---	---	---	3.2	2.1	2.2	1.5	0.53	0.97
9	---	---	---	---	---	---	3.5	2.0	2.3	1.6	0.58	0.77
10	---	---	---	---	---	---	4.9	2.0	2.3	1.8	0.61	0.73
11	---	---	---	---	---	---	4.9	2.9	2.0	1.5	0.65	0.71
12	---	---	---	---	---	---	4.9	6.5	1.9	1.3	0.57	0.63
13	---	---	---	---	---	---	4.9	6.6	1.8	1.3	0.54	0.59
14	---	---	---	---	---	---	5.7	4.9	1.7	1.3	0.50	0.64
15	---	---	---	---	---	---	5.2	4.0	1.7	1.3	0.46	0.69
16	---	---	---	---	---	---	3.7	3.4	2.2	1.3	0.39	0.66
17	---	---	---	---	---	---	4.2	3.3	2.4	1.3	0.37	0.59
18	---	---	---	---	---	---	4.6	2.8	3.9	1.2	0.55	0.46
19	---	---	---	---	---	---	3.9	2.9	3.8	1.2	0.87	0.57
20	---	---	---	---	---	---	3.8	2.7	3.3	1.1	0.81	0.75
21	---	---	---	---	---	---	3.8	2.5	3.2	1.2	0.62	1.4
22	---	---	---	---	---	---	4.6	2.4	3.1	1.2	0.54	1.4
23	---	---	---	---	---	---	4.8	2.3	2.7	1.9	0.77	1.2
24	---	---	---	---	---	---	4.2	2.1	2.6	2.0	0.83	0.84
25	---	---	---	---	---	---	3.7	2.1	3.3	1.9	0.72	0.84
26	---	---	---	---	---	---	3.2	2.4	4.4	1.6	1.00	0.81
27	---	---	---	---	---	---	2.8	4.0	3.7	1.3	1.1	0.78
28	---	---	---	---	---	---	3.5	5.6	6.2	1.3	1.2	0.86
29	---	---	---	---	---	---	3.7	5.0	13	1.3	0.87	0.81
30	---	---	---	---	---	---	3.8	5.0	9.7	1.2	0.78	1.4
31	---	---	---	---	---	---	---	3.8	---	1.1	0.75	---
TOTAL	---	---	---	---	---	---	116.5	103.7	107.0	48.3	21.43	26.50
MEAN	---	---	---	---	---	---	3.88	3.35	3.57	1.56	0.69	0.88
MAX	---	---	---	---	---	---	5.7	6.6	13	3.1	1.2	1.8
MIN	---	---	---	---	---	---	2.5	2.0	1.7	1.1	0.37	0.46
AC-FT	---	---	---	---	---	---	231	206	212	96	43	53

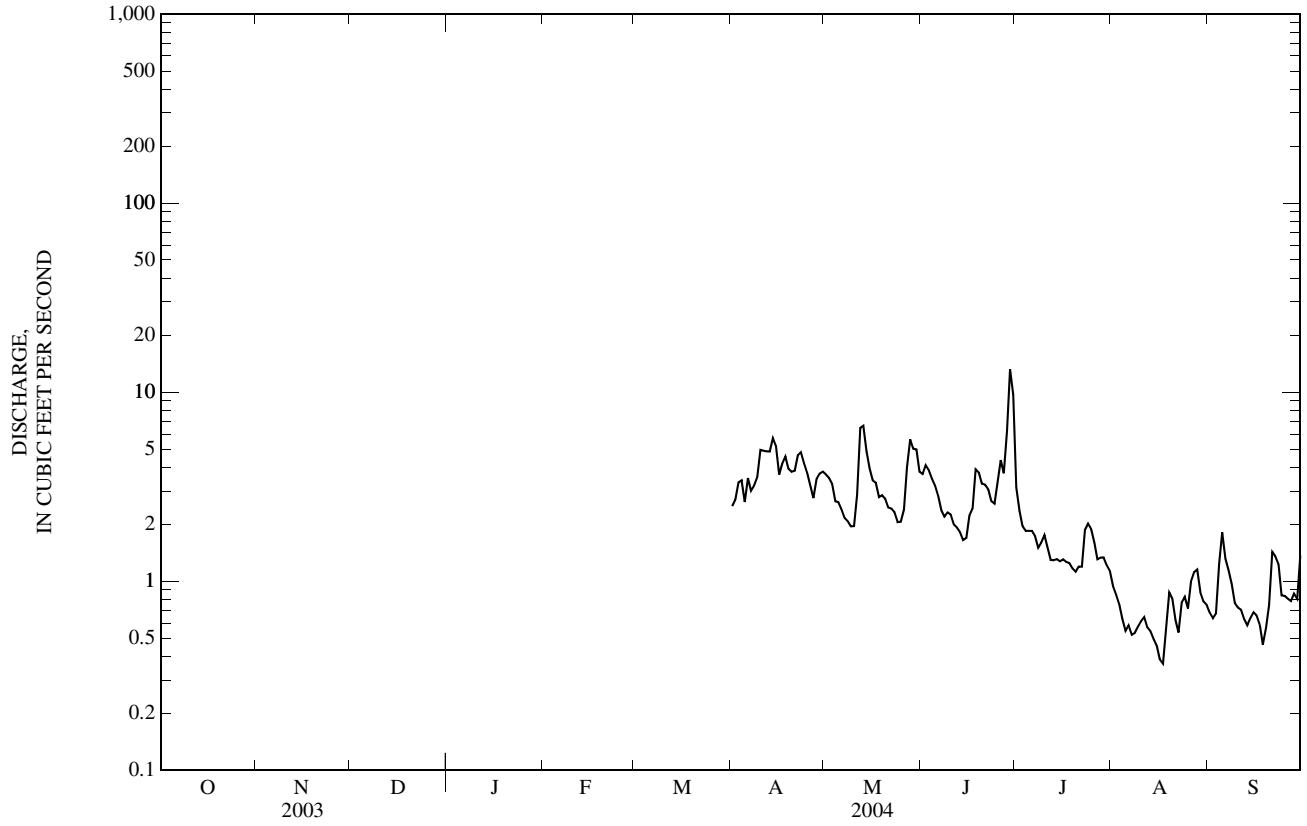
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2004, BY WATER YEAR (WY)*

MEAN	4.24	---	---	---	---	7.75	30.2	61.8	41.6	22.1	12.4	5.73
MAX	4.24	---	---	---	---	7.75	201	533	382	193	62.7	23.3
(WY)	(1989)	---	---	---	---	(1987)	(1983)	(1983)	(1983)	(1983)	(1983)	(1983)
MIN	4.24	---	---	---	---	7.75	2.27	3.35	2.67	0.64	0.65	0.65
(WY)	(1989)	---	---	---	---	(1987)	(1977)	(2004)	(1989)	(2002)	(1989)	(2002)

06664400 SYBILLE CREEK ABOVE MULE CREEK, NEAR WHEATLAND, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1974 - 2004*	
HIGHEST DAILY MEAN	13	Jun 29	1,280	Aug 20, 1990
LOWEST DAILY MEAN	0.37	Aug 17	0.09	Sep 5, 2002
MAXIMUM PEAK FLOW	174	Jun 29	19,900[a]	Aug 20, 1990
MAXIMUM PEAK STAGE	3.20	Jun 29	15.60[b]	Aug 20, 1990

* For period of operation.
a On basis of slope-area measurement of peak flow at site 1.2 mi upstream.
b From floodmarks.



06665790 SYBILLE CREEK ABOVE CANAL NO. 3, NEAR WHEATLAND, WY

LOCATION.--Lat 41°54'40", long 105°07'36", in NW¼ SW¼ NE¼ sec. 4, T.22 N., R.69 W., Platte County, Hydrologic Unit 10180011, on right bank 100 ft upstream from State Highway 34, 200 ft downstream from Deadhead Creek, 2.7 mi upstream from Canal No. 3, and 19.7 mi southwest of Wheatland.

PERIOD OF RECORD.--April 1980 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,040 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for daily discharges greater than 100 ft^3/s, which are fair. Most of flow during irrigation season is water released from Wheatland Reservoir No. 2, capacity 98,930 acre-ft, on the Laramie River and diverted down Bluegrass Creek for irrigation of land near Wheatland. Diversions for irrigation of about 4,400 acres upstream from station.

COOPERATION.--Station operated and recorded provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	7.0	7.1	8.9	16	16	0.59
2	---	---	---	---	---	---	6.7	7.0	23	9.4	11	0.52
3	---	---	---	---	---	---	5.5	6.8	39	8.0	8.7	0.63
4	---	---	---	---	---	---	5.4	7.4	34	5.7	75	1.2
5	---	---	---	---	---	---	5.4	7.6	33	5.0	22	2.7
6	---	---	---	---	---	---	5.7	7.1	31	4.8	12	1.9
7	---	---	---	---	---	---	5.4	6.7	31	4.2	8.1	1.4
8	---	---	---	---	---	---	5.4	6.0	32	3.7	6.1	1.2
9	---	---	---	---	---	---	6.2	15	33	3.5	4.9	0.86
10	---	---	---	---	---	---	6.7	32	31	5.9	4.4	0.72
11	---	---	---	---	---	---	6.4	56	13	83	3.9	0.74
12	---	---	---	---	---	---	6.5	42	9.6	93	3.1	0.65
13	---	---	---	---	---	---	6.3	58	7.6	74	2.8	0.56
14	---	---	---	---	---	---	6.3	43	6.4	58	2.4	0.53
15	---	---	---	---	---	---	6.3	36	6.1	65	2.1	0.57
16	---	---	---	---	---	---	6.3	19	6.9	95	1.9	0.54
17	---	---	---	---	---	---	6.3	13	7.9	95	1.6	0.49
18	---	---	---	---	---	---	6.6	12	14	85	1.7	0.48
19	---	---	---	---	---	---	6.9	9.0	14	87	2.0	0.54
20	---	---	---	---	---	---	6.9	7.8	11	92	2.2	0.59
21	---	---	---	---	---	---	6.9	7.5	10	101	1.8	1.0
22	---	---	---	---	---	---	7.8	6.9	10	92	1.3	1.4
23	---	---	---	---	---	---	8.3	6.3	8.5	87	1.3	1.3
24	---	---	---	---	---	---	8.2	5.6	7.7	66	1.4	1.2
25	---	---	---	---	---	---	7.7	5.2	9.1	38	1.2	1.4
26	---	---	---	---	---	---	7.8	6.3	10	32	1.3	1.3
27	---	---	---	---	---	---	7.6	8.9	9.6	20	1.5	1.4
28	---	---	---	---	---	---	7.7	7.3	8.3	16	1.5	1.6
29	---	---	---	---	---	---	7.4	6.2	23	18	1.0	1.6
30	---	---	---	---	---	---	7.3	6.3	19	18	0.81	3.0
31	---	---	---	---	---	---	---	6.4	---	17	0.67	---
TOTAL	---	---	---	---	---	---	200.9	471.4	507.6	1,398.2	205.68	32.61
MEAN	---	---	---	---	---	---	6.70	15.2	16.9	45.1	6.63	1.09
MAX	---	---	---	---	---	---	8.3	58	39	101	75	3.0
MIN	---	---	---	---	---	---	5.4	5.2	6.1	3.5	0.67	0.48
AC-FT	---	---	---	---	---	---	398	935	1,010	2,770	408	65

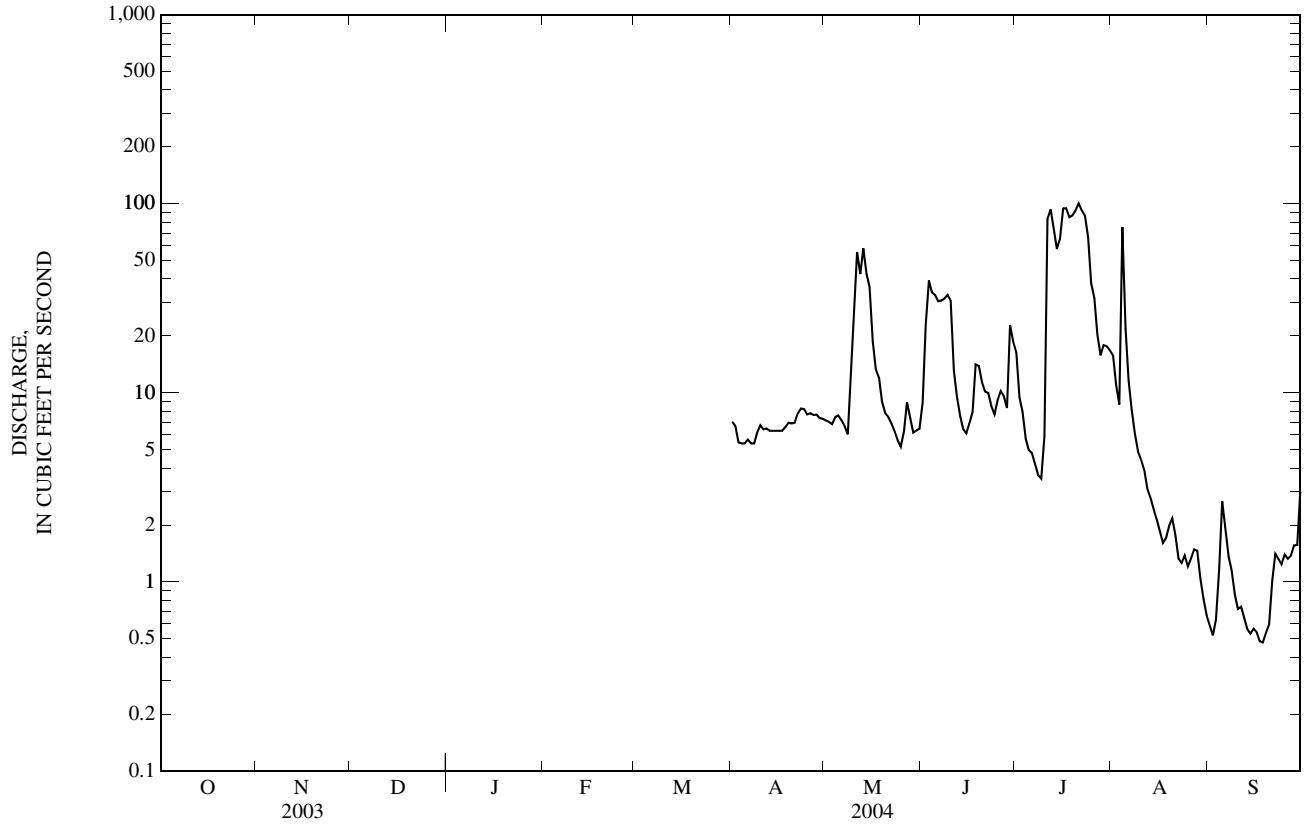
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2004, BY WATER YEAR (WY)*

MEAN	29.0	---	---	---	---	25.5	51.7	101	78.1	79.4	65.4	32.3
MAX	29.0	---	---	---	---	25.5	260	665	347	191	192	68.3
(WY)	(1989)	---	---	---	---	(1987)	(1983)	(1983)	(1983)	(1983)	(1983)	(1983)
MIN	29.0	---	---	---	---	25.5	6.70	12.5	13.0	12.6	0.07	0.00
(WY)	(1989)	---	---	---	---	(1987)	(2004)	(2002)	(2002)	(2002)	(2002)	(2002)

06665790 SYBILLE CREEK ABOVE CANAL NO. 3, NEAR WHEATLAND, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1980 - 2004*	
HIGHEST DAILY MEAN	101	Jul 21	1,280	May 22, 1983
LOWEST DAILY MEAN	0.48	Sep 18	0.00	Sep 1, 1981 Aug 12 to Sep 30, 2002
MAXIMUM PEAK FLOW	166	Jul 15	6,900[a]	Aug 20, 1990
MAXIMUM PEAK STAGE	1.55	Jul 15	8.35[b]	Aug 20, 1990

* For period of operation.
a From rating curve extended above 1,300 ft^3/s, on basis of contracted opening measurement of peak flow.
b From floodmarks.



06669050 WHEATLAND CREEK BELOW WHEATLAND, WY

LOCATION.--Lat 42°05'05", long 104°57'02", in SW¼ SW¼ NE¼ sec.1, T.24 N., R.68 W., Platte County, Hydrologic Unit 10180011, 50 ft upstream from bridge on U.S. Highway 87, 50 ft downstream from sewage lagoons, and 1.6 mi north of Wheatland city limits.

PERIOD OF RECORD.--Water years 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
NOV													
05...	1000	.51	647	12.1	104	9.5	1,430	-3.0	2.0	E.03	<.06	E.004	.08
FEB													
24...	1020	.48	644	17.3	161	8.9	1,420	4.0	5.0	16.4	.29	.053	2.32
MAY													
04...	1050	.34	645	11.6	143	8.9	1,530	18.0	17.0	3.60	.97	.406	1.58
AUG													
11...	0950	.00	--	--	--	--	--	18.0	--	--	--	--	--

Date	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
NOV		
05...	70	120
FEB		
24...	240	180
MAY		
04...	260	220
AUG		
11...	--	--

< -- Less than
E -- Estimated value

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY

LOCATION.--Lat 42°12'02", long 104°32'16", in NE¼ SE¼ NE¼ sec.28, T.26 N., R.64 W., Goshen County, Hydrologic Unit 10180011, on right bank 600 ft upstream from bridge on county road, 0.6 mi upstream from mouth, and 1.1 mi southwest of Fort Laramie.

DRAINAGE AREA.--4,564 mi^2, of which 631 mi^2 probably is non-contributing. Drainage area at mouth, 4,565 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1915 to current year (no winter records prior to 1927). Monthly discharge only for some periods, published in WSP 1310. Records for water years 1926-39, previously published including diversions to Gering-Fort Laramie Canal, were adjusted to exclude flow in the canal in WSP 1310. Prior to October 1931, published as "at Fort Laramie." No diversion to Gering-Fort Laramie Canal since 1956.

REVISED RECORDS.--WSP 1918: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,220 ft above NGVD of 1929, from topographic map. April 4, 1915 to March 31, 1925, nonrecording gage at site 0.1 mi downstream at different datum. April 1, 1925 to September 30, 1932, nonrecording gage and October 1, 1932 to August 20, 1935, water-stage recorder at site 4.3 mi upstream at different datum. August 21, 1935 to November 2, 1970, water-stage recorder at site 0.3 mi upstream at different datum. November 3, 1970 to May 9, 1973, water-stage recorder 0.1 mi downstream at different datum. May 10, 1973, to April 5, 1977, water-stage recorder 4.3 mi upstream at different datum. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for December to March and those for estimated daily discharges, which are poor. Major regulation began after completion of Grey Rocks Reservoir in 1980. Diversion, at times, to Gering-Fort Laramie Canal, 5.4 mi upstream. Natural flow of stream affected by transbasin diversions, storage reservoirs, ground-water withdrawals and diversions for irrigation of about 176,000 acres upstream from station, and return flow from irrigated areas.

COOPERATION.--Five discharge measurements provided by the Wyoming State Engineer's Office.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	23	24	19	30	17	42	39	37	51	37	38
2	30	23	24	17	31	18	48	39	36	47	37	38
3	27	23	24	14	36	17	50	39	36	43	37	39
4	24	22	23	e13	32	17	50	42	40	43	35	41
5	22	22	22	e12	20	17	48	44	44	43	35	50
6	24	22	e22	e13	e18	17	45	43	41	43	35	41
7	20	21	24	e15	e17	17	46	42	39	45	35	39
8	17	21	23	22	18	17	46	40	38	39	37	39
9	18	21	22	20	19	16	47	40	39	38	42	38
10	19	21	22	17	19	16	47	39	42	40	48	38
11	19	21	e22	15	19	17	47	39	43	39	48	40
12	19	20	e21	14	e18	17	47	40	40	36	42	41
13	18	20	e23	15	e17	17	46	42	40	34	39	41
14	19	22	24	16	e16	17	46	43	40	63	40	42
15	18	23	23	20	e17	17	46	44	36	40	40	42
16	18	23	e22	18	17	17	46	44	37	39	39	41
17	19	23	e21	17	16	17	45	41	41	38	39	40
18	17	23	e20	16	16	17	45	41	46	37	40	36
19	17	23	e19	16	17	17	46	40	49	35	41	37
20	17	23	e17	16	18	17	43	40	50	33	41	38
21	18	23	15	17	17	17	35	42	45	35	39	43
22	19	23	15	e17	17	17	42	42	43	41	38	41
23	20	24	14	18	17	20	43	42	41	46	40	39
24	21	e23	19	18	16	22	42	41	43	42	39	39
25	22	e25	19	19	17	23	37	40	43	46	37	39
26	23	e24	19	e18	17	23	36	40	47	39	41	38
27	23	e24	15	e21	17	23	37	39	47	37	37	38
28	22	e24	e16	e24	17	23	36	39	48	37	38	37
29	22	25	e18	28	18	23	37	38	46	39	35	38
30	23	24	21	32	---	23	39	39	46	38	37	63
31	23	---	25	31	---	34	---	40	---	37	39	---
TOTAL	652	679	638	568	564	587	1,310	1,263	1,263	1,263	1,207	1,214
MEAN	21.0	22.6	20.6	18.3	19.4	18.9	43.7	40.7	42.1	40.7	38.9	40.5
MAX	34	25	25	32	36	34	50	44	50	63	48	63
MIN	17	20	14	12	16	16	35	38	36	33	35	36
AC-FT	1,290	1,350	1,270	1,130	1,120	1,160	2,600	2,510	2,510	2,510	2,390	2,410

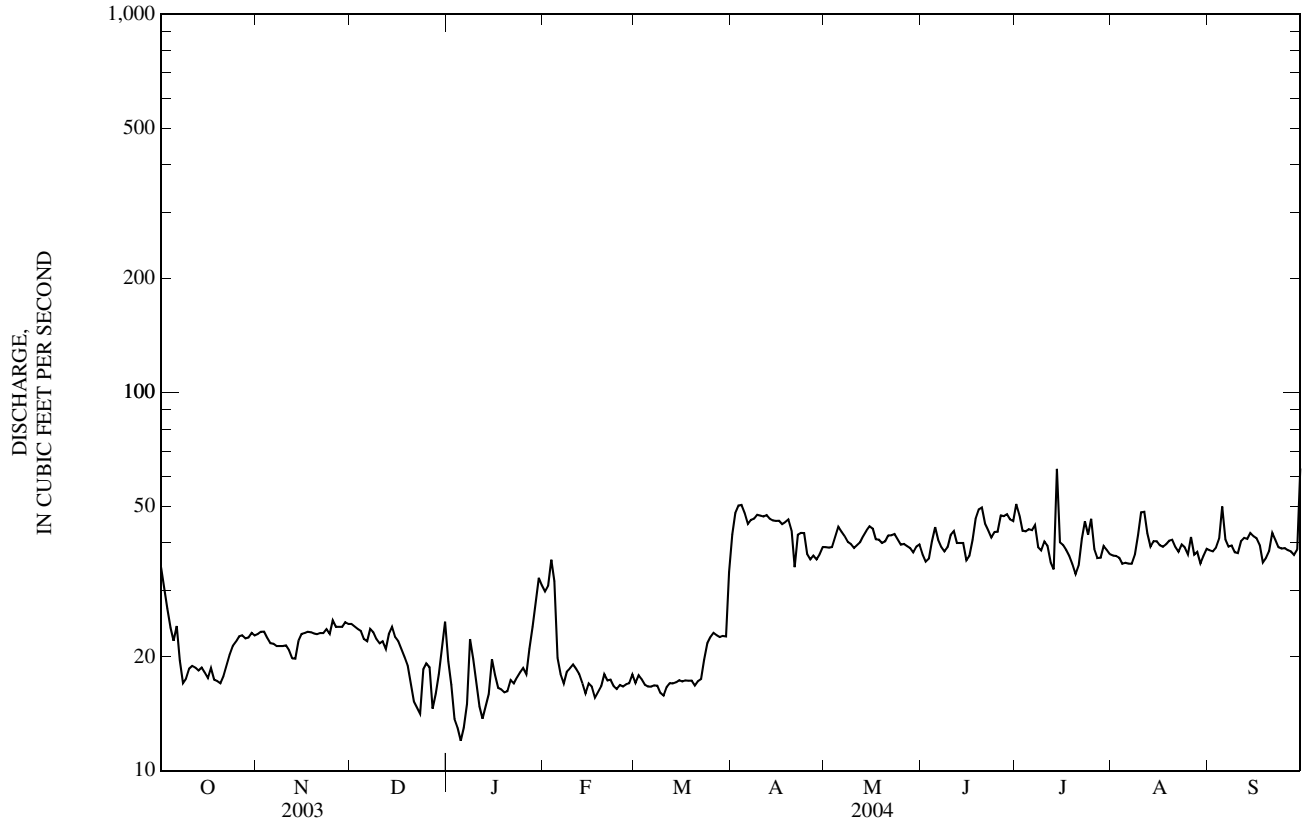
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2004, BY WATER YEAR (WY)

MEAN	68.1	78.9	84.6	83.0	87.6	102	147	371	297	127	64.0	61.3
MAX	350	388	464	360	418	425	1,056	3,145	2,967	1,925	390	245
(WY)	(1985)	(1985)	(1985)	(1985)	(1984)	(1984)	(1984)	(1973)	(1983)	(1983)	(1984)	(1973)
MIN	13.9	10.3	6.35	6.32	17.3	18.9	37.5	25.3	17.3	23.1	8.73	15.0
(WY)	(1965)	(1981)	(1981)	(1981)	(1981)	(2004)	(1981)	(1963)	(1966)	(1966)	(1975)	(1964)

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1957 - 2004	
ANNUAL TOTAL	14,856		11,208		--	
ANNUAL MEAN	40.7		30.6		131	
HIGHEST ANNUAL MEAN	--		--		672	1983
LOWEST ANNUAL MEAN	--		--		26.1	1981
HIGHEST DAILY MEAN	122	May 2	63	Jul 14,Sep 30	5,810	May 10, 1973
LOWEST DAILY MEAN	14	Dec 23	12	Jan 5	2.0[a]	Jan 23, 1981
ANNUAL SEVEN-DAY MINIMUM	17	Dec 21	15	Jan 1	3.1	Jan 21, 1981
MAXIMUM PEAK FLOW	--		143	Sep 30	6,260	May 10, 1973#
MAXIMUM PEAK STAGE	--		2.85	Sep 30	9.40[b]	May 10, 1973#
ANNUAL RUNOFF (AC-FT)	29,470		22,230		95,030	
10 PERCENT EXCEEDS	54		45		210	
50 PERCENT EXCEEDS	42		34		59	
90 PERCENT EXCEEDS	21		17		29	

For period of record 1915-2004.
a No flow Jan. 31 to Mar. 20, Oct. 24 to Dec. 17, 1926, Mar. 1-26, 1927, Apr. 14, 1938, all flows divided by Gering-fort Laramie Canal.
b Site and datum then in use.
e Estimated.



06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to July 1986, October 1986 to July 1988, October 2003 to September 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
OCT													
24...	1140	21	662	10.4	109	8.2	748	15.0	11.0	<.04	.12	E.006	<.02
MAR													
10...	1025	16	657	8.6	82	8.2	757	3.0	7.0	<.04	.14	E.007	<.02
JUN													
09...	1615	41	649	10.5	139	8.4	770	29.0	21.0	<.04	.07	E.007	<.04
SEP													
13...	1230	41	650	9.9	125	8.2	796	22.5	18.5	<.04	E.06	<.008	<.02

Date	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)	Suspended sediment discharge, tons/d (80155)
OCT				
24...	38	40	6	.34
MAR				
10...	76	100	7	.30
JUN				
09...	E13	87	19	2.1
SEP				
13...	23	27	31	3.4

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 41°59'19", long 104°03'10", in SE¼ SE¼ SE¼ sec.3, T.23 N., R.60 W., Goshen County, Hydrologic Unit 10180009, on right bank 2000 ft upstream from bridge on NE State Highway 86, 250 ft upstream from Wyoming-Nebraska State line, and 0.7 mi southeast of Henry, NE.

DRAINAGE AREA.--22,218 mi^2, of which 1,929 mi^2 probably is non-contributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1929 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Sheet-piling control since March 9, 1994. Elevation of gage is 4,025 ft above NGVD of 1929, from topographic map. Prior to November 6, 1929, non-recording gage and November 6, 1929 to September 30, 1959, water-stage recorder at site 0.2 mi upstream at different datum. October 7, 1959 to February 22, 1972 water-stage recorder at site 0.2 mi upstream at different datum. February 22, 1972 to March 9, 1994, water-stage recorder at site 0.3 mi downstream at different datum. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Gering-Mitchell Canal diverts from right bank 0.5 mi upstream.

COOPERATION.--Seven discharge measurements provided by Wyoming State Engineer's Office.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	329	186	152	130	124	e100	104	0.00	0.00	5.5	1,260	345
2	309	191	151	131	123	110	105	0.00	0.00	5.4	1,310	314
3	289	195	150	133	123	111	108	0.00	0.00	130	1,380	263
4	274	194	150	e125	124	111	111	0.00	0.00	446	1,380	212
5	261	196	151	e100	127	112	112	0.00	0.00	728	1,330	272
6	254	189	151	e70	126	113	115	0.00	0.55	1,010	1,320	243
7	244	187	152	e100	122	111	115	0.00	13	1,150	1,340	174
8	234	187	154	e170	121	113	115	0.00	22	1,270	1,350	148
9	228	187	153	e150	120	118	117	0.00	18	1,360	1,360	131
10	224	188	154	142	119	118	118	0.00	47	1,310	1,300	108
11	219	187	149	136	119	115	118	0.00	48	1,350	1,220	98
12	212	180	148	133	115	115	118	0.00	32	1,350	1,170	88
13	210	178	e145	130	120	115	117	0.00	24	1,390	1,180	79
14	206	178	147	129	117	114	115	0.00	21	1,510	1,230	74
15	205	176	150	128	118	114	115	0.00	25	1,500	1,240	68
16	202	176	145	128	117	118	99	0.00	7.6	1,450	1,240	62
17	199	176	144	127	117	111	103	0.00	0.00	1,350	1,230	58
18	194	175	143	126	116	111	109	0.00	0.00	1,190	1,230	52
19	189	167	142	126	117	110	39	0.00	24	1,190	1,230	44
20	187	166	141	126	116	109	8.1	0.00	81	1,260	975	42
21	187	165	140	124	115	108	6.7	0.00	138	1,360	727	61
22	187	e165	140	122	115	108	6.3	0.00	150	1,550	592	63
23	187	e160	139	123	115	108	5.3	0.00	115	1,650	549	69
24	187	160	136	122	115	108	4.7	0.00	92	1,740	516	63
25	187	160	135	122	115	108	4.6	0.00	67	1,690	516	52
26	187	160	135	e110	115	107	3.9	0.00	54	1,560	495	47
27	187	156	136	e115	113	109	3.4	0.00	56	1,490	490	44
28	186	154	e135	123	111	109	1.8	0.00	25	1,380	456	69
29	185	156	e125	120	e105	108	1.1	0.00	7.6	1,360	430	91
30	185	154	130	122	---	106	0.00	0.00	6.4	1,330	393	181
31	186	---	131	122	---	105	---	0.00	---	1,290	368	---
TOTAL	6,720	5,249	4,454	3,865	3,420	3,433	2,098.90	0.00	1,074.15	37,354.9	30,807	3,615
MEAN	217	175	144	125	118	111	70.0	0.00	35.8	1,205	994	120
MAX	329	196	154	170	127	118	118	0.00	150	1,740	1,380	345
MIN	185	154	125	70	105	100	0.00	0.00	0.00	5.4	368	42
AC-FT	13,330	10,410	8,830	7,670	6,780	6,810	4,160	0.00	2,130	74,090	61,110	7,170

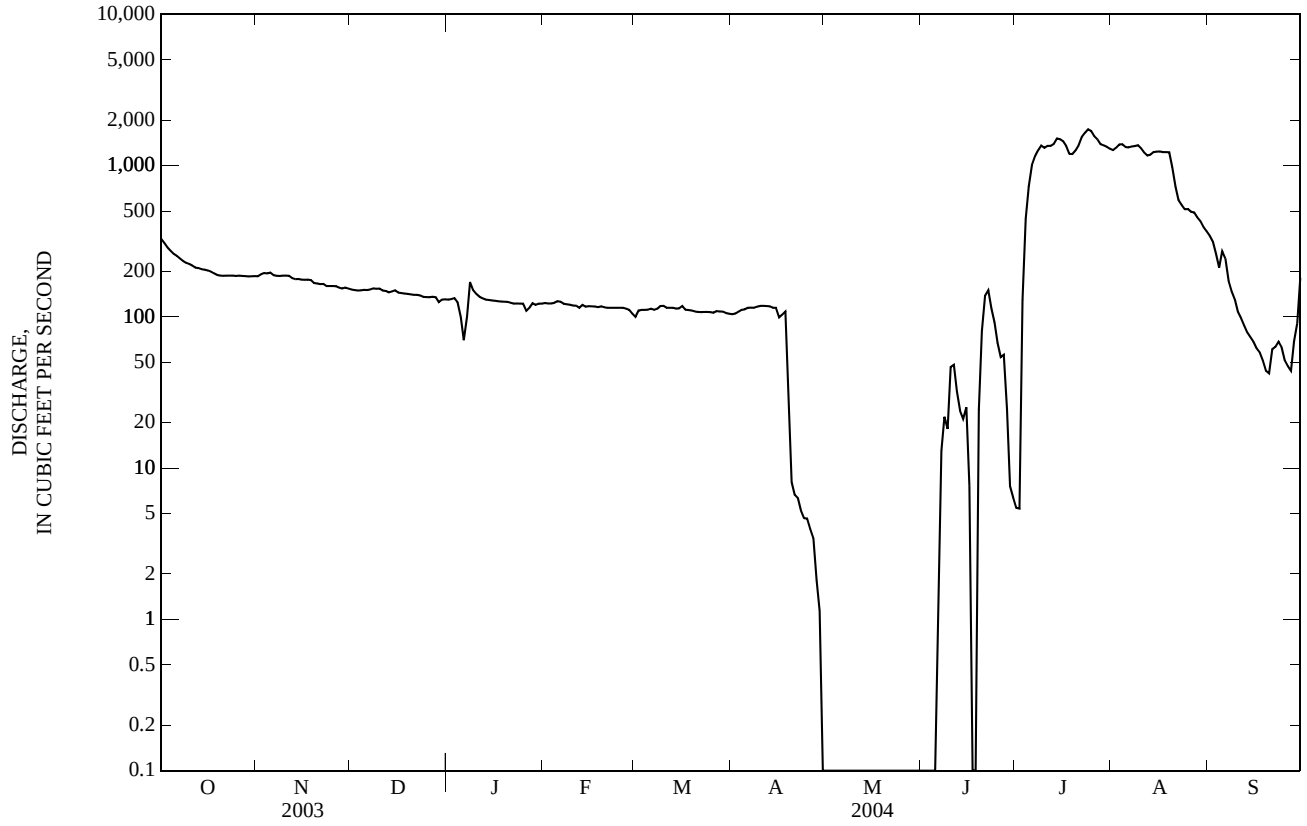
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2004, BY WATER YEAR (WY)

MEAN	494	412	364	322	326	490	639	1,146	1,630	1,541	1,253	837
MAX	1,666	1,454	895	751	1,063	4,202	4,407	7,226	10,360	7,170	5,751	4,766
(WY)	(1987)	(1987)	(1930)	(1930)	(1984)	(1974)	(1974)	(1971)	(1929)	(1983)	(1983)	(1983)
MIN	134	174	144	125	118	111	70.0	0.00	35.8	611	154	120
(WY)	(2003)	(1935)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(1934)	(1934)	(2004)

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1929 - 2004	
ANNUAL TOTAL	123,651.6		102,090.95		--	
ANNUAL MEAN	339		279		772	
HIGHEST ANNUAL MEAN	--		--		2,863	1984
LOWEST ANNUAL MEAN	--		--		279	2004
HIGHEST DAILY MEAN	2,130	Jul 19	1,740	Jul 24	17,600	Jun 2, 1929
LOWEST DAILY MEAN	3.8	Jun 4	0.00	Many days	0.00	Many days, some years
ANNUAL SEVEN-DAY MINIMUM	4.3	May 30	0.00	Apr 30	0.00	Some years
MAXIMUM PEAK FLOW	--		1,800	Jul 24	17,900[a]	Jun 2, 1929
MAXIMUM PEAK STAGE	--		3.47	Jul 24	7.04[b]	Jun 2, 1929
ANNUAL RUNOFF (AC-FT)	245,300		202,500		559,500	
10 PERCENT EXCEEDS	1,290		1,230		1,420	
50 PERCENT EXCEEDS	145		124		469	
90 PERCENT EXCEEDS	13		0.00		194	

a Maximum observed.
b Site and datum then in use.
e Estimated.



06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
OCT													
24...	0945	181	664	9.5	95	8.0	926	10.0	9.0	.06	2.30	.045	E.01
MAR													
10...	0845	117	655	8.4	83	8.2	983	3.0	8.0	.10	2.33	.046	E.01
JUN													
09...	1425	3.1	655	8.4	103	8.0	850	28.0	17.5	<.04	.63	.012	<.04
SEP													
13...	1015	84	642	8.7	108	8.1	902	24.0	17.0	E.03	2.01	.020	<.02

Date	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT		
24...	45	22
MAR		
10...	16	5.1
JUN		
09...	11	.09
SEP		
13...	8	1.8

< -- Less than
E -- Estimated value

06755960 CROW CREEK AT 19TH STREET, AT CHEYENNE, WY

LOCATION.--Lat 41°07'52", long 104°49'41", in NW¼ NW¼ NW¼ sec.6, T.13 N., R.66 W., Laramie County, Hydrologic Unit 10190009, on right bank at upstream side of 19th Street, at Cheyenne, and 0.5 mi upstream from Clear Creek.

DRAINAGE AREA.--257 mi^2.

PERIOD OF RECORD.--October 1993 to current year.

REVISED RECORDS.--WDR WY-96-1: 1994; WDR WY-99-1: 1997.

GAGE.--Water-stage recorder. Elevation of gage is 6,050 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except for discharges below 0.5 ft^3/sec and those for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 20, 1904, stage unknown, estimated 8,500 ft^3/s; flood of August 1, 1985, reached a stage of 9.6 ft, present datum, from floodmarks, discharge, 2,980 ft^3/s, on basis of indirect measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.72	1.3	1.7	1.8	e1.2	e1.6	1.1	1.4	0.48	4.2	0.43	0.48
2	0.70	1.4	1.5	1.7	e1.2	e1.7	1.1	1.3	0.48	1.3	0.43	0.45
3	0.71	1.4	1.4	1.8	e1.3	e1.8	1.2	1.2	0.47	0.87	0.41	0.50
4	0.71	1.2	e1.3	e1.7	e1.3	1.6	1.2	1.2	0.48	0.75	0.39	1.6
5	0.75	1.2	e1.3	e1.5	e1.3	1.6	1.2	1.2	0.47	0.82	0.35	3.5
6	0.71	1.2	1.4	e1.3	e1.4	e1.6	1.2	1.1	0.45	0.69	0.38	0.83
7	0.71	1.1	1.4	e1.4	e1.4	e1.5	1.2	1.0	0.43	0.66	0.38	0.68
8	0.71	1.1	e1.5	e1.5	e1.3	1.5	1.2	1.0	0.45	0.59	0.43	0.57
9	0.70	1.1	e1.4	e1.6	e1.3	1.7	3.7	0.97	0.45	0.53	0.52	0.56
10	0.72	1.0	e1.4	e1.6	e1.3	1.7	2.8	1.2	0.43	1.3	0.38	2.0
11	0.80	1.00	e1.4	e1.6	e1.2	1.5	2.0	1.4	0.41	0.72	0.36	0.84
12	0.75	1.1	e1.5	e1.5	e1.2	1.5	1.8	1.8	0.45	0.56	0.34	0.51
13	0.78	1.2	e1.6	e1.5	e1.3	1.6	1.5	2.8	0.44	0.47	0.34	2.7
14	0.79	1.3	e1.8	e1.6	e1.5	1.6	1.4	1.7	0.41	0.46	0.35	5.1
15	0.84	1.3	e1.8	e1.5	e1.7	1.5	1.4	1.2	0.41	0.44	0.38	1.3
16	0.84	1.3	e1.7	1.3	e1.8	1.5	1.3	1.1	0.63	0.43	0.35	0.97
17	0.80	1.4	e1.8	e1.3	1.9	1.5	1.2	1.0	2.3	0.41	0.37	0.79
18	0.79	1.4	e1.9	e1.2	1.9	1.5	1.1	1.0	9.6	0.39	0.39	0.68
19	0.79	1.3	e1.9	e1.2	2.1	1.4	1.1	0.99	2.7	1.5	1.1	0.68
20	0.80	1.4	1.8	e1.2	e1.9	1.4	1.1	0.85	5.7	0.68	0.45	0.74
21	0.81	1.4	1.4	e1.3	e1.8	1.3	2.4	0.79	2.6	0.40	0.40	6.8
22	0.83	e1.4	e1.4	e1.3	e1.7	1.3	2.0	0.77	1.5	0.39	0.66	2.4
23	0.83	e1.3	e1.5	e1.4	1.7	1.4	1.6	0.73	0.86	4.6	0.49	1.3
24	0.85	e1.4	e1.6	e1.3	1.7	1.6	1.4	0.61	0.72	3.6	0.44	0.98
25	0.85	e1.5	e1.6	e1.3	1.6	1.8	3.0	1.9	5.2	1.1	0.40	0.86
26	0.85	e1.6	1.4	e1.2	1.6	1.5	1.7	0.96	6.7	0.72	1.9	0.82
27	0.86	e1.6	e1.4	e1.2	1.6	1.4	1.4	0.68	3.3	0.65	2.4	0.79
28	0.90	e1.6	e1.4	e1.3	1.6	1.3	1.3	0.62	1.5	0.55	0.92	0.81
29	0.89	e1.7	1.6	e1.4	e1.6	1.2	1.2	0.59	1.2	0.53	0.59	0.81
30	0.98	1.8	1.7	e1.4	---	1.1	1.5	0.55	7.1	0.51	0.51	6.3
31	1.1	---	1.9	e1.3	---	1.1	---	0.51	---	0.47	0.48	---
TOTAL	24.87	40.00	48.4	44.2	44.4	46.3	47.3	34.12	58.32	31.29	17.72	47.35
MEAN	0.80	1.33	1.56	1.43	1.53	1.49	1.58	1.10	1.94	1.01	0.57	1.58
MAX	1.1	1.8	1.9	1.8	2.1	1.8	3.7	2.8	9.6	4.6	2.4	6.8
MIN	0.70	1.0	1.3	1.2	1.2	1.1	1.1	0.51	0.41	0.39	0.34	0.45
AC-FT	49	79	96	88	88	92	94	68	116	62	35	94

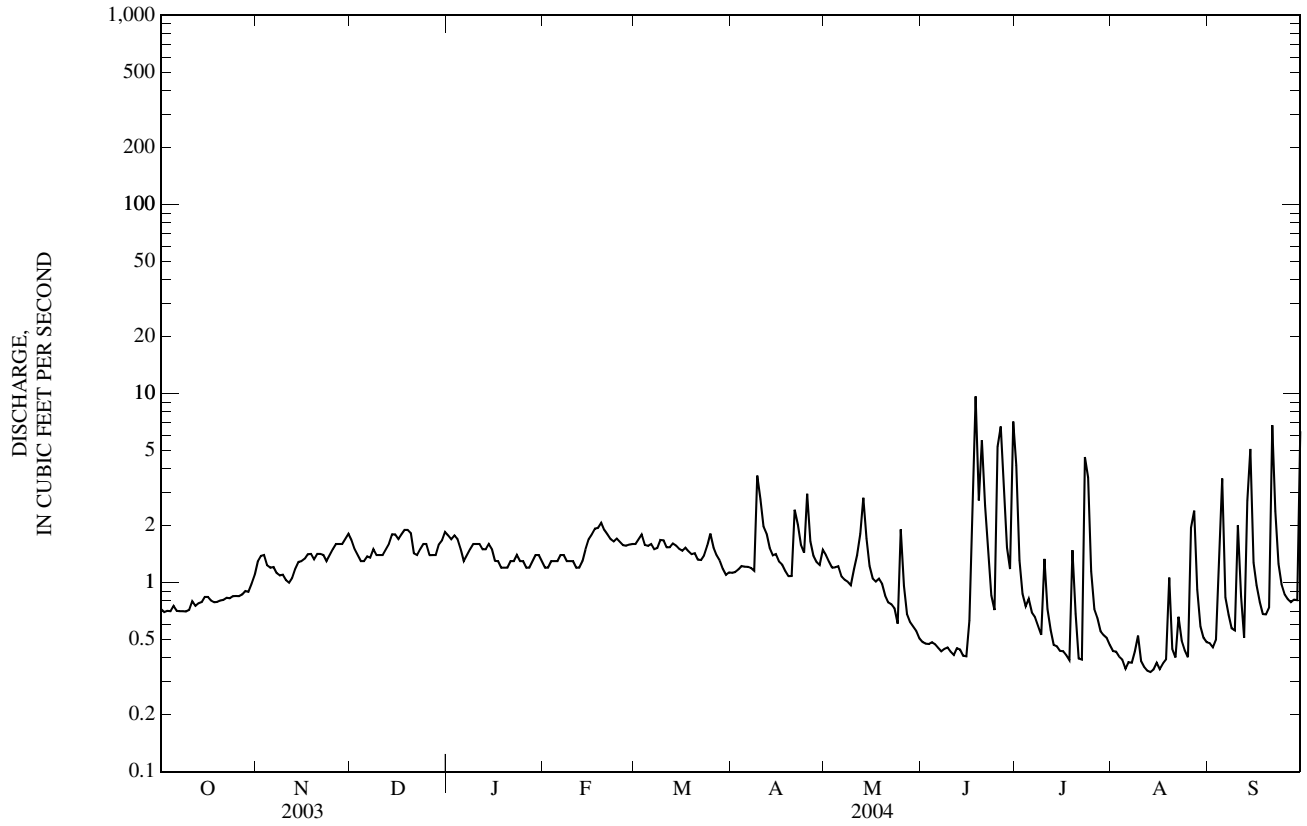
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)

MEAN	5.37	6.56	5.49	5.39	6.02	7.28	9.86	31.9	20.9	6.07	5.37	4.10
MAX	26.3	29.7	19.9	14.8	13.0	17.5	27.3	252	90.1	26.7	30.0	19.4
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1999)	(1999)	(1999)	(1995)	(1997)	(1997)
MIN	0.80	1.33	1.39	1.43	1.53	1.49	1.58	1.10	0.90	0.25	0.57	0.73
(WY)	(2004)	(2004)	(1995)	(2004)	(2004)	(2004)	(2004)	(2004)	(2000)	(2002)	(2004)	(2003)

06755960 CROW CREEK AT 19TH STREET, AT CHEYENNE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1994 - 2004	
ANNUAL TOTAL	720.75		484.27		--	
ANNUAL MEAN	1.97		1.32		9.55	
HIGHEST ANNUAL MEAN	--		--		37.4	1999
LOWEST ANNUAL MEAN	--		--		1.32	2004
HIGHEST DAILY MEAN	11	Mar 24	9.6	Jun 18	579	May 1, 1999
LOWEST DAILY MEAN	0.37	Aug 14,15	0.34	Aug 12,13	0.15	Aug 2, 2002
ANNUAL SEVEN-DAY MINIMUM	0.40	Aug 10	0.36	Aug 11	0.18	Jul 29, 2002
MAXIMUM PEAK FLOW	--		49	Jun 30	687	Apr 30, 1999
MAXIMUM PEAK STAGE	--		2.65	Jun 30	5.56	Apr 30, 1999
ANNUAL RUNOFF (AC-FT)	1,430		961		6,920	
10 PERCENT EXCEEDS	3.9		1.8		17	
50 PERCENT EXCEEDS	1.6		1.2		3.0	
90 PERCENT EXCEEDS	0.53		0.45		0.96	

e Estimated



06756060 CROW CREEK NEAR ARCHER, WY

LOCATION.--Lat 41°07'35", long 104°39'04", in NE¼ SW¼ NW¼ sec.3, T. 13 N., R.65 W., Laramie County, Hydrologic Unit 10190009, 0.4 mi upstream from highwater line of Wyoming Hereford Ranch Reservoir No. 2, and 2.3 mi southeast of Archer.

PERIOD OF RECORD.--November 1990 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
NOV 05...	1250	7.2	616	8.5	83	7.9	781	-2.0	5.0	8.02	4.56	.168	2.04
FEB 23...	1030	7.0	615	9.0	85	8.0	861	2.5	4.0	23.7	1.14	.112	2.90
MAY 05...	0900	8.6	616	5.8	65	8.1	886	22.0	11.0	12.3	.81	.128	2.99
AUG 11...	1230	4.3	624	6.7	87	8.2	839	17.5	18.0	10.4	4.62	.796	2.06

Date	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
NOV 05...	E8	E9
FEB 23...	29	57
MAY 05...	33	44
AUG 11...	460	520

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

06762500 LODGEPOLE CREEK AT BUSHNELL, NE

LOCATION.--Lat 41°13'50" long 103°53'28", in SE¼ NE¼ sec. 31, T.15 N., R.57 W., Kimball County, Hydrologic Unit 10190016, on left bank 0.1 mi south of Bushnell at north end of highway bridge on State Highway 53c.

DRAINAGE AREA.--1,350 mi^2.

PERIOD OF RECORD.--October 1931 to September 1991, October 2002 to current year. Records for March to September 1931 at site 1.5 mi upstream not equivalent owing to diversions. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1390: 1933, 1935, 1937-38, 1941, 1948-49, WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,843.31 ft above NGVD of 1929. Prior to March 16, 1938, nonrecording gage; March 26, 1938 to July 2, 1981, water stage recorder; July 3, 1981 to September 30, 1981, a nonrecording gage at previous site 1.7 mi downstream from present site at datum 31.01 ft lower. October 1, 1981 to September 30, 1991, recording gage at present site at datum 2.00 ft higher. Data collection platform with satellite telemetry at station.

REMARKS.--Records good except for October 5 to December 17, and estimated daily discharges, which are poor. Natural flow of stream affected by groundwater withdrawals and diversions for irrigation, and return flow from irrigated areas. Diversions for irrigation of about 12,600 acres upstream from station. Station operated and record provided by the Nebraska District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.12	0.30	0.49	0.58	0.80	0.52	0.41	0.30	0.00	0.00	0.00
2	0.00	0.13	0.30	0.46	0.63	0.80	0.48	0.40	0.29	0.00	0.00	0.00
3	0.00	0.17	0.30	0.45	0.66	0.70	0.50	0.38	0.28	0.00	0.00	0.00
4	0.00	0.16	0.31	0.40	0.59	0.70	0.51	0.34	0.25	0.00	0.00	0.00
5	0.00	0.16	0.30	0.40	0.58	0.70	0.47	0.31	0.22	0.00	0.00	0.00
6	0.00	0.16	0.41	0.36	0.58	0.77	0.44	0.28	0.16	0.00	0.00	0.00
7	0.00	0.17	0.36	0.34	0.58	0.80	0.40	0.26	0.11	0.00	0.00	0.00
8	0.00	0.17	0.35	0.36	0.56	0.85	0.40	0.23	0.08	0.00	0.00	0.00
9	0.00	0.18	0.37	0.36	0.60	0.85	0.46	0.23	0.11	0.00	0.00	0.00
10	0.00	0.18	0.33	0.38	0.60	0.79	0.45	0.23	0.12	0.00	0.00	0.00
11	0.00	0.18	0.30	0.46	0.56	0.74	0.45	0.22	0.04	0.00	0.00	0.00
12	0.00	0.17	0.32	0.53	0.50	0.73	0.48	0.24	0.00	0.00	0.00	0.00
13	0.00	0.20	0.36	0.52	0.54	0.70	0.45	0.35	0.00	0.00	0.00	0.00
14	0.00	0.20	0.36	0.50	0.60	0.68	0.43	0.32	0.00	0.00	0.00	0.00
15	0.00	0.20	0.36	0.51	0.62	0.67	0.39	0.32	0.00	0.00	0.00	0.00
16	0.00	0.21	0.38	0.50	0.64	0.66	0.35	0.32	0.00	0.00	0.00	0.00
17	0.00	0.22	0.40	0.51	0.61	0.65	0.35	0.30	0.00	0.00	0.00	0.00
18	0.00	0.22	0.41	0.51	0.61	0.64	0.36	0.30	0.04	0.00	0.00	0.00
19	0.00	0.23	0.46	0.51	0.61	0.65	0.37	0.30	0.05	0.00	0.00	0.00
20	0.00	0.23	0.49	0.52	0.60	0.62	0.38	0.28	0.07	0.00	0.00	0.00
21	0.00	0.24	0.44	0.54	0.61	0.64	0.39	0.51	0.12	0.00	0.00	0.00
22	0.00	0.26	0.42	0.54	0.61	0.65	0.50	0.33	0.07	0.00	0.00	0.00
23	0.00	0.24	0.42	0.55	0.62	0.63	0.44	0.33	0.05	0.00	0.00	0.00
24	0.00	0.22	0.46	0.56	0.61	0.61	0.42	0.30	0.05	0.00	0.00	0.00
25	0.00	0.24	0.47	0.58	0.61	0.57	0.40	0.33	0.05	0.00	0.00	0.00
26	0.00	0.26	0.45	0.72	0.62	0.57	0.39	0.33	0.03	0.00	0.00	0.00
27	0.08	0.26	0.43	0.68	0.61	0.58	0.38	0.29	0.00	0.00	0.00	0.00
28	0.09	0.28	0.58	0.71	0.62	0.57	0.38	0.29	0.00	0.00	0.00	0.00
29	0.09	0.30	0.50	0.58	0.74	0.55	0.38	0.32	0.00	0.00	0.00	0.00
30	0.08	0.32	0.55	0.58	---	0.55	0.41	0.31	0.00	0.00	0.00	0.00
31	0.08	---	0.63	0.58	---	0.55	---	0.29	---	0.00	0.00	---
TOTAL	0.42	6.28	12.52	15.69	17.50	20.97	12.73	9.65	2.49	0.00	0.00	0.00
MEAN	0.01	0.21	0.40	0.51	0.60	0.68	0.42	0.31	0.08	0.00	0.00	0.00
MAX	0.09	0.32	0.63	0.72	0.74	0.85	0.52	0.51	0.30	0.00	0.00	0.00
MIN	0.00	0.12	0.30	0.34	0.50	0.55	0.35	0.22	0.00	0.00	0.00	0.00
AC-FT	0.8	12	25	31	35	42	25	19	4.9	0.00	0.00	0.00

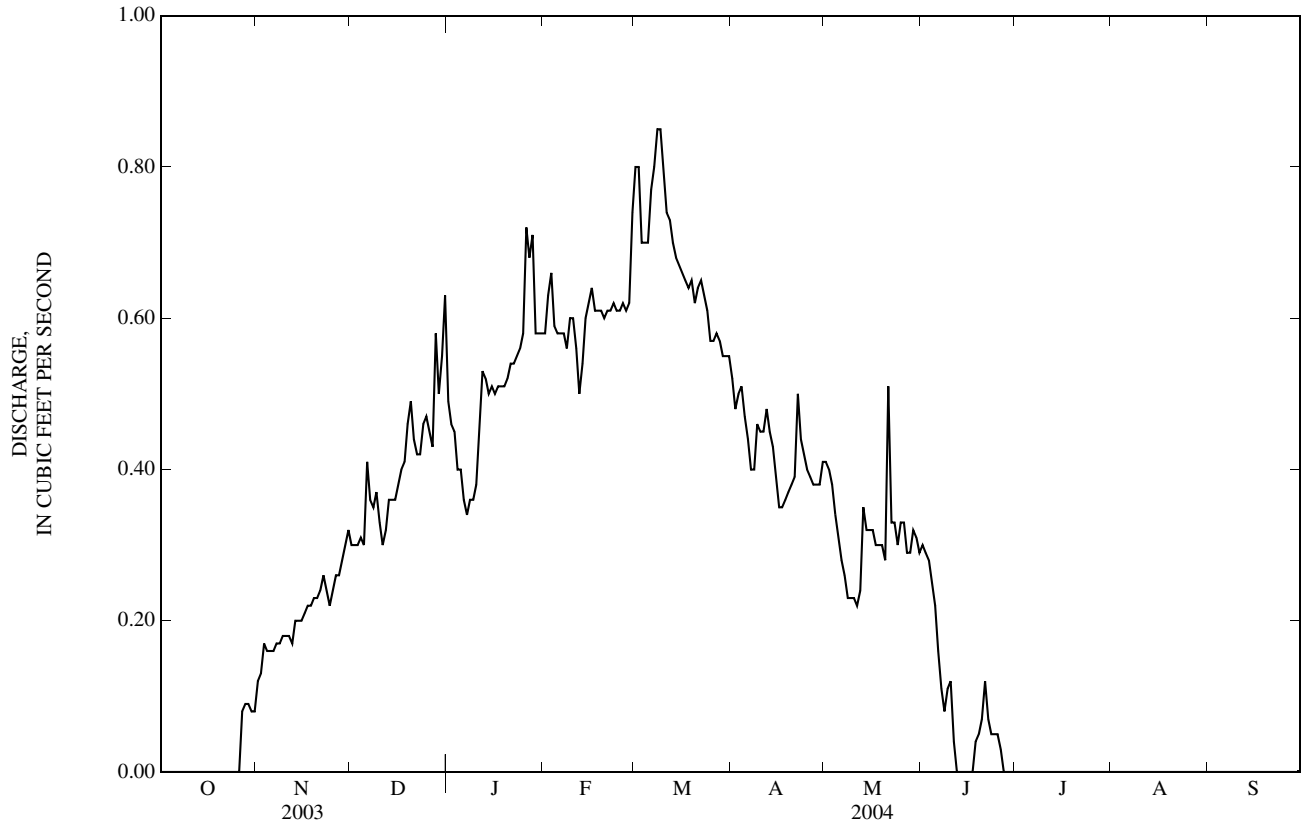
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2004, BY WATER YEAR (WY)

MEAN	7.95	8.65	8.33	8.26	9.91	11.3	11.2	11.2	12.2	9.56	7.29	9.13
MAX	15.1	18.5	15.5	16.2	17.0	21.2	21.5	40.4	69.9	56.2	18.5	58.8
((WY)	(1939)	(1936)	(1939)	(1936)	(1936)	(1949)	(1939)	(1983)	(1935)	(1981)	(1953)	(1951)
MIN	0.00	0.16	0.40	0.51	0.60	0.68	0.42	0.31	0.08	0.00	0.00	0.00
((WY)	(2003)	(2003)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)

06762500 LODGEPOLE CREEK AT BUSHNELL, NE—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1934 - 2004	
ANNUAL TOTAL	177.96		98.25		--	
ANNUAL MEAN	0.49		0.27		9.57	
HIGHEST ANNUAL MEAN	--		--		18.1	1935
LOWEST ANNUAL MEAN	--		--		0.27	2004
HIGHEST DAILY MEAN	8.8	Jul 29	0.85	Mar 8,9	1,170	Sep 15, 1950
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days, most years
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 14	0.00	Oct 11	0.00	Many days
MAXIMUM PEAK FLOW	--		0.93[a]	Mar 7	16,500[b]	Sep 15, 1950
MAXIMUM PEAK STAGE	--		5.48[c]	Nov 28	10.49[d]	Jun 7, 1991
ANNUAL RUNOFF (AC-FT)	353		195		6,930	
10 PERCENT EXCEEDS	1.1		0.61		15	
50 PERCENT EXCEEDS	0.43		0.27		8.5	
90 PERCENT EXCEEDS	0.00		0.00		3.1	

a Gage height, 2.76 ft.
b Gage height, 9.98 ft, datum then in use. From rating curve extended above 2,700 ft^3/s, on basis of slope-area measurement.
c Backwater from ice.
d Site and datum then in use.
e Estimated.



09188500 GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WY

LOCATION.--Lat 43°01'08", long 110°07'03", in SE¼ SE¼ NE¼ sec.8, T.35 N., R.111 W., Sublette County, Hydrologic Unit 14040101, on right bank 100 ft upstream from bridge on U.S. Highways 189 and 191, 3.4 mi upstream from Beaver Creek, and 12 mi north of Daniel.

DRAINAGE AREA.--468 mi^2.

PERIOD OF RECORD.--October 1931 to September 1992, October 1993 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 979: 1932(M).

GAGE.--Water-stage recorder. Elevation of gage is 7,468.09 ft above NGVD of 1929. Prior to October 6, 1977, on left bank at same datum. National Weather Service data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 10,200 acres, of which about 6,100 acres are downstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	e120	e125	e115	e84	e98	283	295	494	2,020	508	374
2	198	e125	e125	e110	e80	e96	302	312	439	2,080	498	354
3	197	e130	e120	e100	e86	e98	299	363	433	1,820	480	365
4	192	e110	e120	e95	e88	e100	256	443	500	1,530	466	409
5	188	e105	e115	e95	e92	e105	279	502	723	1,400	473	421
6	182	e100	e125	e92	e90	e110	341	605	1,070	1,380	490	420
7	180	e105	e120	e92	e90	e105	398	686	1,520	1,350	471	414
8	177	e110	e115	e95	e95	e105	420	722	1,770	1,330	447	377
9	174	e115	e105	e100	e90	e110	405	746	1,900	1,320	440	340
10	171	e115	e100	e105	e90	e115	321	736	2,020	1,300	411	308
11	169	e120	e105	e105	e86	e111	283	709	2,090	1,180	375	284
12	164	e120	e110	e100	e82	e110	269	646	1,670	1,130	352	263
13	161	e115	e115	e100	e96	e115	289	570	1,190	1,100	333	257
14	158	e120	e120	e98	e84	e120	304	508	909	1,090	322	269
15	156	e125	e115	e94	e90	e130	299	447	797	1,060	318	274
16	155	e135	e105	e94	e92	e150	281	395	821	1,080	306	268
17	155	e155	e105	e95	e95	e165	260	368	879	1,150	301	255
18	154	e130	e110	e95	e100	e150	254	343	936	1,100	306	239
19	154	e119	e110	e92	e105	e200	260	370	1,140	1,160	321	229
20	152	e120	e115	e90	e95	e220	250	413	1,350	1,050	360	241
21	149	e115	e115	e88	e92	e290	241	458	1,350	1,100	373	256
22	147	e115	e110	e90	e94	e340	227	498	1,250	1,090	373	253
23	146	e100	e105	e90	e94	365	217	493	1,120	991	406	246
24	144	e110	e110	e90	e96	414	215	470	1,140	984	483	250
25	141	e115	e115	e92	e100	436	220	420	1,280	935	605	250
26	134	e120	e115	e84	e105	431	221	375	1,440	818	649	243
27	137	e120	e110	e88	e100	389	239	362	1,580	767	623	240
28	140	e115	e105	e92	e105	309	284	450	1,710	666	586	232
29	142	e125	e110	e96	e100	319	329	823	1,820	566	524	226
30	154	e130	e110	e98	---	301	307	718	1,890	543	462	240
31	105	---	e115	e90	---	294	---	581	---	530	411	---
TOTAL	4,976	3,559	3,500	2,960	2,696	6,401	8,553	15,827	37,231	35,620	13,473	8,797
MEAN	161	119	113	95.5	93.0	206	285	511	1,241	1,149	435	293
MAX	200	155	125	115	105	436	420	823	2,090	2,080	649	421
MIN	105	100	100	84	80	96	215	295	433	530	301	226
AC-FT	9,870	7,060	6,940	5,870	5,350	12,700	16,960	31,390	73,850	70,650	26,720	17,450

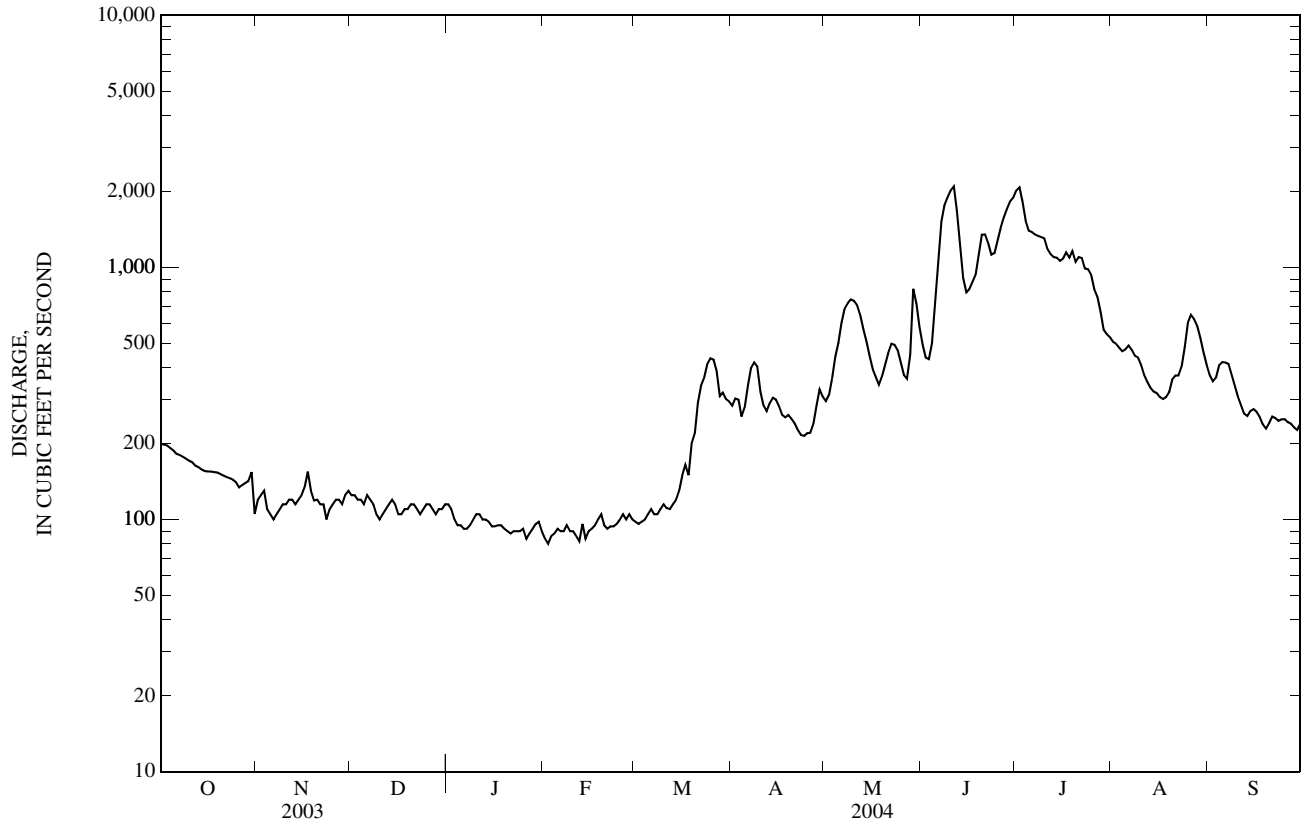
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2004, BY WATER YEAR (WY)

MEAN	198	144	124	109	110	125	289	1,012	1,774	1,242	532	302
MAX	433	223	215	176	166	240	600	1,811	3,813	2,424	997	592
(WY)	(1984)	(1983)	(1997)	(1967)	(1967)	(1932)	(1943)	(1956)	(1986)	(1975)	(1982)	(1963)
MIN	102	67.7	70.0	50.0	60.0	70.0	129	269	610	399	213	150
(WY)	(1989)	(1994)	(1933)	(1933)	(1933)	(1933)	(1970)	(1977)	(1934)	(1988)	(1988)	(1988)

09188500 GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1932 - 2004	
ANNUAL TOTAL	154,950		143,593		--	
ANNUAL MEAN	425		392		498	
HIGHEST ANNUAL MEAN	--		--		768	1986
LOWEST ANNUAL MEAN	--		--		280	2001
HIGHEST DAILY MEAN	2,960	Jun 2	2,090	Jun 11	5,620	Jun 11, 1997
LOWEST DAILY MEAN	78	Feb 25	80	Feb 2	36	Nov 26, 1933
ANNUAL SEVEN-DAY MINIMUM	87	Feb 20	87	Jan 31	43	Nov 24, 1933
MAXIMUM PEAK FLOW	--		2,170	Jun 11	5,930	Jun 11, 1997
MAXIMUM PEAK STAGE	--		4.00	Jun 11	6.04	Jun 11, 1997
ANNUAL RUNOFF (AC-FT)	307,300		284,800		360,900	
10 PERCENT EXCEEDS	1,090		1,090		1,410	
50 PERCENT EXCEEDS	191		240		200	
90 PERCENT EXCEEDS	96		95		100	

e Estimated.



09196500 PINE CREEK ABOVE FREMONT LAKE, WY

LOCATION.--Lat 43°01'50", long 109°46'10", in SW¼ S½ sec.5, T.35 N., R.108 W., Sublette County, Hydrologic Unit 14040102, Bridger National Forest, on right bank 0.5 mi upstream from Fremont Lake, 0.5 mi downstream from Fremont Creek, and 12 mi northeast of Pinedale.

DRAINAGE AREA.--75.8 mi^2.

PERIOD OF RECORD.--October 1954 to September 1997, October 2000 to current year.

REVISED RECORDS.--WSP 1443: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,450 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily dicharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	10	21	20	e8.5	10	43	85	218	973	186	154
2	e34	10	21	21	e9.4	e9.6	49	106	220	827	173	140
3	e31	10	22	e25	10	10	55	148	253	707	165	149
4	e27	11	23	27	9.4	e9.2	61	199	367	682	160	154
5	e24	e8.8	24	28	8.7	e9.0	71	260	549	669	155	155
6	e23	e8.8	24	e29	8.5	9.2	78	296	871	649	150	154
7	e24	e9.4	23	30	8.6	e9.0	81	336	1,140	611	142	145
8	e24	e10	22	29	9.2	10	80	357	1,230	637	134	135
9	23	11	22	26	9.0	10	78	398	1,410	632	128	126
10	21	12	e21	24	e8.6	11	72	390	1,300	553	121	114
11	20	12	20	23	e8.4	e10	68	388	904	517	114	107
12	19	13	e18	23	e9.0	11	64	329	628	504	107	103
13	18	15	22	21	10	11	65	273	493	491	102	101
14	18	17	21	19	11	11	70	239	431	469	98	99
15	17	18	21	e18	10	11	70	215	481	439	94	98
16	16	19	e19	18	9.3	12	68	206	549	429	91	94
17	16	21	e18	17	8.8	13	66	191	578	400	89	91
18	15	23	e19	e16	8.4	18	65	182	595	377	87	88
19	14	23	18	e16	8.0	21	62	183	667	358	88	85
20	14	23	19	e15	7.9	20	61	204	748	354	83	88
21	13	e20	20	e15	e7.6	21	59	240	655	346	81	88
22	12	e18	e20	e16	7.9	24	56	240	594	311	82	86
23	12	e22	e19	e16	8.0	29	53	239	641	294	122	84
24	11	e21	e19	14	7.5	34	53	231	767	278	129	85
25	11	e20	20	12	7.3	39	51	218	828	251	152	85
26	11	e19	19	11	7.9	40	54	208	925	226	225	85
27	10	e20	19	11	9.6	38	65	200	1,010	212	229	84
28	9.7	e21	e17	9.9	9.7	37	80	241	e1,060	217	219	82
29	10	22	19	9.5	9.9	35	79	259	e1,130	216	205	79
30	11	21	e19	9.4	---	35	78	239	e1,110	208	191	81
31	11	---	20	9.7	---	37	---	224	---	197	171	---
TOTAL	555.7	489.0	629	578.5	256.1	604.0	1,955	7,524	22,352	14,034	4,273	3,219
MEAN	17.9	16.3	20.3	18.7	8.83	19.5	65.2	243	745	453	138	107
MAX	36	23	24	30	11	40	81	398	1,410	973	229	155
MIN	9.7	8.8	17	9.4	7.3	9.0	43	85	218	197	81	79
AC-FT	1,100	970	1,250	1,150	508	1,200	3,880	14,920	44,340	27,840	8,480	6,380

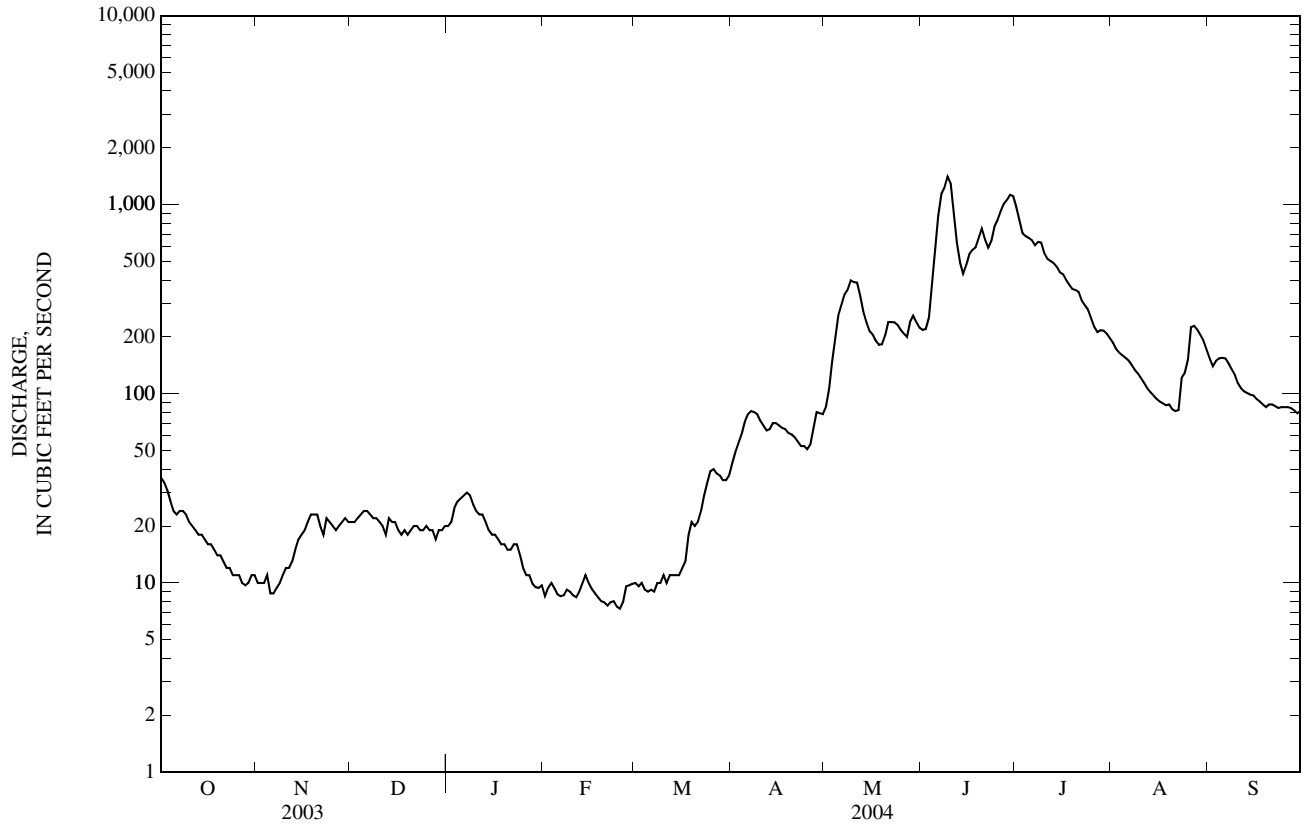
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2004, BY WATER YEAR (WY)

MEAN	53.2	32.1	23.9	19.3	16.6	17.0	38.8	295	837	507	156	88.0
MAX	165	71.8	53.0	37.6	36.7	35.0	98.4	586	1,476	1,142	350	209
(WY)	(1984)	(1984)	(1978)	(1969)	(1969)	(1986)	(1962)	(2001)	(1986)	(1965)	(1968)	(1963)
MIN	9.60	10.9	6.73	4.39	4.66	4.03	12.0	90.3	384	117	44.0	23.0
(WY)	(1989)	(1989)	(1977)	(1977)	(1977)	(1977)	(1970)	(1975)	(1992)	(1988)	(1988)	(1988)

09196500 PINE CREEK ABOVE FREMONT LAKE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1955 - 2004	
ANNUAL TOTAL	54,222.7		56,469.3		--	
ANNUAL MEAN	149		154		174	
HIGHEST ANNUAL MEAN	--		--		253	1986
LOWEST ANNUAL MEAN	--		--		96.7	1977
HIGHEST DAILY MEAN	1,570	May 30,Jun 1	1,410	Jun 9	2,290	Jun 10, 1997
LOWEST DAILY MEAN	8.8	Nov 5,6	7.3	Feb 25	3.3	Apr 4, 1977
ANNUAL SEVEN-DAY MINIMUM	9.7	Nov 1	7.7	Feb 20	3.4	Mar 31, 1977
MAXIMUM PEAK FLOW	--		1,490	Jun 9	2,550[a]	Jun 16, 1959
MAXIMUM PEAK STAGE	--		5.65	Jun 9	7.65	Jun 6, 1986
ANNUAL RUNOFF (AC-FT)	107,600		112,000		126,000	
10 PERCENT EXCEEDS	466		492		560	
50 PERCENT EXCEEDS	35		42		41	
90 PERCENT EXCEEDS	18		9.8		13	

a Gage height, 7.15 ft.
e Estimated.



09197000 PINE CREEK BELOW FREMONT LAKE, WY

LOCATION.--Lat 42°53'42", long 109°50'35", in NE¼ NE¼ NE¼ sec.27, T.34 N., R.109 W., Sublette County, Hydrologic Unit 14040102, on left bank at Lot Number 93, 0.9 mi downstream from Fremont Lake, and 2.1 mi northeast of Pinedale.

DRAINAGE AREA.--114 mi^2.

PERIOD OF RECORD.--October 1910 to September 1912, October 1915 to September 1918, April 1985 to September 1986, April 1988 to current year, (no winter records 1918-2003). Published as "near Pinedale" prior to October 1912 and as "at Fremont Lake Outlet" October 1915 to September 1918. Records since April 1985 equivalent to earlier records if diversions to Highland Ditch (station 09196960) are added to flow past station.

GAGE.--Water-stage recorder. Elevation of gage is 7,390 ft above NGVD of 1929, from topographic map. Prior to September 30, 1918, nonrecording gage at site 0.2 mi upstream at different datum.

REMARKS.--Records fair October 1 to March 31, and good April 1 to September 30, except those for estimated daily discharges, which are poor. Some regulation by Fremont Lake. Fremont Ditch and Highland Ditch divert water upstream from station for irrigation downstream from station.

COOPERATION.--Station operated and record provided by Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e30	18	17	16	10	12	13	31	169	888	62	47
2	e25	18	17	16	10	11	12	32	157	858	63	47
3	22	18	17	16	10	11	12	32	146	817	81	48
4	18	18	17	16	10	11	12	33	146	752	92	47
5	18	18	17	18	10	11	12	56	148	722	95	48
6	18	18	17	e19	11	12	12	66	153	682	92	47
7	19	17	17	e19	10	12	12	77	160	646	91	47
8	19	18	17	e17	11	12	12	99	182	617	91	46
9	19	18	17	15	11	12	12	110	204	599	92	46
10	19	18	17	15	10	11	12	111	217	578	90	47
11	19	18	17	15	10	12	12	112	226	542	89	47
12	19	18	17	15	11	12	12	113	232	517	90	47
13	19	18	17	15	11	12	13	114	232	493	90	47
14	19	18	17	15	11	12	13	130	238	467	90	47
15	19	18	17	15	11	12	13	141	238	449	91	47
16	19	18	16	15	11	12	13	141	242	428	91	48
17	19	18	16	15	11	12	13	150	243	407	90	49
18	18	18	16	15	11	12	13	158	250	390	91	49
19	19	18	16	15	11	12	13	156	272	320	91	49
20	18	18	16	15	11	12	13	155	293	274	90	49
21	18	18	16	14	11	13	13	155	314	265	90	39
22	18	18	16	e15	11	13	13	155	325	260	90	32
23	19	18	16	e15	11	12	13	155	334	259	89	32
24	18	18	16	e13	11	12	19	152	357	249	73	32
25	18	18	16	e12	11	12	32	151	399	207	60	32
26	18	18	16	e12	11	12	32	154	442	170	60	32
27	18	17	16	e11	12	12	32	172	502	142	50	33
28	18	17	e16	e11	12	12	32	179	604	95	36	33
29	18	17	e16	10	12	12	32	176	694	69	36	32
30	18	17	16	10	---	12	32	175	827	60	36	33
31	18	---	16	10	---	12	---	173	---	61	43	---
TOTAL	594	535	511	450	314	369	499	3,814	8,946	13,283	2,415	1,279
MEAN	19.2	17.8	16.5	14.5	10.8	11.9	16.6	123	298	428	77.9	42.6
MAX	30	18	17	19	12	13	32	179	827	888	95	49
MIN	18	17	16	10	10	11	12	31	146	60	36	32
AC-FT	1,180	1,060	1,010	893	623	732	990	7,570	17,740	26,350	4,790	2,540

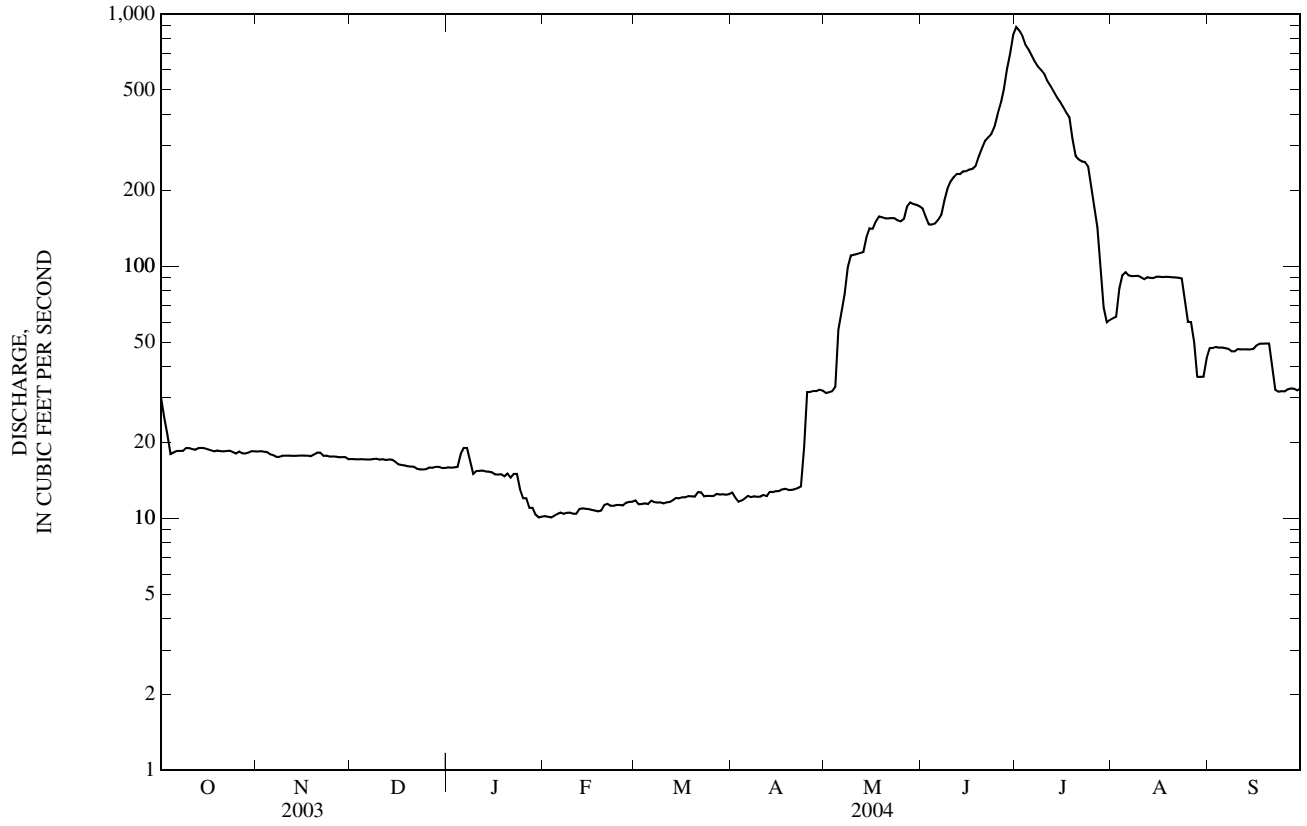
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2004, BY WATER YEAR (WY)

MEAN	55.8	33.6	25.7	21.8	22.0	23.8	30.5	148	590	455	140	62.3
MAX	86.2	40.0	34.2	26.3	33.0	36.0	93.0	299	1,273	1,258	300	131
(WY)	(1916)	(1911)	(1918)	(1918)	(1916)	(1916)	(1986)	(1997)	(1918)	(1917)	(1917)	(1917)
MIN	19.2	17.8	16.5	14.5	10.8	11.9	14.9	36.5	215	95.0	43.9	22.8
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(1988)	(2002)	(1992)	(1992)	(1988)	(1988)

09197000 PINE CREEK BELOW FREMONT LAKE, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR		WATER YEARS 1911 - 2004*	
ANNUAL TOTAL	33,009		--	
ANNUAL MEAN	90.2		176	
HIGHEST ANNUAL MEAN	--		211	1917
LOWEST ANNUAL MEAN	--		90.2	2004
HIGHEST DAILY MEAN	888	Jul 1	2,330	Jun 17, 1918
LOWEST DAILY MEAN	10	Many days	9.6	Apr 23, 1990
ANNUAL SEVEN-DAY MINIMUM	10	Jan 29	10	Jan 29, 2004
MAXIMUM PEAK FLOW	931	Jun 30	2,330[a]	Jun 17, 1918
MAXIMUM PEAK STAGE	3.43	Jun 30	3.43	Jun 30, 2004
ANNUAL RUNOFF (AC-FT)	65,470		127,400	
10 PERCENT EXCEEDS	249		665	
50 PERCENT EXCEEDS	18		40	
90 PERCENT EXCEEDS	12		18	

* For period of operation.
a At different site and datum.
e Estimated.



09205000 NEW FORK RIVER NEAR BIG PINEY, WY

LOCATION.--Lat 42°34'02", long 109°55'46", in SE¼ NE¼ NE¼ sec.22, T.30 N., R.110 W., Sublette County, Hydrologic Unit 14040102, on right bank 350 ft downstream from old highway bridge, 3.4 mi upstream from mouth, and 9.5 mi northeast of Big Piney.

DRAINAGE AREA.--1,230 mi^2.

PERIOD OF RECORD.--September 1954 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,800 ft above NGVD of 1929, from topographic map. National Weather Service data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power development, and diversions for irrigation of about 62,100 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	262	e240	e165	e155	e180	454	289	760	3,870	612	387
2	235	255	e230	e160	e150	e175	468	265	728	3,790	596	384
3	248	251	e220	e155	e155	e180	445	282	707	3,580	610	425
4	237	252	e210	e150	e160	e185	408	369	772	3,200	610	444
5	232	231	e200	e145	e165	e190	375	505	967	2,900	586	429
6	231	e230	e210	e140	e165	e200	357	712	1,160	2,450	555	423
7	235	e230	e200	e145	e165	e195	351	1,000	1,480	2,180	528	414
8	231	e230	e195	e150	e170	e190	362	1,180	2,060	2,080	499	391
9	231	e240	e185	e160	e170	e195	405	1,230	2,470	1,980	481	381
10	232	e250	e175	e165	e165	e200	406	1,200	3,020	1,900	453	375
11	236	e260	e180	e165	e160	e197	398	1,100	3,540	1,840	426	372
12	237	e260	e190	e160	e155	e195	380	1,060	3,180	1,670	415	371
13	234	e250	e195	e160	e160	e200	356	925	2,610	1,550	403	427
14	240	e260	e195	e160	e155	e210	340	821	2,180	1,410	405	417
15	260	e270	e180	e155	e160	e220	329	733	1,880	1,370	410	415
16	265	e280	e170	e155	e165	e240	322	662	1,730	1,370	408	425
17	270	e310	e160	e155	e170	e290	322	620	1,700	1,290	383	417
18	269	e280	e165	e150	e175	e300	321	567	1,840	1,220	394	418
19	249	e270	e165	e150	e180	e320	313	543	2,110	1,210	434	409
20	247	e270	e170	e145	e175	e330	300	547	2,620	1,090	432	410
21	246	e260	e170	e145	e165	e370	292	662	2,740	992	424	433
22	246	e250	e165	e150	e165	e410	281	773	2,680	918	417	429
23	250	e230	e160	e150	e165	e460	270	804	2,280	942	436	423
24	248	e240	e165	e150	e170	e490	255	705	2,080	990	450	420
25	241	e240	e170	e150	e175	e520	235	644	1,970	955	447	417
26	243	e240	e170	e145	e185	e470	231	605	1,970	920	448	397
27	250	e230	e165	e150	e185	419	231	584	2,050	894	453	394
28	249	e220	e165	e157	e185	386	234	610	3,180	877	445	392
29	246	e230	e160	e165	e180	367	260	896	3,490	792	416	404
30	263	e240	e165	e165	---	371	281	946	3,710	734	406	444
31	270	---	e165	e160	---	421	---	843	---	658	395	---
TOTAL	7,604	7,521	5,655	4,777	4,850	9,076	9,982	22,682	63,664	51,622	14,377	12,287
MEAN	245	251	182	154	167	293	333	732	2,122	1,665	464	410
MAX	270	310	240	165	185	520	468	1,230	3,710	3,870	612	444
MIN	231	220	160	140	150	175	231	265	707	658	383	371
AC-FT	15,080	14,920	11,220	9,480	9,620	18,000	19,800	44,990	126,300	102,400	28,520	24,370

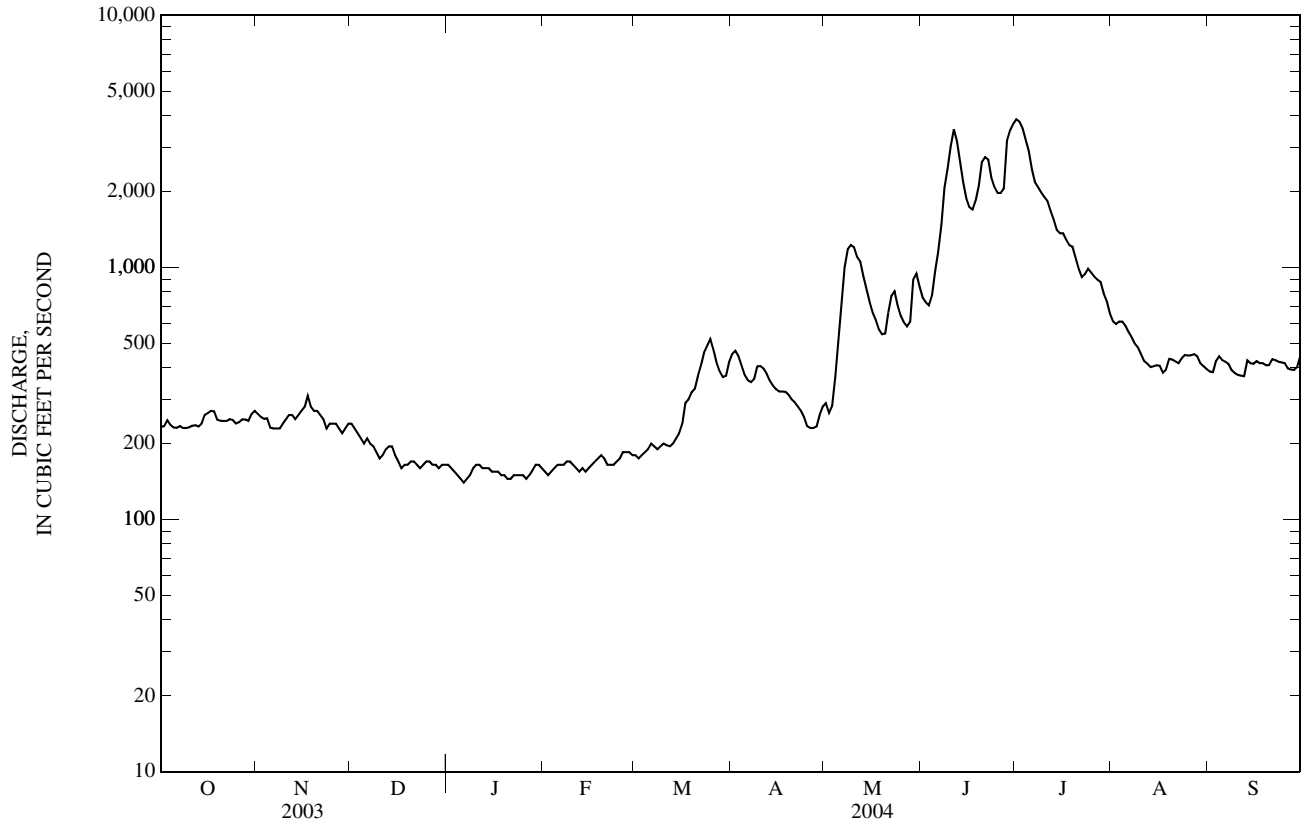
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)

MEAN	370	318	237	198	209	271	426	1,122	2,936	1,601	574	371
MAX	989	608	397	277	337	597	1,114	2,539	7,065	4,155	1,279	766
(WY)	(1983)	(1984)	(1983)	(1969)	(1969)	(1972)	(1969)	(1969)	(1986)	(1982)	(1982)	(1983)
MIN	171	188	139	108	122	161	181	254	699	405	225	164
(WY)	(1989)	(1989)	(1989)	(2002)	(2002)	(1977)	(1981)	(1977)	(1992)	(1961)	(1988)	(1988)

09205000 NEW FORK RIVER NEAR BIG PINEY, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004	
ANNUAL TOTAL	178,560		214,097		--	
ANNUAL MEAN	489		585		720	
HIGHEST ANNUAL MEAN	--		--		1,288	1986
LOWEST ANNUAL MEAN	--		--		313	1977
HIGHEST DAILY MEAN	3,560	Jun 2	3,870	Jul 1	9,110	Jun 7, 1986
LOWEST DAILY MEAN	135	Feb 7	140	Jan 6	90	Jan 13, 1963
ANNUAL SEVEN-DAY MINIMUM	145	Feb 2	148	Jan 20	102	Jan 2, 2002
MAXIMUM PEAK FLOW	--		3,900	Jul 1	9,190	Jun 7, 1986
MAXIMUM PEAK STAGE	--		5.25	Jul 1	8.28	Jun 7, 1986
ANNUAL RUNOFF (AC-FT)	354,200		424,700		521,700	
10 PERCENT EXCEEDS	1,030		1,500		1,790	
50 PERCENT EXCEEDS	295		305		329	
90 PERCENT EXCEEDS	170		160		185	

e Estimated



09208400 LA BARGE CREEK ABOVE VIOLA, WY

LOCATION.--Lat 42°17'38", long 110°26'24", in NE¼ NW¼ NW¼ sec.36, T.27 N., R.115 W., Sublette County, Hydrologic Unit 14040101, on left bank 1.1 mi upstream from Rock Creek, 3.7 mi northwest of Viola, and 12.2 mi west of La Barge.

DRAINAGE AREA.--122 mi^2.

PERIOD OF RECORD.--October 1982 to September 1984, April 2003 to current year (seasonal).

GAGE.--Water-stage recorder. Elevation of gage is 7,270 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversion above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge 1,080 ft^3/s, May 17, 1997, gage height 4.35 ft.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	70	126	99	42	38
2	---	---	---	---	---	---	---	80	125	92	43	38
3	---	---	---	---	---	---	---	103	130	88	40	50
4	---	---	---	---	---	---	---	115	143	86	40	44
5	---	---	---	---	---	---	---	140	156	83	41	41
6	---	---	---	---	---	---	---	152	164	78	41	40
7	---	---	---	---	---	---	---	155	169	76	39	38
8	---	---	---	---	---	---	---	154	166	80	39	37
9	---	---	---	---	---	---	---	154	159	73	39	36
10	---	---	---	---	---	---	---	148	159	69	38	36
11	---	---	---	---	---	---	---	147	159	66	39	35
12	---	---	---	---	---	---	e60	124	148	64	41	36
13	---	---	---	---	---	---	e58	116	138	61	38	43
14	---	---	---	---	---	---	e60	105	130	61	39	40
15	---	---	---	---	---	---	e60	101	125	60	38	39
16	---	---	---	---	---	---	61	101	119	59	38	37
17	---	---	---	---	---	---	58	98	118	56	39	36
18	---	---	---	---	---	---	58	103	122	54	47	34
19	---	---	---	---	---	---	56	106	126	55	44	35
20	---	---	---	---	---	---	56	111	128	51	40	38
21	---	---	---	---	---	---	54	114	124	51	41	38
22	---	---	---	---	---	---	54	116	114	50	40	36
23	---	---	---	---	---	---	52	120	110	50	49	35
24	---	---	---	---	---	---	55	111	106	47	43	34
25	---	---	---	---	---	---	56	102	107	48	44	33
26	---	---	---	---	---	---	61	98	105	47	44	33
27	---	---	---	---	---	---	73	111	103	47	43	33
28	---	---	---	---	---	---	87	152	107	46	40	32
29	---	---	---	---	---	---	79	189	109	44	39	32
30	---	---	---	---	---	---	69	145	112	44	38	34
31	---	---	---	---	---	---	---	132	---	43	39	---
TOTAL	---	---	---	---	---	---	---	3,773	3,907	1,928	1,265	1,111
MEAN	---	---	---	---	---	---	---	122	130	62.2	40.8	37.0
MAX	---	---	---	---	---	---	---	189	169	99	49	50
MIN	---	---	---	---	---	---	---	70	103	43	38	32
AC-FT	---	---	---	---	---	---	---	7,480	7,750	3,820	2,510	2,200

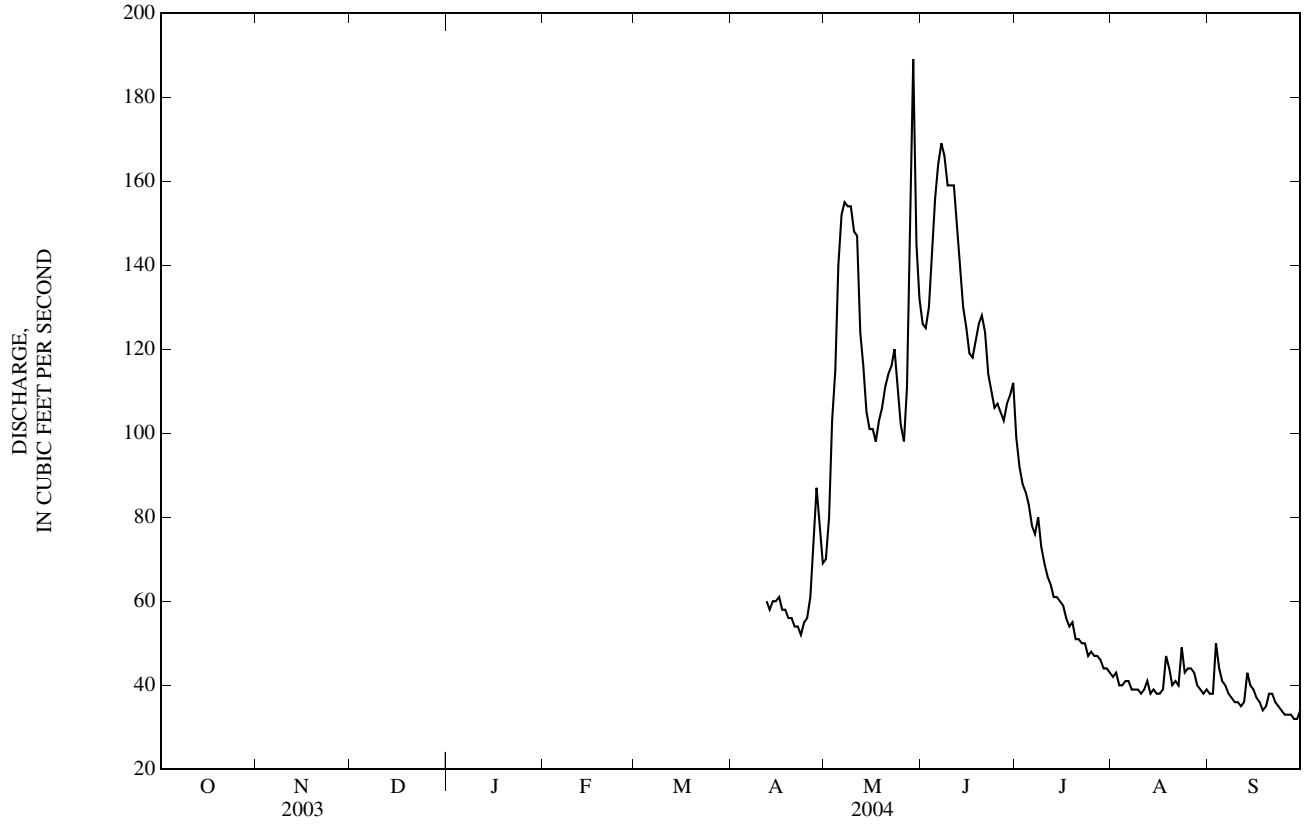
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)*

MEAN	69.6	53.5	42.5	42.4	38.0	42.0	61.4	243	301	126	67.7	55.7
MAX	69.9	60.3	44.8	43.9	41.8	44.8	68.4	426	540	226	104	79.6
(WY)	(1984)	(1984)	(1984)	(1983)	(1983)	(1983)	(1984)	(1984)	(1983)	(1983)	(1983)	(1983)
MIN	69.2	46.8	40.2	41.0	34.3	39.3	54.5	122	130	52.5	36.4	32.6
(WY)	(1983)	(1983)	(1983)	(1984)	(1984)	(1984)	(1983)	(2004)	(2004)	(2003)	(2003)	(2003)

09208400 LA BARGE CREEK ABOVE VIOLA, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1983 - 2004*	
ANNUAL MEAN	--		128	
HIGHEST ANNUAL MEAN	--		129	1983
LOWEST ANNUAL MEAN	--		126	1984
HIGHEST DAILY MEAN	189	May 29	840	May 29, 1984
LOWEST DAILY MEAN	32	Sep 28,29	21	Dec 23, 1983
MAXIMUM PEAK FLOW	241	May 29	1,080	May 17, 1997
MAXIMUM PEAK STAGE	2.06	May 29	4.35	May 17, 1997
ANNUAL RUNOFF (AC-FT)	--		92,520	
10 PERCENT EXCEEDS	--		376	
50 PERCENT EXCEEDS	--		66	
90 PERCENT EXCEEDS	--		38	

* For period of operation.
e Estimated.



09209400 GREEN RIVER NEAR LA BARGE, WY

LOCATION.--Lat 42°11'34", long 110°09'45", in SE¼ SE¼ NW¼ sec.33, T.26 N., R.112 W., Lincoln County, Hydrologic Unit 14040101, on right bank 1.7 mi upstream from high-water line of Fontenelle Reservoir at elevation 6,513 ft, 4.0 mi upstream from Muddy Creek, and 5.0 mi south of La Barge.

DRAINAGE AREA.--3,910 mi^2.

PERIOD OF RECORD.--October 1963 to current year. Records are equivalent to those published August 1946 to March 1965 as Green River near Fontenelle (station 09209500) average annual mean 1,557 cfs.

GAGE.--Water-stage recorder. Elevation of gage is 6,520 ft above NGVD of 1929, from topographic map. National Weather Service data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs and diversions for irrigation of about 198,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	499	517	e420	e350	e320	e370	1,400	744	1,420	5,240	1,440	880
2	497	494	e410	e350	e310	e360	1,470	715	1,190	5,300	1,380	817
3	496	488	e400	e330	e320	e370	1,500	660	1,040	5,160	1,350	819
4	496	e480	e390	e320	e330	e380	1,470	684	1,000	4,710	1,340	904
5	487	e450	e380	e300	e340	e390	1,350	815	1,100	4,140	1,330	942
6	481	e440	e390	e310	e340	e400	1,280	1,000	1,360	3,640	1,270	969
7	473	437	e390	e320	e350	e390	1,310	1,420	1,750	3,340	1,200	969
8	473	421	e380	e330	e350	e380	1,370	1,720	2,540	3,140	1,110	942
9	470	e440	e370	e340	e350	e400	1,450	1,870	3,300	3,080	1,020	859
10	465	e460	e360	e340	e340	e418	1,470	1,930	3,820	3,020	981	803
11	465	e500	e370	e340	e330	e420	1,380	1,820	5,000	2,970	925	770
12	464	e520	e380	e330	e320	e420	1,350	1,730	5,540	2,780	862	738
13	467	e500	e390	e330	e330	e430	1,270	1,590	4,610	2,620	827	737
14	460	e540	e380	e330	e330	e460	1,120	1,400	3,610	2,490	782	789
15	470	e580	e360	e320	e330	e520	1,030	1,200	2,970	2,400	748	779
16	481	e620	e350	e320	e340	e580	1,000	1,070	2,540	2,450	730	800
17	481	e660	e330	e320	e350	e620	973	955	2,370	2,410	706	804
18	481	e560	e340	e310	e360	e640	909	836	2,680	2,380	675	789
19	481	e560	e340	e310	e380	e720	861	740	2,960	2,510	710	773
20	476	e540	e350	e310	e380	e890	816	698	4,190	2,440	799	792
21	473	e520	e350	e310	e370	e1,150	792	717	4,570	2,220	794	811
22	473	e460	e340	e320	e360	e1,400	742	907	4,320	2,120	806	859
23	467	e380	e330	e320	e350	e1,550	698	1,090	3,590	2,100	816	865
24	464	e405	e340	e320	e360	e1,750	630	1,160	3,140	2,160	862	851
25	453	e420	e350	e320	e370	e1,900	580	1,080	2,920	2,190	906	835
26	449	e420	e350	e320	e380	1,950	545	990	2,960	2,070	972	819
27	454	e410	e340	e330	e380	1,860	539	917	3,140	2,000	1,060	783
28	451	e400	e340	e340	e380	1,720	540	857	3,970	1,990	1,130	760
29	453	e410	e330	e340	e370	1,490	605	982	4,760	1,890	1,120	758
30	484	e420	e340	e340	---	1,290	700	1,450	4,980	1,720	1,030	765
31	520	---	e350	e330	---	1,350	---	1,570	---	1,580	953	---
TOTAL	14,704	14,452	11,240	10,100	10,120	26,968	31,150	35,317	93,340	88,260	30,634	24,781
MEAN	474	482	363	326	349	870	1,038	1,139	3,111	2,847	988	826
MAX	520	660	420	350	380	1,950	1,500	1,930	5,540	5,300	1,440	969
MIN	449	380	330	300	310	360	539	660	1,000	1,580	675	737
AC-FT	29,170	28,670	22,290	20,030	20,070	53,490	61,790	70,050	185,100	175,100	60,760	49,150

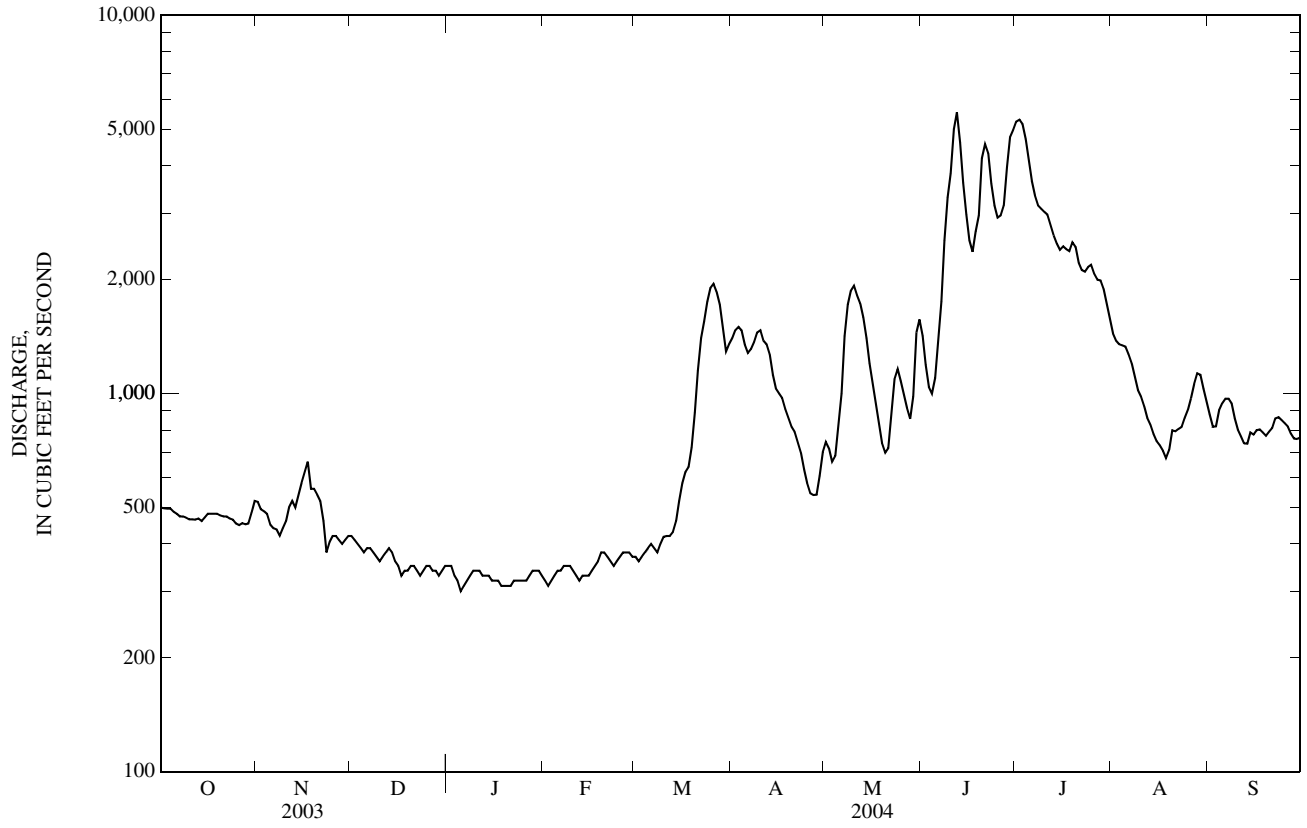
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	807	721	520	453	485	719	1,364	2,751	5,562	3,345	1,414	870
MAX	2,049	1,306	866	608	681	1,565	2,692	5,357	14,230	7,993	3,185	1,768
(WY)	(1983)	(1984)	(1984)	(1966)	(1998)	(1972)	(1986)	(1997)	(1986)	(1982)	(1982)	(1983)
MIN	353	469	269	202	213	403	469	305	1,080	710	448	350
(WY)	(2002)	(1989)	(2002)	(2002)	(2002)	(2002)	(1977)	(1977)	(1992)	(1994)	(2001)	(2001)

09209400 GREEN RIVER NEAR LA BARGE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	341,307		391,066		--	
ANNUAL MEAN	935		1,068		1,586	
HIGHEST ANNUAL MEAN	--		--		2,908	1986
LOWEST ANNUAL MEAN	--		--		668	1977
HIGHEST DAILY MEAN	6,340	Jun 3	5,540	Jun 12	18,800	Jun 9, 1986
LOWEST DAILY MEAN	330	Dec 17	300	Jan 5	180	Jan 31, 2002
ANNUAL SEVEN-DAY MINIMUM	340	Dec 17	314	Jan 15	188	Jan 31, 2002
MAXIMUM PEAK FLOW	--		5,670	Jun 12	18,800	Jun 9, 1986
MAXIMUM PEAK STAGE	--		7.54	Jun 12	10.50	Jun 9, 1986
ANNUAL RUNOFF (AC-FT)	677,000		775,700		1,149,000	
10 PERCENT EXCEEDS	1,690		2,500		3,850	
50 PERCENT EXCEEDS	583		708		786	
90 PERCENT EXCEEDS	390		340		420	

e Estimated



09210500 FONTENELLE CREEK NEAR HERSCHLER RANCH, NEAR FONTENELLE, WY

LOCATION.--Lat 42°05'46", long 110°24'57", in NW¼ SW¼ NE¼ sec.2, T.24 N., R.115 W., Lincoln County, Hydrologic Unit 14040101, on left bank 2.0 mi downstream from Dutch George Creek and 14 mi west of Fontenelle.

DRAINAGE AREA.--152 mi^2.

PERIOD OF RECORD.--August 1951 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,950 ft above NGVD of 1929, from topographic map. Prior to May 5, 1970, at site 300 ft downstream at present datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good those for estimated daily discharges, which are poor. Diversions for irrigation of about 780 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	e18	e21	e19	e24	e18	100	88	125	e79	26	19
2	19	e19	e20	e16	e23	e17	95	82	118	e70	27	18
3	20	e20	e20	e14	e24	e19	98	89	110	e62	27	22
4	19	e17	e20	e15	e26	e19	94	105	106	e58	25	28
5	19	e15	e19	e14	e27	e17	105	121	115	e56	26	26
6	19	e14	e21	e13	e27	e19	102	134	123	e52	25	24
7	19	e15	e20	e14	e25	e17	102	141	115	e48	24	22
8	19	e16	e19	e15	e25	e18	108	141	118	e54	23	20
9	19	e17	e17	e17	e24	e19	113	137	114	e44	22	20
10	18	e17	e16	e19	e25	20	106	134	126	e42	22	19
11	18	e18	e18	e18	e24	27	100	134	130	e35	23	19
12	18	e18	e19	e18	e23	28	85	130	109	e32	22	19
13	18	e17	e21	e17	e22	29	85	120	98	e29	22	20
14	18	e19	e19	e16	e24	30	88	111	91	e31	22	22
15	18	e21	e18	e17	e23	33	86	104	86	33	22	22
16	19	e23	e18	e18	e22	34	81	101	82	36	22	21
17	19	e25	e19	e17	e24	31	84	97	82	34	23	20
18	20	e28	e20	e18	e25	39	79	96	97	34	30	20
19	20	e22	e21	e19	e25	51	75	83	93	38	36	20
20	20	e23	e22	e19	e24	62	74	87	93	35	30	22
21	20	e20	e21	e18	e22	73	77	84	99	34	30	25
22	19	e18	e19	e18	e20	82	72	103	93	34	27	26
23	19	e16	e18	e19	e19	90	66	123	85	36	30	25
24	18	e17	e19	e20	e19	103	65	109	83	36	32	24
25	18	e18	e20	e19	e20	101	64	91	81	34	28	24
26	18	e19	e21	e21	e21	89	64	83	76	33	28	23
27	19	e18	e20	e23	e20	66	69	90	79	35	27	23
28	19	e19	e17	e24	e19	54	80	129	e90	38	25	24
29	20	e21	e18	e26	e20	52	94	181	e80	32	23	24
30	e21	e22	e18	e28	---	62	92	145	e76	29	21	26
31	e15	---	e17	e25	---	80	---	131	---	27	20	---
TOTAL	584	570	596	574	666	1,399	2,603	3,504	2,973	1,270	790	667
MEAN	18.8	19.0	19.2	18.5	23.0	45.1	86.8	113	99.1	41.0	25.5	22.2
MAX	21	28	22	28	27	103	113	181	130	79	36	28
MIN	15	14	16	13	19	17	64	82	76	27	20	18
AC-FT	1,160	1,130	1,180	1,140	1,320	2,770	5,160	6,950	5,900	2,520	1,570	1,320

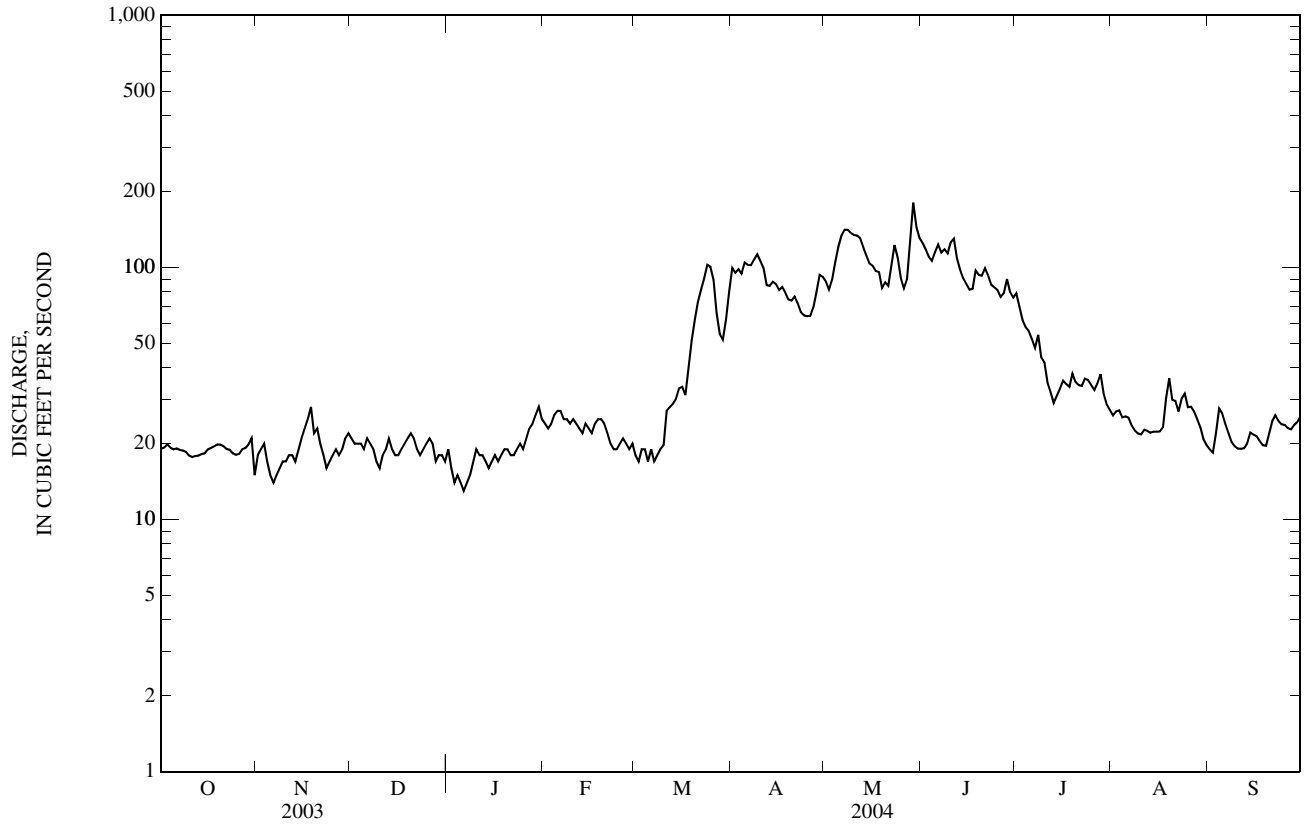
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2004, BY WATER YEAR (WY)

MEAN	31.8	29.6	25.8	25.3	26.3	33.3	98.1	211	220	74.9	36.8	30.3
MAX	55.3	47.1	42.1	41.3	51.3	76.3	280	437	628	185	76.0	63.1
(WY)	(1987)	(1998)	(1985)	(1985)	(1985)	(1986)	(1986)	(1980)	(1986)	(1975)	(1983)	(1997)
MIN	18.8	18.6	13.5	14.3	15.0	18.7	35.1	32.1	20.3	17.2	10.2	12.7
(WY)	(2004)	(1994)	(1990)	(1991)	(1958)	(1962)	(1977)	(1977)	(1977)	(1977)	(1992)	(1977)

09210500 FONTENELLE CREEK NEAR HERSCHLER RANCH, NEAR FONTENELLE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1952 - 2004	
ANNUAL TOTAL	19,156		16,196		--	
ANNUAL MEAN	52.5		44.3		70.3	
HIGHEST ANNUAL MEAN	--		--		155	1986
LOWEST ANNUAL MEAN	--		--		24.8	1977
HIGHEST DAILY MEAN	389	May 17	181	May 29	865	Jun 6, 1986
LOWEST DAILY MEAN	12	Feb 8	13	Jan 6	5.6	Aug 14, 1992
ANNUAL SEVEN-DAY MINIMUM	13	Feb 5	14	Jan 2	6.2	Aug 10, 1992
MAXIMUM PEAK FLOW	--		196	May 29	907	Apr 23, 1986
MAXIMUM PEAK STAGE	--		6.62	May 29	9.51	Apr 23, 1986
ANNUAL RUNOFF (AC-FT)	38,000		32,120		50,950	
10 PERCENT EXCEEDS	123		102		178	
50 PERCENT EXCEEDS	22		24		33	
90 PERCENT EXCEEDS	16		18		20	

e Estimated



09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY

LOCATION.--Lat 42°01'16", long 110°02'57", in NW¼ NW¼ NE¼ sec.31, T.24 N., R.111 W., Sweetwater County, Hydrologic Unit 14040103, on right bank 1.0 mi downstream from Fontenelle Dam, 2.5 mi upstream from Slate Creek, and 6.0 mi southeast of Fontenelle.

DRAINAGE AREA.--4,280 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1963 to current year.

REVISED RECORDS.--WSP 2125: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,378.13 ft above NGVD of 1929. National Weather Service data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated by Fontenelle Reservoir 1.0 mi upstream. Natural flow of stream affected by storage reservoirs and diversions for irrigation of about 202,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	805	808	789	779	777	769	766	821	1,010	1,690	1,970	978
2	796	807	793	801	779	770	771	811	1,010	2,990	2,030	974
3	786	822	798	779	782	770	778	800	1,000	3,260	1,950	1,000
4	780	804	798	779	783	778	780	813	1,020	3,260	1,720	1,000
5	776	798	784	779	770	763	767	806	1,020	3,290	1,530	985
6	790	789	789	771	770	765	749	794	1,030	3,130	1,370	942
7	749	788	789	e740	770	743	743	789	1,030	2,450	1,360	936
8	735	789	784	779	770	746	754	785	1,040	2,490	1,390	946
9	721	789	779	786	761	754	757	791	1,040	3,000	1,330	942
10	723	792	779	779	760	754	764	815	1,040	2,990	1,240	941
11	735	797	779	779	759	741	760	914	1,050	2,980	1,180	934
12	760	793	776	779	751	758	756	1,090	1,060	2,980	1,160	934
13	762	800	773	779	751	764	762	1,290	1,050	2,970	1,180	1,220
14	764	789	778	782	762	777	747	1,330	1,050	2,800	1,200	1,800
15	764	789	777	779	770	779	753	1,320	1,040	2,250	1,210	1,760
16	751	791	767	779	777	777	773	1,330	1,050	1,980	1,220	1,140
17	757	789	763	779	785	776	788	1,320	1,050	1,970	1,230	862
18	752	789	766	779	794	776	783	1,280	1,070	1,960	1,240	867
19	747	789	759	777	805	776	785	1,130	1,070	1,960	1,250	877
20	741	789	760	770	793	760	788	1,040	1,040	1,950	1,240	870
21	740	787	758	770	791	759	789	1,010	1,010	1,950	1,250	862
22	756	779	761	770	779	770	791	992	1,020	1,940	1,270	921
23	758	779	e760	761	764	768	797	1,020	1,030	1,930	1,290	996
24	750	779	e760	760	757	767	795	1,010	1,290	1,940	1,270	990
25	755	779	e780	760	761	775	803	997	1,330	1,970	1,280	988
26	764	791	e780	760	770	774	813	995	1,180	1,940	1,370	980
27	778	770	760	765	768	775	810	1,000	933	1,870	1,460	980
28	785	770	763	770	770	764	814	1,000	893	1,860	1,440	975
29	776	776	768	770	770	765	830	1,010	896	1,880	1,320	972
30	778	789	769	770	---	768	827	1,010	930	1,920	1,190	961
31	794	---	775	770	---	779	---	1,010	---	1,960	1,090	---
TOTAL	23,628	23,700	24,014	23,980	22,399	23,760	23,393	31,123	31,282	73,510	42,230	30,533
MEAN	762	790	775	774	772	766	780	1,004	1,043	2,371	1,362	1,018
MAX	805	822	798	801	805	779	830	1,330	1,330	3,290	2,030	1,800
MIN	721	770	758	740	751	741	743	785	893	1,690	1,090	862
AC-FT	46,870	47,010	47,630	47,560	44,430	47,130	46,400	61,730	62,050	145,800	83,760	60,560

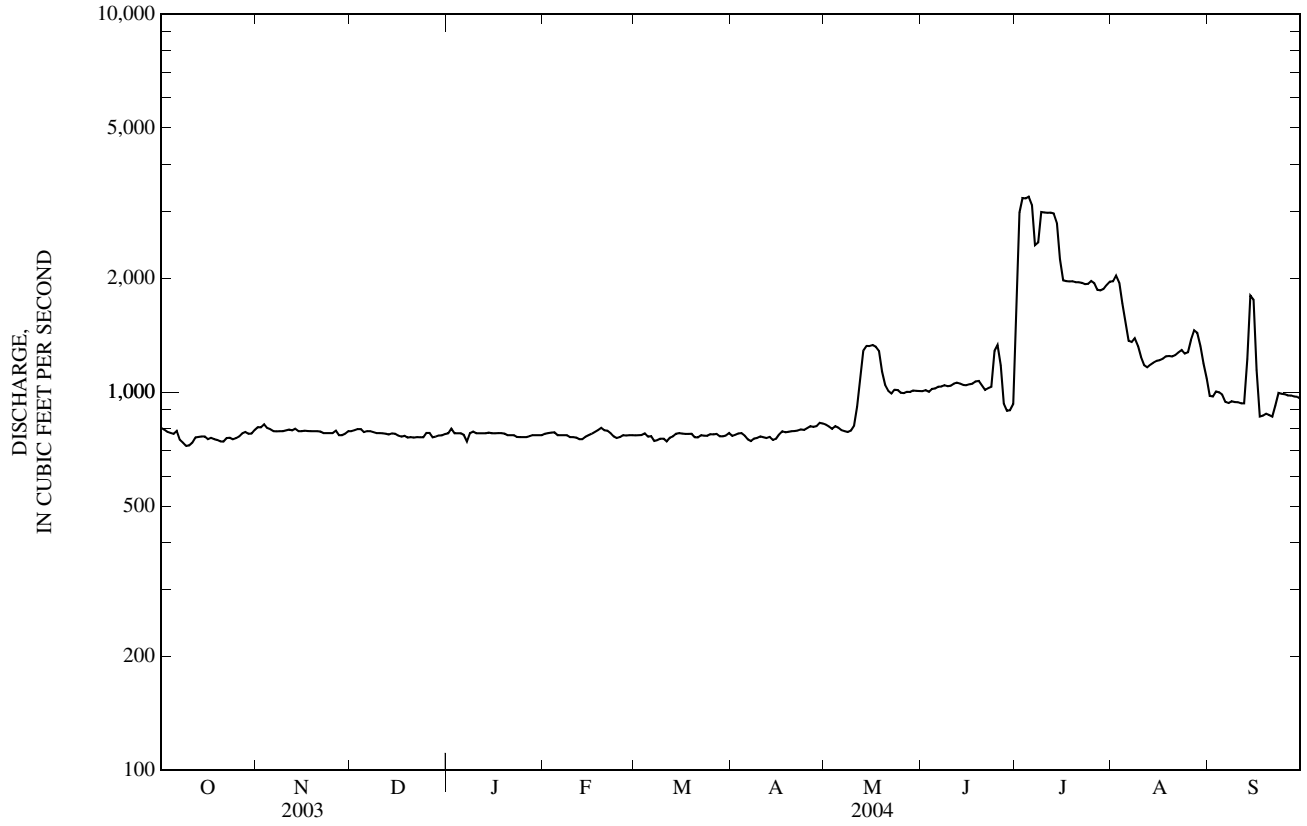
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	997	878	817	829	874	939	1,438	2,331	4,251	3,086	1,571	1,197
MAX	3,138	1,522	1,308	1,312	1,818	1,576	3,134	5,588	11,240	8,868	3,466	7,893
(WY)	(1983)	(1984)	(1998)	(1998)	(1974)	(1986)	(1986)	(1985)	(1986)	(1986)	(1982)	(1965)
MIN	291	308	272	273	262	365	370	463	465	364	367	285
(WY)	(1989)	(1989)	(1968)	(1968)	(1968)	(1989)	(1968)	(1992)	(1977)	(1977)	(1977)	(1988)

09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	335,194		373,552		--	
ANNUAL MEAN	918		1,021		1,602	
HIGHEST ANNUAL MEAN	--		--		3,060	1986
LOWEST ANNUAL MEAN	--		--		609	2002
HIGHEST DAILY MEAN	1,550	Apr 25	3,290	Jul 5	18,600	Sep 6, 1965
LOWEST DAILY MEAN	640	Feb 6	721	Oct 9	209	Nov 22, 1968
ANNUAL SEVEN-DAY MINIMUM	654	Feb 18	741	Oct 7	251	Dec 25, 1967
MAXIMUM PEAK FLOW	--		3,350	Jul 6	19,400[a]	Sep 5, 1965
MAXIMUM PEAK STAGE	--		13.10	Jul 6	18.74[a,b]	Sep 5, 1965
ANNUAL RUNOFF (AC-FT)	664,900		740,900		1,160,000	
10 PERCENT EXCEEDS	1,440		1,700		3,280	
50 PERCENT EXCEEDS	789		790		1,100	
90 PERCENT EXCEEDS	660		760		508	

a Caused by emergency release from Fontenelle Reservoir.
b From floodmarks.
e Estimated.



09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to September 1976.
WATER TEMPERATURES: October 1967 to September 1976.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	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)
OCT													
16...	1220	750	610	9.4	112	8.9	307	14.0	13.0	203	.38	<.04	<.06
NOV													
19...	1615	670	604	10.1	97	9.1	309	4.0	4.0	201	--	<.04	<.06
JAN													
14...	1445	775	609	11.8	107	8.2	391	-10.0	2.0	256	--	<.04	<.06
FEB													
17...	1215	789	609	11.5	104	8.4	407	2.0	2.0	262	--	E.03	E.04
APR													
30...	1520	781	606	9.4	104	8.3	433	14.0	9.5	270	--	<.04	<.06
MAY													
25...	1600	942	602	8.9	105	8.3	409	15.5	12.0	252	--	<.04	<.06
JUN													
30...	1530	898	610	7.1	86	8.1	371	14.5	14.0	224	--	.04	<.06
AUG													
03...	1540	2,300	609	4.7	63	7.7	321	25.5	18.0	191	--	<.04	.11
SEP													
08...	1530	962	607	7.9	103	8.4	307	24.5	17.0	195	--	<.04	<.06

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)
OCT					
16...	<.008	<.02	<.04	<.04	--
NOV					
19...	<.008	<.02	<.01	.01	.25
JAN					
14...	<.008	<.02	<.01	.01	.20
FEB					
17...	<.008	<.02	<.01	<.01	.21
APR					
30...	<.008	<.02	<.01	.02	.27
MAY					
25...	<.008	<.02	<.01	<.01	.23
JUN					
30...	<.008	<.02	.01	.02	.32
AUG					
03...	<.008	.03	.04	.05	.41
SEP					
08...	<.008	<.02	<.01	.03	.33

< -- Less than
E -- Estimated value

09213500 BIG SANDY RIVER NEAR FARSON, WY

LOCATION.--Lat 42°19'01", long 109°29'06", in NW¼ SE¼ NW¼ sec.17, T.27 N., R.106 W., Sublette County, Hydrologic Unit 14040104, on left upstream side of Eden Canal diversion, about 1.0 mi upstream from high-water line of Big Sandy Reservoir, 14.5 mi north of Farson, and 24.5 mi upstream from Little Sandy Creek.

DRAINAGE AREA.--322 mi^2.

PERIOD OF RECORD.--October 1914 to September 1917, October 1920 to October 1924, October 1926 to September 1934, April 1953 to current year (no winter records since 1971). Prior to October 1968, published as Big Sandy Creek near Farson. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1733: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,770 ft above NGVD of 1929, from topographic map. Prior to April 28, 1921, nonrecording gage, and April 28, 1921 to August 3, 1934, water-stage recorder at site 0.5 mi upstream at different datum. April 17, 1953 to November 11, 1954, water-stage recorder at site 1.5 mi upstream at different datum. National Weather Service 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 1,000 acre upstream from station. The Eden Canal, which bypasses the station, has not been used since station was establish at present site in November 1954. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation, is given below:

Oct. 9 . . . . 12.1

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e54	95	132	342	73	59
2	---	---	---	---	---	---	e68	95	124	346	70	55
3	---	---	---	---	---	---	e74	100	131	300	68	53
4	---	---	---	---	---	---	e66	139	159	248	66	53
5	---	---	---	---	---	---	e90	198	250	227	65	55
6	---	---	---	---	---	---	92	295	333	212	63	53
7	---	---	---	---	---	---	91	373	406	196	56	55
8	---	---	---	---	---	---	89	372	474	192	53	52
9	---	---	---	---	---	---	90	358	470	210	51	50
10	---	---	---	---	---	---	95	349	500	203	49	48
11	---	---	---	---	---	---	78	307	485	185	47	45
12	---	---	---	---	---	---	72	310	389	171	45	44
13	---	---	---	---	---	---	71	219	341	160	43	44
14	---	---	---	---	---	---	72	182	296	153	42	44
15	---	---	---	---	---	---	75	161	236	149	40	48
16	---	---	---	---	---	---	76	143	241	140	40	48
17	---	---	---	---	---	---	74	142	236	134	39	47
18	---	---	---	---	---	---	69	135	237	126	41	45
19	---	---	---	---	---	---	67	130	230	120	50	44
20	---	---	---	---	---	---	65	135	272	115	63	44
21	---	---	---	---	---	---	61	155	332	114	64	46
22	---	---	---	---	---	---	58	183	321	111	63	57
23	---	---	---	---	---	---	56	175	273	110	59	58
24	---	---	---	---	---	---	55	171	234	184	57	57
25	---	---	---	---	---	---	55	157	260	145	76	55
26	---	---	---	---	---	---	57	142	281	129	78	56
27	---	---	---	---	---	---	57	127	307	121	95	54
28	---	---	---	---	---	---	68	123	350	109	92	53
29	---	---	---	---	---	---	107	156	388	98	82	53
30	---	---	---	---	---	---	101	223	375	89	74	55
31	---	---	---	---	---	---	---	157	---	80	65	---
TOTAL	---	---	---	---	---	---	2,203	6,007	9,063	5,219	1,869	1,530
MEAN	---	---	---	---	---	---	73.4	194	302	168	60.3	51.0
MAX	---	---	---	---	---	---	107	373	500	346	95	59
MIN	---	---	---	---	---	---	54	95	124	80	39	44
AC-FT	---	---	---	---	---	---	4,370	11,910	17,980	10,350	3,710	3,030

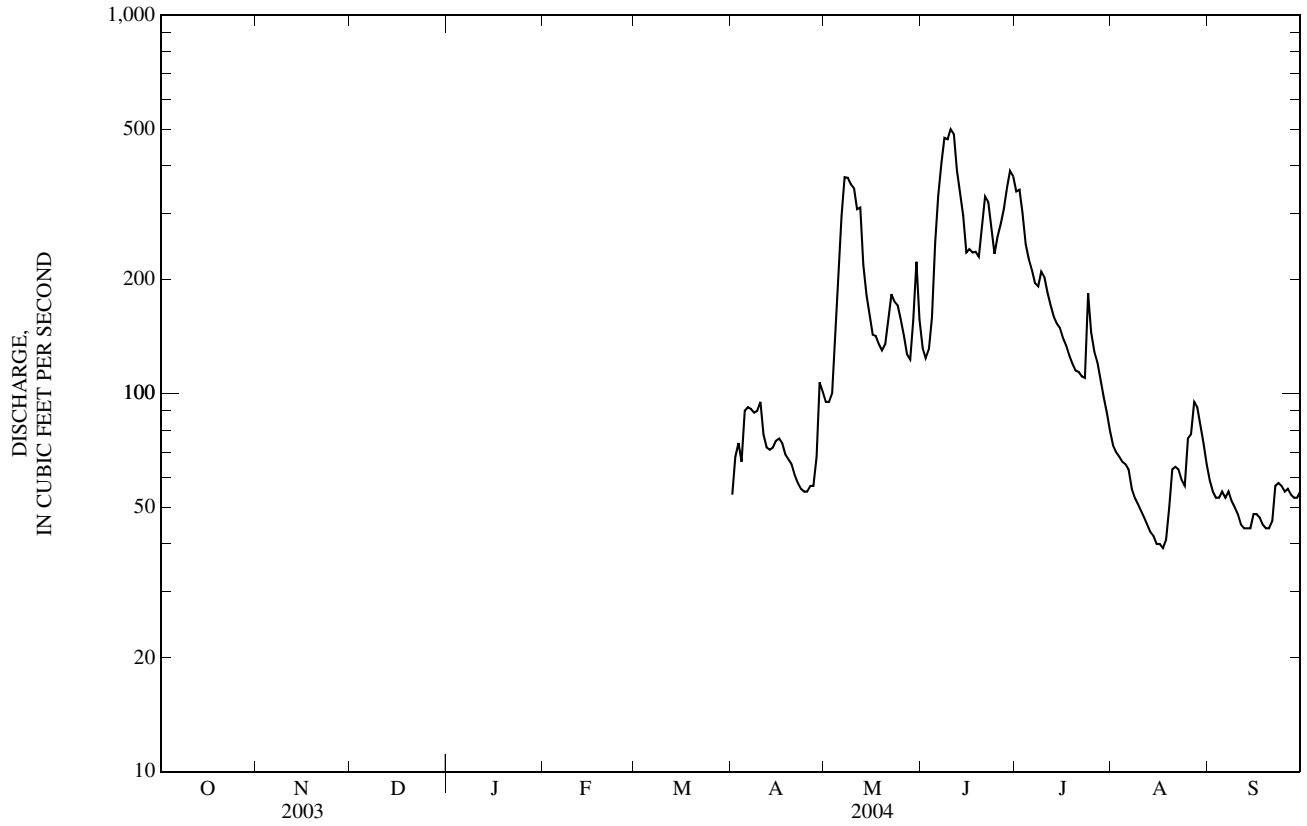
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2004, BY WATER YEAR (WY)*

MEAN	30.2	21.2	13.2	11.1	12.1	21.8	60.3	235	412	173	48.4	30.6
MAX	75.6	41.0	21.7	22.9	26.0	46.7	148	454	905	510	155	83.9
(WY)	(1928)	(1934)	(1969)	(1969)	(1969)	(1967)	(1983)	(1928)	(1986)	(1995)	(1930)	(1927)
MIN	8.90	9.17	3.00	0.30	0.10	2.98	22.1	89.1	55.5	14.3	8.48	2.07
(WY)	(1932)	(1961)	(1960)	(1960)	(1960)	(1961)	(1975)	(1933)	(1934)	(1934)	(1931)	(1931)

09213500 BIG SANDY RIVER NEAR FARSON, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1915 - 2004*	
ANNUAL MEAN	--		86.7	
HIGHEST ANNUAL MEAN	--		148	1917
LOWEST ANNUAL MEAN	--		33.0	1934
HIGHEST DAILY MEAN	500	Jun 10	1,690	Jun 4, 1986
LOWEST DAILY MEAN	39	Aug 17	0.00	Jan 27, 1963
ANNUAL SEVEN-DAY MINIMUM	--		0.10	Feb 1, 1960
MAXIMUM PEAK FLOW	558	Jun 10	1,890	Jun 3, 1986
MAXIMUM PEAK STAGE	6.51	Jun 10	8.46	Jun 3, 1986
ANNUAL RUNOFF (AC-FT)	--		62,800	
10 PERCENT EXCEEDS	--		270	
50 PERCENT EXCEEDS	--		25	
90 PERCENT EXCEEDS	--		9.0	

* For period of operation.
e Estimated.



09213700 BIG SANDY RESERVOIR NEAR FARSON, WY

LOCATION.--Lat 42°14'57", long 109°25'43", in NE¼ NW¼ NW¼ sec.11, T.26 N., R.106 W., Sweetwater County, Hydrologic Unit 14040104, 10.1 mi north of Farson and 20.5 mi upstream from Little Sandy Creek.

DRAINAGE AREA.--386 mi^2.

PERIOD OF RECORD.--May 1987 to current year.

REVISED. --WDR WY-98-1: 1996, 1997.

GAGE.--Water-stage recorder. Elevation of gage is 6,770.00 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation). U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated contents, which are poor. Reservoir is formed by an earthfill dam, storage began in April 1953. Total capacity, 54,385 acre-ft at elevation 6,762.8 ft, crest of spillway, including 1,425 acre-ft of dead storage in a permanent pool at elevation 6,720.0 ft, trash-rack sill. Reservoir is used for storage of irrigation water and for recreation. Figures given herein represent active storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents recorded, 41,400 acre-ft, June 12, 1997, elevation, 6,758.71 ft, June 12, 1997; minimum contents recorded, 322 acre-ft, September 15, 2000, elevation, 6,721.85 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

6,720	0	6,730	2,545	6,740	8,655	6,750	22,155	6,760	44,905

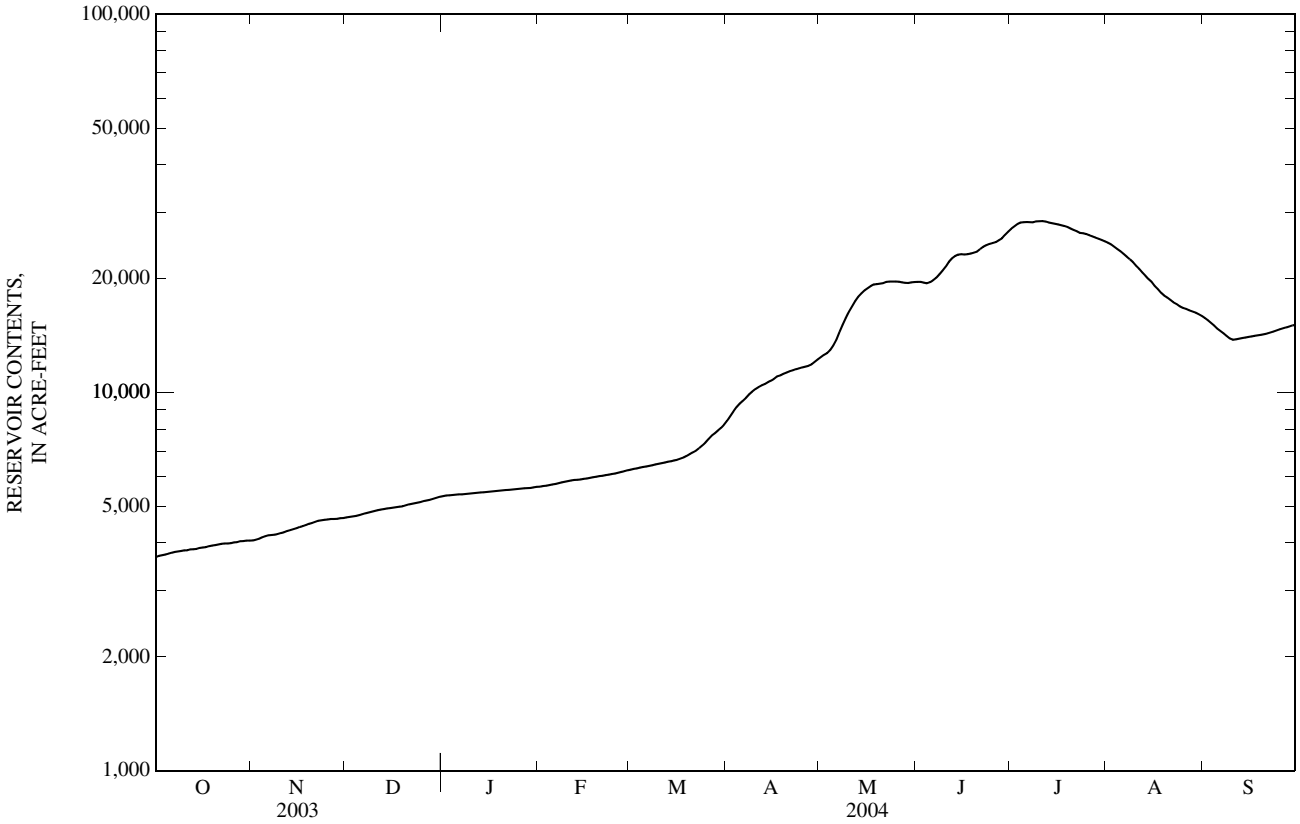
RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,670	4,060	4,680	e5,320	5,640	6,250	8,430	12,400	19,600	27,100	24,900	15,800
2	3,700	4,080	4,690	e5,340	5,660	6,280	8,660	12,600	19,600	27,500	24,600	15,500
3	3,710	4,100	4,700	e5,350	5,670	6,300	8,920	12,700	19,500	27,900	24,300	15,300
4	3,730	4,140	4,720	e5,360	5,690	6,330	9,150	13,000	19,400	28,100	24,000	15,000
5	3,750	4,170	4,740	e5,370	5,710	6,350	9,350	13,300	19,600	28,200	23,600	14,800
6	3,770	4,190	4,760	e5,380	5,730	6,370	9,510	13,800	19,800	28,200	23,300	14,500
7	3,790	4,200	4,790	e5,380	5,760	6,400	9,680	14,500	20,100	28,200	22,900	14,300
8	3,800	4,210	4,810	e5,390	5,790	6,430	9,890	15,100	20,500	28,200	22,500	14,100
9	3,810	4,220	4,840	e5,400	5,810	6,460	10,000	15,700	21,000	28,400	22,100	13,900
10	3,830	4,250	4,860	e5,410	5,830	6,480	10,200	16,400	21,500	28,400	21,700	13,800
11	3,830	4,270	4,880	e5,420	5,860	6,510	10,300	16,900	22,200	28,400	21,200	13,800
12	3,850	4,300	4,900	e5,430	5,870	6,530	10,400	17,500	22,600	28,300	20,800	13,900
13	3,850	4,320	4,920	e5,440	5,880	6,560	10,500	17,900	22,900	28,200	20,400	13,900
14	3,860	4,350	4,940	e5,450	5,890	6,580	10,700	18,300	23,100	28,100	19,900	14,000
15	3,880	4,370	4,950	e5,460	5,910	6,610	10,700	18,600	23,200	27,900	19,600	14,000
16	3,890	4,410	4,960	e5,470	5,930	6,640	10,900	18,900	23,200	27,800	19,100	14,100
17	3,900	4,430	4,980	e5,480	5,950	6,680	11,000	19,100	23,200	27,700	18,800	14,100
18	3,920	4,460	e4,990	e5,490	5,970	6,730	11,100	19,300	23,300	27,600	18,400	14,200
19	3,940	4,500	e5,000	e5,500	5,990	6,800	11,200	19,400	23,400	27,400	18,000	14,200
20	3,950	4,520	e5,030	e5,510	6,010	6,880	11,300	19,400	23,600	27,100	17,800	14,300
21	3,960	4,550	e5,060	e5,520	6,020	6,940	11,400	19,500	23,900	26,900	17,600	14,300
22	3,980	4,580	e5,080	e5,530	6,040	7,020	11,400	19,600	24,300	26,700	17,300	14,400
23	3,990	4,590	e5,100	e5,540	6,060	7,120	11,500	19,600	24,500	26,400	17,100	14,500
24	3,990	4,610	e5,120	e5,550	6,080	7,240	11,600	19,600	24,700	26,400	16,900	14,600
25	4,000	4,620	e5,140	e5,560	6,110	7,360	11,600	19,600	24,800	26,200	16,700	14,700
26	4,020	4,630	e5,170	e5,570	6,130	7,540	11,700	19,600	25,000	26,000	16,600	14,800
27	4,020	4,630	e5,190	e5,580	6,170	7,680	11,800	19,600	25,300	25,900	16,500	14,900
28	4,040	4,630	e5,210	e5,590	6,190	7,800	11,900	19,500	25,600	25,700	16,400	14,900
29	4,050	4,650	e5,240	5,600	6,220	7,920	12,000	19,500	26,100	25,500	16,300	15,000
30	4,060	4,660	e5,270	5,620	---	8,060	12,200	19,600	26,600	25,300	16,100	15,100
31	4,060	---	e5,300	5,630	---	8,220	---	19,600	---	25,100	16,000	---
MAX	4,060	4,660	5,300	5,630	6,220	8,220	12,200	19,600	26,600	28,400	24,900	15,800
MIN	3,670	4,060	4,680	5,320	5,640	6,250	8,430	12,400	19,400	25,100	16,000	13,800
(#)	6,733.4	6,734.5	---	6,136.0	6,736.9	6,739.4	6,743.5	6,748.6	6,752.3	6,751.6	6,746.3	6,745.7
(*)	+410	+600	+640	+330	+590	+2,000	+3,980	+7,400	+7,000	-1,500	-9,100	-900

CAL YR 2003 MAX 22200 MIN 2480
WTR YR 2004 MAX 28400 MIN 3670

(#) Elevation, in feet, at end of month.
(*) Change in contents, in acre-feet.
e Estimated.

09213700 BIG SANDY RESERVOIR NEAR FARSON, WY—Continued



09216050 BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY

LOCATION.--Lat 41°56'51", long 109°41'15", in NW¼ NW¼ NW¼ sec.29, T.23 N., R.108 W., Sweetwater County, Hydrologic Unit 14040104, on right bank 20 ft downstream from Gasson Bridge and 14.5 mi southwest of Eden.

DRAINAGE AREA.--1,720 mi^2.

PERIOD OF RECORD.--May 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,350 ft above NGVD of 1929, from topographic map. Prior to June 10, 1998, at site 1,250 ft upstream at present 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. Natural flow of stream affected by storage reservoirs and diversions for irrigation of about 19,300 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	e16	e12	e8.2	e12	e17	53	18	22	43	25	34
2	17	e16	e12	e8.5	e11	e16	50	16	22	39	24	36
3	18	e16	e12	e8.0	e10	e16	49	15	19	34	23	41
4	16	e17	e12	e7.3	e12	e15	49	15	16	29	20	40
5	16	e17	e11	e6.8	e12	e14	47	14	18	26	20	41
6	16	e16	e11	e6.4	e13	e13	43	14	20	27	22	43
7	17	e15	e10	e7.0	e12	e14	39	13	17	28	23	43
8	17	e14	e10	e8.0	e12	e14	45	13	16	26	25	38
9	17	e15	e9.4	e8.4	e12	e15	42	13	17	24	28	30
10	17	e16	e9.2	e8.4	e11	e16	38	13	19	24	31	31
11	16	e17	e9.0	e8.4	e11	e17	36	13	20	23	26	32
12	17	e17	e9.0	e8.6	e11	e18	38	13	23	26	26	29
13	17	e18	e9.6	e8.7	e11	e20	34	14	24	23	28	28
14	17	e18	e11	e9.0	e10	e30	31	16	23	23	25	28
15	17	e18	e10	e9.0	e10	e40	28	15	24	23	23	27
16	18	e19	e9.6	e9.0	e10	e50	27	15	23	24	23	27
17	17	e19	e9.4	e9.0	e10	e60	25	14	23	23	23	27
18	17	e18	e9.0	e9.4	e11	e30	25	15	24	23	26	26
19	17	e17	e9.1	e9.6	e12	47	24	15	23	23	26	26
20	17	e17	e9.0	e9.8	e12	50	22	16	24	24	27	28
21	17	e16	e9.0	e10	e13	58	21	16	32	22	27	28
22	17	e16	e8.8	e11	e14	70	19	21	32	23	26	28
23	18	e13	e8.8	e11	e14	107	19	21	30	33	28	28
24	18	e12	e8.5	e11	e13	118	19	19	26	36	29	28
25	17	e12	e8.5	e11	e13	129	18	21	30	29	28	28
26	17	e11	e8.2	e11	e14	140	18	21	31	27	27	28
27	19	e11	e8.2	e11	e14	104	17	21	28	30	26	28
28	19	e11	e8.0	e11	e15	90	16	20	31	31	29	27
29	e19	e12	e8.0	e12	e16	75	17	20	40	31	32	27
30	e18	e12	e7.7	e12	---	64	17	23	39	30	36	29
31	e17	---	e8.0	e13	---	58	---	24	---	29	37	---
TOTAL	533	462	295.0	291.5	351	1,525	926	517	736	856	819	934
MEAN	17.2	15.4	9.52	9.40	12.1	49.2	30.9	16.7	24.5	27.6	26.4	31.1
MAX	19	19	12	13	16	140	53	24	40	43	37	43
MIN	16	11	7.7	6.4	10	13	16	13	16	22	20	26
AC-FT	1,060	916	585	578	696	3,020	1,840	1,030	1,460	1,700	1,620	1,850

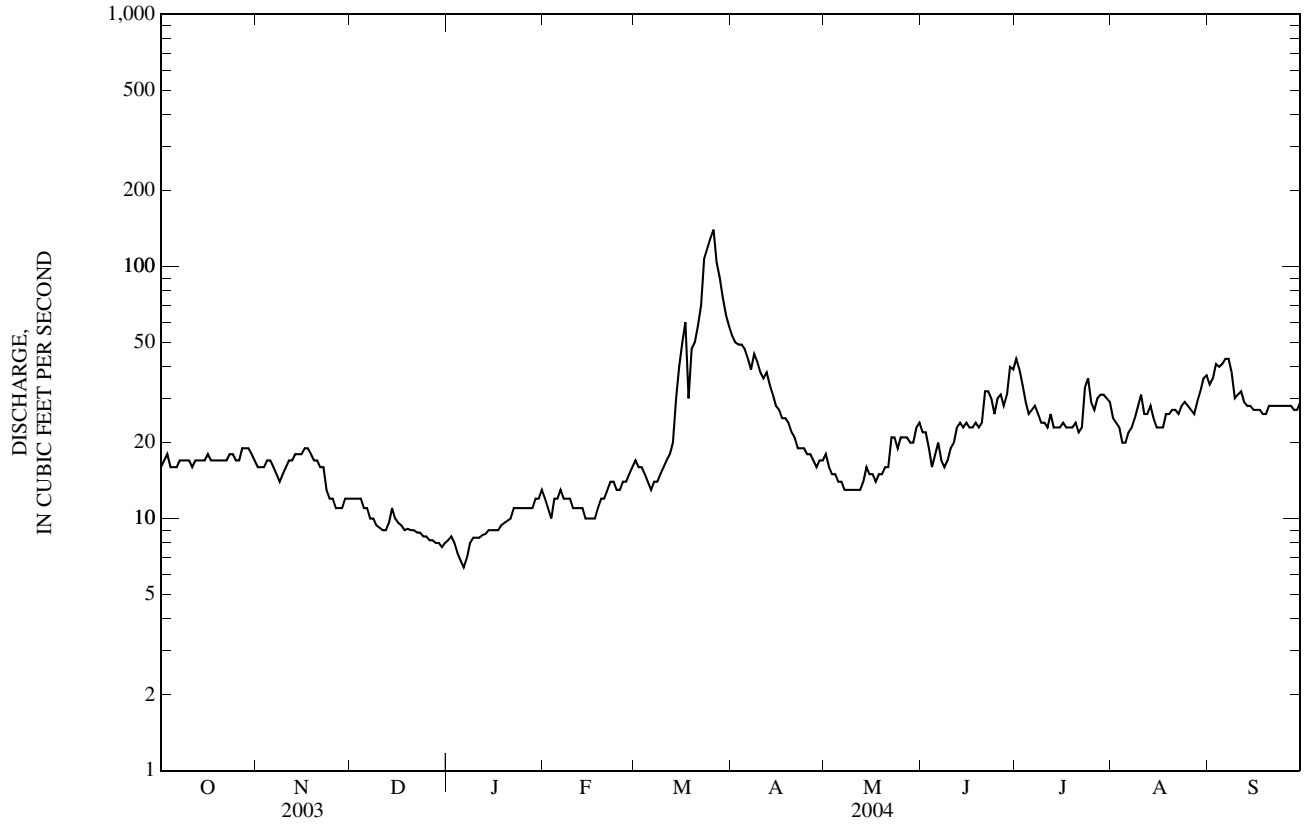
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

MEAN	58.1	51.2	36.2	29.4	31.9	81.1	104	72.4	137	99.6	74.4	68.1
MAX	102	149	60.4	55.5	74.0	393	462	208	627	340	119	100
(WY)	(1984)	(1984)	(1976)	(1984)	(1982)	(1997)	(1980)	(1984)	(1986)	(1995)	(1983)	(1983)
MIN	17.2	15.4	9.52	9.40	11.9	22.1	25.0	16.7	21.6	21.8	19.7	18.1
(WY)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)	(2004)	(2003)	(2001)	(2003)	(2003)

09216050 BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1972 - 2004	
ANNUAL TOTAL	6,530.0		8,245.5		--	
ANNUAL MEAN	17.9		22.5		69.3	
HIGHEST ANNUAL MEAN	--		--		139	1983
LOWEST ANNUAL MEAN	--		--		19.8	2003
HIGHEST DAILY MEAN	43	Jun 25	140	Mar 26	5,530	Apr 24, 1980
LOWEST DAILY MEAN	7.7	Dec 30	6.4	Jan 6	6.4	Jan 6, 2004
ANNUAL SEVEN-DAY MINIMUM	8.1	Dec 25	7.4	Jan 3	7.4	Jan 3, 2004
MAXIMUM PEAK FLOW	--		173[a]	Mar 26	7,430[b]	Apr 24, 1980
MAXIMUM PEAK STAGE	--		4.88[c]	Mar 13	10.58	Apr 24, 1980
ANNUAL RUNOFF (AC-FT)	12,950		16,350		50,220	
10 PERCENT EXCEEDS	25		38		106	
50 PERCENT EXCEEDS	17		18		50	
90 PERCENT EXCEEDS	11		9.4		23	

a Gage height, 3.94 ft.
b From rating curve extended above 2,000 ft^3/s, on basis of slope-area measuement of peak flow.
c Backwater from ice.
e Estimated.



09217000 GREEN RIVER NEAR GREEN RIVER, WY

LOCATION.--Lat 41°30'59", long 109°26'54", in NW¼ NE¼ NE¼ sec.26, T.18 N., R.107 W., Sweetwater County, Hydrologic Unit 14040106, on right bank 0.1 mi downstream from Bitter Creek, 1.0 mi southeast of town of Green River, and 4.0 mi upstream from high-water line of Flaming Gorge Reservoir.

DRAINAGE AREA.--14,000 mi^2, of which 4,260 mi^2, including 3,959 mi^2 in Great Divide Basin in southern Wyoming, probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1951 to current year.

REVISED RECORDS.--WSP 1713: 1957. WDR-76-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,060 ft above NGVD of 1929, from topographic map. National Weather Service data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by Fontenelle Reservoir since August 1963. Natural flow of stream affected by transbasin diversions, storage reservoirs, power generation, and diversions for irrigation of about 223,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge observed, 22,200 ft^3/s, June 19, 1918, at site 1.5 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	697	706	e760	e760	e800	e820	804	741	915	889	1,920	992
2	699	700	e770	e760	e800	e800	777	738	918	1,580	1,930	924
3	700	709	e780	e760	e800	e800	807	739	910	2,740	1,960	910
4	704	717	e790	e750	e780	e780	810	753	896	3,140	1,840	948
5	715	728	e780	e750	e800	e780	802	756	905	3,220	1,710	955
6	712	726	e780	e760	e780	e780	773	749	901	2,930	1,580	908
7	728	722	e790	e780	e780	e800	761	732	889	2,680	1,450	900
8	727	708	e793	e780	e780	e800	819	717	885	2,100	1,410	896
9	723	703	e790	e780	e790	e820	832	711	882	2,350	1,400	881
10	715	711	e790	e780	e780	e820	838	735	894	2,710	1,350	868
11	717	725	e790	e780	e780	e840	822	733	892	2,700	1,250	874
12	718	728	e790	e780	e760	e850	795	780	863	2,700	1,180	870
13	708	742	e780	e780	e770	e870	776	906	847	2,690	1,150	889
14	719	742	e780	e770	e800	e880	765	1,050	860	2,710	1,160	1,010
15	708	732	e785	e720	e820	e880	749	1,130	884	2,500	1,160	1,400
16	716	740	e785	e800	e820	e900	748	1,140	866	2,050	1,150	1,400
17	724	736	e780	e840	e800	e900	763	1,160	876	1,820	1,150	1,060
18	723	724	e790	e780	e774	e900	770	1,190	884	1,820	1,160	847
19	697	722	e780	e780	e810	e920	761	1,160	933	1,840	1,150	847
20	695	721	e760	e760	e810	901	764	1,060	926	1,850	1,140	906
21	715	729	e760	e750	e810	877	763	1,010	924	1,840	1,140	866
22	689	715	e760	e770	e800	875	755	980	897	1,850	1,140	852
23	697	e730	e760	e800	e800	877	745	989	899	1,860	1,170	889
24	698	e740	e760	e800	e800	882	748	976	908	1,880	1,170	939
25	702	e730	e760	e770	e820	880	743	953	1,120	1,900	1,160	939
26	708	e750	e760	e760	e820	882	741	938	1,160	1,910	1,140	936
27	715	e750	e760	e780	e820	875	731	934	1,070	1,930	1,190	940
28	722	e740	e750	e800	e830	850	729	951	968	1,930	1,210	946
29	734	e730	e750	e800	e820	840	749	961	863	1,940	1,170	987
30	750	e750	e760	e820	---	826	765	928	903	1,940	1,120	992
31	690	---	e760	e820	---	814	---	930	---	1,930	1,080	---
TOTAL	22,065	21,806	23,983	24,120	23,154	26,319	23,205	28,230	27,538	67,929	40,890	28,571
MEAN	712	727	774	778	798	849	774	911	918	2,191	1,319	952
MAX	750	750	793	840	830	920	838	1,190	1,160	3,220	1,960	1,400
MIN	689	700	750	720	760	780	729	711	847	889	1,080	847
AC-FT	43,770	43,250	47,570	47,840	45,930	52,200	46,030	55,990	54,620	134,700	81,110	56,670

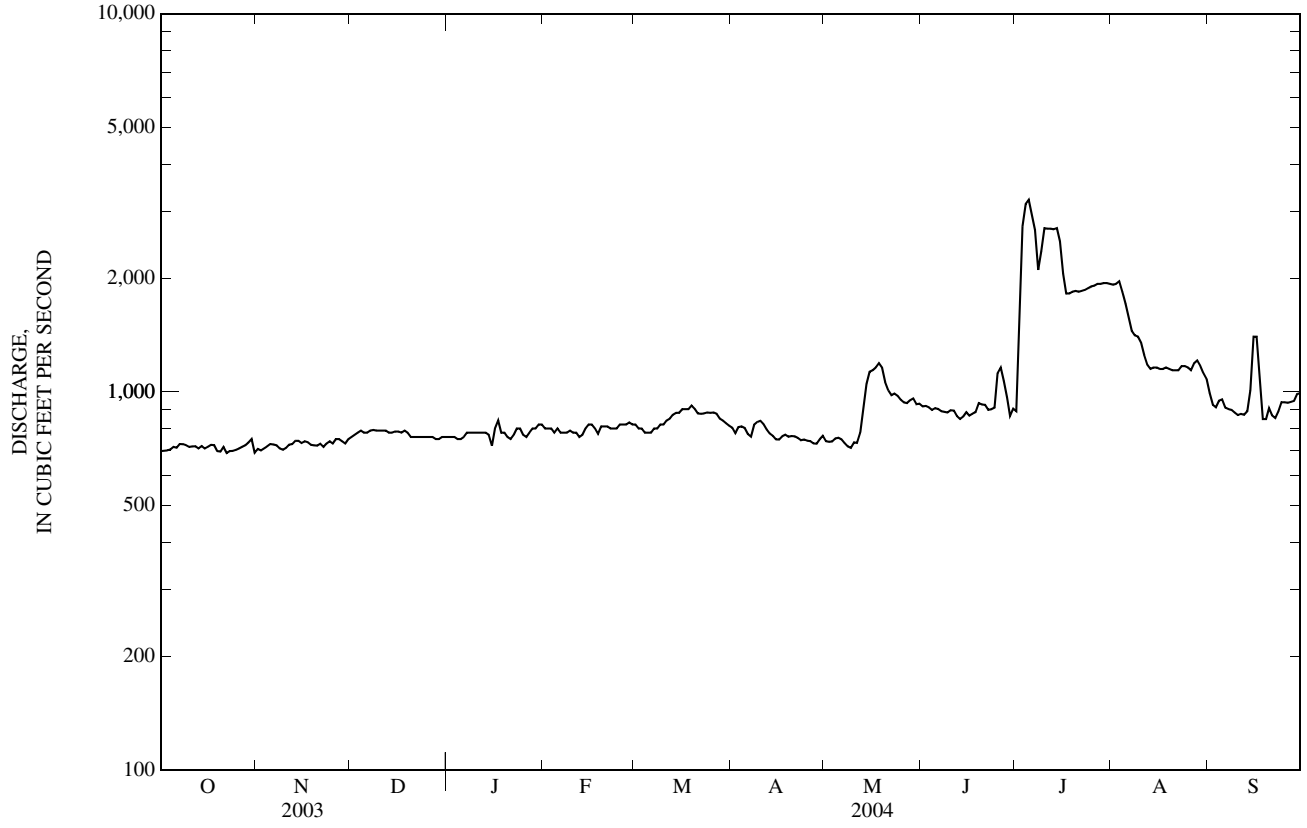
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2004, BY WATER YEAR (WY)

MEAN	952	845	734	752	821	1,029	1,593	2,500	4,599	3,116	1,527	1,109
MAX	3,109	1,844	1,419	1,442	1,980	1,852	3,416	5,665	11,700	9,415	3,577	7,746
(WY)	(1983)	(1984)	(1972)	(1996)	(1974)	(1974)	(1962)	(1952)	(1986)	(1986)	(1982)	(1965)
MIN	279	281	272	266	267	350	516	434	414	368	372	251
(WY)	(1989)	(1989)	(1989)	(1989)	(1989)	(1989)	(1968)	(1992)	(1977)	(1977)	(1977)	(1988)

09217000 GREEN RIVER NEAR GREEN RIVER, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1952 - 2004	
ANNUAL TOTAL	316,674		357,810		--	
ANNUAL MEAN	868		978		1,633	
HIGHEST ANNUAL MEAN	--		--		3,089	1986
LOWEST ANNUAL MEAN	--		--		576	2002
HIGHEST DAILY MEAN	1,800	Mar 27	3,220	Jul 5	16,700	Sep 7, 1965
LOWEST DAILY MEAN	555	Jul 30	689	Oct 22	170	Nov 16, 1955
ANNUAL SEVEN-DAY MINIMUM	573	Jul 26	699	Oct 19	214	Dec 24, 1962
MAXIMUM PEAK FLOW	--		4,500	Jul 4	16,800[a]	Sep 7, 1965
MAXIMUM PEAK STAGE	--		4.09	Jul 4	8.53[a]	Sep 7, 1965
ANNUAL RUNOFF (AC-FT)	628,100		709,700		1,183,000	
10 PERCENT EXCEEDS	1,390		1,490		3,540	
50 PERCENT EXCEEDS	718		808		1,050	
90 PERCENT EXCEEDS	620		722		460	

a Caused by emergency release from Fontenelle Reservoir.
e Estimated.



09217000 GREEN RIVER NEAR GREEN RIVER, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1951 to September 1992.
WATER TEMPERATURES: May 1951 to September 1992.
SUSPENDED-SEDIMENT DISCHARGE: May 1951 to September 1992.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Residue on evap. at 180degC wat flt mg/L (70300)
NOV										
20...	1430	700	606	11.9	110	8.7	431	3.5	2.5	265
JAN										
15...	1130	651	611	11.0	94	8.5	491	-10.0	.0	314
FEB										
18...	1530	773	609	9.4	81	8.4	474	5.0	.0	318
APR										
07...	0910	758	609	8.5	94	8.7	691	10.5	9.5	467
MAY										
20...	0950	1,100	610	8.1	98	8.5	511	14.0	13.5	323
JUN										
24...	1610	847	615	7.7	109	8.7	471	24.0	21.5	302
JUL										
22...	1610	1,880	615	6.8	95	8.3	355	27.0	21.0	216

09217010 GREEN RIVER BELOW GREEN RIVER, WY

LOCATION.--Lat 41°29'46", long 109°26'17", in SW¼ SE¼ NW¼ sec.36, T.18 N., R.107 W., Sweetwater County, Hydrologic Unit 14040106, at bridge on county road, 1.7 mi downstream from Bitter Creek, 2.7 mi southeast of town of Green River, and 3.3 mi upstream from Logan Draw.

PERIOD OF RECORD.--Water years 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
NOV 20...	1545	700	606	12.2	111	8.8	555	2.5	2.0	E.04	.14	<.008	.03
JAN 15...	1335	651	--	--	--	--	537	-2.0	.0	.05	.14	<.008	.02
FEB 19...	0820	765	--	--	--	--	562	-1.0	.0	.12	.10	E.004	.02
MAY 25...	1455	922	--	--	--	--	570	13.0	13.5	<.04	.08	.008	E.01
JUN 25...	0915	847	--	--	--	--	519	17.0	17.5	<.04	E.04	<.008	<.02
JUL 23...	0900	1,880	--	--	--	--	382	21.0	17.5	<.04	<.06	<.008	<.02

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)
NOV 20...	.03	.05	.48
JAN 15...	.02	.04	.44
FEB 19...	.03	.04	.43
MAY 25...	.03	.03	.33
JUN 25...	.01	.06	.47
JUL 23...	.01	.04	.38

< -- Less than
E -- Estimated value

09217900 BLACKS FORK NEAR ROBERTSON, WY

LOCATION.--Lat 40°57'33", long 110°34'46", in SW¼ SW¼ SW¼ sec.27, T.3 N., R.12 E., Summit County, Utah, Hydrologic Unit 14040107, on left bank 1 mi downstream from East Fork, 2.7 mi south of Utah-Wyoming State line, and 18 mi south of Robertson.

DRAINAGE AREA.--130 mi^2.

PERIOD OF RECORD.--October 1937 to July 1939 (published as "at Blacks Fork Ranger Station"), July 1966 to September 1986, October 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,811.3 ft above NGVD of 1929 (Bureau of Reclamation benchmark). Elevations published from October 1968 to September 1978 are incorrect. October 1937 to July 1939, at site 970 ft downstream at different datum, July 1966 to September 1986 and October 1992 to September 1993 at site 0.2 mi downstream at datum 6.5 ft lower. U.S. Geological Survey data collection platform with satellite telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	e20	e25	e20	e17	e9.5	42	105	269	243	93	42
2	37	e22	e24	e17	e18	e8.5	49	136	349	225	92	40
3	33	23	e24	e15	e20	e9.0	61	184	402	207	93	46
4	34	e22	e23	e16	e24	e9.5	62	254	449	197	86	66
5	32	e21	e23	e15	e24	e10	73	361	499	186	82	64
6	31	e20	e27	e14	e25	e11	78	443	542	177	88	54
7	30	e21	e26	e15	e23	e10	79	452	569	171	73	46
8	29	e21	e25	e17	e25	e10	79	455	548	168	69	44
9	26	e22	e23	e18	e23	e11	74	471	498	166	65	41
10	25	22	e21	e19	e20	e10	54	489	455	159	62	40
11	22	e23	e19	e18	e18	e10	54	480	395	150	59	38
12	26	e21	e22	e18	e13	e9.5	59	386	318	144	56	38
13	24	21	e23	e17	e12	e9.0	67	301	270	145	53	51
14	22	22	e22	e16	e11	e9.5	76	249	301	157	51	41
15	25	e22	e21	e17	e12	e10	67	235	321	234	51	39
16	24	e25	e22	e18	e13	e11	60	262	304	260	53	39
17	23	e28	e23	e16	e13	e10	64	307	348	223	57	37
18	22	e29	e23	e17	e14	e11	66	367	376	202	66	35
19	21	e23	e24	e18	e13	e12	56	410	295	178	68	50
20	21	e24	e25	e18	e12	e13	57	432	278	167	52	76
21	21	e21	e22	e16	e10	14	59	395	297	175	50	57
22	20	e20	e20	e16	e9.5	18	54	371	259	154	55	53
23	19	e19	e19	e17	e9.0	23	52	308	242	160	58	52
24	18	e20	e20	e18	e10	30	59	294	240	132	66	55
25	17	e21	e21	e16	e10	36	58	284	280	123	62	51
26	19	e22	e22	e16	e11	31	76	240	256	129	68	47
27	22	e21	e20	e18	e11	25	108	265	245	128	58	44
28	22	e23	e18	e19	e10	22	129	323	266	123	51	43
29	20	e26	e19	e17	e11	26	113	348	332	109	48	47
30	19	e28	e19	e16	---	27	99	262	298	103	46	58
31	17	---	e18	e18	---	33	---	234	---	95	44	---
TOTAL	750	673	683	526	441.5	488.5	2,084	10,103	10,501	5,190	1,975	1,434
MEAN	24.2	22.4	22.0	17.0	15.2	15.8	69.5	326	350	167	63.7	47.8
MAX	37	29	27	20	25	36	129	489	569	260	93	76
MIN	17	19	18	14	9.0	8.5	42	105	240	95	44	35
AC-FT	1,490	1,330	1,350	1,040	876	969	4,130	20,040	20,830	10,290	3,920	2,840

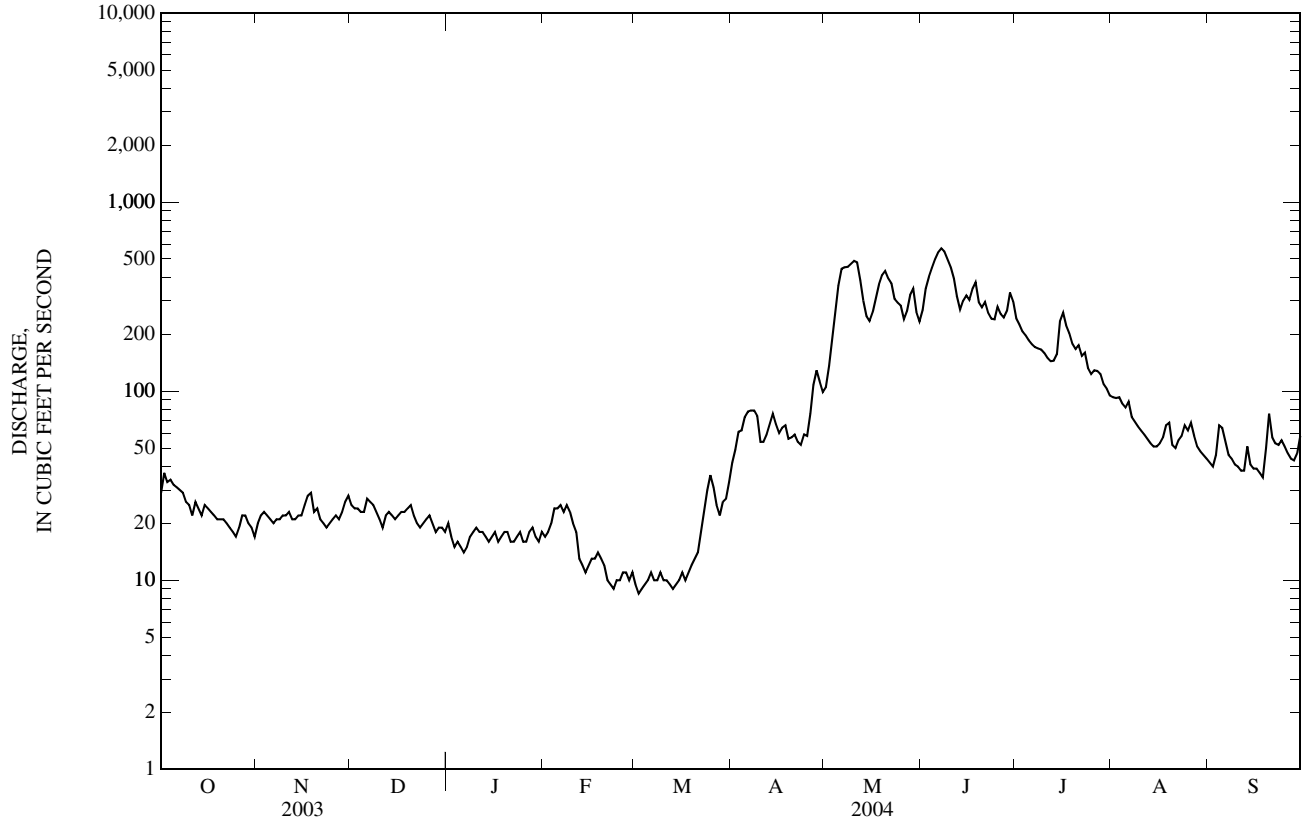
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

MEAN	51.8	39.6	31.6	26.5	23.0	24.1	52.3	397	725	314	103	66.1
MAX	136	62.0	50.0	55.7	36.9	38.6	112	789	1,273	1,003	232	157
(WY)	(1983)	(1974)	(1974)	(1997)	(1974)	(1969)	(1985)	(1984)	(1983)	(1975)	(1983)	(1982)
MIN	22.9	20.8	11.1	6.73	9.23	8.54	19.4	134	190	56.5	28.8	27.4
(WY)	(2002)	(2000)	(1977)	(1977)	(2003)	(2002)	(1975)	(1975)	(2002)	(2002)	(2002)	(2001)

09217900 BLACKS FORK NEAR ROBERTSON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1966 - 2004	
ANNUAL TOTAL	45,362.4		34,849.0			
ANNUAL MEAN	124		95.2		155	
HIGHEST ANNUAL MEAN					228	1983
LOWEST ANNUAL MEAN					57.1	2002
HIGHEST DAILY MEAN	1,780	May 30	569	Jun 7	1,880	Jun 19, 1983
LOWEST DAILY MEAN	5.8	Feb 8	8.5	Mar 2	3.2	Apr 2, 1994
ANNUAL SEVEN-DAY MINIMUM	6.6	Feb 7	9.6	Feb 28	3.9	Apr 2, 1994
MAXIMUM PEAK FLOW			712	Jun 6	2,480[a]	Jun 19, 1983
MAXIMUM PEAK STAGE			3.44	Jun 6	5.17[b]	Jun 15, 1995
ANNUAL RUNOFF (AC-FT)	89,980		69,120		112,200	
10 PERCENT EXCEEDS	369		297		461	
50 PERCENT EXCEEDS	37		36		45	
90 PERCENT EXCEEDS	14		13		20	

a Gage height, 4.91 ft, site and datum then in use.
b Discharge, 2,210 ft^3/s.
e Estimated



09220000 EAST FORK OF SMITHS FORK NEAR ROBERTSON, WY

LOCATION.--Lat 41°03'15", long 110°23'52", in NE¼NW¼NE¼ sec.5, T.12 N., R.115 W., Uinta County, Hydrologic Unit 14040107, Wasatch National Forest, on left bank 60 ft downstream from bridge, 1.0 mi upstream from Gilbert Creek, 6.1 mi downstream from State Line Reservoir, and 9.0 mi south of Robertson.

DRAINAGE AREA.--53.0 mi^2.

PERIOD OF RECORD.--July 1939 to September 1999, (no winter records 1971 to 1999), April 2001 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1, 1978, published as East Fork of Smith Fork near Robertson.

REVISED RECORDS.--WSP 979: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,470 ft above NGVD of 1929, from topographic map. Prior to July 12, 1957, at datum 3.96 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated by State Line Reservoir, 6.1 mi upstream, total capacity, 14,000 acre-ft, dead storage is about 2,000 acre-ft, since May 1979.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	e15	5.7	e4.4	e4.8	e4.2	e11	7.0	99	87	51	22
2	23	15	5.7	e4.3	e4.9	e4.1	e12	6.6	92	87	51	22
3	23	12	e5.6	e4.4	e4.9	e4.2	e11	6.5	92	86	48	23
4	22	13	e5.5	e4.5	e5.0	e4.3	e10	6.4	94	86	45	23
5	22	13	e5.4	e4.5	e4.9	e4.3	e11	6.1	98	85	43	23
6	21	e13	e5.2	e4.4	e4.8	e4.5	e11	5.7	98	84	42	22
7	21	e14	e5.0	e4.5	e4.6	e4.6	e12	5.6	98	84	40	22
8	21	e13	e4.9	e4.6	e4.6	e4.7	e12	5.4	107	84	38	22
9	21	e12	e4.8	e4.5	e4.5	e4.7	e11	5.3	119	84	37	22
10	20	12	e4.8	e4.4	e4.3	e4.8	e10	5.3	120	83	33	22
11	20	12	e4.7	e4.3	e4.1	e4.7	e8.8	5.3	120	83	28	23
12	20	12	e4.6	e4.3	e4.0	e4.7	e7.8	5.4	120	83	28	23
13	20	8.1	e4.7	e4.4	e4.1	e4.6	e7.8	5.6	119	76	28	24
14	20	7.9	e4.5	e4.3	e4.2	e4.7	7.8	24	119	66	28	23
15	20	11	e4.4	e4.2	e4.2	e4.8	6.9	51	106	68	28	23
16	20	9.8	e4.2	e4.3	e4.3	e5.0	6.4	52	90	69	28	28
17	20	9.5	e4.3	e4.3	e4.4	e5.4	6.2	52	89	69	29	34
18	19	10	e4.4	e4.4	e4.4	e5.8	6.8	67	89	72	30	34
19	19	8.1	e4.5	e4.4	e4.3	e6.0	6.1	99	88	70	29	34
20	19	7.5	e4.4	e4.3	e4.3	e6.4	6.1	108	88	72	29	35
21	19	6.8	e4.5	e4.3	e4.2	e6.8	9.9	107	89	75	29	29
22	19	5.9	e4.3	e4.4	e4.2	e7.0	7.4	108	93	75	29	21
23	19	e5.8	e4.3	e4.5	e4.3	e7.4	7.5	109	98	75	29	21
24	17	e6.0	e4.4	e4.6	e4.4	e7.6	7.1	108	99	74	28	21
25	14	e5.8	e4.4	e4.5	e4.4	e7.9	7.0	110	100	74	25	21
26	15	e5.6	e4.5	e4.6	e4.5	e7.6	6.8	111	99	74	26	21
27	15	e5.6	e4.5	e4.6	e4.4	e8.0	6.8	110	98	64	25	21
28	15	e5.8	e4.4	e4.7	e4.4	e8.4	6.8	110	98	52	25	19
29	15	e5.8	e4.4	e4.8	e4.3	e9.0	7.6	107	94	51	25	16
30	15	5.8	e4.3	e4.7	---	e9.6	7.2	105	87	51	25	15
31	15	---	e4.4	e4.7	---	e10	---	105	---	51	24	---
TOTAL	592	286.8	145.7	138.1	128.7	185.8	255.8	1,719.2	3,000	2,294	1,003	709
MEAN	19.1	9.56	4.70	4.45	4.44	5.99	8.53	55.5	100	74.0	32.4	23.6
MAX	23	15	5.7	4.8	5.0	10	12	111	120	87	51	35
MIN	14	5.6	4.2	4.2	4.0	4.1	6.1	5.3	87	51	24	15
AC-FT	1,170	569	289	274	255	369	507	3,410	5,950	4,550	1,990	1,410

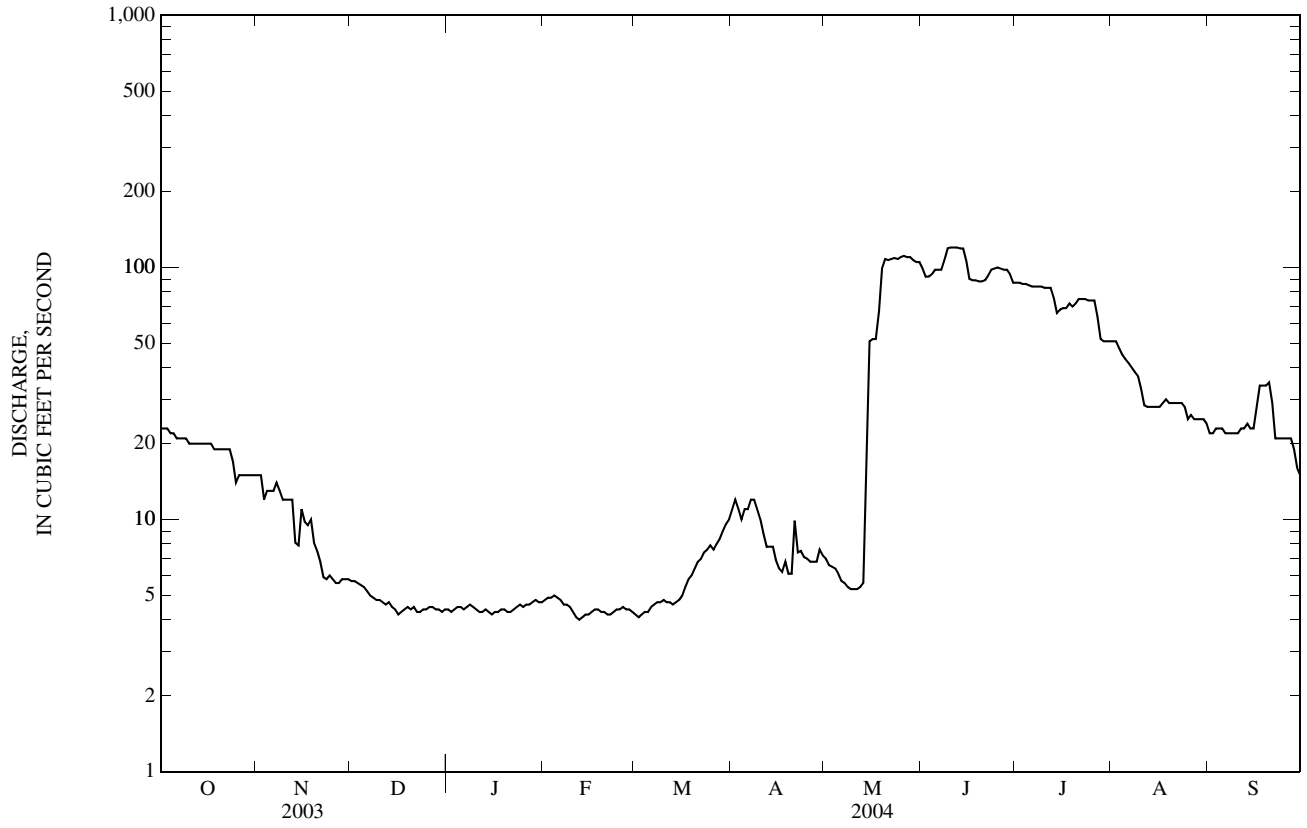
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	16.0	10.8	7.89	7.06	6.99	7.82	18.4	102	212	104	41.9	27.9
MAX	34.8	19.0	16.9	16.4	13.4	15.0	90.0	221	628	374	120	91.2
(WY)	(1962)	(1952)	(1966)	(1966)	(1966)	(1943)	(1946)	(1974)	(1983)	(1975)	(1965)	(1995)
MIN	5.21	5.50	2.11	1.34	1.55	2.14	3.71	26.6	59.3	15.9	6.64	6.68
(WY)	(1957)	(1957)	(1963)	(1963)	(1963)	(1963)	(1982)	(1983)	(1954)	(1940)	(1940)	(1956)

09220000 EAST FORK OF SMITHS FORK NEAR ROBERTSON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	12,887.5		10,458.1		--	
ANNUAL MEAN	35.3		28.6		45.6	
HIGHEST ANNUAL MEAN	--		--		88.9	1965
LOWEST ANNUAL MEAN	--		--		24.1	2002
HIGHEST DAILY MEAN	158	Jun 5	120	Jun 10-12	1,200	Jun 24, 1983
LOWEST DAILY MEAN	2.6	Feb 11	4.0	Feb 12	1.0	Dec 17, 1962
ANNUAL SEVEN-DAY MINIMUM	2.9	Feb 8	4.2	Feb 10	1.0	Dec 17, 1962
MAXIMUM PEAK FLOW	--		125	Jun 10	1,450	Jun 10, 1965
MAXIMUM PEAK STAGE	--		4.77	Jun 10	6.75	Jun 10, 1965
ANNUAL RUNOFF (AC-FT)	25,560		20,740		33,060	
10 PERCENT EXCEEDS	118		91		134	
50 PERCENT EXCEEDS	9.6		12		13	
90 PERCENT EXCEEDS	3.8		4.4		5.5	

e Estimated



09222000 BLACKS FORK NEAR LYMAN, WY

LOCATION.--Lat 41°27'08", long 110°10'20", in SW¼ NW¼ SW¼ sec.15, T.17 N., R.113 W., Uinta County, Hydrologic Unit 14040107, 200 ft downstream from bridge on old U.S. Highway 30S, 8.5 mi downstream from Smiths Fork, and 11 mi northeast of Lyman.

DRAINAGE.--821 mi^2.

PERIOD OF RECORD.--Water years 1962 to 1989, October 1995 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1962 to September 1983.
WATER TEMPERATURES: May 1962 to September 1983.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV													
20...	1050	42	600	11.0	98	8.7	2,110	7.0	.5	E25	E15	341	39
FEB													
18...	1205	20	609	8.5	73	7.6	1,520	2.0	.0	E16	E20	14	.76
JUN													
24...	1055	80	610	7.4	100	8.4	1,340	26.0	18.5	130	100	150	32
JUL													
28...	1625	102	607	7.0	103	8.2	1,140	27.0	22.5	420	310	343	94

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

09223000 HAMS FORK BELOW POLE CREEK, NEAR FRONTIER, WY

LOCATION.--Lat 42°06'38", long 110°42'32", in NE¼ SE¼ NW¼ sec.35, T.25 N., R.117 W., Lincoln County, Hydrologic Unit 14040107, on left bank 2.0 mi downstream from Pole Creek, 4.6 mi upstream from Taylor Creek, and 22 mi northwest of Frontier.

DRAINAGE AREA.--128 mi^2.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1970, published as "near Elk Creek ranger station."

GAGE.--Water-stage recorder. Elevation of gage is 7,455 ft above NGVD of 1929, from topographic map. October 1952 to September 2, 1971, at site 270 ft upstream at present datum, September 3, 1971 to July 30, 1980, at site 150 ft upstream at present datum. National Weather Service data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	e11	e12	e10	e12	e14	e66	67	e175	82	23	11
2	14	e12	e11	e8.6	e11	e13	e64	72	167	73	24	10
3	14	e12	e11	e7.8	e12	e14	e68	98	161	69	23	15
4	14	e11	e11	e8.0	e13	e14	e66	130	172	66	23	21
5	14	e10	e10	e7.4	e15	e15	e72	177	197	65	23	20
6	14	e9.4	e11	e6.6	e15	e15	e80	e230	215	56	21	16
7	14	e9.8	e10	e7.0	e14	e16	e90	e260	223	52	19	14
8	15	e10	e9.8	e7.4	e14	e17	e115	e270	222	55	17	12
9	15	e10	e9.6	e7.8	e14	e18	e150	e260	214	50	15	11
10	13	e10	e9.4	e8.0	e14	e19	e140	e250	242	47	15	10
11	13	e11	e10	e7.6	e13	e24	e115	e240	241	43	14	10
12	12	e10	e11	e7.0	e13	e27	e100	e240	205	39	15	10
13	13	e10	e12	e7.0	e12	e29	98	e220	178	37	13	12
14	14	e11	e11	e6.8	e12	e31	108	e200	156	38	12	16
15	13	e11	e11	e7.0	e13	e33	98	e180	143	39	11	15
16	14	e12	e12	e7.4	e13	e35	84	e170	137	40	11	14
17	14	e12	e13	e7.2	e14	e33	77	e150	134	37	12	13
18	14	e13	e13	e7.6	e15	e38	78	e130	132	35	15	13
19	14	e12	e14	e8.0	e15	e44	68	e120	130	43	18	12
20	13	e11	e15	e8.0	e14	e50	65	e140	132	37	17	15
21	13	e10	e14	e7.8	e14	e56	65	e125	131	35	21	20
22	13	e10	e13	e7.8	e13	e64	64	e160	118	33	19	18
23	12	e9.4	e12	e8.2	e12	e80	56	e220	109	33	21	17
24	12	e10	e12	e8.6	e12	e92	57	e170	103	32	19	17
25	11	e10	e13	e8.4	e13	e104	57	e140	97	30	17	16
26	11	e11	e14	e9.0	e14	e80	64	e120	93	28	17	15
27	11	e10	e13	e10	e13	e60	87	e140	90	29	16	14
28	11	e11	e10	e11	e13	e50	112	e200	95	29	15	15
29	12	e12	e11	e12	e14	e44	93	e310	86	26	14	15
30	e12	e12	e11	e14	---	e52	75	e240	82	24	12	17
31	e10	---	e9.4	e13	---	e57	---	e190	---	22	12	---
TOTAL	402	323.6	359.2	262.0	386	1,238	2,532	5,619	4,580	1,324	524	434
MEAN	13.0	10.8	11.6	8.45	13.3	39.9	84.4	181	153	42.7	16.9	14.5
MAX	15	13	15	14	15	104	150	310	242	82	24	21
MIN	10	9.4	9.4	6.6	11	13	56	67	82	22	11	10
AC-FT	797	642	712	520	766	2,460	5,020	11,150	9,080	2,630	1,040	861

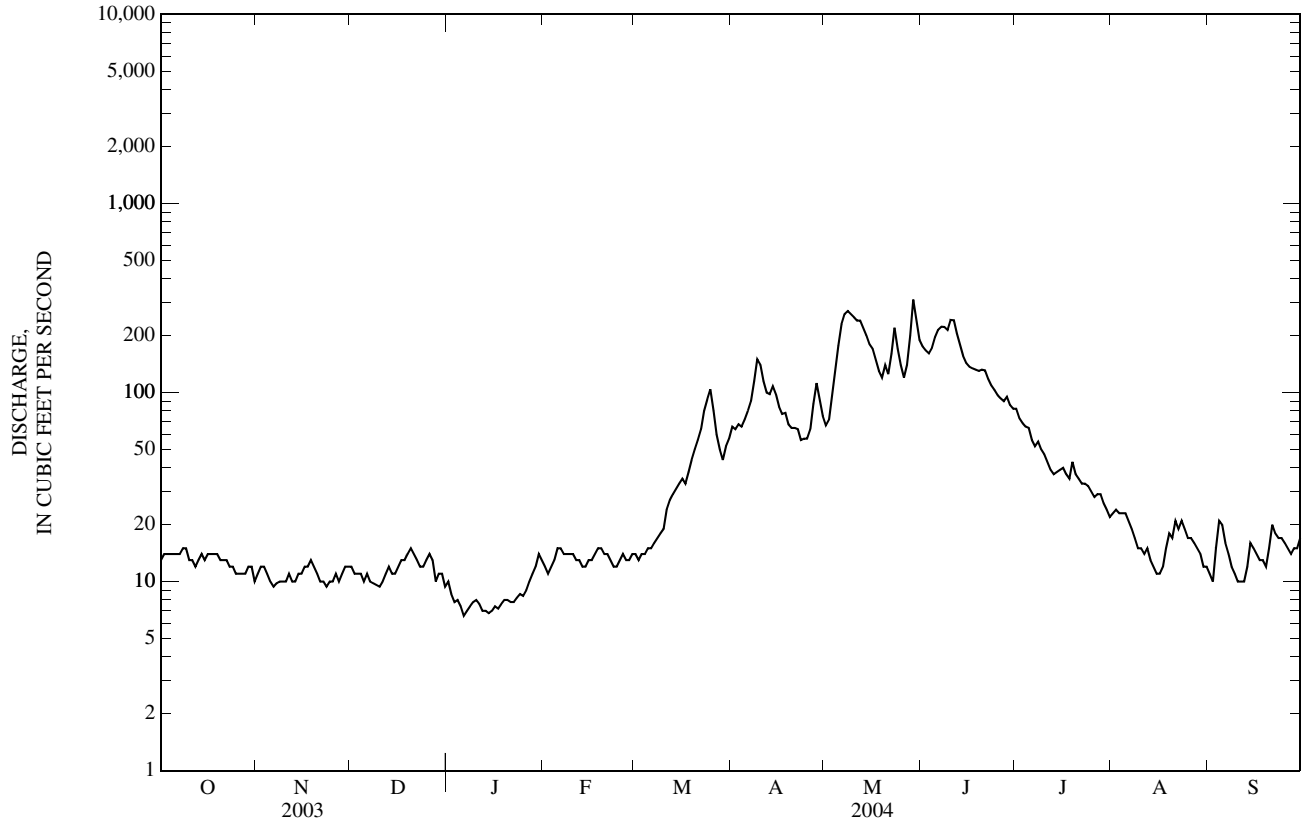
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2004, BY WATER YEAR (WY)

MEAN	21.7	19.0	16.0	14.5	15.0	21.2	102	403	380	93.3	28.7	20.9
MAX	54.2	34.4	27.8	26.4	29.1	39.9	398	970	1,039	296	64.0	51.9
(WY)	(1983)	(1983)	(1984)	(1984)	(1958)	(2004)	(1971)	(1971)	(1986)	(1975)	(1983)	(1984)
MIN	8.44	9.37	8.58	6.23	5.61	6.77	19.8	40.5	24.0	9.32	4.55	5.56
(WY)	(2002)	(1961)	(2002)	(1967)	(1967)	(1965)	(1975)	(1977)	(1977)	(1977)	(2001)	(2001)

09223000 HAMS FORK BELOW POLE CREEK, NEAR FRONTIER, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1953 - 2004	
ANNUAL TOTAL	15,476.4		17,983.8		--	
ANNUAL MEAN	42.4		49.1		94.8	
HIGHEST ANNUAL MEAN	--		--		214	1971
LOWEST ANNUAL MEAN	--		--		17.7	1977
HIGHEST DAILY MEAN	377	May 30	310	May 29	2,000	Jun 5, 1986
LOWEST DAILY MEAN	6.2	Feb 24	6.6	Jan 6	0.10	Aug 17, 1977
ANNUAL SEVEN-DAY MINIMUM	6.6	Feb 6	7.1	Jan 11	0.62	Aug 11, 1977
MAXIMUM PEAK FLOW	--		Unknown[a]		2,230[b]	Jun 5, 1986
MAXIMUM PEAK STAGE	--		Unknown[a]		8.10[c]	May 28, 1971
ANNUAL RUNOFF (AC-FT)	30,700		35,670		68,660	
10 PERCENT EXCEEDS	100		141		285	
50 PERCENT EXCEEDS	13		15		22	
90 PERCENT EXCEEDS	8.6		10		11	

a Occurred sometime during the period May 28-30.
b Gage height, 6.72 ft.
c Site then in use, at current datum.
e Estimated.



09224050 HAMS FORK NEAR DIAMONDVILLE, WY

LOCATION.--Lat 41°45'06", long 110°31'57", in NW¼ SE¼ SW¼ sec.36, T.21 N., R.116 W., Lincoln County, Hydrologic Unit 14040107, at bridge on U.S. Highway 30 North, 1.9 mi south of Diamondville, and 2.8 mi south of Kemmerer.

PERIOD OF RECORD.--Water years 1974 to September 1989, October 1992 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
NOV 19...	1325	19	603	11.9	105	8.4	613	6.5	.5	<.04	.90	<.008	.05
FEB 17...	1415	8.2	598	9.5	83	7.8	699	.0	.0	.08	1.50	.010	.09
JUN 23...	1400	82	602	8.9	124	8.8	428	25.0	19.5	<.04	.14	<.008	<.02
JUL 28...	1330	30	605	10.7	146	8.7	355	27.0	19.0	<.04	.09	<.008	E.01

Date	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
NOV 19...	E2	E3
FEB 17...	E13	E30
JUN 23...	25	26
JUL 28...	E14	26

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

09224700 BLACKS FORK NEAR LITTLE AMERICA, WY

LOCATION.--Lat 41°32'46", long 109°41'34", in NE¼ NE¼ NE¼ sec.15, T.18 N., R.109 W., Sweetwater County, Hydrologic Unit 14040107, on right bank 200 ft upstream from bridge on U.S. Highway 30, 4.2 mi upstream from Meadow Springs Wash, and 8.5 mi east of Little America.

DRAINAGE AREA.--3,100 mi^2.

PERIOD OF RECORD.--June 1962 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,127.66 ft above NGVD of 1929. National Weather Service data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by regulation from Meeks Cabin Reservoir, capacity, 32,470 acre-ft, since June 1971; Viva Naughton Reservoir, capacity, 42,400 acre-ft; from State Line Reservoir, capacity, 14,000 acre-ft, since April 1980; numerous smaller reservoirs, and diversions for upstream from mines and irrigation of about 76,100 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	7.0	18	e13	e3.7	e10	121	36	104	191	46	1.8
2	5.8	7.8	20	e12	e3.8	e9.0	104	35	102	205	38	1.4
3	7.8	8.3	24	e11	e4.0	e8.6	92	55	86	173	31	1.1
4	9.2	5.7	e24	e10	e4.2	e7.6	88	58	70	142	28	1.1
5	11	6.9	e25	e9.0	e4.4	e7.8	87	41	59	138	29	46
6	9.7	e9.0	e29	e8.0	e4.5	e8.0	88	30	47	111	37	16
7	6.4	e12	e28	e8.0	e4.8	e9.0	83	27	37	103	29	6.1
8	5.5	e14	e27	e9.0	e5.0	e10	81	54	33	77	20	5.9
9	5.0	e15	e25	e9.0	e5.1	e13	84	84	31	62	15	14
10	4.8	e20	e25	e10	e5.0	e18	84	93	30	52	12	12
11	4.4	e22	e25	e11	e5.0	e30	92	84	28	46	9.3	8.2
12	3.4	e23	25	e11	e5.4	e50	114	65	27	41	7.3	5.1
13	2.4	e23	24	e11	e5.4	e100	130	58	41	37	5.9	5.2
14	1.9	e24	26	e10	e5.7	e500	129	58	73	33	5.8	4.2
15	1.8	e25	25	e9.2	e6.0	e900	114	49	85	31	3.7	2.4
16	2.5	e25	22	e8.0	e7.0	e780	89	37	84	37	2.5	2.1
17	5.3	e25	21	e7.8	e8.0	716	73	28	75	42	2.1	2.4
18	5.8	e23	20	e7.0	e9.0	638	68	24	77	43	1.8	2.4
19	7.6	e25	17	e6.0	e10	516	60	21	88	44	1.4	2.1
20	8.5	e27	16	e5.7	e10	429	57	18	102	250	1.5	7.6
21	9.8	e27	15	e5.0	e11	428	54	16	142	157	7.3	7.6
22	9.9	e26	e15	e4.5	e11	400	49	15	136	78	10	4.4
23	11	e25	e15	e4.8	e10	356	48	15	138	64	6.5	3.1
24	11	e22	e14	e5.0	e9.0	323	69	25	134	59	5.2	2.0
25	11	e22	e14	e4.7	e9.0	284	68	26	130	59	5.5	3.4
26	11	e20	e15	e4.1	e10	244	61	25	116	57	6.4	4.0
27	12	e17	e14	e3.7	e10	200	51	26	114	53	5.7	5.4
28	11	16	e13	e3.9	e11	177	41	36	122	59	8.1	7.8
29	10	16	e12	e3.7	e10	163	37	50	147	88	7.7	10
30	7.4	16	e13	e4.0	---	142	37	52	148	100	4.5	12
31	5.3	---	e14	e3.9	---	134	---	59	---	66	2.5	---
TOTAL	223.0	554.7	620	233.0	207.0	7,611.0	2,353	1,300	2,606	2,698	395.7	206.8
MEAN	7.19	18.5	20.0	7.52	7.14	246	78.4	41.9	86.9	87.0	12.8	6.89
MAX	12	27	29	13	11	900	130	93	148	250	46	46
MIN	1.8	5.7	12	3.7	3.7	7.6	37	15	27	31	1.4	1.1
AC-FT	442	1,100	1,230	462	411	15,100	4,670	2,580	5,170	5,350	785	410

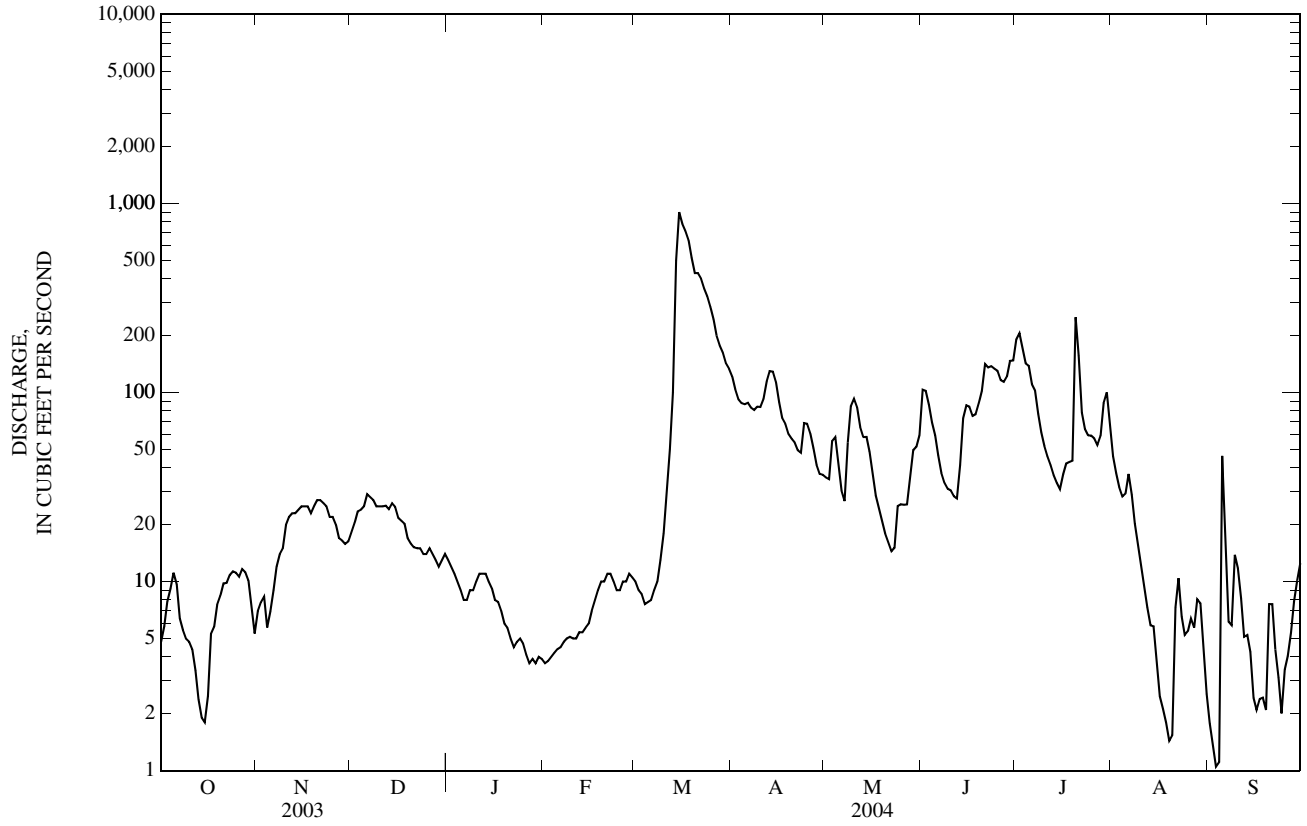
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	93.8	101	73.5	75.9	106	329	471	892	1,017	303	104	81.2
MAX	376	336	230	371	318	912	1,310	2,918	4,573	1,349	542	576
(WY)	(1983)	(1983)	(1984)	(1971)	(1984)	(1997)	(1973)	(1984)	(1983)	(1975)	(1983)	(1983)
MIN	7.05	13.0	5.44	3.94	7.14	33.9	23.4	21.1	14.0	2.86	0.00	0.00
(WY)	(1980)	(2002)	(1995)	(1991)	(2004)	(1964)	(2003)	(1977)	(1977)	(2002)	(2002)	(1994)

09224700 BLACKS FORK NEAR LITTLE AMERICA, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	17,171.7		19,008.2		--	
ANNUAL MEAN	47.0		51.9		305	
HIGHEST ANNUAL MEAN	--		--		888	1983
LOWEST ANNUAL MEAN	--		--		23.2	2002
HIGHEST DAILY MEAN	1,680	Jun 25	900	Mar 15	9,340	Jun 13, 1965
LOWEST DAILY MEAN	1.8	Oct 15	1.1	Sep 3,4	0.00	Many days, several years
ANNUAL SEVEN-DAY MINIMUM	3.0	Oct 10	2.7	Aug 14	0.00	Several years
MAXIMUM PEAK FLOW	--		Unknown		9,980[a]	Jun 13, 1965
MAXIMUM PEAK STAGE	--		7.61[b]	Mar 15	11.18[b]	Mar 13, 1997
ANNUAL RUNOFF (AC-FT)	34,060		37,700		220,800	
10 PERCENT EXCEEDS	76		118		872	
50 PERCENT EXCEEDS	22		18		105	
90 PERCENT EXCEEDS	6.5		4.3		14	

a Gage height, 10.90 ft.
b Backwater from ice.
e Estimated.



09229500 HENRYS FORK NEAR MANILA, UT

LOCATION.--Lat 41°00'45", long 109°40'20", in NW¼ NW¼ sec.23, T.12 N., R. 109 W., Sweetwater County, WY, Hydrologic Unit 14040106, on right bank 0.8 mi north of Wyoming-Utah State line, 1.3 mi upstream from normal high-water line of Flaming Gorge Reservoir at elevation 6,045 ft, and 3.0 mi northeast of Manila, UT.

DRAINAGE AREA.--520 mi^2, approximately.

PERIOD OF RECORD.--October 1928 to September 1993, May 2001 to current year. Prior to October 1971, published as "at Linwood, UT."

REVISED RECORDS.--WSP 1443: 1955. WDR WY-76-2: 1970. WDR WY-92-1: 1991.

GAGE.--Water-stage recorder. Elevation of gage is 6,060 ft above NGVD of 1929, from topographic map. Prior to October 1, 1957, nonrecording gages or water-stage recorder at several sites and 2.0 mi downstream at various datums. October 1, 1957 to December 2, 1965, water-stage recorders at sites about 1.0 mi upstream at different datums. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges and those from August 12 to September 30, which are poor. Peoples Irrigation Canal diverts 5.9 mi upstream. Natural flow of stream affected by transbasin diversions, small storage reservoirs, diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	19	68	e41	e34	e54	23	5.4	7.2	63	6.0	2.3
2	4.6	25	62	e30	e32	e88	24	4.5	6.0	33	5.7	2.2
3	4.6	31	e62	e25	e35	e70	23	2.0	7.1	20	5.5	2.1
4	4.5	30	e50	e27	e40	65	22	1.7	6.5	24	7.9	5.3
5	4.3	29	e42	e26	e42	66	21	1.5	7.6	29	10	33
6	4.3	32	44	e23	e45	65	21	1.8	6.5	12	7.7	10
7	4.2	27	e43	e29	e40	71	21	7.3	8.3	6.3	6.3	3.8
8	4.1	40	46	e33	e62	131	23	7.4	14	4.2	6.0	2.9
9	3.8	39	e60	e40	e56	180	25	9.5	7.8	3.5	5.8	3.0
10	3.7	48	e66	e35	e50	107	28	23	6.8	3.1	4.0	2.3
11	3.5	44	e64	e34	e44	124	27	46	6.1	3.4	3.4	2.2
12	3.6	47	e58	e32	e42	106	34	64	5.3	3.6	2.6	2.2
13	3.6	59	56	e29	e62	100	36	36	5.1	3.1	1.1	2.4
14	3.4	63	54	e27	e80	95	29	18	4.7	2.9	1.0	2.8
15	3.5	56	55	e30	98	97	24	11	4.3	3.7	1.1	3.2
16	3.5	60	e70	e32	80	82	20	7.6	4.0	7.5	1.1	3.2
17	6.3	62	e72	e27	75	79	18	5.0	4.2	22	2	3.1
18	7.8	e35	e54	e30	72	72	17	7.4	24	21	4.9	2.5
19	8.1	e36	e55	e34	70	79	18	11	35	51	6.2	2.9
20	8.5	e34	e64	e32	65	78	16	27	40	35	9.8	3.9
21	8.5	e36	62	e30	66	64	14	24	46	18	5.9	7.0
22	8.6	e30	62	e29	62	54	17	19	52	12	5.4	8.2
23	8.6	e27	62	e33	60	52	18	15	15	11	9.4	8.1
24	9.1	e33	e65	e30	59	39	13	15	9.1	11	14	7.2
25	9.2	e39	e60	e26	58	35	10	9.0	20	9.1	23	7.0
26	9.2	e50	e55	e29	61	31	8.6	14	28	15	15	5.3
27	9.2	e45	52	e32	e60	28	5.2	11	30	18	22	4.3
28	9.4	e59	33	e37	e50	23	1.5	7.4	38	16	14	4.5
29	11	e69	e30	e40	e45	22	1.7	6.3	43	15	9.0	5.0
30	12	e80	e37	e45	---	22	1.7	8.0	68	8.5	4.7	6.7
31	16	---	e35	e36	---	22	---	11	---	7.4	2.5	---
TOTAL	205.4	1,284	1,698	983	1,645	2,201	560.7	436.8	559.6	492.3	223.0	158.6
MEAN	6.63	42.8	54.8	31.7	56.7	71.0	18.7	14.1	18.7	15.9	7.19	5.29
MAX	16	80	72	45	98	180	36	64	68	63	23	33
MIN	3.4	19	30	23	32	22	1.5	1.5	4.0	2.9	1.0	2.1
AC-FT	407	2,550	3,370	1,950	3,260	4,370	1,110	866	1,110	976	442	315

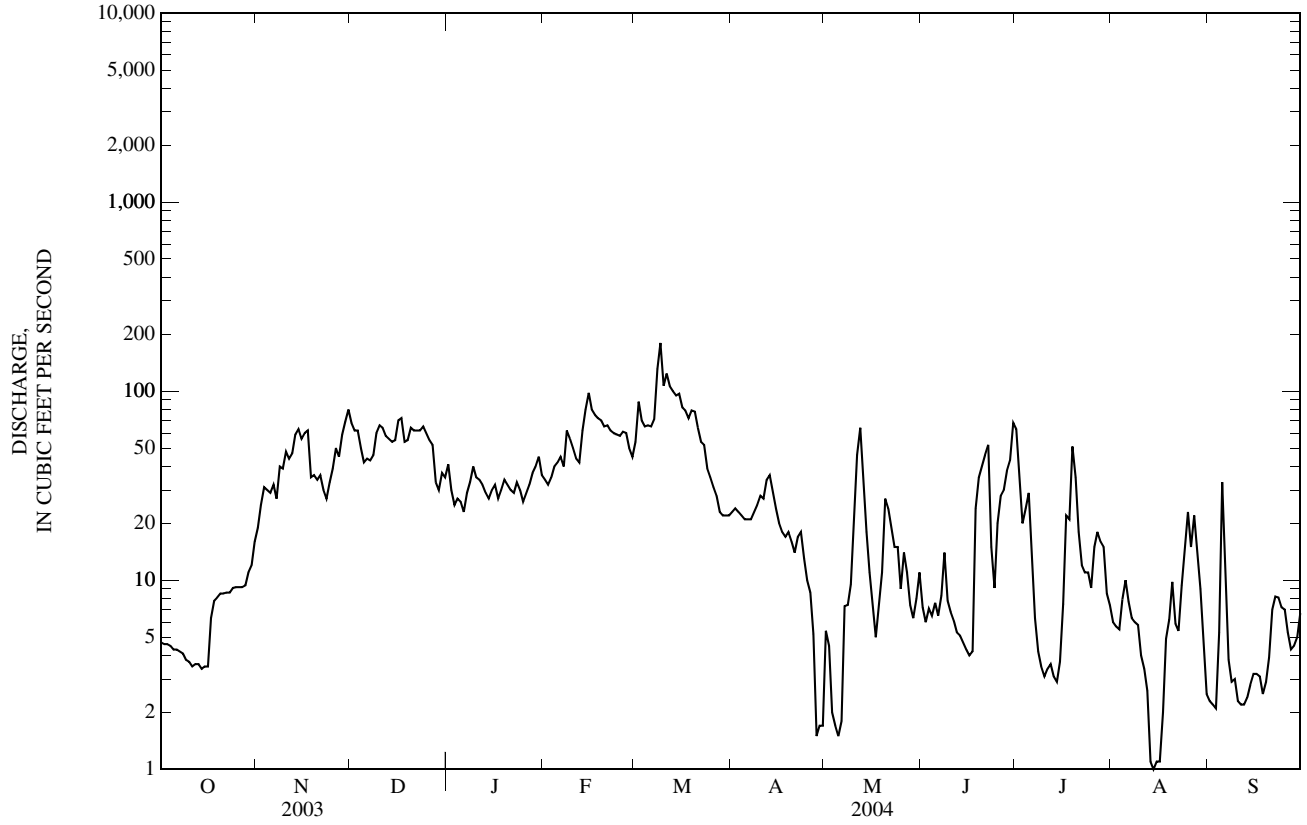
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2004, BY WATER YEAR (WY)

MEAN	45.6	54.6	47.6	42.5	46.0	69.3	82.5	151	267	90.3	48.5	33.0
MAX	176	117	105	103	88.6	165	196	541	1,375	703	323	191
(WY)	(1983)	(1984)	(1985)	(1984)	(1984)	(1929)	(1944)	(1984)	(1983)	(1975)	(1965)	(1929)
MIN	0.00	12.8	20.5	15.2	15.0	24.9	3.94	3.75	0.10	0.00	0.09	0.00
(WY)	(1935)	(1935)	(1933)	(1933)	(1933)	(1957)	(1935)	(2002)	(1934)	(1934)	(1940)	(1934)

09229500 HENRYS FORK NEAR MANILA, UT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1929 - 2004	
ANNUAL TOTAL	18,255.3		10,447.4		--	
ANNUAL MEAN	50.0		28.5		81.5	
HIGHEST ANNUAL MEAN	--		--		273	1983
LOWEST ANNUAL MEAN	--		--		16.5	1934
HIGHEST DAILY MEAN	1,290	May 31	180	Mar 9	3,780	Jun 13, 1965
LOWEST DAILY MEAN	2.8	Apr 13	1.0	Aug 14	0.00	Sep 20, 1933
ANNUAL SEVEN-DAY MINIMUM	3.4	Apr 22	1.8	Aug 11	0.00	Jun 6, 1934
MAXIMUM PEAK FLOW	--		413	Mar 8	6,750[a]	Aug 3, 1936
MAXIMUM PEAK STAGE	--		4.02	Mar 8	9.42[b]	Jul 15, 1959
ANNUAL RUNOFF (AC-FT)	36,210		20,720		59,060	
10 PERCENT EXCEEDS	67		64		165	
50 PERCENT EXCEEDS	32		22		47	
90 PERCENT EXCEEDS	4.4		3.5		4.2	

a Gage height, 7.19 ft, site and datum then in use, from floodmarks, from rating curve extended above 57 ft^3/s, on basis of slope-area measurement of peak flow.
b Site and datum then in use. Discharge not determined.
e Estimated.



09234500 GREEN RIVER NEAR GREENDALE, UT

LOCATION.--Lat 40°54'30", long 109°25'20", in NW¼ NW¼ SE¼ sec. 15. T. 2 N., R. 22 E., Daggett County, Hydrologic Unit 14040106, Ashley National Forest on right bank 0.5 mi downstream from Flaming Gorge Dam, 2 mi south of Dutch John, 4 mi northeast of Greendale, and 407 mi from mouth.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--19,350 mi^2, approximately, including 4,260 mi^2 is probably noncontributing. This noncontributing area includes 3,959 mi^2 in Great Divide Basin in southern Wyoming.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WDR UT-76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,594.48 ft above NGVD of 1929. Prior to September 2, 1959, water-stage recorder at site 2.2 mi upstream at different datum. September 3, 1959 to September 30, 1985, at datum 5.0 ft lower.

REMARKS.-- Records good. Flow completely regulated by Flaming Gorge Reservoir 0.5 mi upstream, beginning November 1, 1962. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	889	928	940	947	947	954	e954	962	1,150	1,140	1,150	1,150
2	877	928	943	948	918	954	e954	962	1,150	1,140	1,140	1,160
3	885	928	943	952	906	954	e954	961	1,160	1,140	1,160	1,160
4	896	928	940	958	910	954	e953	962	1,150	1,140	1,150	1,160
5	896	928	941	965	918	953	e953	961	1,150	1,140	1,160	1,160
6	894	928	943	936	917	954	e954	956	1,150	1,140	1,140	1,160
7	896	928	944	933	917	1,180	953	955	1,150	1,150	1,150	1,160
8	896	928	944	928	918	955	952	1,070	1,150	1,160	1,160	1,160
9	898	929	944	928	918	954	951	2,640	1,150	1,170	1,160	1,160
10	894	928	944	928	919	952	970	4,000	1,160	1,170	1,150	1,160
11	895	929	945	928	919	953	989	4,550	1,160	1,170	1,160	1,110
12	895	929	945	928	918	952	964	4,530	1,160	1,170	1,150	1,160
13	900	929	945	928	911	952	953	4,130	1,150	1,160	1,150	1,380
14	901	931	943	928	911	1,180	954	3,760	1,150	1,170	1,150	1,440
15	902	936	944	928	912	954	954	3,410	1,150	1,170	1,160	1,160
16	914	936	945	928	913	953	956	3,020	1,160	1,160	1,140	1,160
17	922	931	944	931	912	953	954	2,630	1,160	1,170	1,160	1,150
18	923	932	945	931	914	953	957	2,260	1,160	1,160	1,160	1,150
19	925	933	945	923	938	953	967	1,910	1,160	1,160	1,160	1,150
20	929	933	945	931	1,130	954	955	1,390	1,160	1,170	1,150	1,150
21	934	936	945	926	953	1,200	956	1,200	1,150	796	1,160	1,160
22	929	935	945	936	1,180	953	957	1,170	1,150	1,170	1,160	1,160
23	923	936	948	940	948	954	959	1,160	1,150	1,160	1,160	1,160
24	925	934	945	938	946	954	958	1,160	1,150	1,170	1,160	1,150
25	927	938	945	944	947	954	964	1,160	1,150	1,170	1,160	1,160
26	927	940	945	975	954	953	957	1,160	1,150	1,170	1,150	1,160
27	926	941	945	1,180	953	954	958	1,160	1,150	1,170	1,160	1,160
28	924	938	945	943	953	1,180	959	1,160	1,160	1,170	1,160	1,160
29	927	940	945	947	1,180	953	962	1,160	1,160	1,160	1,160	1,160
30	928	941	945	946	---	951	962	1,160	1,130	1,170	1,160	1,160
31	928	---	945	946	---	e954	---	1,150	---	1,160	1,160	---
TOTAL	28,225	27,979	29,270	29,328	27,580	30,481	28,743	58,819	34,590	35,616	35,810	35,190
MEAN	910	933	944	946	951	983	958	1,897	1,153	1,149	1,155	1,173
MAX	934	941	948	1,180	1,180	1,200	989	4,550	1,160	1,170	1,160	1,440
MIN	877	928	940	923	906	951	951	955	1,130	796	1,140	1,110
AC-FT	55,980	55,500	58,060	58,170	54,700	60,460	57,010	116,700	68,610	70,640	71,030	69,800

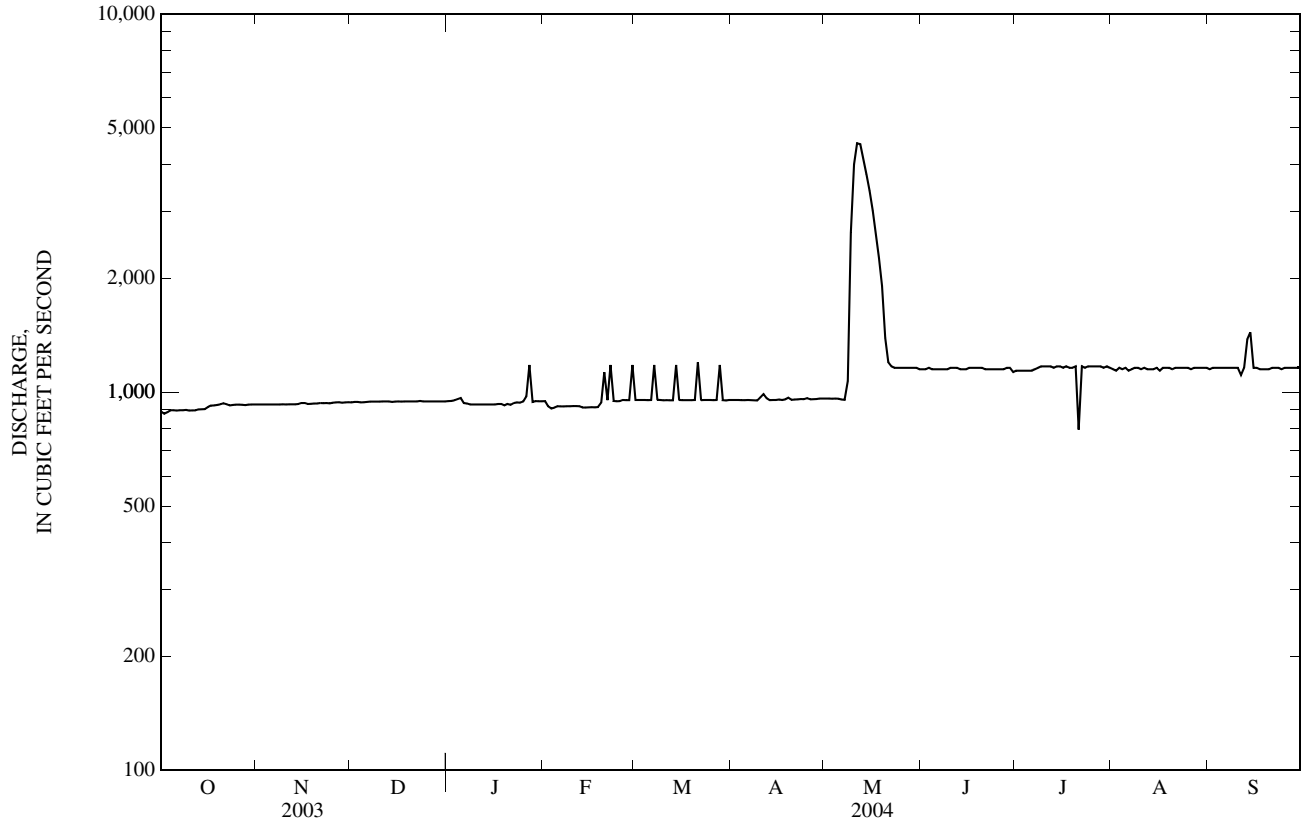
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	1,827	1,975	2,150	2,078	2,060	1,762	1,891	2,488	2,468	2,239	1,927	1,808
MAX	3,911	3,655	3,626	4,145	4,090	3,818	4,271	7,146	8,044	10,130	5,056	3,729
(WY)	(1983)	(1983)	(1973)	(1985)	(1984)	(1977)	(1997)	(1986)	(1999)	(1983)	(1983)	(1983)
MIN	128	312	743	836	773	599	587	984	900	474	497	734
(WY)	(1964)	(1964)	(1964)	(2002)	(1971)	(1964)	(1964)	(1990)	(2002)	(1965)	(1965)	(1965)

09234500 GREEN RIVER NEAR GREENDALE, UT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	371,712		401,631		--	
ANNUAL MEAN	1,018		1,097		2,056	
HIGHEST ANNUAL MEAN	--		--		4,270	1983
LOWEST ANNUAL MEAN	--		--		936	2002
HIGHEST DAILY MEAN	4,590	May 26	4,550	May 11	12,300	Jul 16, 1983
LOWEST DAILY MEAN	751	Jul 8	796	Jul 21	90	Oct 8, 1963
ANNUAL SEVEN-DAY MINIMUM	754	Jul 7	890	Oct 1	112	Oct 2, 1963
ANNUAL RUNOFF (AC-FT)	737,300		796,600		1,490,000	
10 PERCENT EXCEEDS	1,030		1,170		3,690	
50 PERCENT EXCEEDS	855		954		1,760	
90 PERCENT EXCEEDS	787		923		866	

e Estimated.



09234500 GREEN RIVER NEAR GREENDALE, UT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1956 to September 2000, October 2001 to September 2003, February 2004 to September 2004

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1956 to September 1959, October 1963 to September 2000.
WATER TEMPERATURES: October 1956 to September 1959, October 1963 to September 2000, October 2001 to September 2003, February 2004 to September 2004.
SEDIMENT DATA: October 1956 to September 1959.

INSTRUMENTATION.--Water-quality monitor from December 1986 to September 2000. Water temperature Thermister installed October 2001.

REMARKS.--Storage in Flaming Gorge Reservoir began on November 1, 1962. Samples for daily records are taken inside Penstock. Extremes are given for two separate periods--water years 1957-62, and water years 1964 to current year. Extremes for the 1963 water year (October 1962 to September 1963) are not included. Temperature extremes for the 1994 water year are not included. Unpublished daily records of specific conductance obtained before 1965 were included in the determination of extremes for period of daily record and are available in files of district office. Daily records provided by Bureau of Reclamation. Water-quality monitor located in seperate shelter 0.6 mi downstream from Flaming Gorge Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.--(water years 1957-62, 1964-2000, 2002-03, Feb to Sep 2004).
SPECIFIC CONDUCTANCE (water years 1957-58, 1960-62): Maximum daily, 1,340 microsiemens, August 30, 1961; minimum daily, 325 microsiemens, June 2, 1961.
WATER TEMPERATURES (water years 1957-59): Maximum, 24.0°C, July 24, 25, 1959; minimum, 0.0°C, on many days during winter period each year.
SPECIFIC CONDUCTANCE (water years 1964 to 2000): Maximum daily, 1,060 microsiemens, November 9, 1971; minimum, 507 microsiemens, July 29, 1998.
WATER TEMPERATURES: (water years 1964 to 2000, 2002-03, February to September 2004): Maximum, 17.2°C, July 9, 1989; minimum 1.6°C, March 1, 2, 1987.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 15.6°C, July 22; minimum recorded, 2.3°C, February 8.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	3.8	3.0	3.3	4.9	4.4	4.5	7.6	6.9	7.3
2	---	---	---	4.1	3.0	3.3	5.0	4.3	4.8	8.2	7.2	7.5
3	---	---	---	4.1	3.1	3.5	4.9	4.2	4.5	8.7	7.3	8.0
4	---	---	---	3.9	3.1	3.4	5.0	4.4	4.7	8.6	7.8	8.0
5	---	---	---	4.1	3.1	3.4	5.6	4.8	5.1	8.2	7.8	7.9
6	4.1	3.1	3.4	3.8	2.8	3.2	5.3	4.5	4.8	8.1	7.3	7.7
7	4.1	3.1	3.5	4.1	2.8	3.3	5.3	4.7	5.0	8.3	7.4	7.8
8	3.4	2.3	3.0	4.5	3.1	3.5	5.6	4.7	5.2	8.5	7.6	7.9
9	3.4	2.4	2.9	4.5	3.3	3.6	6.9	5.5	6.1	8.8	8.0	8.6
10	3.8	2.6	3.1	4.5	3.3	3.6	6.1	5.6	5.8	8.8	7.4	8.3
11	3.6	3.0	3.2	4.5	3.3	3.6	6.3	5.3	5.8	9.3	7.9	8.7
12	3.6	2.6	3.0	4.7	3.4	3.7	6.3	5.8	6.1	9.0	7.9	8.3
13	3.9	2.8	3.2	4.7	3.4	3.7	6.3	5.5	5.8	9.2	8.1	8.9
14	3.9	2.8	3.3	4.7	3.4	3.8	6.3	5.8	6.0	8.9	8.1	8.6
15	4.1	3.0	3.4	4.7	3.4	3.8	6.6	6.1	6.2	8.9	8.4	8.7
16	4.1	3.1	3.4	4.4	3.6	3.8	6.7	6.1	6.4	9.2	8.4	8.8
17	4.2	3.3	3.6	4.9	3.6	3.9	6.7	6.1	6.5	9.5	8.6	9.1
18	4.5	3.4	3.7	5.0	3.8	4.0	6.7	6.3	6.4	9.8	8.8	9.3
19	3.6	3.3	3.4	5.2	3.8	4.2	6.4	5.8	6.2	9.8	9.2	9.6
20	3.9	3.1	3.4	5.2	3.9	4.2	6.6	5.8	6.2	9.8	8.9	9.2
21	3.8	3.1	3.4	5.0	3.9	4.2	6.6	6.1	6.3	10.3	9.0	9.6
22	3.9	3.1	3.4	5.0	3.9	4.2	6.3	5.6	6.1	9.9	8.8	9.5
23	4.1	3.3	3.5	4.5	4.1	4.2	6.4	5.3	5.8	10.3	8.7	9.3
24	3.8	3.4	3.5	5.2	3.9	4.3	6.6	5.8	6.2	9.9	9.2	9.5
25	4.2	3.4	3.6	4.5	4.1	4.2	7.2	6.3	6.6	9.7	9.0	9.4
26	4.1	3.3	3.7	4.9	4.1	4.3	7.4	6.7	6.9	10.2	9.1	9.6
27	4.1	3.3	3.5	5.0	4.2	4.6	7.5	6.8	7.1	10.5	9.6	9.9
28	4.4	3.0	3.6	5.3	4.7	5.0	8.5	7.1	7.5	10.7	9.7	10.0
29	3.8	3.1	3.4	4.7	4.2	4.4	7.8	6.7	7.1	11.4	9.7	10.6
30	---	---	---	4.7	4.1	4.3	7.1	6.6	6.9	11.4	10.6	11.0
31	---	---	---	4.7	4.2	4.4	---	---	---	11.4	10.6	11.0
MONTH	---	---	---	5.3	2.8	3.9	8.5	4.2	6.0	11.4	6.9	9.0

09234500 GREEN RIVER NEAR GREENDALE, UT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	12.0	10.6	11.2	14.0	12.4	13.4	13.4	12.5	12.8	13.4	12.3	12.8
2	12.0	11.7	11.8	13.7	12.3	12.9	13.3	12.2	12.6	13.8	12.3	12.8
3	12.3	11.6	11.9	13.7	12.6	13.0	13.2	12.1	12.5	13.8	12.8	13.2
4	12.6	11.7	12.1	13.5	12.7	13.0	13.0	12.1	12.4	13.1	12.2	12.7
5	12.4	11.8	12.2	14.1	12.4	13.1	13.3	11.8	12.4	13.9	12.2	13.0
6	13.4	11.8	12.4	13.9	12.6	13.1	12.7	11.6	12.2	13.8	12.4	13.1
7	13.2	12.3	12.6	13.4	12.6	12.9	13.0	11.9	12.4	13.4	12.3	12.7
8	12.7	12.3	12.5	13.6	12.3	12.9	13.0	11.5	12.2	13.4	12.3	12.8
9	12.7	12.0	12.3	13.6	12.6	13.0	13.2	11.5	12.2	13.3	12.2	12.6
10	12.8	12.1	12.4	13.6	12.6	13.0	13.7	12.0	12.7	13.1	12.2	12.5
11	12.8	12.1	12.4	14.2	12.8	13.3	13.7	12.6	13.0	13.1	11.4	12.4
12	12.7	12.1	12.4	13.9	12.9	13.3	13.9	12.4	13.0	13.3	12.0	12.5
13	13.8	12.2	12.9	14.6	12.8	13.3	13.9	12.6	13.2	13.3	12.5	12.9
14	13.6	12.7	13.1	14.4	13.0	13.5	13.7	12.6	13.0	13.3	12.3	12.8
15	13.6	12.5	13.0	14.6	13.2	13.6	13.7	12.6	13.0	13.3	12.3	12.9
16	13.4	12.3	13.2	14.3	13.3	13.6	13.5	12.3	12.9	13.1	12.2	12.6
17	13.2	11.4	12.6	14.4	13.3	13.6	13.8	12.2	12.8	13.3	12.3	12.7
18	12.3	11.2	11.7	14.3	13.2	13.5	13.6	12.7	13.0	13.1	12.5	12.7
19	12.5	11.7	12.0	14.4	13.2	13.6	13.8	12.5	13.0	12.8	11.9	12.4
20	12.5	11.7	11.9	15.3	13.2	13.8	13.9	12.7	13.1	12.5	11.9	12.2
21	12.9	11.8	12.2	15.1	12.9	14.6	14.1	12.7	13.2	12.5	11.7	12.0
22	12.7	11.9	12.3	15.6	14.2	14.9	13.9	12.5	13.3	12.5	11.7	12.0
23	13.9	12.1	13.0	15.1	13.8	14.3	13.9	12.5	13.1	12.7	11.9	12.2
24	15.0	13.5	14.0	14.8	13.7	14.2	13.4	12.3	12.9	12.7	11.9	12.1
25	14.7	13.6	14.0	14.9	13.8	14.3	13.9	12.3	12.9	12.5	11.9	12.1
26	14.2	13.5	13.9	15.3	14.0	14.5	13.8	12.7	13.1	12.7	11.9	12.1
27	14.1	13.5	13.6	14.7	13.3	13.8	13.6	12.6	13.1	12.5	11.9	12.1
28	14.4	13.5	13.8	15.0	13.3	14.0	13.8	12.5	13.0	12.3	11.9	12.0
29	14.6	13.4	13.8	15.0	12.6	14.0	14.1	12.5	13.2	12.2	11.7	11.9
30	14.1	13.5	13.8	13.7	12.0	12.7	13.9	12.7	13.1	12.3	11.7	11.9
31	---	---	---	13.9	12.3	12.9	13.8	12.5	12.9	---	---	---
MONTH	15.0	10.6	12.7	15.6	12.0	13.5	14.1	11.5	12.8	13.9	11.4	12.5

09253000 LITTLE SNAKE RIVER NEAR SLATER, CO

LOCATION.--Lat 40°59'58", long 107°08'34", in SW¼ NW¼ sec.15, T.12 N., R.87 W., Routt County, Hydrologic Unit 14050003, on left bank just downstream from highway bridge at Focus Ranch, 0.2 mi downstream from Spring Creek, and 12 mi east of Slater.

DRAINAGE AREA.--285 mi^2.

PERIOD OF RECORD.--October 1942 to September 1947, October 1950 to September 1999, April 2001 to current year.

REVISED RECORDS.--WSP 1733: 1960.

GAGE.--Water-stage recorder. Elevation of gage is 6,831.00 ft above NGVD of 1929. 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 2,000 acres upstream from station. Station operated and record provided by the Colorado District.

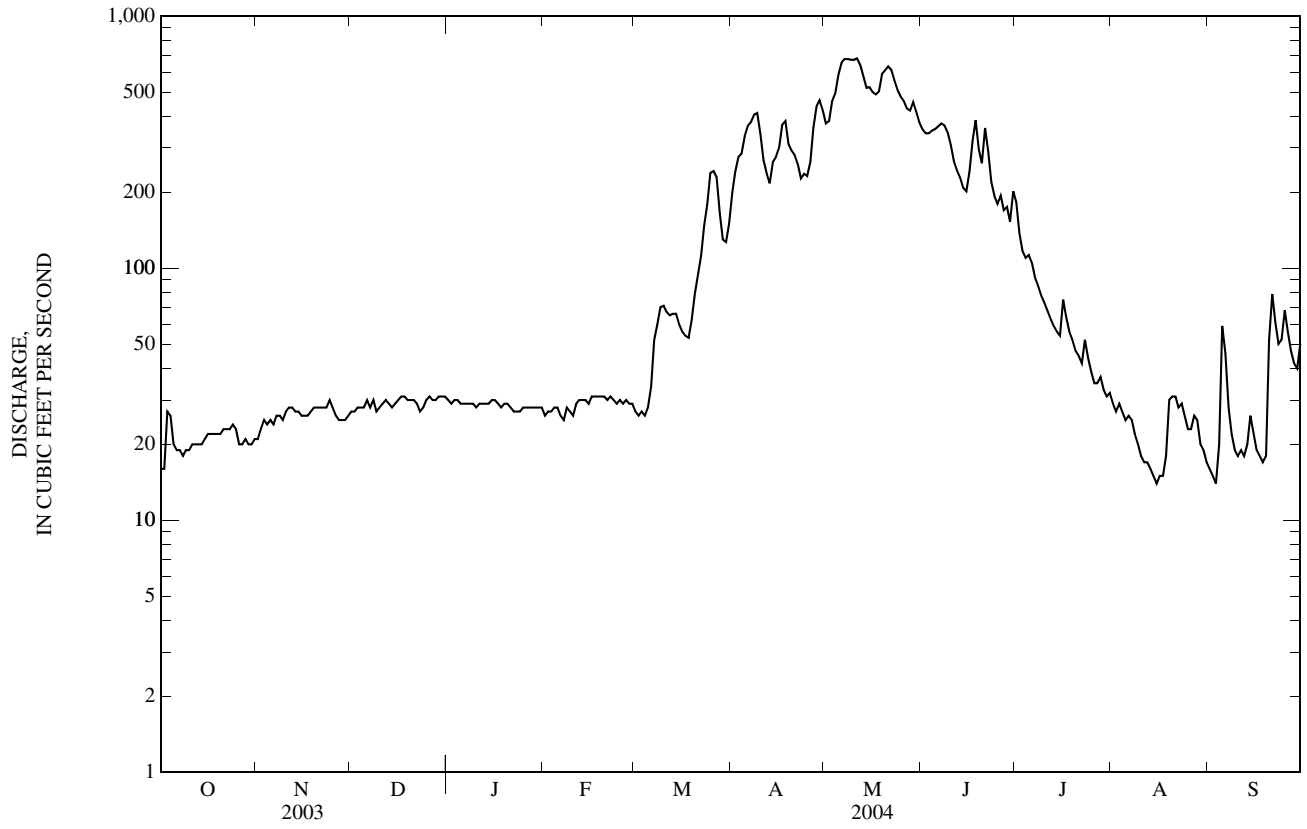
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	e21	e27	e30	e26	e27	199	375	355	183	29	16
2	16	e23	e27	e29	e27	e26	242	383	343	137	27	15
3	27	e25	e28	e30	e27	e27	277	459	343	117	29	14
4	26	e24	e28	e30	e28	e26	285	494	351	110	27	20
5	20	e25	e28	e29	e28	e28	334	584	356	113	25	59
6	19	e24	e30	e29	e26	e34	367	653	365	105	26	46
7	19	e26	e28	e29	e25	e52	380	676	375	92	25	28
8	18	e26	e30	e29	e28	e60	406	676	369	85	22	22
9	19	e25	e27	e29	e27	70	412	672	346	78	20	19
10	19	e27	e28	e28	e26	71	340	671	310	73	18	18
11	20	e28	e29	e29	e29	67	269	679	266	68	17	19
12	20	e28	e30	e29	e30	65	238	640	245	63	17	18
13	20	e27	e29	e29	e30	66	217	580	229	59	16	20
14	20	e27	e28	e29	e30	66	264	520	209	56	15	26
15	21	e26	e29	e30	e29	60	276	522	202	54	14	22
16	22	e26	e30	e30	e31	56	301	499	240	75	15	19
17	22	e26	e31	e29	e31	54	370	489	320	64	15	18
18	22	e27	e31	e28	e31	53	383	503	386	56	18	17
19	22	e28	e30	e29	e31	62	312	589	296	52	30	18
20	22	e28	e30	e29	e31	79	293	610	261	47	31	52
21	23	e28	e30	e28	e30	94	281	632	360	45	31	79
22	23	e28	e29	e27	e31	112	258	612	289	42	28	61
23	23	e28	e27	e27	e30	147	227	555	220	52	29	50
24	24	e30	e28	e27	e29	180	237	508	193	44	26	52
25	23	e28	e30	e28	e30	239	232	479	180	39	23	68
26	20	e26	e31	e28	e29	243	264	459	194	35	23	56
27	e20	e25	e30	e28	e30	230	361	430	170	35	26	47
28	e21	e25	e30	e28	e29	165	439	422	175	37	25	42
29	e20	e25	e31	e28	e29	130	463	456	153	33	20	40
30	e20	e26	e31	e28	---	127	422	416	202	31	19	50
31	e21	---	e31	e28	---	150	---	378	---	32	17	---
TOTAL	648	786	906	888	838	2,866	9,349	16,621	8,303	2,112	703	1,031
MEAN	20.9	26.2	29.2	28.6	28.9	92.5	312	536	277	68.1	22.7	34.4
MAX	27	30	31	30	31	243	463	679	386	183	31	79
MIN	16	21	27	27	25	26	199	375	153	31	14	14
AC-FT	1,290	1,560	1,800	1,760	1,660	5,680	18,540	32,970	16,470	4,190	1,390	2,040
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2004, BY WATER YEAR (WY)												
MEAN	38.6	36.0	32.3	31.7	32.7	51.8	263	1,064	914	155	38.7	29.2
MAX	91.8	77.8	59.4	74.5	59.5	139	842	2,122	2,231	519	97.3	80.5
(WY)	(1962)	(1962)	(1983)	(1983)	(1962)	(1989)	(1974)	(1984)	(1983)	(1983)	(1945)	(1997)
MIN	16.2	18.4	14.8	16.3	20.4	23.8	77.6	379	178	26.9	12.9	11.0
(WY)	(2003)	(1959)	(1977)	(1945)	(1945)	(1977)	(1973)	(2002)	(1987)	(2002)	(2002)	(1944)

09253000 LITTLE SNAKE RIVER NEAR SLATER, CO—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1944 - 2004	
ANNUAL TOTAL	59,516		45,051		--	
ANNUAL MEAN	163		123		226	
HIGHEST ANNUAL MEAN	--		--		423	1984
LOWEST ANNUAL MEAN	--		--		86.4	2002
HIGHEST DAILY MEAN	2,000	Jun 1	679	May 11	3,960	May 24, 1984
LOWEST DAILY MEAN	16	Several days	14	Aug 15,Sep 3	3.9	Sep 16, 2002
ANNUAL SEVEN-DAY MINIMUM	16	Sep 26	16	Aug 11	6.2	Sep 4, 1988
MAXIMUM PEAK FLOW	--		786	May 7	4,780	May 23, 1984
MAXIMUM PEAK STAGE	--		5.55	May 7	8.78[a]	May 23, 1984
ANNUAL RUNOFF (AC-FT)	118,000		89,360		163,700	
10 PERCENT EXCEEDS	432		381		800	
50 PERCENT EXCEEDS	31		30		40	
90 PERCENT EXCEEDS	20		20		21	

a Maximum gage height, 9.95 ft, Apr 25, 1974.
e Estimated.



09253455 HAGGARTY CREEK ABOVE BELVIDERE DITCH, NEAR ENCAMPMENT, WY

LOCATION.--Lat 41°09'02", long 107°07'06", in SE¼ SE¼ SE¼ sec.25, T.14 N., R.87 W., Carbon County, Hydrologic Unit 14050003, Medicine Bow National Forest, 0.5 mi upstream from State Highway 70, 1.6 mi upstream from mouth, and 17 mi west of Encampment, WY.

PERIOD OF RECORD.--October 1992 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
MAY													
19...	1250	64	560	8.7	93	7.2	24	15.0	5.0	10	2.83	.619	.29
AUG													
17...	1210	2.5	566	8.2	101	7.8	42	19.0	11.0	18	5.40	1.08	.34

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	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)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)
MAY													
19...	.1	.84	16	11	.22	<.2	6.5	1.5	20	.03	3.41	25	<.20
AUG													
17...	.1	1.39	14	20	E.13	<.2	8.7	1.8	--	--	--	8	<.20

Date	Arsenic water, fltrd, ug/L (01000)	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)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)
MAY													
19...	E.1	9	<.06	<7.0	E.02	<.8	.107	27.4	22	<.08	<3	1.1	<.02
AUG													
17...	.3	15	<.06	<7.0	<.04	<.8	.080	18.5	31	.10	<3	4.7	<.02

Date	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)	Uranium natural water, fltrd, ug/L (22703)
MAY								
19...	<.4	.54	<.4	<.2	13.9	<5	2.0	E.02
AUG								
17...	.7	.53	E.2	<.2	22.7	<5	<.6	E.04

< -- Less than
E -- Estimated value

09253465 WEST FORK BATTLE CREEK AT BATTLE CREEK CAMPGROUND, NEAR SAVERY, WY

LOCATION.--Lat 41°05'37", long 107°09'31", in SW¼ NE¼ SE¼ sec.15, T.13 N., R.87 W., Carbon County, Hydrologic Unit 14050003, Medicine Bow National Forest, at Battle Creek Campground, 1.1 mi upstream from mouth, and 15 mi east of Savery.

PERIOD OF RECORD.--October 1992 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
MAY													
19...	1520	118	585	9.2	99	7.7	32	12.0	7.0	13	4.05	.754	.35
AUG													
17...	1010	.36	590	8.2	102	8.1	259	16.0	13.5	100	32.5	5.15	.93

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	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)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)
MAY													
19...	.1	1.09	15	15	.40	<.2	6.8	1.9	24	.03	7.72	24	<.20
AUG													
17...	.4	9.83	17	66	5.80	.5	11.0	49.7	155	.21	.15	4	<.20

Date	Arsenic water, fltrd, ug/L (01000)	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)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)
MAY													
19...	E.1	11	<.06	<7.0	E.02	<.8	.056	13.8	21	E.05	<3	1.0	<.02
AUG													
17...	.2	60	<.06	24	.06	<.8	.090	4.9	E4	<.08	4	2.5	<.02

Date	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)	Uranium natural water, fltrd, ug/L (22703)
MAY								
19...	<.4	.43	<.4	<.2	21.9	<5	1.0	E.03
AUG								
17...	1.5	.40	<.4	<.2	243	<5	<.6	.28

< -- Less than
E -- Estimated value

09255000 SLATER FORK NEAR SLATER, CO

LOCATION.--Lat 40°58'57", long 107°22'56", in SW¼ NE¼ sec.21, T.12 N., R.89 W., Moffat County, Hydrologic Unit 14050003, on right bank 15 ft downstream from highway bridge, 1.0 mi upstream from mouth, and 1.5 mi south of Slater.

DRAINAGE AREA.--161 mi^2.

PERIOD OF RECORD.--May to October, December 1910, March to October 1911, and April to May 1912 (published as Slater Creek), July 1931 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 618: 1910-11. WSP 764: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,600 ft above NGVD of 1929, from river-profile map. May 28, 1910 to May 25, 1912, nonrecording gage at site 1.5 mi upstream at different datum. July 9, 1931 to May 6, 1932, nonrecording gage at site 0.2 mi downstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except for May 20 to July 20, which is fair and those for estimated daily discharges, which are poor. Diversions for irrigation of about 500 acres upstream from station. Station operated and record provided by the Colorado District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	14	16	17	e13	17	75	162	83	20	5.7	5.0
2	7.5	16	16	18	e13	13	93	165	82	15	6.5	4.1
3	8.2	18	15	18	e13	20	101	194	85	11	7.3	2.6
4	9.2	17	13	17	e13	15	103	220	100	13	7.5	3.9
5	10	16	13	17	e13	20	119	246	97	14	6.9	11
6	11	15	16	17	e13	20	146	285	95	13	5.7	16
7	12	12	16	18	e13	18	157	286	110	11	5.6	10
8	11	16	15	17	e13	19	193	274	95	13	5.3	8.0
9	11	14	14	17	e13	22	215	270	86	12	4.1	6.2
10	11	17	11	16	e13	24	180	273	77	12	3.3	6.4
11	11	16	17	16	e13	22	147	271	63	11	3.0	6.6
12	11	15	15	16	e13	23	136	242	51	8.7	4.4	6.0
13	11	15	15	15	e13	23	101	233	42	8.6	5.0	6.3
14	11	19	15	e15	e12	24	120	203	38	7.0	5.0	9.4
15	12	17	14	e15	e12	23	134	198	41	5.4	5.1	8.0
16	12	15	12	e15	e12	20	131	188	38	5.5	5.4	5.9
17	11	16	14	e15	e12	20	167	174	40	6.5	5.0	3.8
18	11	12	15	e15	e12	22	168	177	63	7.3	2.7	3.2
19	12	15	13	e15	e12	27	129	200	70	9.2	8.1	4.2
20	12	16	13	e15	e12	40	116	206	60	9.7	12	14
21	12	15	13	e15	e12	46	113	206	77	7.4	12	24
22	12	11	13	e14	e12	54	105	177	93	7.9	10	25
23	13	10	12	e14	e12	70	93	140	59	9.3	8.7	19
24	12	14	12	e14	e12	83	95	128	41	8.6	9.0	18
25	12	16	13	e14	e11	103	89	123	32	6.9	7.9	19
26	11	15	14	e14	11	102	100	127	24	6.0	7.6	18
27	13	14	14	e14	9.9	102	132	120	22	6.5	7.8	16
28	13	13	15	e14	8.0	74	183	129	29	6.8	8.1	14
29	13	15	16	e14	12	57	186	143	22	6.7	7.6	13
30	13	17	16	e14	---	58	188	118	21	6.2	6.5	13
31	14	---	17	e13	---	62	---	92	---	6.1	5.4	---
TOTAL	350.2	451	443	478	352.9	1,243	4,015	5,970	1,836	291.3	204.2	319.6
MEAN	11.3	15.0	14.3	15.4	12.2	40.1	134	193	61.2	9.40	6.59	10.7
MAX	14	19	17	18	13	103	215	286	110	20	12	25
MIN	7.3	10	11	13	8.0	13	75	92	21	5.4	2.7	2.6
AC-FT	695	895	879	948	700	2,470	7,960	11,840	3,640	578	405	634

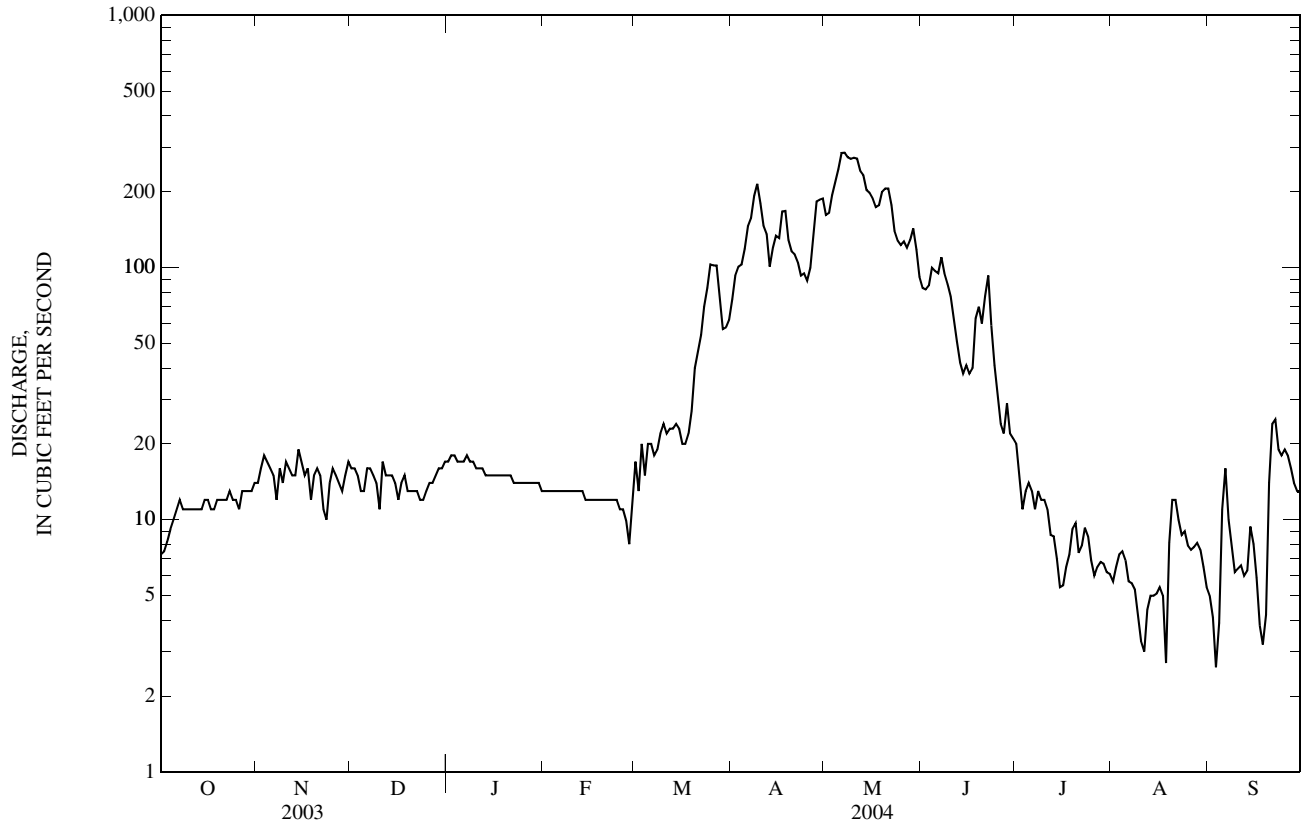
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2004, BY WATER YEAR (WY)

MEAN	19.9	19.2	17.4	17.2	18.6	29.8	120	377	245	36.6	9.71	11.5
MAX	62.4	49.2	44.1	36.9	46.5	144	323	801	660	189	38.4	55.0
(WY)	(1986)	(1985)	(1985)	(1985)	(1986)	(1998)	(1985)	(1984)	(1995)	(1983)	(1945)	(1984)
MIN	7.29	7.73	7.30	4.42	9.83	12.6	25.2	45.7	16.0	1.27	1.39	3.20
(WY)	(1934)	(1934)	(1932)	(1992)	(1981)	(1965)	(1933)	(1934)	(2002)	(1977)	(1994)	(1960)

09255000 SLATER FORK NEAR SLATER, CO—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1932 - 2004	
ANNUAL TOTAL	22,687.3		15,954.2		--	
ANNUAL MEAN	62.2		43.6		77.0	
HIGHEST ANNUAL MEAN	--		--		157	1984
LOWEST ANNUAL MEAN	--		--		20.5	1934
HIGHEST DAILY MEAN	809	Jun 1	286	May 7	1,500	May 16, 1984
LOWEST DAILY MEAN	1.8	Aug 11,12	2.6	Sep 3	0.00[a]	Aug 2, 1934
ANNUAL SEVEN-DAY MINIMUM	2.0	Aug 9	4.3	Aug 9	0.00	Aug 2, 1934
MAXIMUM PEAK FLOW	--		332	May 7	2,250[b]	May 16, 1984
MAXIMUM PEAK STAGE	--		5.71	May 7	11.78[c]	May 16, 1984
ANNUAL RUNOFF (AC-FT)	45,000		31,650		55,800	
10 PERCENT EXCEEDS	186		135		249	
50 PERCENT EXCEEDS	14		15		20	
90 PERCENT EXCEEDS	4.8		6.6		7.0	

a Also occurred several days during years 1936, 1954, and 1977.
b From rating curve extended above 1,000 ft^3/s.
c From floodmark.
e Estimated.



09258980 MUDDY CREEK BELOW YOUNG DRAW NEAR BAGGS, WY

LOCATION.--41°04'05", long 107°37'51", in NE¼ NE¼ SE¼ sec. 28, T.13 N., R.91 W., Carbon County, Hydrologic Unit 14050004, on right bank, 4.0 mi upstream from mouth and 4.0 mi northeast of Baggs.

DRAINAGE AREA.--1,200 mi^2, approximately.

PERIOD OF RECORD.--April to September 2004.

GAGE.--Water-stage recorder. Elevation of gage is 6,270 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records poor. Natural flow of stream possibly affected by numerous small ponds for coal bed methane production water. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation is given below:

April 15. . . 17.2

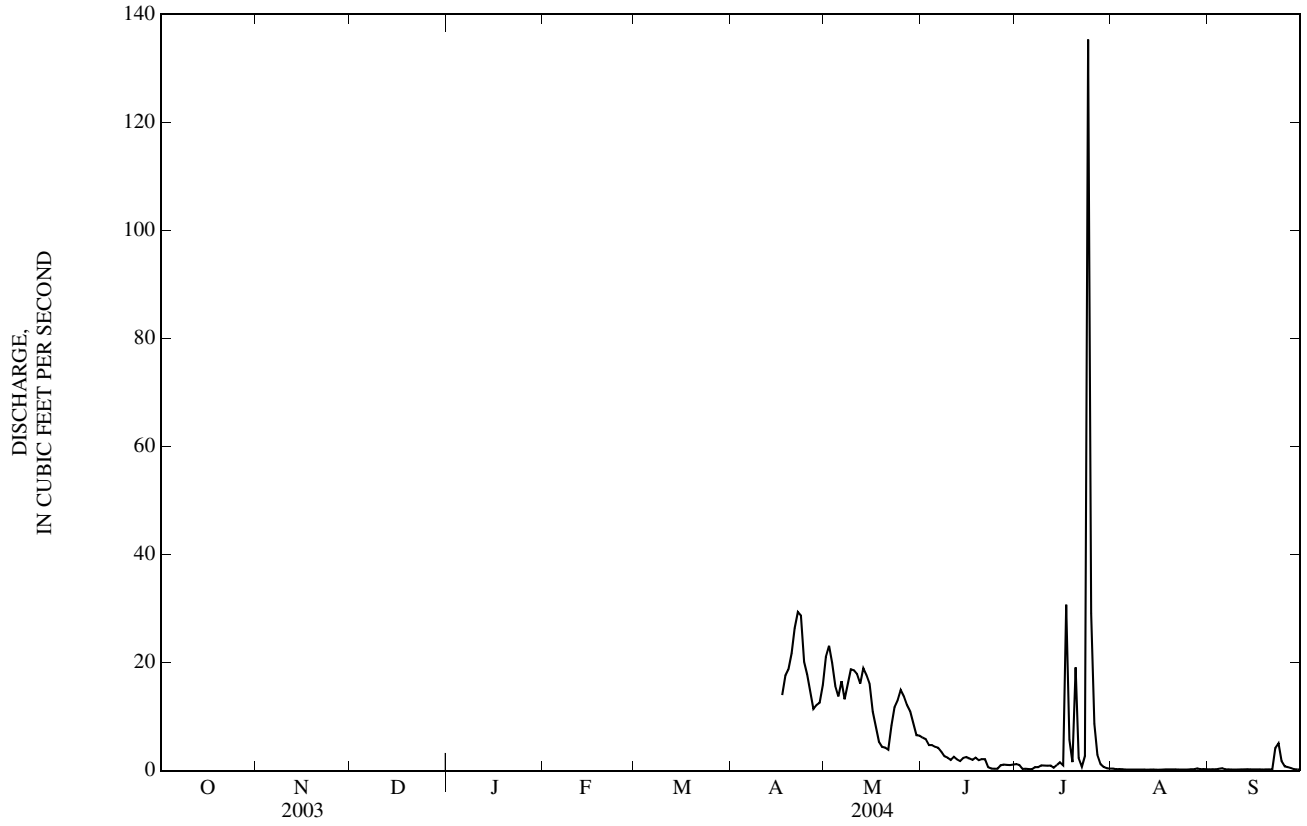
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	21	6.1	1.2	0.40	0.23
2	---	---	---	---	---	---	---	23	5.8	1.0	0.27	0.25
3	---	---	---	---	---	---	---	20	4.7	0.33	0.28	0.24
4	---	---	---	---	---	---	---	16	4.7	0.35	0.25	0.36
5	---	---	---	---	---	---	---	14	4.4	0.30	0.21	0.44
6	---	---	---	---	---	---	---	17	4.2	0.26	0.20	0.25
7	---	---	---	---	---	---	---	13	3.5	0.64	0.20	0.23
8	---	---	---	---	---	---	---	16	2.7	0.65	0.19	0.21
9	---	---	---	---	---	---	---	19	2.4	0.97	0.20	0.21
10	---	---	---	---	---	---	---	19	2.0	0.96	0.20	0.22
11	---	---	---	---	---	---	---	18	2.6	0.93	0.20	0.23
12	---	---	---	---	---	---	---	16	2.1	0.95	0.19	0.23
13	---	---	---	---	---	---	---	19	1.8	0.54	0.20	0.26
14	---	---	---	---	---	---	---	18	2.3	1.0	0.20	0.24
15	---	---	---	---	---	---	---	16	2.5	1.5	0.19	0.23
16	---	---	---	---	---	---	---	11	2.2	0.98	0.19	0.23
17	---	---	---	---	---	---	14	8.2	2.0	31	0.20	0.23
18	---	---	---	---	---	---	18	5.3	2.4	5.7	0.23	0.22
19	---	---	---	---	---	---	19	4.4	1.9	1.6	0.23	0.23
20	---	---	---	---	---	---	22	4.3	2.1	19	0.24	0.24
21	---	---	---	---	---	---	26	3.9	2.1	2.3	0.23	0.20
22	---	---	---	---	---	---	29	8.4	0.63	0.71	0.21	4.2
23	---	---	---	---	---	---	29	12	0.39	2.7	0.21	5.1
24	---	---	---	---	---	---	20	13	0.35	135	0.21	1.8
25	---	---	---	---	---	---	18	15	0.35	29	0.21	0.81
26	---	---	---	---	---	---	14	14	1.00	8.7	0.26	0.64
27	---	---	---	---	---	---	11	12	1.1	2.9	0.27	0.46
28	---	---	---	---	---	---	12	11	1.1	1.2	0.43	0.27
29	---	---	---	---	---	---	13	8.8	1.0	0.68	0.25	0.23
30	---	---	---	---	---	---	16	6.6	1.1	0.45	0.30	0.22
31	---	---	---	---	---	---	---	6.5	---	0.40	0.26	---
TOTAL	---	---	---	---	---	---	---	409.4	71.52	253.90	7.31	18.91
MEAN	---	---	---	---	---	---	---	13.2	2.38	8.19	0.24	0.63
MAX	---	---	---	---	---	---	---	23	6.1	135	0.43	5.1
MIN	---	---	---	---	---	---	---	3.9	0.35	0.26	0.19	0.20
AC-FT	---	---	---	---	---	---	---	812	142	504	14	38
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2004 - 2004, BY WATER YEAR (WY)*												
MEAN	---	---	---	---	---	---	---	13.2	2.38	8.19	0.24	0.63
MAX	---	---	---	---	---	---	---	13.2	2.38	8.19	0.24	0.63
(WY)	---	---	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	---	---	---	---	---	---	---	13.2	2.38	8.19	0.24	0.63
(WY)	---	---	---	---	---	---	---	(2004)	(2004)	(2004)	(2004)	(2004)

09258980 MUDDY CREEK BELOW YOUNG DRAW NEAR BAGGS, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*	
HIGHEST DAILY MEAN	135	Jul 24
LOWEST DAILY MEAN	0.19	Aug 812,15,16
MAXIMUM PEAK FLOW	216	Jun 24
MAXIMUM PEAK STAGE	4.94	Jun 24

* For period of operation.



09259050 LITTLE SNAKE RIVER BELOW BAGGS, WY

LOCATION.--Lat 41°01'43", long 107°41'14", in SE¼ NW¼ NW¼ sec.7, T.12 N., R.92 W., Carbon County, Hydrologic Unit 14050003, 0.8 mi downstream from Ledford Slough, 1.5 mi southwest of Baggs, and 3.5 mi downstream from bridge on State Highway 789 in Baggs.

PERIOD OF RECORD.--Water years 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
APR													
13...	1500	538	610	10.0	110	8.6	207	21.0	9.5	94	27.2	6.43	1.44
MAY													
19...	0800	937	610	8.4	97	7.0	128	15.0	11.5	53	15.4	3.58	1.17
JUN													
28...	1800	164	612	7.3	101	8.3	291	19.0	20.0	110	30.7	8.33	1.57
AUG													
16...	1750	2.2	611	7.1	110	8.6	723	21.0	26.0	230	48.1	25.8	3.56

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	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)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR													
13...	.5	10.3	19	77	2.77	<.2	13.1	24.6	132	.18	192	38	55
MAY													
19...	.4	6.08	19	54	1.46	<.2	11.8	10.0	82	.11	207	52	132
JUN													
28...	.8	18.8	27	123	3.48	.3	12.8	22.2	172	.23	76.2	6	2.7
AUG													
16...	2	79.1	43	223	15.2	.6	9.9	121	437	.59	2.59	32	.19

< -- Less than

10011500 BEAR RIVER NEAR UTAH-WYOMING STATE LINE

LOCATION.--Lat 40°57'55", long 11°051'10", in SE¼ NW¼ SE¼ sec. 30, T. 3 N., R. 10 E., Summit County, Utah, Hydrologic Unit 16010101, on left bank 400 ft downstream from West Fork and 2.8 mi upstream from Utah-Wyoming State line.

DRAINAGE AREA.--172 mi^2.

PERIOD OF RECORD.--July 1942 to current year.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,965 ft above NGVD of 1929, from river-profile map. Prior to October 1, 1986 at datum 3.0 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated slightly by Whitney Reservoir, total capacity, 4,700 acre-ft since 1966. Three diversions upstream from station for irrigation of about 265 acres upstream and 2,600 acres downstream from station. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	e38	e38	e42	e40	e42	118	189	265	226	111	58
2	53	e39	e38	e42	e40	e42	135	217	359	203	115	56
3	54	e40	e38	e42	e39	e42	147	290	432	187	121	56
4	58	e41	e39	e42	e39	e42	143	387	505	179	106	66
5	52	e41	e40	e43	e39	e42	155	519	563	178	107	71
6	49	e41	e41	e43	e39	e41	164	651	600	198	107	63
7	48	e42	e41	e44	e38	e41	163	671	605	193	95	59
8	48	e42	e40	e44	e38	e41	168	643	563	191	88	54
9	46	e43	e43	e45	e37	e40	167	679	513	188	84	52
10	44	e43	e43	e46	e37	41	136	677	467	183	80	50
11	43	e42	e42	e46	e37	37	123	656	404	177	77	49
12	43	e40	e42	e47	e37	40	123	460	350	172	74	47
13	43	e38	e42	e47	e36	42	134	371	300	176	73	57
14	42	e36	e42	e47	e36	43	146	297	300	181	71	53
15	43	e36	e41	e47	e35	43	139	262	317	206	69	49
16	43	e36	e41	e46	e35	43	128	273	297	243	73	47
17	43	e37	e41	e46	e35	44	128	328	312	263	82	46
18	42	e38	e41	e45	e35	46	132	404	326	246	86	44
19	42	e39	e42	e45	e35	54	122	451	278	227	83	43
20	41	e40	e42	e45	e35	60	123	452	263	190	73	61
21	40	e40	e42	e44	e36	70	129	448	270	192	69	57
22	41	e40	e43	e44	e37	83	121	407	245	176	68	55
23	41	e41	e42	e43	e38	100	112	323	226	180	71	52
24	40	e41	e41	e43	e39	108	124	303	220	170	85	53
25	38	e41	e41	e43	e40	111	119	283	253	157	79	50
26	37	e41	e41	e42	e40	111	134	250	238	139	77	48
27	e37	e40	e44	e42	e41	88	170	252	233	145	74	45
28	e37	e40	e45	e42	e41	89	207	327	242	142	67	43
29	e37	e39	e45	e42	e42	80	201	392	274	125	64	48
30	e37	e39	e46	e41	---	90	187	289	271	118	63	55
31	e38	---	e46	e41	---	102	---	245	---	113	61	---
TOTAL	1,346	1,194	1,293	1,361	1,096	1,898	4,298	12,396	10,491	5,664	2,553	1,587
MEAN	43.4	39.8	41.7	43.9	37.8	61.2	143	400	350	183	82.4	52.9
MAX	58	43	46	47	42	111	207	679	605	263	121	71
MIN	37	36	38	41	35	37	112	189	220	113	61	43
AC-FT	2,670	2,370	2,560	2,700	2,170	3,760	8,530	24,590	20,810	11,230	5,060	3,150

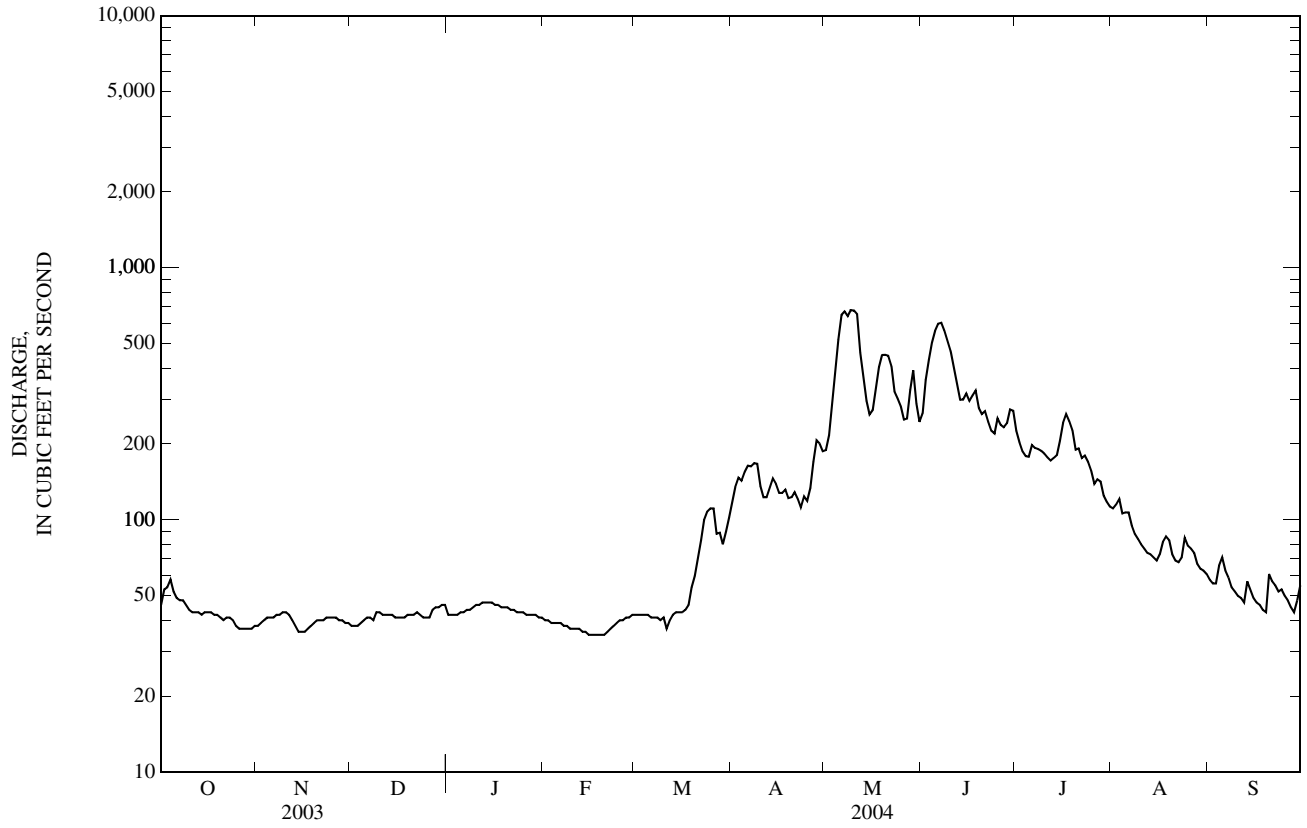
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2004, BY WATER YEAR (WY)

MEAN	1,430	1,327	1,217	1,137	1,182	1,431	1,336	2,294	3,669	2,175	1,080	1,236
MAX	2,346	2,439	1,933	1,975	1,772	2,753	2,929	6,252	11,210	8,574	2,627	2,326
(WY)	(1984)	(1984)	(1985)	(1992)	(1997)	(1998)	(1998)	(1999)	(1991)	(1995)	(1997)	(1998)
MIN	582	564	522	533	504	634	574	690	928	357	380	531
(WY)	(2003)	(2003)	(2003)	(2004)	(1989)	(1989)	(2003)	(2002)	(2004)	(1988)	(2002)	(2002)

10011500 BEAR RIVER NEAR UTAH-WYOMING STATE LINE—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1943 - 2004	
ANNUAL TOTAL	52,038		45,177		--	
ANNUAL MEAN	143		123		191	
HIGHEST ANNUAL MEAN	--		--		335	1986
LOWEST ANNUAL MEAN	--		--		81.5	1977
HIGHEST DAILY MEAN	1,640	May 30	679	May 9	2,680	Jun 4, 1986
LOWEST DAILY MEAN	13	Feb 9	35	Feb 15-20	13	Feb 9, 2003
ANNUAL SEVEN-DAY MINIMUM	15	Feb 6	35	Feb 14	15	Feb 6, 2003
ANNUAL RUNOFF (AC-FT)	103,200		89,610		138,700	
10 PERCENT EXCEEDS	355		298		589	
50 PERCENT EXCEEDS	47		53		58	
90 PERCENT EXCEEDS	26		39		34	

e Estimated.



10016900 BEAR RIVER AT EVANSTON, WY

LOCATION.--Lat 41°16'13", long 110°57'47", in NE¼ NW¼ NW¼ sec.21, T.15 N., R.120 W., Uinta County, Hydrologic Unit 16010101, on left bank 100 ft downstream from bridge on State Highway 89, in the City of Evanston.

DRAINAGE AREA.--433 mi^2.

PERIOD OF RECORD.--May 1984 to current year (no winter records 1984 to 2001).

GAGE.--Water-stage recorder. Elevation of gage is 6,730 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection with satellite telemetry at station.

REMARKS.--Records good except those for estimated discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	19	36	e21	e24	e30	175	249	300	160	57	33
2	19	26	33	e22	e26	e29	183	257	290	149	74	34
3	26	28	29	e20	e26	e31	236	345	345	134	95	34
4	29	27	22	e19	e27	e30	196	480	394	120	87	43
5	27	25	22	e18	e29	e31	207	655	470	111	85	68
6	20	27	22	e20	e29	e31	219	805	525	100	80	55
7	18	19	26	e21	e28	e32	230	831	542	90	76	43
8	18	24	25	e23	e27	e33	244	758	482	82	65	35
9	17	31	20	e23	e28	e33	313	748	422	83	59	28
10	19	33	e19	e22	e26	34	271	727	387	84	62	31
11	19	24	e17	e24	e25	49	215	717	383	81	59	31
12	19	23	e18	e23	e23	61	203	549	344	78	55	29
13	19	25	e20	e23	e25	55	183	429	270	79	48	33
14	20	29	e18	e24	e27	65	189	340	221	100	46	35
15	20	23	e17	e25	e29	74	181	280	206	101	46	35
16	20	19	e16	e26	e27	89	161	292	182	145	46	31
17	19	33	e15	e26	e28	105	159	314	151	200	54	29
18	18	21	e17	e27	e29	132	184	391	224	240	70	26
19	18	20	e18	e27	e31	248	193	410	169	214	67	21
20	18	34	e19	e26	e31	414	175	402	136	160	62	24
21	15	27	e18	e24	e29	362	207	409	151	177	63	42
22	14	18	e17	e25	e27	386	272	382	171	169	59	41
23	14	15	e16	e25	e28	418	227	314	137	151	63	38
24	14	e9.0	e17	e26	e29	352	188	287	130	132	62	35
25	14	e14	e18	e27	e29	289	174	283	154	115	70	36
26	14	e20	e19	e25	e30	282	166	303	148	104	63	32
27	13	e23	e20	e26	e29	218	193	264	155	105	64	28
28	14	25	e20	e25	e31	202	255	316	178	116	52	26
29	14	27	e19	e27	e30	196	288	543	218	90	42	28
30	16	35	e20	e28	---	186	271	474	236	76	42	36
31	15	---	e21	e26	---	167	---	354	---	64	36	---
TOTAL	558	723.0	634	744	807	4,664	6,358	13,908	8,121	3,810	1,909	1,040
MEAN	18.0	24.1	20.5	24.0	27.8	150	212	449	271	123	61.6	34.7
MAX	29	35	36	28	31	418	313	831	542	240	95	68
MIN	13	9.0	15	18	23	29	159	249	130	64	36	21
AC-FT	1,110	1,430	1,260	1,480	1,600	9,250	12,610	27,590	16,110	7,560	3,790	2,060

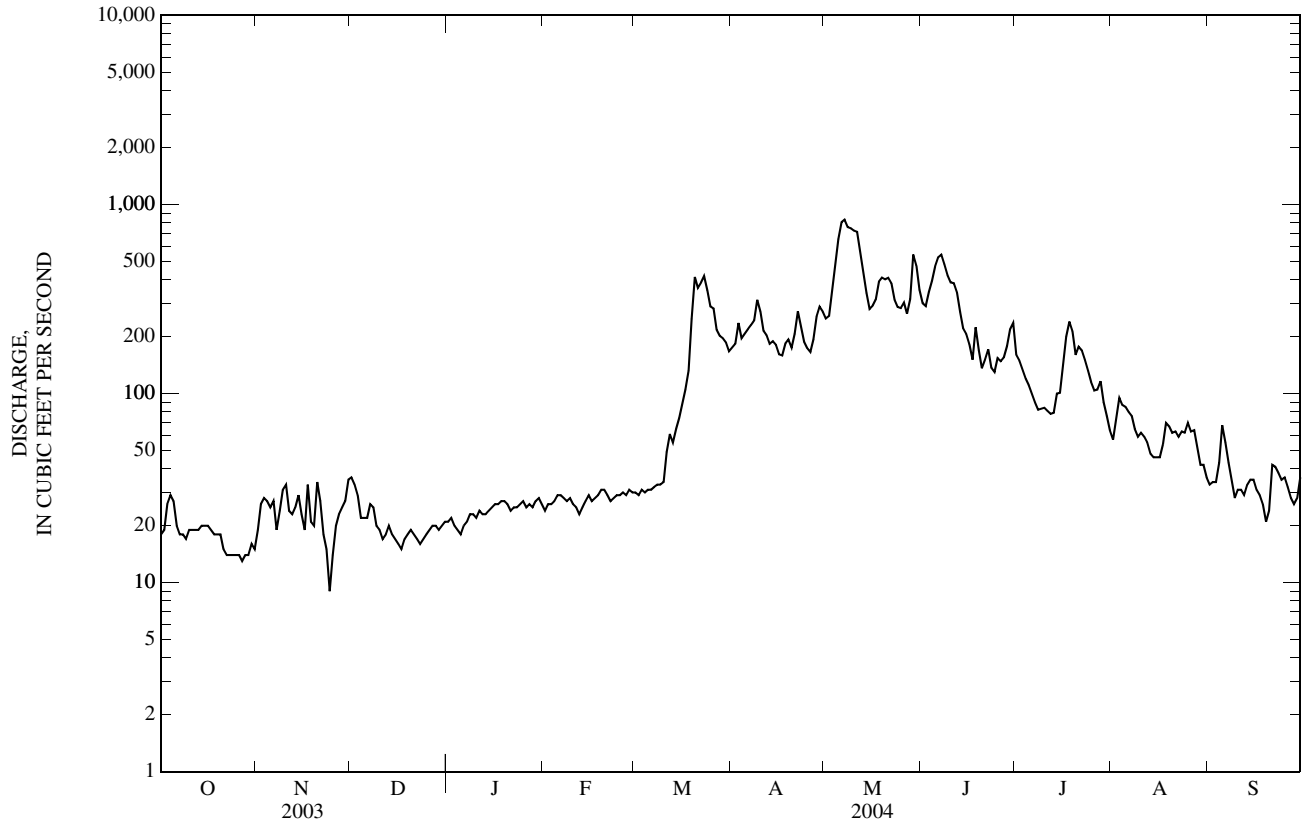
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2004, BY WATER YEAR (WY)

MEAN	24.6	18.7	20.3	21.7	29.2	96.6	293	732	734	194	64.4	54.5
MAX	44.4	24.1	27.4	24.1	33.4	150	602	1,291	1,890	980	181	225
(WY)	(2003)	(2004)	(2002)	(2002)	(2003)	(2004)	(1985)	(1986)	(1986)	(1995)	(1984)	(1984)
MIN	11.5	14.9	13.1	17.0	26.4	45.5	133	330	121	31.9	12.8	11.8
(WY)	(2002)	(2003)	(2003)	(2003)	(2002)	(2002)	(1995)	(1990)	(1992)	(2000)	(2002)	(1988)

10016900 BEAR RIVER AT EVANSTON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1984 - 2004	
ANNUAL TOTAL	49,543.0		43,276.0		--	
ANNUAL MEAN	136		118		112	
HIGHEST ANNUAL MEAN	--		--		137	2003
LOWEST ANNUAL MEAN	--		--		81.3	2002
HIGHEST DAILY MEAN	1,560	May 30	831	May 7	3,160	May 16, 1984
LOWEST DAILY MEAN	9.0	Nov 24	9.0	Nov 24	3.2	Oct 20, 2001
ANNUAL SEVEN-DAY MINIMUM	14	Oct 22	14	Oct 22	5.3	Aug 18, 1988
MAXIMUM PEAK FLOW	--		958	May 7	3,680	May 16, 1984
MAXIMUM PEAK STAGE	--		3.81	May 7	7.35	May 16, 1984
ANNUAL RUNOFF (AC-FT)	98,270		85,840		81,170	
10 PERCENT EXCEEDS	341		315		295	
50 PERCENT EXCEEDS	38		36		35	
90 PERCENT EXCEEDS	17		19		14	

e Estimated



10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT

LOCATION.--Lat 41°26'04", long 111°01'01", in NE¼ NW¼ NW¼ sec. 29, T. 17 N., R. 120 W., Uinta County, Wyoming, Hydrologic Unit 16010101, on right bank 9.3 mi upstream from Woodruff Narrows Dam and 10 mi southeast of Woodruff.

DRAINAGE AREA.--752 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,455 ft above NGVD of 1929, from river-profile map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Diversion for irrigation of about 43,500 acres upstream from station. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	e6.0	e26	e28	e27	e33	139	162	220	145	36	25
2	19	e7.0	e27	e28	e27	e34	133	153	193	98	39	21
3	17	e8.0	e28	e28	e27	e35	160	203	225	87	58	20
4	23	e9.0	e25	e27	e27	e34	158	287	263	71	71	24
5	27	e9.5	e24	e27	e27	e33	142	411	332	64	54	36
6	28	e10	e25	e27	e26	e33	139	560	396	60	56	50
7	23	e10	e25	e28	e25	e33	151	617	442	51	46	39
8	22	e11	e25	e28	e25	e32	166	597	398	36	39	32
9	17	e11	e25	e28	e24	e32	210	536	347	33	41	28
10	10	e11	e25	e29	e24	e33	221	541	309	32	40	24
11	11	e11	e27	e29	e24	e37	172	530	328	30	39	21
12	12	e11	e27	e30	e24	e50	134	492	294	29	40	21
13	14	e11	e27	e30	e24	e60	115	334	228	25	35	21
14	8.7	e12	e26	e30	e24	e70	110	257	167	28	33	22
15	5.9	e13	e25	e30	e24	e85	107	177	148	38	32	22
16	5.9	e14	e25	e30	e25	e100	100	164	136	40	34	25
17	6.0	e16	e25	e30	e26	e150	96	179	117	83	36	23
18	6.2	e18	e26	e30	e27	e260	105	194	148	134	48	22
19	5.7	e18	e26	e29	e28	340	127	241	169	129	56	20
20	6.2	e19	e26	e29	e29	292	114	244	124	102	52	17
21	6.3	e19	e26	e29	e30	307	124	250	113	90	45	15
22	6.4	e19	e27	e28	e30	282	173	260	140	122	45	24
23	6.4	e19	e27	e28	e30	320	171	230	120	112	50	29
24	5.5	e19	e28	e28	e30	338	129	171	89	99	50	31
25	4.7	e19	e28	e28	e31	312	123	173	97	72	49	30
26	5.7	e19	e28	e28	e31	268	106	184	118	62	52	30
27	6.6	e20	e29	e28	e32	248	113	159	105	51	47	26
28	6.8	e22	e30	e27	e32	187	157	183	127	63	47	19
29	6.3	e23	e30	e27	e33	182	192	351	146	56	34	15
30	e5.0	e24	e30	e27	---	166	186	426	177	40	29	14
31	e4.0	---	e29	e27	---	155	---	296	---	38	27	---
TOTAL	354.3	438.5	827	880	793	4,541	4,273	9,562	6,216	2,120	1,360	746
MEAN	11.4	14.6	26.7	28.4	27.3	146	142	308	207	68.4	43.9	24.9
MAX	28	24	30	30	33	340	221	617	442	145	71	50
MIN	4.0	6.0	24	27	24	32	96	153	89	25	27	14
AC-FT	703	870	1,640	1,750	1,570	9,010	8,480	18,970	12,330	4,210	2,700	1,480

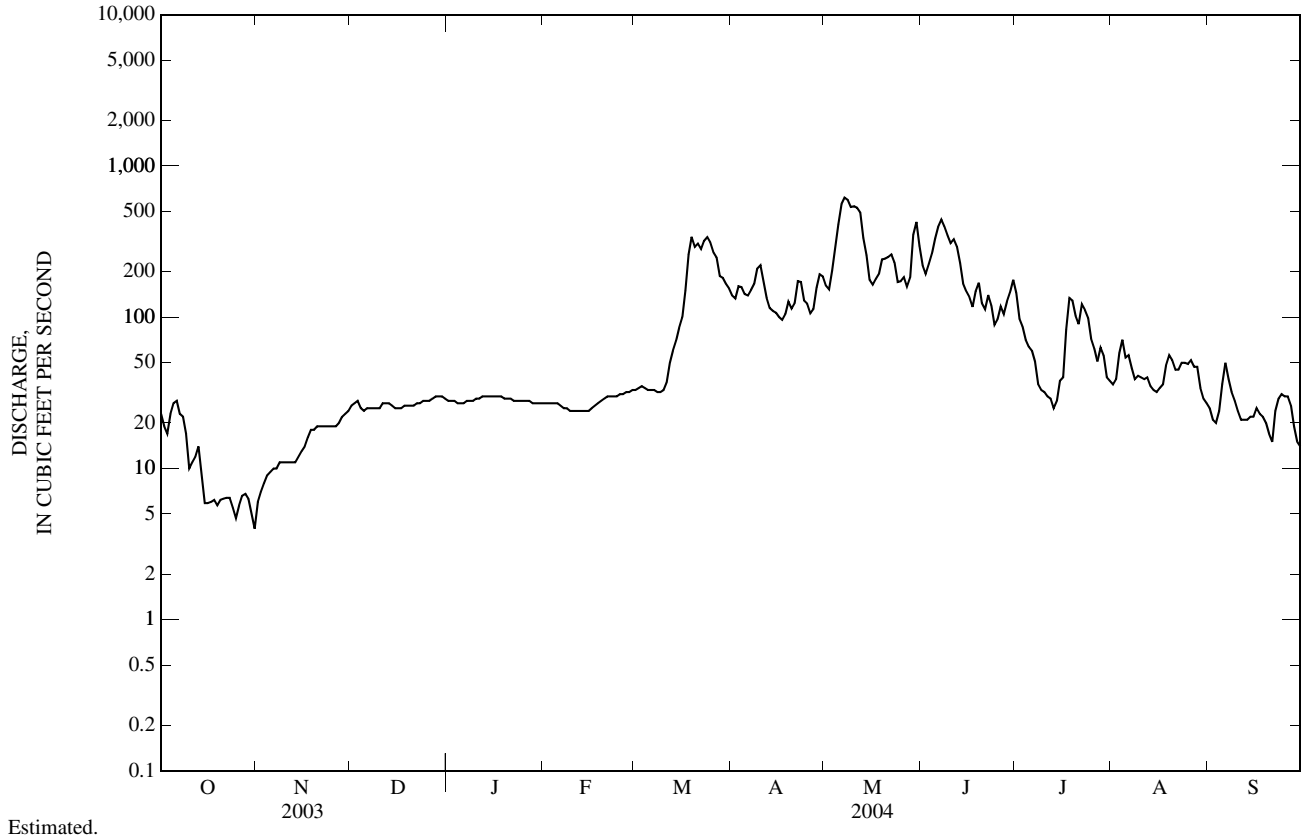
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	69.7	70.1	69.5	65.8	80.5	163	325	780	816	190	48.7	47.5
MAX	437	198	181	147	312	627	671	1,957	2,564	1,191	340	288
(WY)	(1983)	(1974)	(1984)	(1984)	(1986)	(1986)	(1969)	(1984)	(1986)	(1995)	(1983)	(1983)
MIN	3.03	6.06	7.21	6.76	10.4	26.8	77.7	104	54.6	4.41	0.68	0.49
(WY)	(1965)	(1989)	(1989)	(1989)	(2003)	(1977)	(1977)	(1977)	(1992)	(2000)	(2000)	(1988)

10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	38,965.9		32,110.8		--	
ANNUAL MEAN	107		87.7		227	
HIGHEST ANNUAL MEAN	--		--		583	1986
LOWEST ANNUAL MEAN	--		--		45.1	1977
HIGHEST DAILY MEAN	1,440	May 31	617	May 7	3,900	Jun 2, 1983
LOWEST DAILY MEAN	2.4	Feb 13	4.0	Oct 31	0.00	Many days, 1988
ANNUAL SEVEN-DAY MINIMUM	3.2	Jan 17	5.6	Oct 25	0.00	Aug 30, 1988
ANNUAL RUNOFF (AC-FT)	77,290		63,690		164,700	
10 PERCENT EXCEEDS	255		242		668	
50 PERCENT EXCEEDS	29		32		80	
90 PERCENT EXCEEDS	6.2		14		8.4	

e Estimated.



e Estimated.

10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV 19...	0930	21	600	12.3	107	8.7	485	1.0	.0	230	54.6	23.8	2.77
APR 06...	1430	126	600	9.5	116	8.6	357	14.0	13.5	180	44.9	15.6	1.76
JUN 23...	0850	135	609	7.4	95	8.2	377	13.5	16.5	180	43.3	16.7	1.68
JUL 28...	0855	49	605	6.9	87	7.9	373	23.0	15.0	180	43.4	17.1	2.00

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	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)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
NOV 19...	.8	28.3	21	203	39.0	<.2	3.0	22.0	295	.40	17.0	<.04	<.06
APR 06...	.4	10.8	12	156	14.5	<.2	4.1	16.8	202	.27	68.7	<.04	<.06
JUN 23...	.4	12.7	13	168	14.8	<.2	2.1	10.6	203	.28	73.9	<.04	<.06
JUL 28...	.4	11.3	12	172	12.3	<.2	2.6	17.1	209	.28	27.7	<.04	<.06

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV 19...	<.008	<.02	3	.17
APR 06...	<.008	<.02	14	4.8
JUN 23...	<.008	<.02	2	.73
JUL 28...	<.008	<.02	4	.53

< -- Less than

10020300 BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT

LOCATION.--Lat 41°30'20", long 111°00'50", in NE ¼ NE¼ NW¼ sec. 32, T. 18 N., R. 120 W., Uinta County, Wyoming, Hydrologic Unit 16010101, on right bank 1,100 ft downstream from Woodruff Narrows Dam, 1.6 mi upstream from Salt Creek, 5.4 mi upstream from Utah-Wyoming State line, and 7.7 mi east of Woodruff.

DRAINAGE AREA.--784 mi^2.

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,398.96 ft above NGVD of 1929 (levels by Utah Water Resources Division from Bureau of Reclamation bench mark). Prior to September 26, 1962, at site 175 ft upstream at same datum.

REMARKS.--Records good. Flow regulated by Woodruff Narrows Reservoir beginning January 1962. Diversions for irrigation of about 43,500 acres upstream from station. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	13	12	13	14	15	10	29	329	175	47	61
2	17	12	12	13	14	15	10	27	473	163	47	60
3	17	12	12	13	14	15	10	27	478	162	47	60
4	17	12	12	13	14	15	10	29	476	161	47	43
5	17	12	12	14	14	15	10	38	477	98	47	28
6	17	12	12	14	14	15	10	39	476	56	48	29
7	17	12	12	13	14	15	10	306	708	54	48	31
8	17	12	12	13	15	15	10	489	869	54	48	31
9	16	12	12	14	15	15	10	458	858	53	48	30
10	16	12	12	14	15	16	27	448	840	53	48	30
11	16	12	12	14	15	16	38	486	821	53	48	30
12	15	12	12	14	15	16	31	548	809	51	39	30
13	13	12	12	14	15	16	31	477	796	47	32	30
14	13	12	12	14	15	16	32	292	782	47	32	29
15	13	12	12	14	15	16	31	223	617	46	32	29
16	13	12	12	14	14	16	29	222	495	46	31	27
17	13	12	12	14	15	16	29	214	486	46	31	24
18	13	12	13	14	15	16	29	207	461	46	31	20
19	13	12	13	14	15	15	29	207	420	46	32	16
20	13	12	13	14	15	14	29	207	414	46	31	15
21	13	12	13	14	15	14	29	207	406	46	31	15
22	13	12	13	14	15	15	29	207	330	47	31	15
23	13	12	13	14	15	15	29	207	283	47	37	15
24	13	12	13	14	15	12	29	195	278	47	63	15
25	13	12	13	14	15	9.7	30	172	255	47	62	15
26	13	12	13	14	15	9.7	30	155	231	47	62	15
27	13	12	13	14	15	9.7	30	147	228	48	62	14
28	13	12	13	14	15	9.9	30	148	225	48	62	14
29	13	12	13	14	15	9.7	30	148	222	48	62	14
30	13	12	13	14	---	9.8	30	148	201	48	61	14
31	13	---	13	14	---	9.9	---	148	---	48	61	---
TOTAL	444	361	386	428	427	432.4	721	6,855	14,744	2,024	1,408	799
MEAN	14.3	12.0	12.5	13.8	14.7	13.9	24.0	221	491	65.3	45.4	26.6
MAX	17	13	13	14	15	16	38	548	869	175	63	61
MIN	13	12	12	13	14	9.7	10	27	201	46	31	14
AC-FT	881	716	766	849	847	858	1,430	13,600	29,240	4,010	2,790	1,580

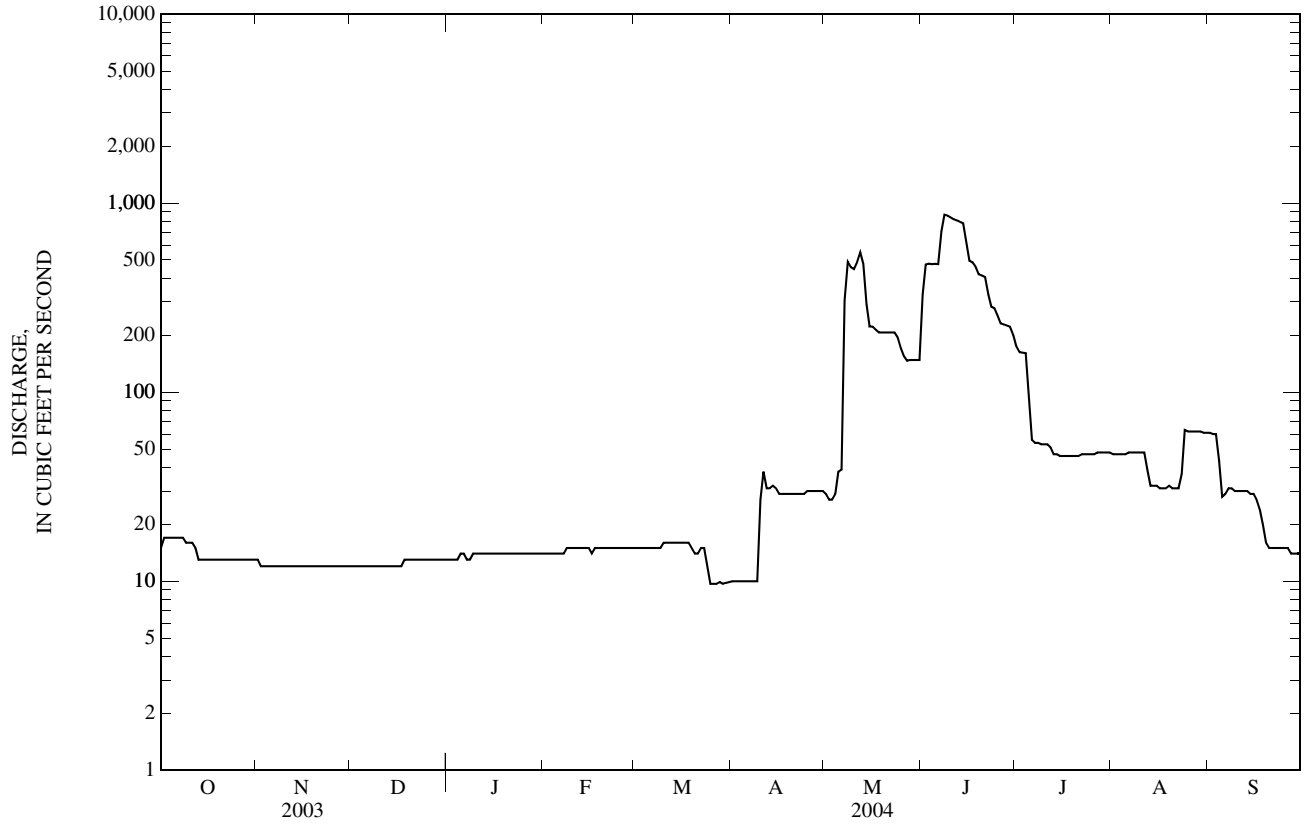
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	56.6	52.4	45.7	43.5	46.3	93.2	267	755	960	277	76.5	59.1
MAX	425	421	184	153	171	473	891	1,828	2,437	913	331	278
(WY)	(1983)	(1983)	(1983)	(1985)	(1971)	(1972)	(1985)	(1984)	(1983)	(1975)	(1983)	(1983)
MIN	3.89	0.12	4.28	4.37	4.71	4.70	0.34	27.8	356	10.5	3.91	3.65
(WY)	(1990)	(1981)	(1978)	(1978)	(1978)	(1978)	(1977)	(1977)	(2002)	(2002)	(1979)	(1979)

10020300 BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	38,632		29,029.4		--	
ANNUAL MEAN	106		79.3		228	
HIGHEST ANNUAL MEAN	--		--		509	1983
LOWEST ANNUAL MEAN	--		--		44.3	1977
HIGHEST DAILY MEAN	1,190	May 31	869	Jun 8	3,630	Jun 3, 1983
LOWEST DAILY MEAN	12	Many days	9.7	Mar 25-27,29	0.00	Jul 4, 1962
ANNUAL SEVEN-DAY MINIMUM	12	Nov 2	9.8	Mar 25	0.07	Nov 26, 1980
ANNUAL RUNOFF (AC-FT)	76,630		57,580		165,100	
10 PERCENT EXCEEDS	238		224		784	
50 PERCENT EXCEEDS	15		15		40	
90 PERCENT EXCEEDS	12		12		9.7	

e Estimated.



10028500 BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY

LOCATION.--Lat 41°56'20", long 110°59'05", in SE¼ SE¼ sec. 25, T. 23 N., R. 120 W., Lincoln County, Hydrologic Unit 16010102, 800 ft downstream from Pixley Dam, 11 mi south of Cokeville, and 17.5 mi downstream from Twin Creek.

DRAINAGE AREA.--2,032 mi^2.

PERIOD OF RECORD.--October 1941 to November 1943 (published as Bear River near Cokeville), October 1952 to September 1956, May 1958 to current year (seasonal only). Monthly discharge only for some periods, published in WSP 1314.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,185 ft above NGVD of 1929, from river-profile map. October 31, 1941 to November 30, 1943, at site 200 ft downstream at different datum.

REMARKS.--Records fair. Natural flow of stream affected by diversions for irrigation, return flow from irrigated areas, and regulation by upstream reservoirs. Station operated and record provided by the Utah District.

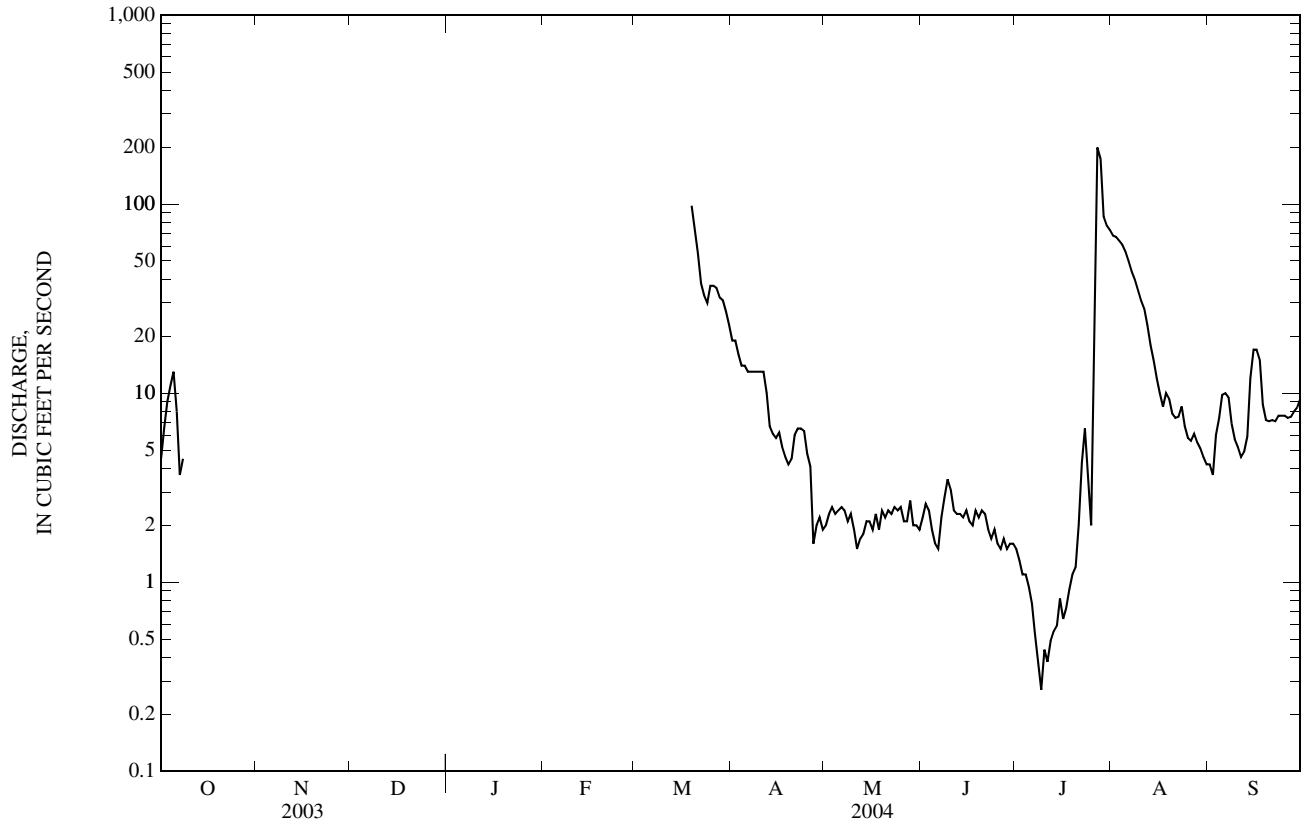
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	---	---	---	---	---	19	2.0	2.2	1.5	68	4.2
2	6.6	---	---	---	---	---	19	2.3	2.6	1.3	67	3.7
3	9.0	---	---	---	---	---	16	2.5	2.4	1.1	64	6.0
4	11	---	---	---	---	---	14	2.3	1.9	1.1	61	7.4
5	13	---	---	---	---	---	14	2.4	1.6	0.95	56	9.8
6	8.0	---	---	---	---	---	13	2.5	1.5	0.77	50	10
7	3.7	---	---	---	---	---	13	2.4	2.2	0.53	44	9.5
8	4.5	---	---	---	---	---	13	2.1	2.8	0.38	40	6.9
9	---	---	---	---	---	---	13	2.3	3.5	0.27	35	5.7
10	---	---	---	---	---	---	13	1.9	3.1	0.44	31	5.2
11	---	---	---	---	---	---	13	1.5	2.4	0.38	28	4.6
12	---	---	---	---	---	---	10	1.7	2.3	0.49	23	4.9
13	---	---	---	---	---	---	6.7	1.8	2.3	0.55	18	5.9
14	---	---	---	---	---	---	6.1	2.1	2.2	0.59	15	12
15	---	---	---	---	---	---	5.8	2.1	2.4	0.82	12	17
16	---	---	---	---	---	---	6.2	1.9	2.1	0.64	10	17
17	---	---	---	---	---	---	5.2	2.3	2.0	0.73	8.5	15
18	---	---	---	---	---	---	4.6	1.9	2.4	0.92	10	8.7
19	---	---	---	---	---	98	4.2	2.4	2.2	1.1	9.3	7.2
20	---	---	---	---	---	74	4.5	2.2	2.4	1.2	7.8	7.1
21	---	---	---	---	---	55	6.0	2.4	2.3	2.0	7.4	7.2
22	---	---	---	---	---	38	6.5	2.3	1.9	4.3	7.5	7.1
23	---	---	---	---	---	33	6.5	2.5	1.7	6.5	8.5	7.6
24	---	---	---	---	---	30	6.3	2.4	1.9	3.3	6.7	7.6
25	---	---	---	---	---	37	4.8	2.5	1.6	2.0	5.8	7.6
26	---	---	---	---	---	37	4.1	2.1	1.5	23	5.6	7.4
27	---	---	---	---	---	36	1.6	2.1	1.7	199	6.1	7.5
28	---	---	---	---	---	32	2.0	2.7	1.5	173	5.5	8.0
29	---	---	---	---	---	31	2.2	2.0	1.6	86	5.1	8.4
30	---	---	---	---	---	27	1.9	2.0	1.6	77	4.6	9.3
31	---	---	---	---	---	23	---	1.9	---	73	4.2	---
TOTAL	---	---	---	---	---	---	255.2	67.5	63.8	664.86	724.6	245.5
MEAN	---	---	---	---	---	---	8.51	2.18	2.13	21.4	23.4	8.18
MAX	--	---	---	---	---	---	19	2.7	3.5	199	68	17
MIN	--	---	---	---	---	---	1.6	1.5	1.5	0.27	4.2	3.7
AC-FT	---	---	---	---	---	---	506	134	127	1,320	1,440	487

10028500 BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1941 - 2004*	
HIGHEST DAILY MEAN	199	Jul 27	2,000	Jun 5, 1983
LOWEST DAILY MEAN	0.27	Jul 9	0.09	Sep 8, 2002

* For period of operation.



10032000 SMITHS FORK NEAR BORDER, WY

LOCATION.--Lat 42°17'36", long 110°51'18", in NE¼ SW¼ SW¼ sec.28, T.27 N., Lincoln County, Hydrologic Unit 16010102, on left bank 4.9 mi upstream from Howland Creek, 5.6 mi downstream from Hobble Creek, and 12.4 mi northeast of Border.

DRAINAGE AREA.--165 mi^2.

PERIOD OF RECORD.--May 1942 to current year.

REVISED RECORDS.--WSP 1734: 1952(M).

GAGE.--Water-stage recorder. Elevation of gage is 6,720 ft above NGVD of 1929, from topographic map. Prior to October 16, 1945, at site 1.2 mi downstream at different datum. October 16, 1945 to November 1986 at site 0.4 mi downstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. One diversion for irrigation of about 200 acres upstream from station. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	66	e56	e70	e68	48	173	160	307	221	126	89
2	67	65	e60	e72	e66	49	185	173	301	212	127	91
3	65	64	64	e70	e64	47	186	197	304	205	121	115
4	63	64	62	e69	e62	47	199	218	331	209	121	109
5	63	62	61	e69	e61	46	250	266	369	195	118	103
6	62	e62	62	e67	e59	43	266	285	399	187	115	98
7	62	e62	63	e67	e58	42	294	307	420	183	113	92
8	62	e63	62	e67	e58	46	347	305	414	192	115	90
9	63	e64	64	e67	e56	48	262	312	410	179	114	93
10	64	66	e65	e67	e56	50	199	309	436	175	112	86
11	65	64	e65	e67	e56	49	190	312	409	172	110	87
12	64	64	e65	e67	e56	50	196	285	367	174	108	86
13	64	64	e65	e67	e56	50	186	268	338	173	108	99
14	63	66	e65	e67	e55	51	165	246	318	172	107	97
15	63	64	e64	e67	e55	52	160	231	304	174	109	93
16	63	65	e64	e68	e55	51	152	222	299	172	112	89
17	64	65	e64	e67	e55	56	148	214	297	167	108	87
18	64	64	e64	e67	e55	60	151	213	291	164	115	88
19	64	65	e64	e66	e55	66	142	211	302	160	113	85
20	64	66	e64	e66	e55	72	141	220	301	156	109	88
21	63	62	e63	e65	e54	80	138	229	288	156	107	86
22	63	63	e64	e65	e54	88	129	238	276	152	107	84
23	63	e60	e64	e64	e54	99	124	252	271	151	119	82
24	63	e59	e68	e64	e54	110	128	231	267	146	109	82
25	62	e57	e72	e64	53	114	129	218	270	142	111	80
26	62	e56	e71	e64	55	115	137	213	257	141	109	81
27	63	e53	e70	e64	53	107	157	226	255	142	105	79
28	63	e53	e70	e64	51	105	182	295	249	141	99	80
29	63	e53	e69	e64	50	99	177	393	238	135	97	76
30	70	e54	e69	e66	---	115	167	350	231	134	95	76
31	67	---	e68	e70	---	134	---	323	---	128	93	---
TOTAL	1,978	1,855	2,011	2,068	1,639	2,189	5,460	7,922	9,519	5,210	3,432	2,671
MEAN	63.8	61.8	64.9	66.7	56.5	70.6	182	256	317	168	111	89.0
MAX	70	66	72	72	68	134	347	393	436	221	127	115
MIN	62	53	56	64	50	42	124	160	231	128	93	76
AC-FT	3,920	3,680	3,990	4,100	3,250	4,340	10,830	15,710	18,880	10,330	6,810	5,300

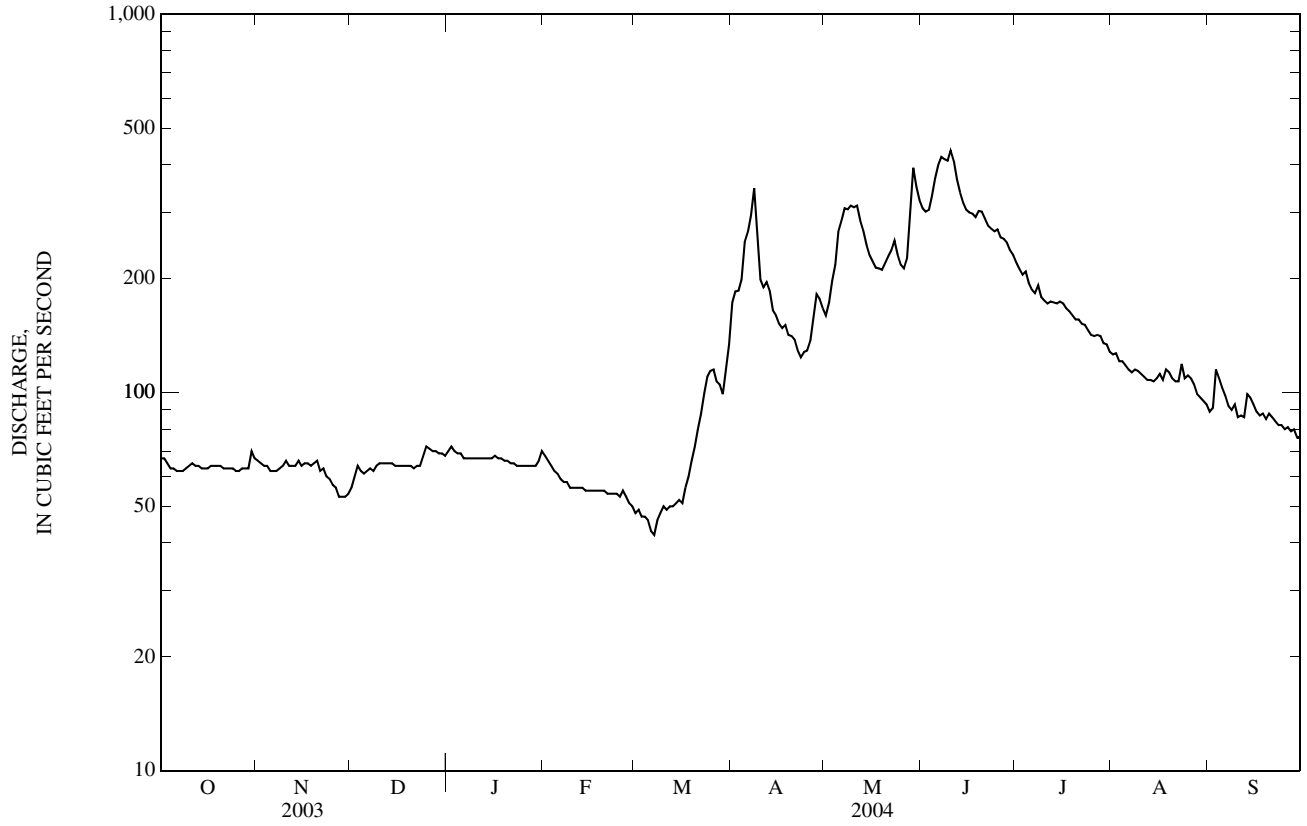
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2004, BY WATER YEAR (WY)

MEAN	90.1	77.7	68.8	63.4	60.6	62.7	159	531	617	289	150	107
MAX	156	113	88.4	85.0	82.8	99.4	385	1,072	1,377	602	242	166
(WY)	(1987)	(1986)	(1983)	(1983)	(1984)	(1986)	(1946)	(1997)	(1986)	(1975)	(1983)	(1986)
MIN	51.0	50.7	41.5	40.1	34.7	39.5	58.6	99.1	96.2	61.4	55.1	52.1
(WY)	(1978)	(1978)	(2002)	(1988)	(2003)	(1988)	(1975)	(1977)	(1977)	(1977)	(1977)	(1977)

10032000 SMITHS FORK NEAR BORDER, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1943 - 2004	
ANNUAL TOTAL	42,709		45,954		--	
ANNUAL MEAN	117		126		190	
HIGHEST ANNUAL MEAN	--		--		324	1986
LOWEST ANNUAL MEAN	--		--		71.1	1977
HIGHEST DAILY MEAN	617	May 30	436	Jun 10	2,000	Jun 4, 1986
LOWEST DAILY MEAN	30 [e]	Feb 13-15	42	Mar 7	30	Feb13-15,2003
ANNUAL SEVEN-DAY MINIMUM	31	Feb 11	46	Mar 3	31	Feb 11, 2003
ANNUAL RUNOFF (AC-FT)	84,710		91,150		137,800	
10 PERCENT EXCEEDS	248		270		501	
50 PERCENT EXCEEDS	68		86		90	
90 PERCENT EXCEEDS	42		56		58	

e Estimated.



10035000 SMITHS FORK AT COKEVILLE, WY

LOCATION.--Lat 42°05'47", long 110°56'24", in NE¼ NW¼ NW¼ sec.4, T.24 N., R.119 W., Lincoln County, Hydrologic Unit 16010102, 900 ft upstream from U.S. Highway 30N, 1 mi northeast of Cokeville, and 2 mi upstream from mouth.

DRAINAGE AREA.--275 mi^2.

PERIOD OF RECORD.--Water years 1983-88, 1989-1992, October 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
NOV													
18...	1405	52	610	12.8	118	8.7	393	5.0	2.5	<.04	<.06	<.008	<.02
APR													
06...	1220	191	603	10.5	112	8.3	391	17.0	8.0	<.04	E.03	<.008	<.02
MAY													
25...	1155	224	605	10.1	108	8.2	354	13.0	8.0	<.04	<.06	.010	<.02
JUN													
22...	1710	258	610	8.2	104	8.3	336	25.0	16.0	<.04	<.06	<.008	<.02

Date	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV		
18...	12	1.7
APR		
06...	138	71
MAY		
25...	34	21
JUN		
22...	31	22

< -- Less than
E -- Estimated value

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY

LOCATION.--Lat 42°07'36", long 110°58'21", in NW¼ SE¼ NE¼ sec. 28, T.25 N., R.119 W., Lincoln County, Hydrologic Unit 16010102, on left bank 1.1 mi upstream from Wyman Dam, 2.8 mi northwest of Cokeville, and 3.8 mi downstream from Smiths Fork.

DRAINAGE AREA.--2,447 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1954 to September 1996, October 1996 to current year (October 1996 to September 1998 seasonal).

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,140 ft above NGVD of 1929, from river-profile map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Natural flow of stream affected by diversion for irrigation, return flow from irrigated areas, and regulation by upstream reservoirs. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	92	e100	e92	e80	95	213	156	308	264	134	99
2	76	98	e107	e86	e80	90	212	145	265	265	139	96
3	76	91	e108	e73	e88	92	214	156	255	259	133	115
4	75	87	e110	e74	e92	91	221	169	269	247	128	120
5	78	85	e115	e74	e88	95	223	202	300	233	124	113
6	81	84	e116	e78	e90	98	211	222	329	216	118	105
7	82	90	e118	e67	e92	93	211	237	349	190	114	101
8	78	88	e118	e71	e94	99	223	245	356	171	108	97
9	71	111	e115	e73	e92	110	229	240	355	152	104	94
10	71	117	e108	e74	e90	114	222	244	390	149	110	90
11	72	106	e113	e74	e88	119	203	248	404	141	119	87
12	72	106	e116	e74	e86	124	195	259	364	139	122	84
13	72	107	e115	e74	e85	123	178	271	332	132	118	92
14	72	111	e116	e76	e84	113	180	251	318	138	114	97
15	72	109	e110	e80	e83	125	167	232	299	160	110	106
16	73	113	e107	e89	e81	129	165	216	286	158	109	108
17	71	120	e107	e89	e79	123	160	207	274	150	108	106
18	71	110	e106	e88	e82	141	151	197	270	149	115	102
19	74	105	e106	e85	e84	159	150	183	282	155	138	98
20	75	134	e106	e85	e83	179	161	180	297	145	129	109
21	68	146	e105	e83	e79	198	168	189	306	145	132	113
22	73	122	e103	e85	e82	207	165	198	277	146	129	105
23	74	e110	e100	e86	e84	214	153	233	273	144	139	104
24	74	e100	e102	e89	88	240	149	216	280	e137	140	99
25	75	e105	e107	e89	92	233	154	199	281	130	137	97
26	85	e109	e111	e88	98	234	150	193	264	127	139	95
27	88	e108	e103	e88	103	213	151	207	248	137	137	94
28	86	e103	e94	e90	98	201	163	249	270	248	126	93
29	85	e97	e90	e92	98	192	179	373	250	227	120	94
30	95	e98	e92	e99	---	199	166	360	258	157	113	100
31	79	---	e93	e86	---	203	---	335	---	142	107	---
TOTAL	2,376	3,162	3,317	2,551	2,543	4,646	5,487	7,012	9,009	5,353	3,813	3,013
MEAN	76.6	105	107	82.3	87.7	150	183	226	300	173	123	100
MAX	95	146	118	99	103	240	229	373	404	265	140	120
MIN	68	84	90	67	79	90	149	145	248	127	104	84
AC-FT	4,710	6,270	6,580	5,060	5,040	9,220	10,880	13,910	17,870	10,620	7,560	5,980

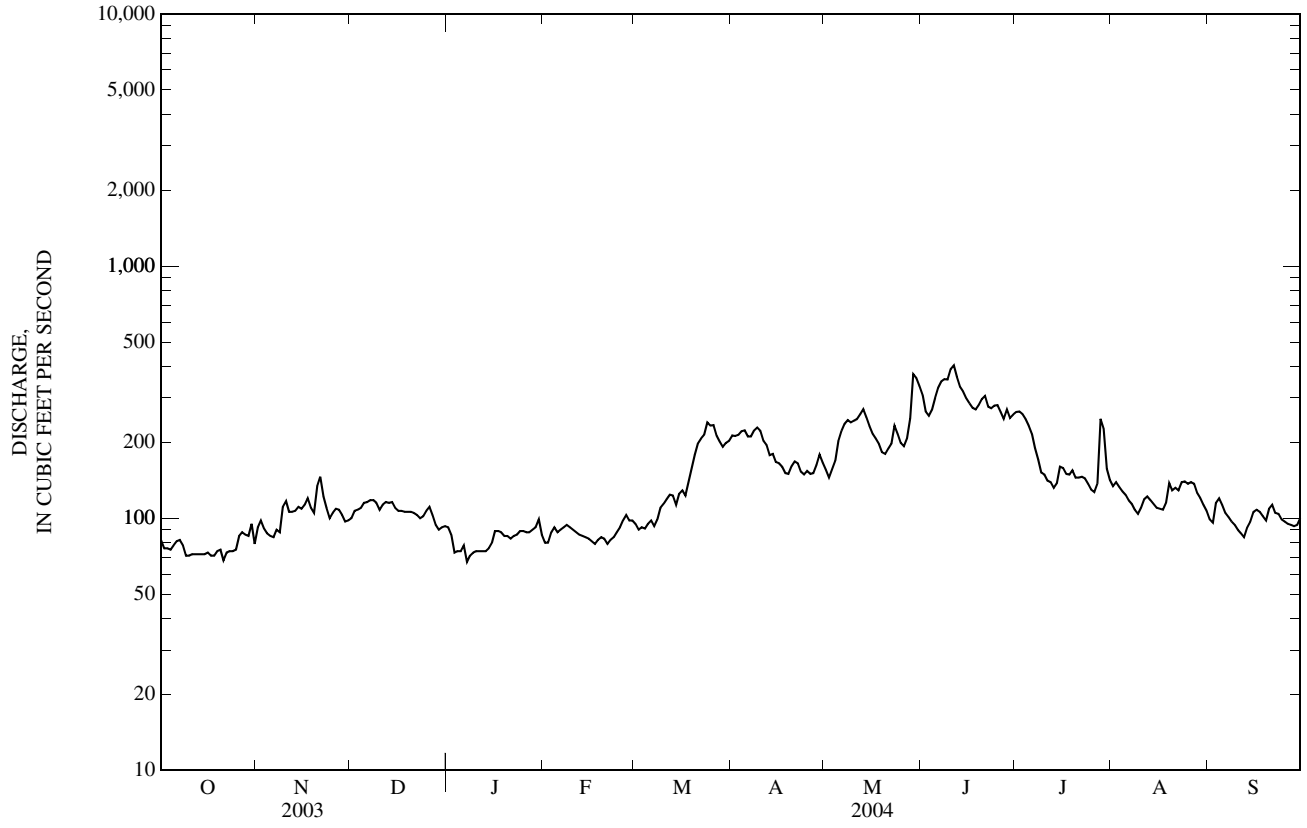
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2004, BY WATER YEAR (WY)

MEAN	216	226	199	180	204	355	654	944	1,175	559	232	198
MAX	755	692	536	344	429	1,159	1,945	2,794	3,712	1,556	707	658
(WY)	(1983)	(1983)	(1983)	(1984)	(1986)	(1986)	(1985)	(1984)	(1983)	(1983)	(1983)	(1983)
MIN	55.6	83.1	96.5	82.3	82.4	116	69.2	115	96.7	71.4	80.1	55.9
(WY)	(1978)	(1978)	(1978)	(2004)	(1993)	(1988)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1955 - 2004	
ANNUAL TOTAL	51,857		52,282		--	
ANNUAL MEAN	142		143		427	
HIGHEST ANNUAL MEAN	--		--		1,049	1984
LOWEST ANNUAL MEAN	--		--		112	1977
HIGHEST DAILY MEAN	552	May 31	404	Jun 11	5,400	Jun 7, 1983
LOWEST DAILY MEAN	68	Feb 8,Oct 21	67	Jan 7	31	Oct 5, 1977
ANNUAL SEVEN-DAY MINIMUM	72	Oct 9	72	Oct 9	36	Oct 1, 1977
ANNUAL RUNOFF (AC-FT)	102,900		103,700		309,000	
10 PERCENT EXCEEDS	273		252		1,030	
50 PERCENT EXCEEDS	110		113		217	
90 PERCENT EXCEEDS	79		79		106	

e Estimated.



10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: November 13, 1998 to September 30, 2001.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 23.3°C, Jul 4, 5, 6, 2001; minimum, 0.0°C, on many days during the winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, percent of saturation (00301)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)
OCT													
14...	1430	71	614	144	13.8	8.5	487	15.0	7.8	178	202	8	14.7
NOV													
18...	1510	101	618	105	11.4	8.5	543	3.5	3.3	191	215	9	19.7
DEC													
16...	1220	E200	625	127	15.2	8.4	613	E-10.0	.1	226	264	6	25.5
JAN													
22...	1220	83	624	75	9.0	8.0	628	<-5.0	.2	226	272	--	24.4
MAR													
25...	1050	224	614	102	10.5	8.3	606	--	5.1	180	216	--	22.7
MAY													
19...	1210	204	615	128	11.0	8.4	462	13.5	12.5	185	219	3	13.3
JUL													
22...	0930	139	614	119	9.3	8.2	491	20.0	17.2	176	215	--	15.8
SEP													
15...	1130	101	618	125	11.4	8.3	477	13.5	10.2	170	202	3	13.3

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L (71846)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Suspended sediment discharge, tons/d (80155)	Suspended sediment concentration mg/L (80154)
OCT											
14...	66.7	<.04	<.06	--	<.008	<.006	.009	.12	--	6.4	33
NOV											
18...	68.5	<.04	E.04	--	<.008	<.006	.023	.20	.0	17	62
DEC											
16...	73.5	E.02	.10	--	<.008	<.006	.040	.32	--	--	--
JAN											
22...	76.3	<.04	.18	--	<.008	<.006	.022	.30	630	4.2	19
MAR											
25...	92.9	.13	.10	.16	E.005	E.004	.100	.79	--	19	32
MAY											
19...	51.8	<.04	.06	--	<.008	E.004	.039	.27	5	11	20
JUL											
22...	57.4	<.04	<.06	--	<.008	<.006	.017	.22	--	18	48
SEP											
15...	61.7	<.04	<.06	--	<.008	<.006	.012	.17	44	2.5	9

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chlorophyll a periphyton, chromofluoro, mg/m2 (70957)	Periphyton biomass ash weight, g/m2 (00572)	Periphyton biomass dry weight, g/m2 (00573)	Biomass periphyton, ashfree drymass g/m2 (49954)	Biomass chlorophyll ratio, periphyton, number (70950)	Pheophytin a, periphyton, mg/m2 (62359)
AUG												
04...	1200	113	8.9	8.4	542	18.9	77.7	1,600	1,755	158.2	2,040	26

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

10039500 BEAR RIVER AT BORDER, WY

LOCATION.--Lat 42°12'40", long 111°03'11", in NE¼ NE¼ NE¼ sec.15, T.14 S., R. 46 E., Bear Lake County, Idaho, Hydrologic Unit 16010102, on left bank 0.2 mi west of Idaho-Wyoming State line, 0.5 mi west of Border, and 2.1 mi upstream from Thomas Fork.

DRAINAGE AREA.--2,486 mi^2.

PERIOD OF RECORD.--October 1937 to September 1996, October 1996 to 2000 (seasonal), October 2000 to current year.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,051.63 ft above NGVD of 1929, unadjusted.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by regulation of upstream reservoirs, diversions for irrigation, and return flow from irrigated areas. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	82	e100	e92	e80	e95	230	136	274	256	146	63
2	40	94	e107	e86	e80	e90	226	125	237	254	155	59
3	39	91	e108	e73	e88	e92	197	121	215	258	160	69
4	40	91	e110	e74	e92	e91	200	115	215	239	149	81
5	41	82	e115	e74	e88	e95	201	124	239	231	137	79
6	37	76	e116	e78	e90	e98	196	154	275	208	110	71
7	36	78	e118	e67	e92	e93	190	157	301	186	102	66
8	36	87	e118	e71	e94	e99	200	166	319	148	97	61
9	35	100	e115	e73	e92	e110	212	165	323	139	88	58
10	36	105	e108	e74	e90	e114	210	169	357	124	76	55
11	40	96	e113	e74	e88	e119	194	170	422	118	80	52
12	42	94	e116	e74	e86	e124	181	180	375	110	86	52
13	43	95	e115	e74	e85	e123	168	214	326	101	89	52
14	44	96	e116	e76	e84	e113	163	218	301	95	88	58
15	45	98	e110	e80	e83	e125	161	194	276	116	84	63
16	45	98	e107	e89	e81	e140	147	179	258	119	83	66
17	45	110	e107	e89	e79	133	142	166	221	119	81	68
18	45	118	e106	e88	e82	141	132	156	215	122	84	66
19	45	114	e106	e85	e84	158	135	138	213	132	99	63
20	46	118	e106	e85	e83	178	144	132	239	145	102	67
21	46	149	e105	e83	e79	194	157	134	256	145	97	76
22	46	e122	e103	e85	e82	213	153	144	232	148	91	72
23	44	e110	e100	e86	e84	213	145	172	222	153	90	69
24	43	e100	e102	e89	e88	241	133	175	244	147	98	65
25	54	e105	e107	e89	e92	245	136	154	245	140	98	62
26	77	e109	e111	e88	e98	253	130	145	246	135	99	61
27	80	e108	e103	e88	e103	242	125	153	227	133	100	64
28	81	e103	e94	e90	e98	221	133	180	241	166	94	61
29	80	e97	e90	e92	e98	209	154	303	243	306	86	60
30	85	e98	e92	e99	---	213	151	346	241	193	82	66
31	83	---	e93	e86	---	225	---	303	---	156	75	---
TOTAL	1,548	3,024	3,317	2,551	2,543	4,800	5,046	5,388	7,998	5,042	3,106	1,925
MEAN	49.9	101	107	82.3	87.7	155	168	174	267	163	100	64.2
MAX	85	149	118	99	103	253	230	346	422	306	160	81
MIN	35	76	90	67	79	90	125	115	213	95	75	52
AC-FT	3,070	6,000	6,580	5,060	5,040	9,520	10,010	10,690	15,860	10,000	6,160	3,820

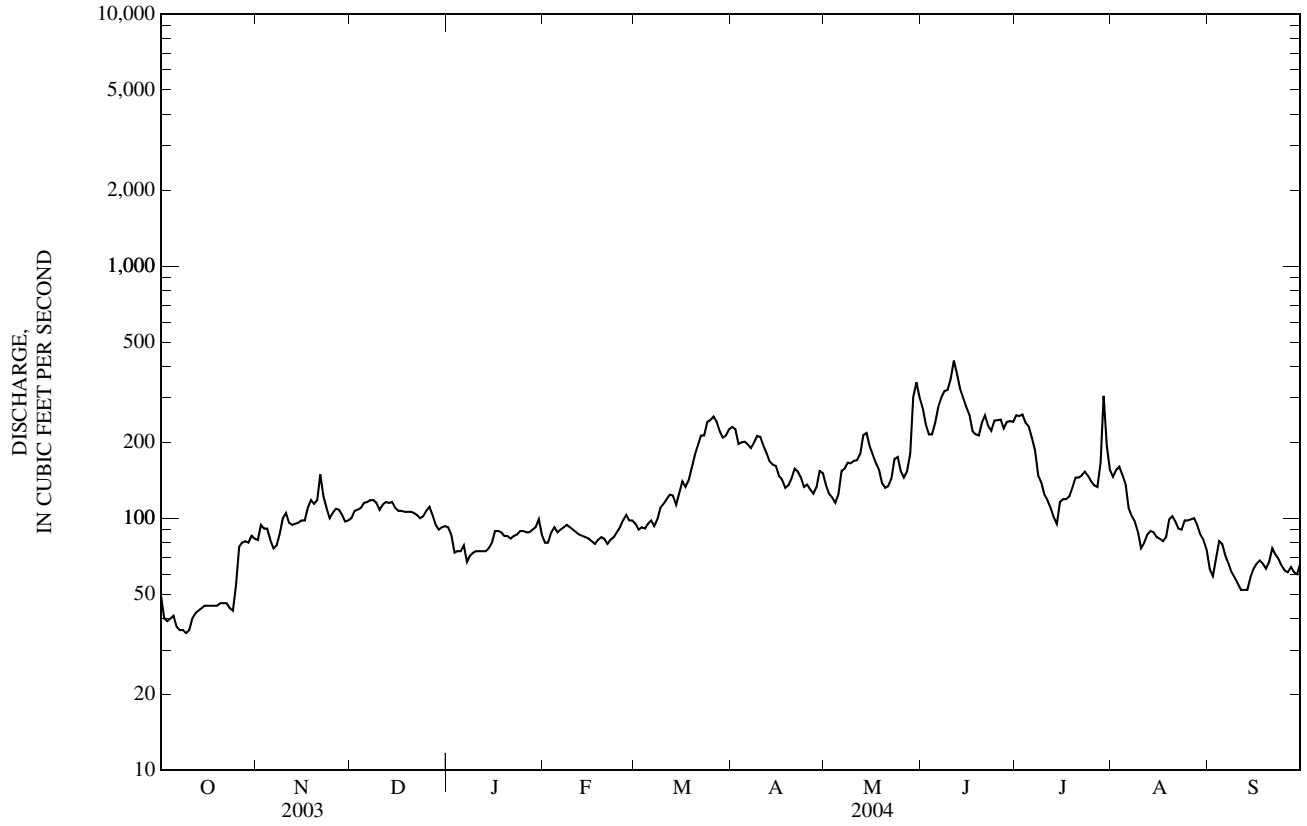
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2004, BY WATER YEAR (WY)*

MEAN	206	222	194	179	204	373	726	993	1,137	520	222	176
MAX	751	693	563	381	479	1,294	1,979	3,158	3,829	1,670	752	671
(WY)	(1983)	(1983)	(1983)	(1985)	(1986)	(1986)	(1985)	(1952)	(1983)	(1983)	(1983)	(1983)
MIN	43.5	74.6	97.2	77.6	75.2	105	71.2	74.4	62.2	54.2	42.3	38.5
(WY)	(2002)	(2002)	(2002)	(1993)	(1993)	(1988)	(1977)	(1977)	(1977)	(1977)	(1940)	(1940)

10039500 BEAR RIVER AT BORDER, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1938 - 2004*	
ANNUAL TOTAL	44,297		46,288		--	
ANNUAL MEAN	121		126		418	
HIGHEST ANNUAL MEAN	--		--		1,068	1983
LOWEST ANNUAL MEAN	--		--		103	2002
HIGHEST DAILY MEAN	494	Jun 1	422	Jun 11	4,840	Jun 8, 1983
LOWEST DAILY MEAN	35	Oct 9	35	Oct 9	25	Apr 29, 1977
ANNUAL SEVEN-DAY MINIMUM	37	Oct 4	37	Oct 4	29	Apr 28, 1977
ANNUAL RUNOFF (AC-FT)	87,860		91,810		303,100	
10 PERCENT EXCEEDS	225		230		1,070	
50 PERCENT EXCEEDS	98		103		215	
90 PERCENT EXCEEDS	64		62		102	

* For period of operation.
e Estimated.



13010065 SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY

LOCATION.--Lat 44°05'21", long 110°41'38", in Hydrologic Unit 17040101, Teton County, Grand Teton National Park, on left bank 50 ft upstream from State Highway 89 bridge, 2 mi downstream from the south boundary of Yellowstone National Park, and 600 ft downstream from the confluence with Sheffield Creek.

DRAINAGE AREA.--486 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year. Prior to 1988 water year, published as station 13010200.

GAGE.--Water-stage recorder. Elevation of gage is 6,801.61 ft above NGVD of 1929, (levels by U.S. Coast and Geodetic Survey). A nonrecording cantilever chain gage was used from 1913-18 at a site 2.5 mi upstream at a different datum. In 1918, an auxiliary chain gage was installed at the current site and read periodically. Water-stage recorder installed July 1921 at the current site at a different datum and operated until July 1925. Records probably not comparable. Data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	e200	296	e320	e300	287	443	1,360	2,150	1,140	380	369
2	209	196	279	e315	e290	282	501	1,800	2,440	1,050	374	383
3	209	204	285	e310	e295	281	569	2,490	2,830	1,000	369	417
4	209	215	287	e300	e300	285	625	3,030	3,250	993	364	428
5	209	212	274	e290	e310	281	684	3,850	3,460	1,350	358	386
6	209	201	296	e280	e310	290	782	4,120	3,690	1,030	346	365
7	210	203	324	e310	310	280	892	4,210	3,540	920	336	351
8	215	202	328	e320	305	289	918	4,070	3,380	848	327	338
9	213	214	324	e320	302	298	873	3,840	3,440	788	321	325
10	263	236	316	e320	294	303	703	3,380	3,250	782	316	318
11	257	257	322	e330	288	299	667	3,230	2,600	719	309	311
12	235	266	319	e330	278	290	721	2,560	2,210	671	303	303
13	227	277	328	e340	279	292	918	2,100	1,990	643	300	380
14	220	286	338	e340	278	289	1,100	1,850	1,930	628	294	406
15	216	286	e325	339	281	282	1,000	1,700	2,010	612	291	420
16	221	291	e315	333	278	279	846	1,790	1,970	601	291	408
17	218	301	e310	326	293	279	836	1,710	1,820	565	320	393
18	215	296	e315	315	308	287	792	2,100	1,760	557	430	363
19	213	302	e320	317	316	302	723	2,420	1,710	571	432	364
20	208	314	e325	313	311	319	722	2,420	1,660	542	354	510
21	207	311	e335	301	302	326	677	2,510	1,510	522	333	453
22	207	e300	326	291	289	341	648	2,490	1,480	526	335	421
23	206	e280	312	296	290	377	653	2,440	1,470	543	549	411
24	203	e280	314	297	289	405	752	2,130	1,470	499	424	416
25	191	e280	e320	301	290	424	763	1,910	1,410	471	505	413
26	198	e290	e330	293	294	415	940	1,790	1,540	456	569	393
27	198	e300	e310	290	295	363	1,380	2,430	1,370	448	505	384
28	210	293	e300	308	293	338	1,760	3,240	1,330	433	446	383
29	259	297	e315	314	290	315	1,300	3,280	1,230	417	414	375
30	246	303	e325	307	---	323	1,150	2,530	1,180	404	396	404
31	213	---	e315	e305	---	366	---	2,190	---	392	382	---
TOTAL	6,721	7,893	9,728	9,671	8,558	9,787	25,338	80,970	65,080	21,121	11,673	11,591
MEAN	217	263	314	312	295	316	845	2,612	2,169	681	377	386
MAX	263	314	338	340	316	424	1,760	4,210	3,690	1,350	569	510
MIN	191	196	274	280	278	279	443	1,360	1,180	392	291	303
AC-FT	13,330	15,660	19,300	19,180	16,970	19,410	50,260	160,600	129,100	41,890	23,150	22,990

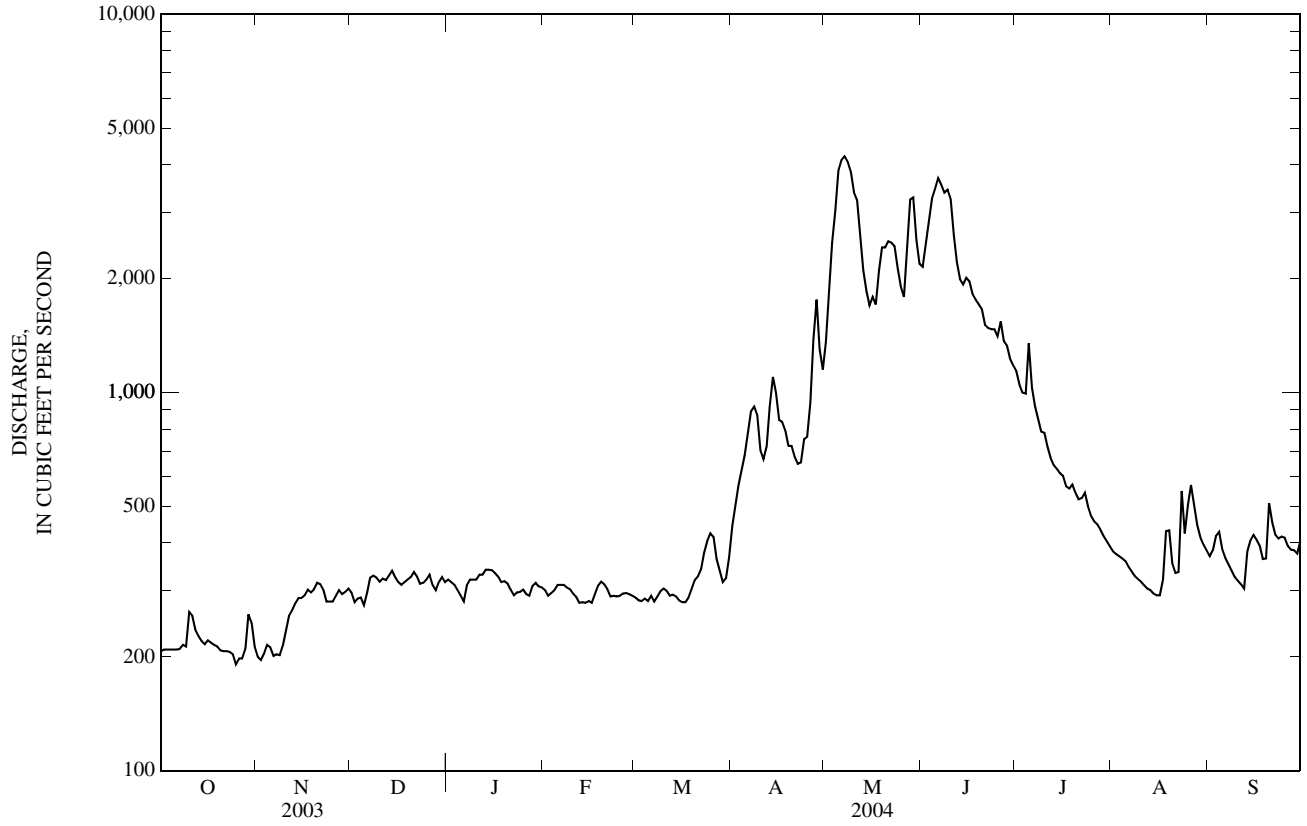
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2004, BY WATER YEAR (WY)

MEAN	345	348	357	354	347	355	727	3,033	3,074	869	418	344
MAX	679	607	531	720	469	506	1,509	5,484	6,701	1,633	861	644
(WY)	(1984)	(1984)	(1997)	(1997)	(1999)	(1986)	(1990)	(1997)	(1996)	(1995)	(1997)	(1997)
MIN	185	213	247	261	267	279	424	1,818	768	328	196	168
(WY)	(1989)	(1988)	(1988)	(2001)	(1989)	(1988)	(1993)	(1987)	(2001)	(2001)	(2001)	(1994)

13010065 SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1984 - 2004	
ANNUAL TOTAL	275,408		268,131		--	
ANNUAL MEAN	755		733		882	
HIGHEST ANNUAL MEAN	--		--		1,538	1997
LOWEST ANNUAL MEAN	--		--		1,538	1988
HIGHEST DAILY MEAN	7,010	May 29	4,210	May 7	11,300	Jun 5, 1996
LOWEST DAILY MEAN	191	Oct 25	191	Oct 25	161	Sep 6, 1994
ANNUAL SEVEN-DAY MINIMUM	201	Oct 21	201	Oct 21	163	Sep 4, 1994
ANNUAL RUNOFF (AC-FT)	546,300		531,800		639,200	
10 PERCENT EXCEEDS	1,860		2,000		2,370	
50 PERCENT EXCEEDS	325		332		391	
90 PERCENT EXCEEDS	215		236		260	

e Estimated



13010065 SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1986 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: June to September 1994, June to September 1995, May to September 1996.

INSTRUMENTATION:--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 22.5°C July 22, 24, Aug. 11, 1994.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
20...	1540	207	603	9.3	106	8.2	336	19.8	10.5	72	22.1	4.05	5.73
NOV													
19...	1530	302	605	10.9	108	7.6	298	7.3	5.0	60	18.5	3.24	4.97
DEC													
18...	1200	318	604	11.4	99	7.8	288	-7.0	.0	54	16.7	3.02	4.66
JAN													
23...	1030	281	599	10.4	94	7.8	310	-4.0	1.4	61	19.0	3.22	5.15
FEB													
25...	1530	295	595	10.2	103	8.4	292	1.8	5.3	58	18.0	3.20	5.19
MAR													
17...	1545	276	596	9.8	104	8.2	305	6.8	7.4	60	18.6	3.27	5.11
MAY													
17...	1340	1,580	595	10.6	111	7.5	138	14.6	6.6	38	11.8	2.00	1.93
JUL													
23...	1110	548	599	8.7	111	8.2	223	19.6	15.4	59	18.4	3.07	3.51
SEP													
22...	1530	415	603	10.2	109	8.4	250	3.2	7.8	59	18.2	3.36	3.72

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)
OCT													
20...	2	39.6	52	85	20.5	2.3	37.7	37.6	221	.30	122	219	<.04
NOV													
19...	2	35.8	54	75	19.2	2.4	38.9	30.9	202	.26	158	194	<.04
DEC													
18...	2	35.7	56	74	20.0	2.6	38.5	29.5	189	.27	168	196	<.04
JAN													
23...	2	37.3	55	79	20.7	2.5	38.9	33.5	201	.29	161	212	<.04
FEB													
25...	2	34.2	53	75	19.9	2.5	40.8	31.7	201	.29	168	210	<.04
MAR													
17...	2	38.2	56	78	20.3	2.5	37.6	32.8	204	.28	155	208	<.04
MAY													
17...	.8	11.9	39	45	6.41	1.1	20.1	10.2	92	.14	424	99	<.04
JUL													
23...	1	22.8	44	66	11.5	1.7	30.0	22.4	150	.21	227	153	<.04
SEP													
22...	2	28.5	49	72	14.0	1.8	30.9	25.4	166	.24	194	173	<.04

13010065 SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Total carbon, suspnd sedimnt total, mg/L (00694)	Organic carbon, water, fltrd, mg/L (00681)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)
OCT													
20...	<.06	<.008	--	E.003	.009	.10	--	--	13	2.7	--	--	--
NOV													
19...	E.03	<.008	.04	E.004	.008	.13	.3	1.6	12	2.6	<.006	<.006	<.006
DEC													
18...	<.06	<.008	--	E.003	.011	.14	--	--	12	2.9	--	--	--
JAN													
23...	.07	<.008	<.02	E.005	.010	.13	.1	2.0	12	3.0	--	--	--
FEB													
25...	<.60	<.008	--	E.005	.009	.09	--	--	16	2.9	--	--	--
MAR													
17...	<.06	<.008	E.03	E.003	.009	.12	.1	1.9	15	3.0	--	--	--
MAY													
17...	<.06	<.008	.03	E.003	.017	.15	.2	3.1	18	3.6	<.006	<.006	<.006
JUL													
23...	<.06	<.008	.03	E.004	.013	.11	.4	1.4	15	3.0	--	--	--
SEP													
22...	<.06	<.008	<.02	<.006	.010	.12	.2	1.9	18	2.2	--	--	--

Date	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)
OCT													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
19...	<.005	<.005	<.007	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012
DEC													
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
17...	<.005	<.005	<.007	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--

13010065 SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Desulfinylfipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)
OCT 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 19...	<.005	<.009	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	<.005	<.009	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035
JUL 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 22...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p-' DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Propyzamide, water, fltrd 0.7u GF ug/L (82676)
OCT 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 19...	<.027	<.015	<.013	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	<.027	<.015	<.013	<.006	.007	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004
JUL 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 22...	--	--	--	--	--	--	--	--	--	--	--	--	--

13010065 SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT												
20...	--	--	--	--	--	--	--	--	--	--	3	1.7
NOV												
19...	<.025	<.011	<.02	E.004	<.02	<.034	<.02	<.010	<.002	<.009	2	1.6
DEC												
18...	--	--	--	--	--	--	--	--	--	--	2	1.7
JAN												
23...	--	--	--	--	--	--	--	--	--	--	5	3.8
FEB												
25...	--	--	--	--	--	--	--	--	--	--	5	4.0
MAR												
17...	--	--	--	--	--	--	--	--	--	--	4	3.0
MAY												
17...	<.025	<.011	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	7	30
JUL												
23...	--	--	--	--	--	--	--	--	--	--	4	5.9
SEP												
22...	--	--	--	--	--	--	--	--	--	--	2	2.2

< -- Less than
E -- Estimated value

13011000 SNAKE RIVER NEAR MORAN, WY

LOCATION.--Lat 43°51'30", long 110°35'09"(revised), in SW¼ SE¼ sec.18, T.45 N., R.114 W., Teton County, Grand Teton National Park, Hydrologic Unit 17040101, on left bank 1,000 ft downstream from Jackson Lake Dam, 4.1 mi west of Moran, and at mile 988.7.

DRAINAGE AREA.--807 mi^2. Mean elevation, 8,040 ft.

PERIOD OF RECORD.--September 1903 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "South Fork Snake River at Moran" prior to October 1910 and as "Snake River at Moran" October 1910 to September 1968.

REVISED RECORDS.--WSP 1217: 1944(m). WSP 1347: 1906-10. WDR Idaho 1974: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,727.84 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation). Prior to June 13, 1917, nonrecording gage, and June 14, 1917 to May 20, 1940, water-stage recorder, at site 1.5 mi downstream at different datums. Data collection platform with satellite telemetry at station.

REMARKS.--Records good. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

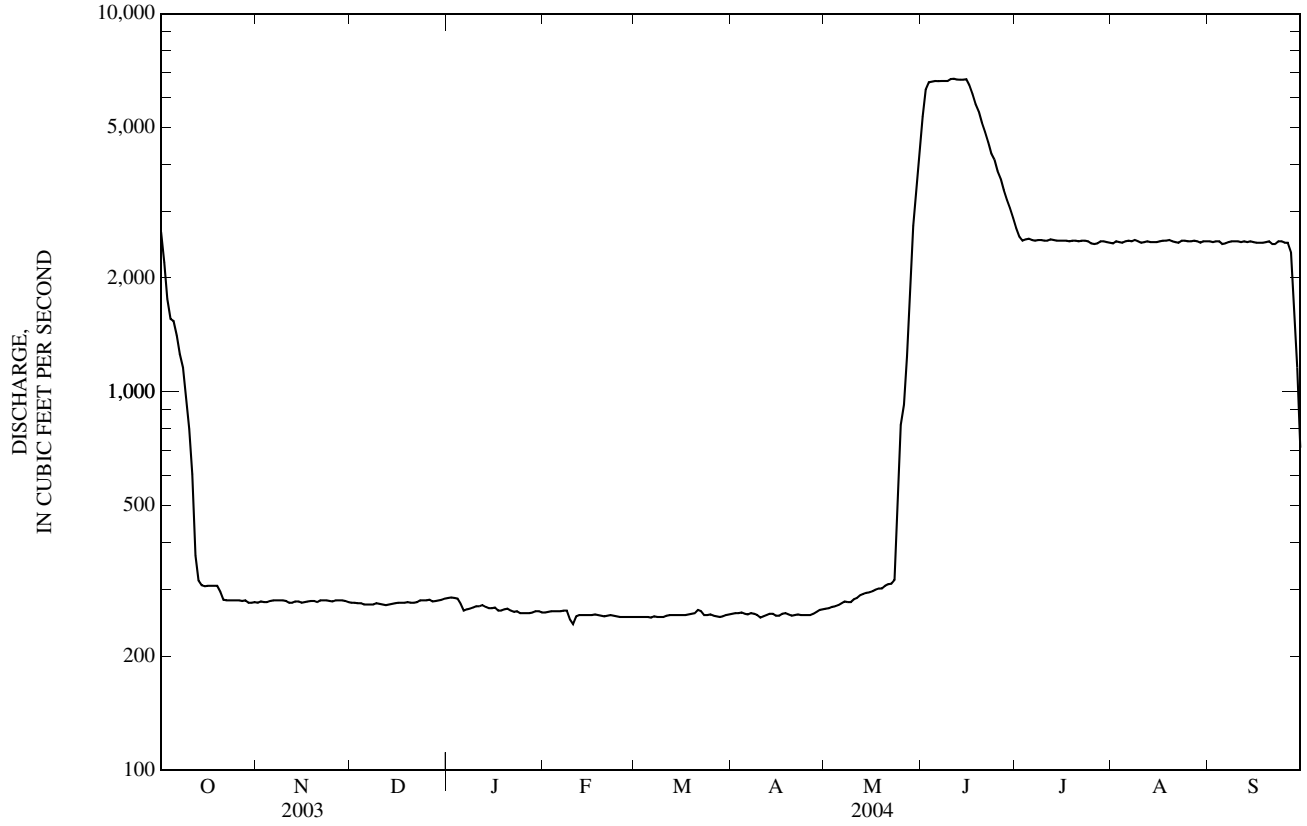
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,650	277	277	285	261	254	259	267	5,350	2,710	2,470	2,500
2	2,200	279	277	286	262	254	260	268	6,300	2,570	2,500	2,490
3	1,760	278	276	285	263	254	260	270	6,590	2,510	2,490	2,500
4	1,560	278	276	284	263	254	261	271	6,610	2,530	2,480	2,500
5	1,540	280	274	275	263	254	259	273	6,640	2,540	2,500	2,460
6	1,410	281	274	264	263	253	258	276	6,630	2,520	2,510	2,470
7	1,260	281	274	266	264	255	260	279	6,640	2,510	2,500	2,490
8	1,160	281	274	267	264	254	259	278	6,640	2,520	2,520	2,500
9	971	281	276	269	250	254	257	278	6,640	2,520	2,500	2,500
10	798	280	275	271	243	254	253	283	6,720	2,510	2,480	2,500
11	606	277	274	271	255	256	255	285	6,730	2,510	2,490	2,490
12	369	277	273	273	257	257	257	290	6,700	2,530	2,500	2,500
13	317	279	274	270	257	257	259	292	6,690	2,520	2,490	2,490
14	308	279	275	268	257	257	259	294	6,690	2,510	2,490	2,500
15	306	277	276	268	257	257	256	295	6,710	2,510	2,490	2,490
16	307	278	277	269	257	257	256	297	6,470	2,510	2,500	2,480
17	307	279	277	264	258	257	259	300	6,130	2,510	2,510	2,480
18	307	280	277	264	257	258	260	302	5,770	2,500	2,510	2,480
19	307	280	278	266	256	259	258	302	5,510	2,510	2,520	2,490
20	296	278	277	267	255	260	256	307	5,160	2,510	2,500	2,500
21	282	281	277	264	256	265	257	310	4,870	2,500	2,490	2,460
22	281	281	278	262	257	263	258	311	4,570	2,510	2,480	2,460
23	281	281	281	263	256	257	257	318	4,270	2,510	2,510	2,500
24	281	280	281	260	255	257	257	533	4,110	2,500	2,510	2,500
25	281	279	281	260	254	258	257	817	3,840	2,470	2,500	2,480
26	281	281	282	260	254	256	257	924	3,660	2,460	2,500	2,480
27	280	281	279	260	254	255	259	1,240	3,420	2,470	2,510	2,340
28	281	281	280	261	254	254	262	1,940	3,220	2,500	2,500	1,730
29	277	280	281	263	254	255	265	2,750	3,060	2,500	2,480	1,160
30	277	278	282	263	---	257	266	3,420	2,880	2,490	2,500	712
31	278	---	284	261	---	258	---	4,350	---	2,480	2,500	---
TOTAL	21,819	8,383	8,597	8,309	7,456	7,950	7,756	22,620	165,220	77,950	77,430	70,632
MEAN	704	279	277	268	257	256	259	730	5,507	2,515	2,498	2,354
MAX	2,650	281	284	286	264	265	266	4,350	6,730	2,710	2,520	2,500
MIN	277	277	273	260	243	253	253	267	2,880	2,460	2,470	712
AC-FT	43,280	16,630	17,050	16,480	14,790	15,770	15,380	44,870	327,700	154,600	153,600	140,100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2004, BY WATER YEAR (WY)

MEAN	361	296	332	310	371	472	739	1,476	3,472	3,916	3,506	2,025
MAX	1,605	3,009	4,280	1,362	2,489	3,053	3,828	5,658	8,594	8,182	7,370	5,265
(WY)	(1913)	(1957)	(1957)	(1912)	(1961)	(1951)	(1974)	(1971)	(1918)	(1921)	(1918)	(1984)
MIN	5.06	3.00	2.00	2.00	2.00	2.00	2.53	6.48	51.7	983	987	146
(WY)	(1948)	(1949)	(1945)	(1945)	(1945)	(1945)	(1945)	(1945)	(1932)	(1989)	(1919)	(1910)

13011000 SNAKE RIVER NEAR MORAN, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1904 - 2004	
ANNUAL TOTAL	514,228		484,122		--	
ANNUAL MEAN	1,409		1,323		1,446	
HIGHEST ANNUAL MEAN	--		--		2,548	1997
LOWEST ANNUAL MEAN	--		--		687	1989
HIGHEST DAILY MEAN	5,640	Aug 20	6,730	Jun 11	14,700	Jun 13, 1918
LOWEST DAILY MEAN	262	Mar 11	243	Feb 10	0.30	Oct 28, 1969
ANNUAL SEVEN-DAY MINIMUM	264	Mar 6	254	Feb 9	1.4	Oct 24, 1969
ANNUAL RUNOFF (AC-FT)	1,020,000		960,300		1,047,000	
10 PERCENT EXCEEDS	5,090		2,550		4,270	
50 PERCENT EXCEEDS	282		281		491	
90 PERCENT EXCEEDS	272		257		18	



13011500 PACIFIC CREEK AT MORAN, WY

LOCATION.--Lat 43°51'01", long 110°31'04", in SW¼ NW¼ sec.23, T.45 N., R.114 W., Teton County, Grand Teton National Park, Hydrologic Unit 17040101, on left bank 40 ft upstream from bridge on U.S. Highway 287, at Moran, and at mile 0.5.

DRAINAGE AREA.--169 mi^2. Mean elevation, 8,160 ft.

PERIOD OF RECORD.--July to November 1906 (gage heights only), July 1917 to September 1918 (no winter records), September 1944 to September 1975, July 1978 to current year. Published as "near Moran" prior to October 1968.

GAGE.--Water-stage recorder. Elevation of gage is 6,720 ft above NGVD of 1929, from topographic map. July 31 to November 11, 1906, nonrecording gage at site 0.4 mi downstream at different datum. July 20, 1917 to September 30, 1918, nonrecording gage at site 0.1 mi downstream at different datum. September 23, 1944 to November 13, 1959, at site 100 ft upstream at same datum. November 14, 1959 to September 24, 1975, at site 35 ft downstream at same datum. Data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversion or regulation. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	42	46	e40	e34	e42	118	477	454	258	115	83
2	46	e40	e40	e38	e32	e40	145	573	486	245	114	94
3	47	41	45	e34	e32	e40	179	774	562	230	111	125
4	45	42	44	e30	e36	e40	206	1,060	686	227	108	133
5	45	e42	e44	e24	e38	e38	225	1,510	816	311	106	116
6	45	e40	44	e20	e34	e38	259	1,670	979	241	101	103
7	45	e34	44	e28	e34	e38	294	1,560	984	215	99	95
8	46	e34	e46	e38	e38	e42	292	1,540	928	200	96	88
9	46	37	e44	e42	e36	e44	296	1,370	1,010	190	93	85
10	48	39	e42	e38	e30	e44	247	1,050	1,010	186	91	81
11	50	41	e44	e38	e32	e42	234	1,000	764	175	88	80
12	48	e36	e46	e36	e24	e40	242	690	583	167	88	80
13	47	e34	e46	e36	e28	e40	294	504	476	163	86	95
14	47	41	e48	e36	e28	e40	362	400	429	160	84	114
15	46	42	e50	e36	e30	e48	357	340	431	162	84	113
16	46	43	e50	e38	e36	e50	311	339	425	156	81	106
17	46	43	e52	e38	e42	51	293	320	396	149	81	100
18	46	e42	e50	e36	e46	53	284	456	395	148	120	91
19	46	44	e50	e38	e50	61	261	539	391	166	136	91
20	45	e42	e50	e38	e46	67	259	613	392	152	116	134
21	45	e40	e52	e34	e42	69	245	567	347	145	112	124
22	45	e38	e50	e36	e38	74	234	545	336	142	109	112
23	45	e36	e42	e38	e36	84	237	523	329	169	144	112
24	45	e34	e40	e38	e38	96	272	414	328	155	125	112
25	43	e30	e52	e40	e44	103	276	339	316	143	132	109
26	43	e34	e52	e38	e44	100	332	312	341	137	139	102
27	43	e38	e48	e38	e42	87	488	447	319	133	127	96
28	43	e32	e38	e40	e40	84	607	747	333	128	112	99
29	e42	e40	e38	e40	e42	79	484	905	292	125	101	95
30	e42	e38	e40	e42	---	85	423	631	275	121	94	108
31	e42	---	e40	e36	---	97	---	502	---	118	89	---
TOTAL	1,404	1,159	1,417	1,122	1,072	1,856	8,756	22,717	15,813	5,417	3,282	3,076
MEAN	45.3	38.6	45.7	36.2	37.0	59.9	292	733	527	175	106	103
MAX	50	44	52	42	50	103	607	1,670	1,010	311	144	134
MIN	42	30	38	20	24	38	118	312	275	118	81	80
AC-FT	2,780	2,300	2,810	2,230	2,130	3,680	17,370	45,060	31,370	10,740	6,510	6,100

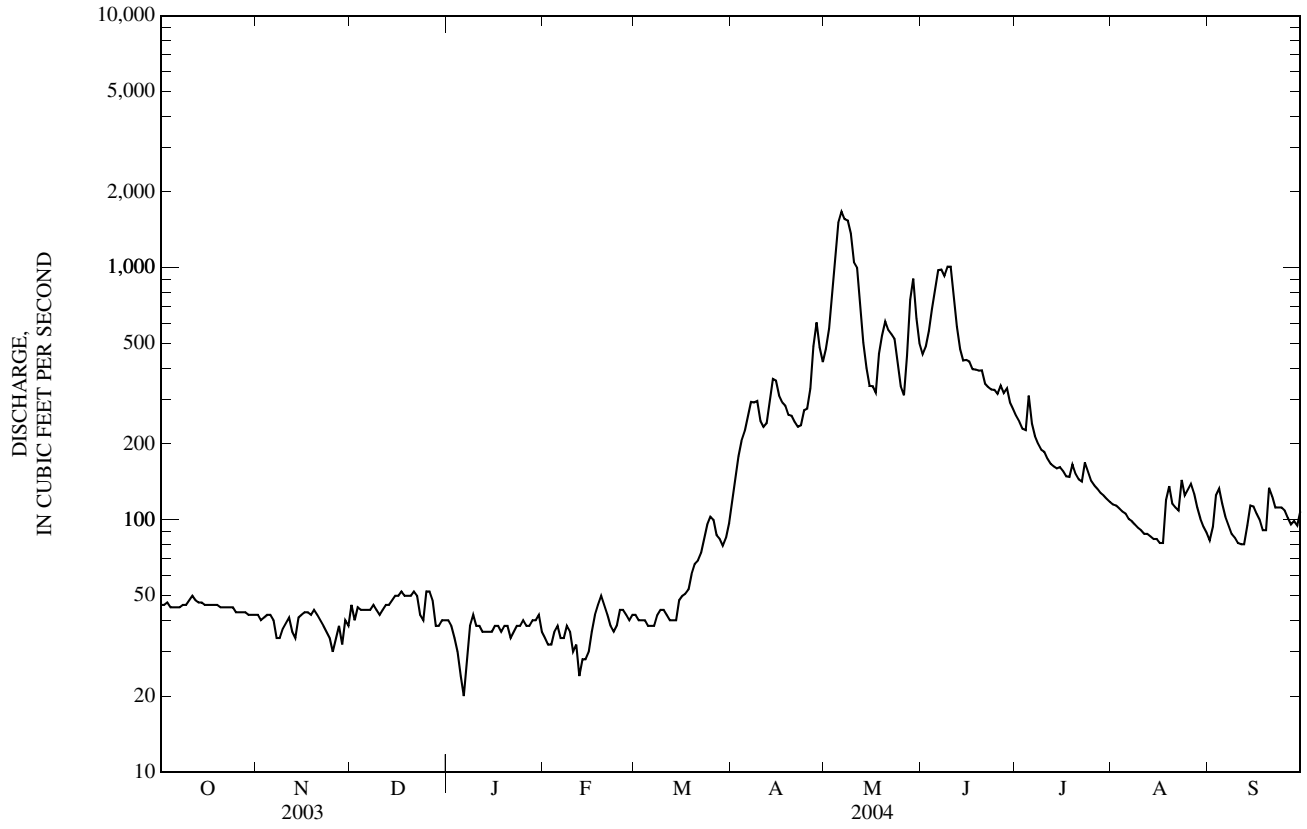
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2004, BY WATER YEAR (WY)

MEAN	64.1	53.8	48.1	44.2	45.6	52.4	160	983	1,236	335	96.9	71.3
MAX	142	105	93.5	70.7	72.2	94.5	418	2,314	2,884	1,527	191	127
(WY)	(1973)	(1973)	(1984)	(1951)	(1995)	(1972)	(1946)	(1997)	(1997)	(1982)	(1982)	(1972)
MIN	34.6	31.7	29.0	25.3	26.4	32.3	53.3	345	238	70.0	39.3	37.2
(WY)	(1988)	(2003)	(2003)	(1979)	(2002)	(2002)	(1970)	(1975)	(1994)	(1994)	(2001)	(1994)

13011500 PACIFIC CREEK AT MORAN, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1917 - 2004	
ANNUAL TOTAL	89,658		67,091		--	
ANNUAL MEAN	246		183		266	
HIGHEST ANNUAL MEAN	--		--		560	1997
LOWEST ANNUAL MEAN	--		--		132	1994
HIGHEST DAILY MEAN	3,060	May 29	1,670	May 6	4,170	Jun1, 1997
LOWEST DAILY MEAN	30	Feb 25	20	Jan 6	18	Feb 27, 2002
ANNUAL SEVEN-DAY MINIMUM	35	Nov 22	30	Fbe 9	20	Feb 26, 2002
ANNUAL RUNOFF (AC-FT)	177,800		133,100		192,700	
10 PERCENT EXCEEDS	574		476		904	
50 PERCENT EXCEEDS	51		84		65	
90 PERCENT EXCEEDS	40		36		38	

e Estimated.



13011900 BUFFALO FORK ABOVE LAVA CREEK, NEAR MORAN, WY

LOCATION.--Lat 43°50'17", long 110°26'28", in SE¼ NE¼ sec.29, T.45 N., R.113 W., Teton County, Hydrologic Unit 17040101, Grand Teton National Park, on right bank below bridge on U.S. Highway 26/287, about 2 mi upstream from Lava Creek, 3.5 mi east of Moran, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--323 mi^2.

PERIOD OF RECORD.--September 1965 to current year. July to November 1906, July 1917 to September 1918, and September 1944 to September 1960 at sites about 3 mi downstream.

REVISED RECORDS.--WDR Idaho 1974: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,772.78 ft above NGVD of 1929 (Federal Highway Administration bench mark). Data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	e130	e120	e100	e110	e120	256	352	584	1,470	364	229
2	175	e130	e110	e100	e105	e120	288	404	638	1,310	352	229
3	174	e130	e115	e95	e105	e120	278	531	718	1,170	344	263
4	171	e130	e115	e90	e115	e105	278	688	987	1,190	333	293
5	170	e130	e120	e85	e120	e105	304	877	1,330	1,430	319	269
6	169	e125	e120	e80	e115	e100	328	998	1,670	1,170	310	248
7	169	e120	e120	e90	e110	e105	350	1,050	2,070	1,150	299	234
8	172	e120	e115	e105	e115	e110	333	1,040	2,150	1,200	289	223
9	169	e125	e110	e110	e110	e110	323	989	2,600	993	281	212
10	171	e130	e105	e105	e110	e110	278	904	2,930	1,040	273	208
11	171	e130	e110	e100	e110	e110	270	903	1,970	1,010	263	205
12	168	e125	e110	e100	e100	e110	267	754	1,440	929	257	203
13	165	e120	e110	e105	e105	e115	293	635	1,160	852	253	222
14	161	e125	e115	e110	e100	e115	341	561	1,030	765	248	233
15	164	e130	e115	e105	e105	e120	329	514	1,120	824	245	240
16	165	e130	e110	e100	e115	e120	301	509	1,230	777	242	238
17	166	e130	e115	e105	e120	e130	286	483	1,180	691	240	235
18	164	e130	e110	e100	e125	e140	275	538	1,180	653	252	220
19	161	e130	e110	e100	e125	e150	255	636	1,100	691	256	217
20	158	e130	e110	e100	e120	e160	254	687	1,190	625	252	257
21	157	e125	e110	e105	e120	e170	247	700	1,150	582	249	242
22	155	e120	e110	e100	e115	214	240	665	1,160	551	244	232
23	154	e115	e105	e100	e115	235	238	646	1,330	622	306	242
24	151	e110	e100	e100	e115	255	255	587	1,560	558	275	247
25	135	e100	e105	e105	e120	257	249	529	1,590	495	286	264
26	e135	e105	e115	e105	e120	241	265	500	1,780	467	360	248
27	e140	e110	e110	e100	e120	214	333	537	1,740	449	314	239
28	e140	e105	e100	e95	e120	212	431	711	1,550	429	280	249
29	e135	e110	e100	e100	e120	195	377	822	1,660	408	259	248
30	e135	e110	e105	e110	---	207	336	689	1,510	390	246	262
31	e130	---	e105	e110	---	227	---	611	---	375	236	---
TOTAL	4,925	3,660	3,430	3,115	3,305	4,802	8,858	21,050	43,307	25,266	8,727	7,151
MEAN	159	122	111	100	114	155	295	679	1,444	815	282	238
MAX	175	130	120	110	125	257	431	1,050	2,930	1,470	364	293
MIN	130	100	100	80	100	100	238	352	584	375	236	203
AC-FT	9,770	7,260	6,800	6,180	6,560	9,520	17,570	41,750	85,900	50,120	17,310	14,180

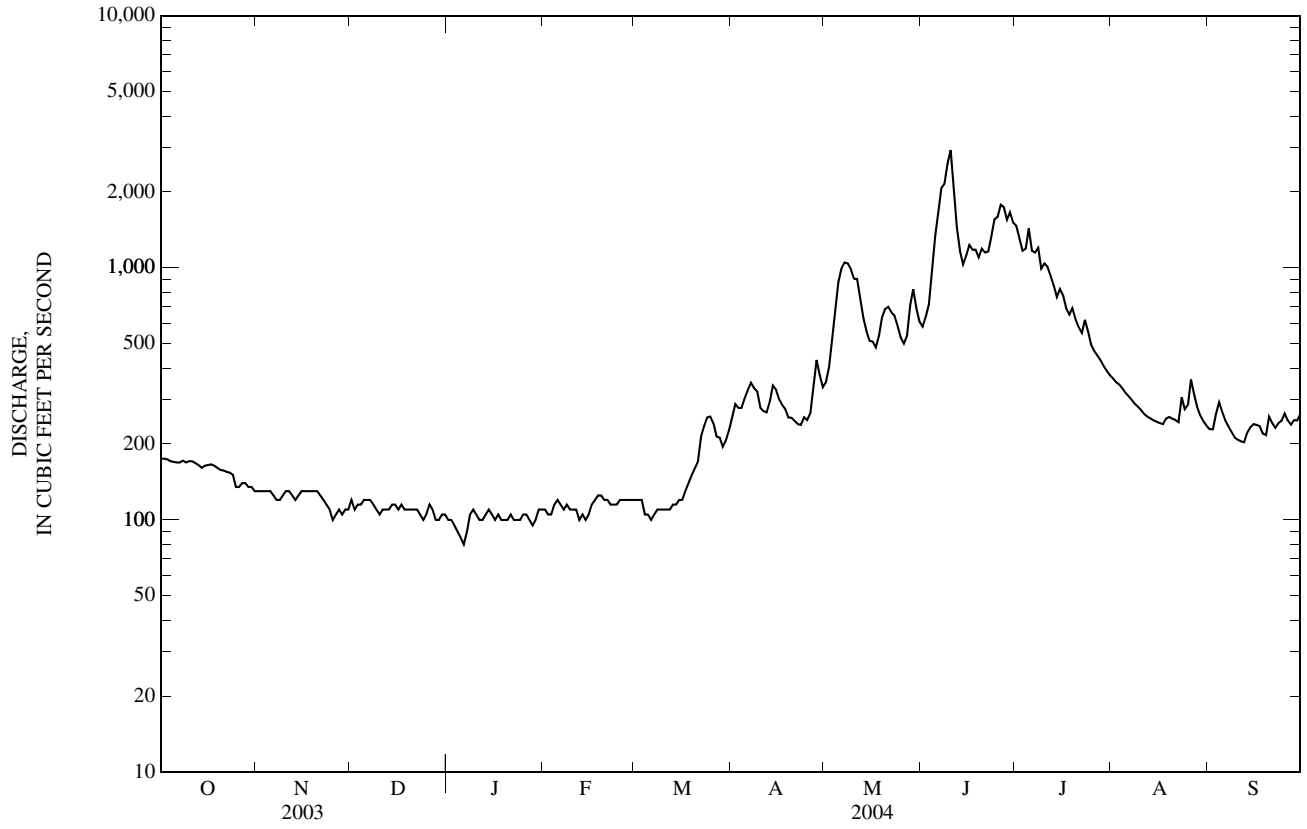
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

MEAN	212	169	137	120	117	126	220	1,017	2,267	1,317	410	257
MAX	304	229	180	145	191	175	367	1,768	4,533	3,056	946	428
(WY)	(1973)	(1984)	(1985)	(1994)	(1984)	(1984)	(1987)	(1969)	(1997)	(1975)	(1982)	(1982)
MIN	128	122	94.7	87.3	93.1	98.5	124	397	845	230	163	135
(WY)	(1988)	(1988)	(2003)	(1989)	(1969)	(1995)	(1967)	(1975)	(2001)	(1977)	(1977)	(1994)

13011900 BUFFALO FORK ABOVE LAVA CREEK, NEAR MORAN, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1966 - 2004	
ANNUAL TOTAL	172,196		137,596		--	
ANNUAL MEAN	472		376		532	
HIGHEST ANNUAL MEAN	--		--		890	1997
LOWEST ANNUAL MEAN	--		--		286	1977
HIGHEST DAILY MEAN	4,760	May 31	2,930	Jun 10	5,880	Jun 9, 1981
LOWEST DAILY MEAN	70	Feb 25	80	Jan 6	60	Dec 25, 2002
ANNUAL SEVEN-DAY MINIMUM	81	Feb 25	91	Jan 1	79	Dec 21, 2002
ANNUAL RUNOFF (AC-FT)	341,600		272,900		385,200	
10 PERCENT EXCEEDS	1,470		1,030		1,610	
50 PERCENT EXCEEDS	169		218		192	
90 PERCENT EXCEEDS	100		105		110	

e Estimated.



13013650 SNAKE RIVER AT MOOSE, WY

LOCATION.--Lat 43°39'14", long 110°42'52", in NW¼ NW¼ NE¼ sec.36, T.43 N., R.116 W., Teton County, Hydrologic Unit 17040101, Grand Teton National Park, on right bank at downstream side of bridge on Teton Park Road, 0.2 miles east of Grand Teton National Park Headquarters visitor Center at Moose, and 0.3 miles west of U.S. Highway 191.

DRAINAGE AREA.--1,677 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,431.12 ft above NGVD of 1929, by survey. U.S. Geological Survey data collection platform with satellite telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,130	767	798	735	758	738	1,130	1,810	7,370	5,370	3,190	2,910
2	2,800	738	763	749	784	727	1,220	1,960	8,330	5,000	3,190	2,940
3	2,390	730	766	722	755	728	1,290	2,270	9,100	4,740	3,180	3,000
4	2,100	760	784	e700	762	735	1,320	2,650	9,490	4,670	3,140	3,080
5	2,020	725	750	e680	771	727	1,390	3,160	10,000	5,000	3,110	3,000
6	2,020	701	767	e660	767	727	1,450	3,470	10,500	4,770	3,100	2,920
7	1,810	697	793	694	762	683	1,540	3,620	10,800	4,590	3,060	2,910
8	1,770	695	778	717	766	689	1,570	3,610	10,900	4,570	3,060	2,880
9	1,570	733	765	736	768	717	1,580	3,530	11,600	4,380	3,020	2,870
10	1,470	781	728	735	733	743	1,460	3,300	12,300	4,340	2,990	2,860
11	1,260	801	736	721	735	730	1,400	3,230	11,500	4,260	2,960	2,840
12	1,040	762	759	745	e720	723	1,420	2,970	10,600	4,170	2,960	2,850
13	886	735	777	789	e680	725	1,490	2,700	10,100	4,060	2,940	2,870
14	852	773	768	760	e720	729	1,630	2,500	9,760	3,950	2,910	2,950
15	830	796	746	790	737	737	1,680	2,390	9,710	3,950	2,910	2,950
16	828	794	703	781	747	741	1,610	2,350	9,690	3,970	2,910	2,910
17	831	801	687	770	764	756	1,580	2,320	9,200	3,830	2,920	2,890
18	820	776	699	783	765	777	1,550	2,400	8,760	3,770	3,040	2,880
19	831	785	738	730	776	843	1,510	2,670	8,360	3,840	3,110	2,910
20	826	803	739	738	760	918	1,490	2,740	8,120	3,800	3,060	3,020
21	800	750	729	797	741	922	1,480	2,860	7,730	3,690	3,000	2,980
22	802	736	726	805	720	935	1,440	2,760	7,340	3,630	3,050	2,940
23	801	689	758	762	713	972	1,420	2,740	7,110	3,720	3,140	2,940
24	796	680	e740	750	737	1,040	1,460	2,660	7,100	3,630	3,080	2,990
25	780	710	739	763	765	1,080	1,490	2,880	6,870	3,480	3,070	2,970
26	773	736	766	764	777	1,080	1,530	2,860	6,840	3,390	3,190	2,960
27	790	742	739	774	764	1,010	1,710	3,160	6,600	3,350	3,120	2,930
28	795	728	771	779	753	987	2,010	4,090	6,250	3,350	3,070	2,510
29	832	741	770	790	745	956	1,950	5,430	5,970	3,330	2,990	2,010
30	844	778	768	784	---	972	1,790	5,640	5,620	3,280	2,980	1,620
31	748	---	713	772	---	1,030	---	6,420	---	3,240	2,930	---
TOTAL	38,845	22,443	23,263	23,275	21,745	25,877	45,590	97,150	263,620	125,120	94,380	85,290
MEAN	1,253	748	750	751	750	835	1,520	3,134	8,787	4,036	3,045	2,843
MAX	3,130	803	798	805	784	1,080	2,010	6,420	12,300	5,370	3,190	3,080
MIN	748	680	687	660	680	683	1,130	1,810	5,620	3,240	2,910	1,620
AC-FT	77,050	44,520	46,140	46,170	43,130	51,330	90,430	192,700	522,900	248,200	187,200	169,200

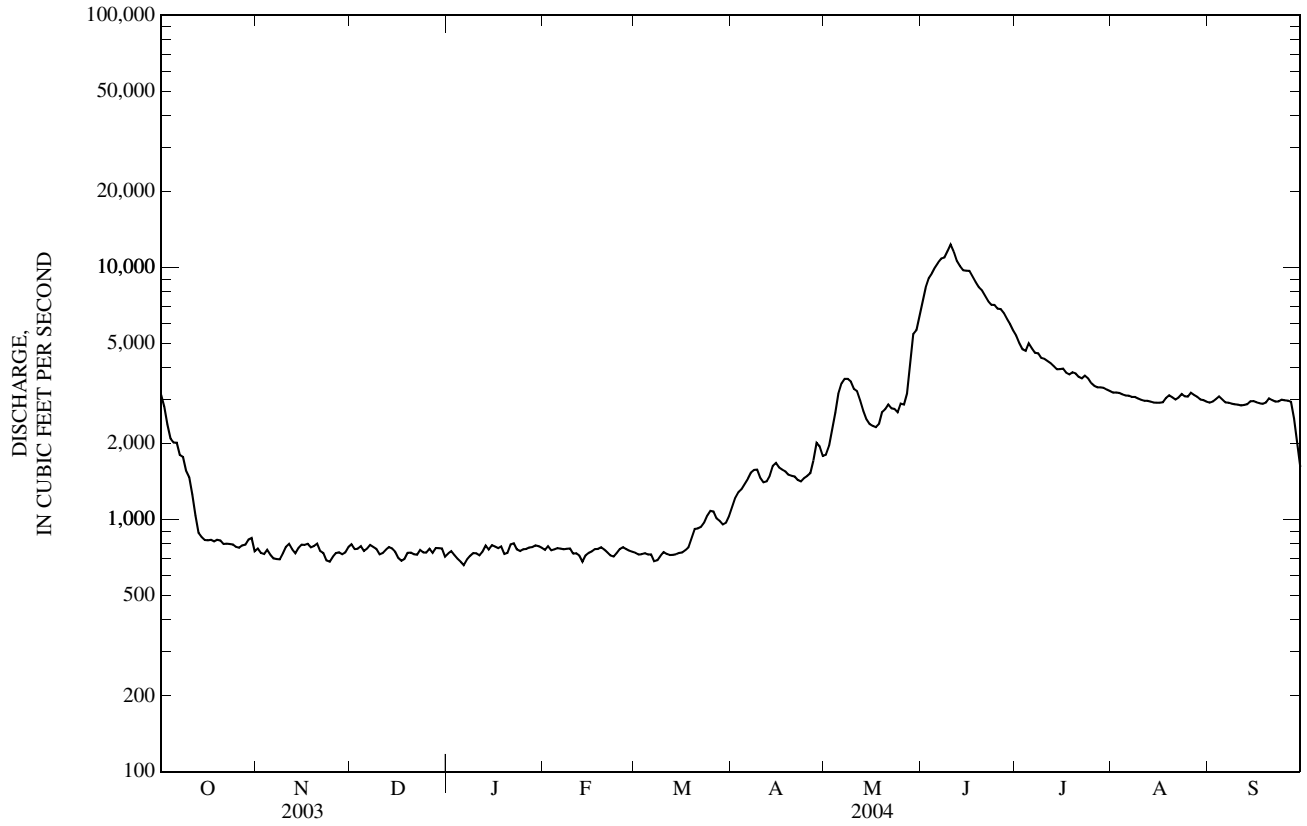
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2004, BY WATER YEAR (WY)

MEAN	1,372	1,020	956	981	1,050	1,306	2,153	5,573	9,799	5,794	4,209	3,656
MAX	2,124	1,382	1,315	1,615	2,083	3,205	4,600	8,620	18,150	7,574	5,723	5,089
(WY)	(1998)	(1998)	(1998)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(2003)	(1998)
MIN	935	748	726	684	667	659	990	2,618	4,753	3,439	2,433	2,063
(WY)	(2003)	(2004)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)	(2000)	(2000)	(2000)

13013650 SNAKE RIVER AT MOOSE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1995 - 2004	
ANNUAL TOTAL	918,790		866,598		--	
ANNUAL MEAN	2,517		2,368		3,154	
HIGHEST ANNUAL MEAN	--		--		4,874	1997
LOWEST ANNUAL MEAN	--		--		2,236	2002
HIGHEST DAILY MEAN	8,740	May 31	12,300	Jun 10	24,500	Jun 11, 1997
LOWEST DAILY MEAN	600	Feb 25	660	Jan 6	600	Feb 25, 2003
ANNUAL SEVEN-DAY MINIMUM	669	Feb 23	701	Jan 3	635	Mar 15, 2002
MAXIMUM PEAK FLOW	--		13,200	Jun 10	25,300	Jun 11, 1997
MAXIMUM PEAK STAGE	--		12.83	Jun 10	15.25	Jun 11, 1997
ANNUAL RUNOFF (AC-FT)	1,822,000		1,719,000		2,285,000	
10 PERCENT EXCEEDS	5,770		4,840		6,590	
50 PERCENT EXCEEDS	1,040		1,460		1,610	
90 PERCENT EXCEEDS	705		729		767	

e Estimated



13013650 SNAKE RIVER AT MOOSE, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1995 to September 2004 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 2002 to current year (no winter records).
pH: April 2002 to current year (no winter records).
WATER TEMPERATURE: April 2002 to current year (no winter records).
DISSOLVED OXYGEN: April 2002 to current year (no winter records).
INSTRUMENTATION: Water-quality monitor.

REMARKS.--Specific conductance records good October 1-6, March 16 to June 1, and July 1 to September 30; and fair June 2-30. pH records good October 1-6, March 16 to April 10, April 22 to May 8, May 14 to June 13, July 1-21, and August 21 to September 30; fair April 11-21, May 9-13, June 14-30, and July 22 to September 30. Water temperature record is good. Dissolved oxygen records fair March 16 to April 21, May 13-29, and June 30 to August 20; poor June 2-10, and August 21, 22. Water-temperature records represent water temperature at sensor within 0.2°C.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 235 microsiemens per centimeter at 25°C (µS/cm), April 10-14, 2002; minimum recorded, 84 µS/cm, June 18, 19, 25, 26, July 1, 2002.
pH: Maximum recorded, 9.5, October 29-31, November 2-7, 11, 12, 2002; minimum recorded, 7.8, June 20, 2003.
WATER TEMPERATURE: Maximum recorded, 21.6°C, July 30, August 1, 2003; minimum recorded, 0.0°C, Nov. 25, 26, 2002.
DISSOLVED OXYGEN: Maximum recorded 13.4 mg/L, May 22, 2002; minimum recorded, 5.7 mg/L, August 13, 14, 2003.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 221 µS/cm, March 31; minimum recorded, 118 µS/cm, July 1.
pH: Maximum recorded, 8.9, October 3-5, March 21, 22, 23, April 22, 23, 26; minimum recorded, 7.5, June 1, 2, July 10, 12, September 11-15.
WATER TEMPERATURE: Maximum recorded, 20.5°C, August 14; minimum recorded, 1.9°C March 27.
DISSOLVED OXYGEN: Maximum recorded, 12.3 mg/L, August 8; minimum recorded, 6.7 mg/L, August 22.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
21...	1200	780	613	11.8	123	8.9	200	18.0	7.5	85	25.0	5.51	2.06
NOV													
17...	1240	810	603	16.4	154	9.0	177	.0	3.0	87	25.9	5.41	1.99
DEC													
15...	1345	742	608	12.6	114	8.7	198	.0	2.0	86	25.4	5.40	1.95
JAN													
13...	1245	660	610	12.5	110	8.6	197	-8.5	1.0	90	26.4	5.77	1.90
FEB													
24...	0930	630	600	11.6	101	8.6	217	-9.0	.0	94	28.1	5.89	2.14
MAR													
16...	1145	770	605	11.8	115	8.6	213	6.0	4.5	91	26.8	5.84	1.91
MAY													
26...	1130	2,700	600	10.2	107	8.3	167	5.0	7.0	72	22.0	4.15	1.57
JUL													
26...	1530	3,630	606	7.5	104	8.4	148	20.0	20.0	58	17.7	3.33	1.78
SEP													
09...	1100	3,100	606	9.4	114	8.3	170	24.5	13.5	62	18.7	3.66	2.01

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
21...	.4	8.75	88	3.99	.5	16.4	10.8	126	.17	258	123	<.04	<.06
NOV													
17...	.4	8.32	88	4.23	.5	16.6	11.1	127	.17	280	128	<.04	<.06
DEC													
15...	.4	8.46	90	4.29	.5	16.8	11.7	129	.18	258	129	<.04	<.06
JAN													
13...	.4	8.81	93	4.48	.5	16.6	12.2	132	.18	234	131	<.04	E.04
FEB													
24...	.4	9.41	94	4.35	.5	16.3	12.2	135	.19	240	141	<.04	E.05
MAR													
16...	.4	9.57	93	4.66	.5	16.3	11.6	133	.18	280	135	<.04	<.06
MAY													
26...	.3	6.67	73	2.82	.4	14.0	8.7	104	.15	798	109	<.04	<.06
JUL													
26...	.5	9.05	60	4.53	.7	14.6	9.2	97	.12	894	91	<.04	<.06
SEP													
09...	.6	10.2	65	5.28	.8	15.3	10.2	105	.15	907	108	<.04	<.06

13013650 SNAKE RIVER AT MOOSE, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Total carbon, suspnd sedimnt total, mg/L (00694)	Organic carbon, water, fltrd, mg/L (00681)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)
OCT													
21...	<.008	--	.006	.015	.06	--	--	E6	1.2	--	--	--	--
NOV													
17...	<.008	<.02	.009	.016	.08	.1	1.1	E4	1.4	<.006	<.006	<.006	<.005
DEC													
15...	<.008	--	.010	.019	.09	--	--	<6	2.2	--	--	--	--
JAN													
13...	<.008	<.02	.010	.021	.12	.3	1.1	E4	2.4	--	--	--	--
FEB													
24...	<.008	--	.011	.023	.12	--	--	E5	3.6	--	--	--	--
MAR													
16...	<.008	.03	.008	.022	.09	.3	1.8	7	3.0	--	--	--	--
MAY													
26...	<.008	.04	.007	.033	.11	.2	2.2	9	2.2	<.006	<.007	<.006	<.005
JUL													
26...	<.008	<.02	.007	.015	.09	.2	1.4	E4	1.1	--	--	--	--
SEP													
09...	<.008	.03	E.004	.013	.06	.3	1.5	E6	1.1	--	--	--	--

Date	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)
OCT													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
17...	<.005	<.007	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005
DEC													
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
26...	<.005	.009	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005
JUL													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--

13013650 SNAKE RIVER AT MOOSE, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Desulfinylfipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)
OCT													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
17...	<.009	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027
DEC													
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
26...	<.009	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027
JUL													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p-' DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Propyzamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)
OCT													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
17...	<.015	<.013	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025
DEC													
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
24...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
26...	<.015	<.013	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025
JUL													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--

13013650 SNAKE RIVER AT MOOSE, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Sima-zine, water, fltrd, ug/L (04035)	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)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
OCT											
21...	--	--	--	--	--	--	--	--	--	1	2.1
NOV											
17...	<.011	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	1	2.2
DEC											
15...	--	--	--	--	--	--	--	--	--	2	4.0
JAN											
13...	--	--	--	--	--	--	--	--	--	2	3.6
FEB											
24...	--	--	--	--	--	--	--	--	--	2	3.4
MAR											
16...	--	--	--	--	--	--	--	--	--	4	8.3
MAY											
26...	<.011	<.02	.005	<.02	<.034	<.02	<.010	<.002	<.009	14	102
JUL											
26...	--	--	--	--	--	--	--	--	--	6	59
SEP											
09...	--	--	--	--	--	--	--	--	--	4	33

< -- Less than
E -- Estimated value

13013650 SNAKE RIVER AT MOOSE, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	170	168	169	---	---	---	---	---	---	---	---	---
2	172	170	171	---	---	---	---	---	---	---	---	---
3	175	172	174	---	---	---	---	---	---	---	---	---
4	177	175	176	---	---	---	---	---	---	---	---	---
5	177	175	176	---	---	---	---	---	---	---	---	---
6	177	176	177	---	---	---	---	---	---	---	---	---
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	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	220	215	217	190	185	188
2	---	---	---	---	---	---	216	211	214	188	178	183
3	---	---	---	---	---	---	214	208	211	181	166	172
4	---	---	---	---	---	---	212	209	211	167	155	159
5	---	---	---	---	---	---	213	208	211	156	143	147
6	---	---	---	---	---	---	211	204	208	145	135	139
7	---	---	---	---	---	---	207	200	204	142	134	137
8	---	---	---	---	---	---	203	197	201	139	132	135
9	---	---	---	---	---	---	204	199	201	137	130	133
10	---	---	---	---	---	---	207	204	205	138	133	135
11	---	---	---	---	---	---	210	207	208	139	134	136
12	---	---	---	---	---	---	212	206	209	143	136	139
13	---	---	---	---	---	---	211	205	208	154	143	148
14	---	---	---	---	---	---	208	200	204	160	154	157
15	---	---	---	---	---	---	202	196	199	164	160	161
16	---	---	---	211	209	210	202	199	200	165	163	164
17	---	---	---	212	208	210	204	200	202	167	163	165
18	---	---	---	211	208	210	206	202	204	167	162	164
19	---	---	---	212	209	211	206	203	205	162	152	156
20	---	---	---	214	209	211	208	203	206	156	149	152
21	---	---	---	215	212	214	208	202	205	155	150	151
22	---	---	---	216	212	214	207	204	206	156	153	155
23	---	---	---	217	214	215	208	204	206	155	153	154
24	---	---	---	217	213	215	208	203	206	160	155	156
25	---	---	---	217	213	215	206	201	204	166	160	163
26	---	---	---	217	213	215	204	199	202	167	165	166
27	---	---	---	219	214	216	201	190	196	167	164	165
28	---	---	---	219	215	217	192	177	184	164	154	159
29	---	---	---	221	215	218	184	177	179	158	154	156
30	---	---	---	219	216	218	190	184	187	166	158	164
31	---	---	---	221	216	219	---	---	---	168	164	166
MONTH	---	---	---	---	---	---	220	177	203	190	130	156

13013650 SNAKE RIVER AT MOOSE, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	173	162	168	123	118	121	149	148	148	162	161	162
2	166	153	157	124	121	122	149	148	149	163	161	162
3	157	155	156	127	123	125	150	149	149	164	161	162
4	155	151	152	129	124	126	150	149	150	164	163	163
5	151	144	146	126	119	123	151	149	150	164	163	163
6	146	138	141	126	120	124	151	150	150	165	163	164
7	140	133	136	128	124	126	152	150	151	165	164	164
8	136	131	133	128	121	124	152	151	151	166	165	165
9	133	128	130	128	123	126	153	151	152	166	165	166
10	130	123	125	130	128	129	153	152	153	167	165	166
11	136	125	131	131	126	129	155	153	154	167	166	166
12	140	136	138	132	128	130	155	154	155	168	166	167
13	142	140	141	133	129	131	156	155	155	168	166	167
14	145	142	144	134	131	133	156	155	155	168	167	167
15	145	143	144	134	132	133	157	156	156	169	167	168
16	143	142	142	132	132	132	158	157	157	169	167	168
17	142	142	142	136	132	134	158	157	157	169	168	169
18	142	141	142	136	134	135	158	155	157	170	168	169
19	142	141	141	136	134	135	158	155	157	170	167	169
20	142	138	140	136	134	135	161	157	159	171	168	169
21	140	138	139	138	135	136	162	160	161	171	169	170
22	140	138	139	139	136	137	161	159	160	172	170	171
23	138	133	136	139	137	138	161	159	160	172	170	172
24	135	128	131	140	137	139	161	159	160	172	171	172
25	131	125	128	142	140	141	160	158	159	172	171	172
26	129	122	125	144	142	143	161	156	159	172	170	171
27	126	121	124	147	144	146	160	157	159	173	171	172
28	126	124	124	147	146	146	161	159	160	175	173	173
29	127	119	123	148	146	147	161	160	160	177	174	175
30	125	121	123	148	147	148	162	161	161	181	175	177
31	---	---	---	148	147	148	162	161	161	---	---	---
MONTH	173	119	138	148	118	134	162	148	156	181	161	168

13013650 SNAKE RIVER AT MOOSE, WY—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.8	8.1	---	---	---	---	---	---	---	---	---	---
2	8.8	8.1	---	---	---	---	---	---	---	---	---	---
3	8.9	8.1	---	---	---	---	---	---	---	---	---	---
4	8.9	8.2	---	---	---	---	---	---	---	---	---	---
5	8.9	8.2	---	---	---	---	---	---	---	---	---	---
6	8.8	8.2	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	8.8	8.3
17	---	---	---	---	---	---	---	---	---	---	8.8	8.2
18	---	---	---	---	---	---	---	---	---	---	8.8	8.3
19	---	---	---	---	---	---	---	---	---	---	8.8	8.3
20	---	---	---	---	---	---	---	---	---	---	8.8	8.3
21	---	---	---	---	---	---	---	---	---	---	8.9	8.3
22	---	---	---	---	---	---	---	---	---	---	8.9	8.3
23	---	---	---	---	---	---	---	---	---	---	8.9	8.3
24	---	---	---	---	---	---	---	---	---	---	8.8	8.3
25	---	---	---	---	---	---	---	---	---	---	8.8	8.3
26	---	---	---	---	---	---	---	---	---	---	8.8	8.3
27	---	---	---	---	---	---	---	---	---	---	8.8	8.3
28	---	---	---	---	---	---	---	---	---	---	8.8	8.2
29	---	---	---	---	---	---	---	---	---	---	8.8	8.2
30	---	---	---	---	---	---	---	---	---	---	8.7	8.2
31	---	---	---	---	---	---	---	---	---	---	8.7	8.2
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.7	8.1	8.8	8.3	7.8	7.5	7.9	7.6	8.5	7.6	8.4	7.6
2	8.7	8.1	8.7	8.3	7.8	7.5	7.8	7.6	8.5	7.6	8.3	7.6
3	8.7	8.1	8.4	8.2	7.8	7.7	8.0	7.6	8.5	7.6	8.3	7.6
4	8.7	8.1	8.2	8.1	7.8	7.7	8.0	7.7	8.5	7.7	8.4	7.6
5	8.7	8.1	8.1	8.1	7.8	7.7	7.9	7.6	8.5	7.7	8.3	7.6
6	8.7	8.1	8.2	8.1	7.8	7.8	8.0	7.6	8.5	7.7	8.4	7.7
7	8.6	8.1	8.2	8.1	7.8	7.8	8.0	7.7	8.5	7.7	8.4	7.6
8	8.6	8.1	8.2	8.1	7.8	7.8	8.0	7.7	8.5	7.7	8.4	7.6
9	8.6	8.1	8.3	8.1	7.8	7.8	8.0	7.7	8.5	7.7	8.4	7.7
10	8.7	8.2	8.3	8.1	7.8	7.7	8.0	7.5	8.5	7.7	8.4	7.6
11	8.7	8.2	8.4	8.1	7.8	7.8	8.0	7.6	8.5	7.7	8.3	7.5
12	8.7	8.1	8.4	8.1	7.9	7.8	8.0	7.5	8.4	7.7	8.2	7.5
13	8.7	8.1	8.4	8.0	7.9	7.8	8.0	7.6	8.4	7.7	8.2	7.5
14	8.6	8.1	8.4	7.9	7.9	7.8	8.1	7.6	8.6	7.7	8.2	7.5
15	8.6	8.1	8.5	7.9	7.8	7.7	8.1	7.6	8.4	7.7	8.2	7.5
16	8.7	8.2	8.5	8.0	7.8	7.7	8.1	7.6	8.5	7.7	8.3	7.6
17	8.6	8.2	8.5	8.0	7.8	7.7	8.1	7.6	8.4	7.7	8.3	7.6
18	8.7	8.1	8.5	8.0	7.8	7.7	8.1	7.6	8.4	7.7	8.3	7.6
19	8.7	8.1	8.4	8.0	7.8	7.7	8.1	7.6	8.4	7.6	8.2	7.6
20	8.6	8.1	8.4	8.0	7.8	7.7	8.2	7.6	8.3	7.6	8.2	7.6
21	8.8	8.1	8.4	8.0	7.8	7.7	8.3	7.6	8.2	7.6	8.3	7.6
22	8.9	8.3	8.3	8.0	7.9	7.7	8.3	7.6	8.3	7.6	8.2	7.6
23	8.9	8.3	8.4	8.0	7.9	7.7	8.3	7.6	8.3	7.6	8.3	7.6
24	8.8	8.3	8.3	7.9	7.8	7.7	8.3	7.6	8.4	7.7	8.3	7.7
25	8.8	8.3	8.3	7.9	7.9	7.7	8.3	7.6	8.3	7.7	8.3	7.6
26	8.9	8.3	8.3	7.9	7.8	7.7	8.4	7.7	8.2	7.7	8.4	7.7
27	8.7	8.3	8.2	7.9	7.8	7.7	8.4	7.7	8.3	7.6	8.3	7.6
28	8.4	8.3	8.0	7.9	7.9	7.6	8.5	7.7	8.3	7.6	8.4	7.7
29	8.7	8.3	8.0	7.9	7.8	7.7	8.5	7.6	8.3	7.6	8.5	7.7
30	8.8	8.3	8.0	7.9	7.9	7.6	8.5	7.6	8.4	7.6	8.5	7.7
31	---	---	8.0	7.8	---	---	8.5	7.6	8.3	7.6	---	---
MONTH	8.9	8.1	8.8	7.8	7.9	7.5	8.5	7.5	8.6	7.6	8.5	7.5

13013650 SNAKE RIVER AT MOOSE, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	12.8	9.2	11.0	---	---	---	---	---	---	---	---	---
2	13.0	10.0	11.4	---	---	---	---	---	---	---	---	---
3	12.9	9.3	11.0	---	---	---	---	---	---	---	---	---
4	12.9	9.0	10.9	---	---	---	---	---	---	---	---	---
5	13.1	9.1	11.0	---	---	---	---	---	---	---	---	---
6	11.2	9.3	10.1	---	---	---	---	---	---	---	---	---
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	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	9.1	5.4	7.3	11.8	6.4	9.0
2	---	---	---	---	---	---	9.9	6.0	7.7	11.6	7.3	9.6
3	---	---	---	---	---	---	9.5	4.9	7.0	11.1	8.0	9.6
4	---	---	---	---	---	---	9.8	4.9	7.3	10.8	7.4	9.2
5	---	---	---	---	---	---	10.6	5.4	7.9	10.8	7.2	9.2
6	---	---	---	---	---	---	9.8	5.6	7.5	10.6	7.6	9.4
7	---	---	---	---	---	---	8.8	5.6	7.2	10.5	7.0	9.0
8	---	---	---	---	---	---	8.2	5.8	6.8	11.0	7.1	9.0
9	---	---	---	---	---	---	6.4	4.1	5.3	9.7	7.0	8.5
10	---	---	---	---	---	---	8.6	2.8	5.4	9.7	6.5	8.4
11	---	---	---	---	---	---	9.2	3.9	6.5	9.1	7.0	8.0
12	---	---	---	---	---	---	10.6	4.8	7.5	7.3	6.1	6.7
13	---	---	---	---	---	---	10.7	5.6	8.1	8.3	4.9	6.4
14	---	---	---	---	---	---	9.7	6.5	7.9	8.9	5.8	7.2
15	---	---	---	---	---	---	7.8	4.9	6.2	10.7	6.4	8.5
16	---	---	---	6.1	4.5	5.4	7.0	4.8	5.9	11.7	8.1	9.5
17	---	---	---	6.7	3.4	4.7	7.5	5.0	6.0	11.2	7.2	9.3
18	---	---	---	7.3	3.0	5.1	8.0	5.4	6.4	11.2	9.0	10.1
19	---	---	---	7.0	3.4	4.8	7.7	4.2	5.8	11.7	6.9	9.3
20	---	---	---	7.8	2.7	5.2	6.2	4.5	5.3	10.5	8.2	9.1
21	---	---	---	7.8	2.3	5.0	7.7	4.0	5.7	9.9	6.4	8.3
22	---	---	---	7.9	2.5	5.3	9.9	4.4	6.8	9.9	7.5	8.7
23	---	---	---	9.4	4.2	6.5	11.2	5.0	7.9	8.7	7.0	7.8
24	---	---	---	8.5	3.8	6.2	9.3	6.0	7.8	9.9	6.3	7.9
25	---	---	---	7.7	3.8	5.7	11.0	5.0	7.8	10.0	6.9	8.4
26	---	---	---	6.0	3.2	5.0	12.2	6.1	9.0	8.6	7.2	7.9
27	---	---	---	5.5	1.9	3.6	11.8	7.2	9.4	10.7	7.3	8.9
28	---	---	---	8.1	2.6	5.1	9.1	5.1	7.2	9.8	7.8	8.8
29	---	---	---	8.5	2.6	5.5	7.6	4.1	5.8	8.0	6.6	7.5
30	---	---	---	9.3	3.3	6.2	10.5	4.4	7.3	8.9	6.4	7.6
31	---	---	---	9.2	4.2	6.8	---	---	---	10.7	7.0	8.8
MONTH	---	---	---	---	---	---	12.2	2.8	7.0	11.8	4.9	8.6

13013650 SNAKE RIVER AT MOOSE, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	11.9	8.1	10	14.6	12.2	13.5	19.6	16.1	17.9	16.9	13.1	14.9
2	12.0	8.6	10.3	14.3	12.4	13.2	20.2	16.4	18.1	15.6	13.9	14.5
3	12.6	9.2	10.9	16.2	11.8	13.9	20.2	16.5	18.1	14.2	12.6	13.6
4	13.2	10.6	11.8	16.7	13.7	14.8	20.3	16.2	18.2	14.6	12.1	13.2
5	13.2	9.6	11.6	16.0	13.0	14.5	20.4	16.7	18.4	14.6	11.6	13.2
6	13.6	11.1	12.4	16.9	12.8	14.7	19.8	16.3	18.1	15.7	11.7	13.7
7	13.5	10.9	12.2	17.2	13.8	15.3	18.9	15.7	17.4	15.8	11.8	13.7
8	13.6	11.1	12.3	16.7	13.2	14.8	19.7	15.2	17.4	16.1	12.2	14.0
9	12.7	10.7	11.5	16.1	13.0	14.6	19.9	15.1	17.4	16.3	12.6	14.2
10	11.3	8.8	9.9	17.1	13.1	15.0	20.2	15.4	17.8	16.0	12.5	14.0
11	11.5	8.7	9.8	18.1	14.1	15.9	20.5	15.8	18.1	16.3	12.4	14.2
12	12.7	9.1	10.8	18.6	14.3	16.4	20.6	15.9	18.1	14.3	12.8	13.6
13	12.0	10.3	11.0	17.0	14.6	15.7	20.6	15.8	18.1	13.8	12.2	13.0
14	13.7	9.8	11.6	18.9	13.9	16.3	20.8	16.1	18.3	12.8	11.5	12.2
15	13.6	10.6	12.0	19.6	16.1	17.6	19.5	16.4	17.9	13.2	10.6	11.9
16	13.4	10.5	11.7	19.6	15.7	17.6	20.1	16.6	18.2	14.6	11.6	12.9
17	13.0	9.3	11.2	19.9	16.2	18.1	18.6	17.4	17.9	14.8	11.2	12.9
18	12.2	10.1	11.1	19.1	16.2	17.4	18.1	16.6	17.1	14.6	11.9	13.1
19	14.2	10.5	12.0	19.9	16.5	17.9	19.2	15.8	17.3	13.0	11.5	12.2
20	13.2	10.8	11.9	19.9	16.6	18.1	19.2	15.4	17.2	11.8	10.6	11.1
21	13.4	9.7	11.7	19.8	16.0	18.0	19.0	15.6	17.1	12.2	9.6	10.8
22	14.3	10.4	12.3	20.5	16.5	18.1	18.2	16.1	16.8	10.6	9.2	10.0
23	14.9	11.5	13.1	19.6	15.4	17.3	17.0	14.5	15.6	12.2	9.8	10.8
24	15.1	12.4	13.6	19.9	15.4	17.5	16.9	13.8	15.0	13.4	10.1	11.6
25	14.4	12.3	13.5	19.7	15.9	17.6	15.2	13.6	14.3	13.6	9.8	11.7
26	15.4	12.0	13.6	19.9	16.3	17.7	13.8	12.6	13.4	13.4	9.8	11.6
27	14.7	12.4	13.5	20.1	16.2	18.0	15.5	11.9	13.4	13.4	10.1	11.8
28	16.1	11.8	13.8	20.2	16.6	18.3	15.8	11.7	13.7	13.6	10.5	11.8
29	15.7	13.5	14.5	20.3	16.2	18.2	16.7	12.3	14.3	13.0	9.9	11.5
30	15.2	13.1	14.1	20.5	16.0	18.2	17.1	12.8	14.9	12.9	10.8	11.5
31	---	---	---	20.2	16.1	18.1	17.3	13.0	15.0	---	---	---
MONTH	16.1	8.1	12.0	20.5	11.8	16.5	20.8	11.7	16.8	16.9	9.2	12.6

13013650 SNAKE RIVER AT MOOSE, WY—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
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	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	10.1	8.6	9.2	---	---	---
2	---	---	---	---	---	---	10.1	8.6	9.3	---	---	---
3	---	---	---	---	---	---	10.2	8.9	9.5	---	---	---
4	---	---	---	---	---	---	10.3	8.8	9.6	---	---	---
5	---	---	---	---	---	---	10.3	8.8	9.5	---	---	---
6	---	---	---	---	---	---	10.3	8.8	9.5	---	---	---
7	---	---	---	---	---	---	10.3	9.0	9.5	---	---	---
8	---	---	---	---	---	---	10.4	9.1	9.7	---	---	---
9	---	---	---	---	---	---	10.7	9.3	10	---	---	---
10	---	---	---	---	---	---	10.8	9.5	10.2	---	---	---
11	---	---	---	---	---	---	10.7	9.3	10	---	---	---
12	---	---	---	---	---	---	10.6	9.1	9.8	---	---	---
13	---	---	---	---	---	---	10.5	9.1	9.7	9.9	8.7	9.1
14	---	---	---	---	---	---	10.4	9.1	9.6	9.6	8.7	9.1
15	---	---	---	---	---	---	10.6	9.4	10	9.6	8.4	9.0
16	---	---	---	9.2	7.9	8.5	10.5	9.5	10	9.4	8.4	8.8
17	---	---	---	9.3	7.8	8.5	10.5	9.5	10	9.7	8.3	9.0
18	---	---	---	9.3	7.9	8.5	10.5	9.5	10	9.5	8.2	8.9
19	---	---	---	9.5	8.0	8.7	10.6	9.6	10.1	9.9	8.5	9.2
20	---	---	---	9.8	8.2	8.9	10.6	9.6	10.0	9.7	8.5	9.1
21	---	---	---	10.0	8.2	9.0	10.6	8.7	9.6	10.1	8.8	9.5
22	---	---	---	9.8	8.0	8.9	---	---	---	10.1	8.8	9.4
23	---	---	---	9.5	7.8	8.7	---	---	---	10.2	8.9	9.7
24	---	---	---	9.7	8.2	8.9	---	---	---	10.3	9.0	9.7
25	---	---	---	10.0	8.3	9.1	---	---	---	10.3	9.1	9.7
26	---	---	---	9.9	8.5	9.3	---	---	---	10.1	8.9	9.5
27	---	---	---	10.5	9.1	9.8	---	---	---	10.0	8.6	9.4
28	---	---	---	10.5	8.8	9.6	---	---	---	9.7	8.8	9.3
29	---	---	---	10.6	8.8	9.6	---	---	---	9.8	9.6	9.7
30	---	---	---	10.5	8.6	9.5	---	---	---	---	---	---
31	---	---	---	10.4	8.6	9.4	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

13013650 SNAKE RIVER AT MOOSE, WY—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	8.8	8.2	8.6	12.2	10.2	11.1	---	---	---
2	9.9	9.3	9.6	9.0	8.5	8.8	12.1	10.2	11.0	---	---	---
3	9.7	9.2	9.5	9.4	8.7	9.0	12.2	10.3	11.1	---	---	---
4	9.4	9.0	9.2	9.2	8.7	8.9	12.2	10.2	11.1	---	---	---
5	9.6	8.9	9.2	9.6	8.9	9.3	12.1	10.2	11.1	---	---	---
6	9.1	8.7	8.9	9.9	9.0	9.4	12.1	10.3	11.1	---	---	---
7	9.0	8.6	8.8	9.7	9.0	9.3	12.2	10.3	11.2	---	---	---
8	8.9	8.5	8.7	10.0	9.2	9.6	12.3	10.5	11.3	---	---	---
9	8.8	8.5	8.7	10.2	9.4	9.8	12.2	10.4	11.2	---	---	---
10	9.0	8.5	8.8	10.5	9.6	9.9	12.0	10.3	11.1	---	---	---
11	---	---	---	10.3	9.5	9.8	11.9	10.2	11.0	---	---	---
12	---	---	---	10.4	9.5	9.9	11.8	10.1	10.9	---	---	---
13	---	---	---	10.6	9.5	10.1	11.7	9.9	10.8	---	---	---
14	---	---	---	10.8	9.5	10.2	11.5	9.8	10.6	---	---	---
15	---	---	---	10.5	9.6	9.9	11.2	9.7	10.4	---	---	---
16	---	---	---	10.8	9.5	10.1	11.0	9.5	10.2	---	---	---
17	---	---	---	10.7	9.5	10.0	10.7	9.3	9.9	---	---	---
18	---	---	---	11.0	9.6	10.1	10.6	9.3	9.7	---	---	---
19	---	---	---	10.7	9.6	10.1	10.1	9.0	9.5	---	---	---
20	---	---	---	11.0	9.7	10.3	9.5	7.6	8.7	---	---	---
21	---	---	---	11.3	9.8	10.5	8.5	7.2	7.8	---	---	---
22	---	---	---	11.3	9.8	10.5	8.0	6.7	7.3	---	---	---
23	---	---	---	11.8	10.1	10.8	---	---	---	---	---	---
24	---	---	---	11.7	10.1	10.9	---	---	---	---	---	---
25	---	---	---	11.8	10.1	10.8	---	---	---	---	---	---
26	---	---	---	11.8	10.2	10.8	---	---	---	---	---	---
27	---	---	---	11.9	10.1	10.9	---	---	---	---	---	---
28	---	---	---	11.9	10.0	10.9	---	---	---	---	---	---
29	---	---	---	12.0	10.0	10.9	---	---	---	---	---	---
30	8.4	8.2	8.3	12.0	10.0	11.0	---	---	---	---	---	---
31	---	---	---	12.1	10.0	11.0	---	---	---	---	---	---
MONTH	---	---	---	12.1	8.2	10.1	---	---	---	---	---	---

13015000 GROS VENTRE RIVER AT ZENITH, WY

LOCATION.--Lat 43°33'26", long 110°45'46"(revised), in SW¼ NW¼ SW¼ sec.34., T.42 N., R.116 W., Teton County, Wyoming, Hydrologic Unit 17040102, on left bank, 20 ft upstream from county road bridge, 0.5 mi southwest of Jackson Hole Country Club, and 5.5 mi north of Jackson, Wyoming.

DRAINAGE AREA.--683 mi^2.

PERIOD OF RECORD.--July to September 1917, July to September 1918 (monthly discharge only, published in WSP 1317), October 1987 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,260 ft above NGVD of 1929, from topographic map. Data collection platform with satellite telemetry at station.

REMARKS.--Records fair. Diversions of about 300 ft^3/s for irrigation upstream station. No regulation. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	60	58	86	730	85	32
2	---	---	---	---	---	---	59	56	65	659	74	30
3	---	---	---	---	---	---	87	62	63	606	57	29
4	---	---	---	---	---	---	96	111	67	553	53	28
5	---	---	---	---	---	---	94	222	206	554	50	28
6	---	---	---	---	---	---	116	330	540	584	44	27
7	---	---	---	---	---	---	136	460	859	543	39	26
8	---	---	---	---	---	---	169	496	1,210	516	35	24
9	---	---	---	---	---	---	201	441	1,210	497	30	22
10	---	---	---	---	---	---	164	372	1,220	423	24	21
11	---	---	---	---	---	---	126	290	1,150	393	38	20
12	---	---	---	---	---	---	97	262	903	342	18	19
13	---	---	---	---	---	---	78	185	707	287	17	18
14	---	---	---	---	---	---	84	148	536	265	16	18
15	---	---	---	---	---	---	101	98	382	257	16	17
16	---	---	---	---	---	---	102	81	405	257	15	17
17	---	---	---	---	---	---	98	65	415	189	15	16
18	---	---	---	---	---	---	92	39	424	152	14	15
19	---	---	---	---	---	---	88	50	491	142	14	14
20	---	---	---	---	---	---	83	62	542	132	13	14
21	---	---	---	---	---	---	79	69	604	125	11	14
22	---	---	---	---	---	---	72	66	551	115	10	14
23	---	---	---	---	---	---	55	59	499	116	10	28
24	---	---	---	---	---	---	53	61	503	128	9.2	74
25	---	---	---	---	---	---	53	61	543	117	9.5	76
26	---	---	---	---	---	---	53	55	556	109	19	74
27	---	---	---	---	---	---	52	54	590	99	41	73
28	---	---	---	---	---	---	57	54	656	98	41	71
29	---	---	---	---	---	---	78	150	679	104	39	70
30	---	---	---	---	---	---	65	320	726	100	37	74
31	---	---	---	---	---	---	---	206	---	94	34	---
TOTAL	---	---	---	---	---	---	2,748	5,043	17,388	9,286	927.7	1,003
MEAN	---	---	---	---	---	---	91.6	163	580	300	29.9	33.4
MAX	---	---	---	---	---	---	201	496	1,220	730	85	76
MIN	---	---	---	---	---	---	52	39	63	94	9.2	14
AC-FT	---	---	---	---	---	---	5,450	10,000	34,490	18,420	1,840	1,990

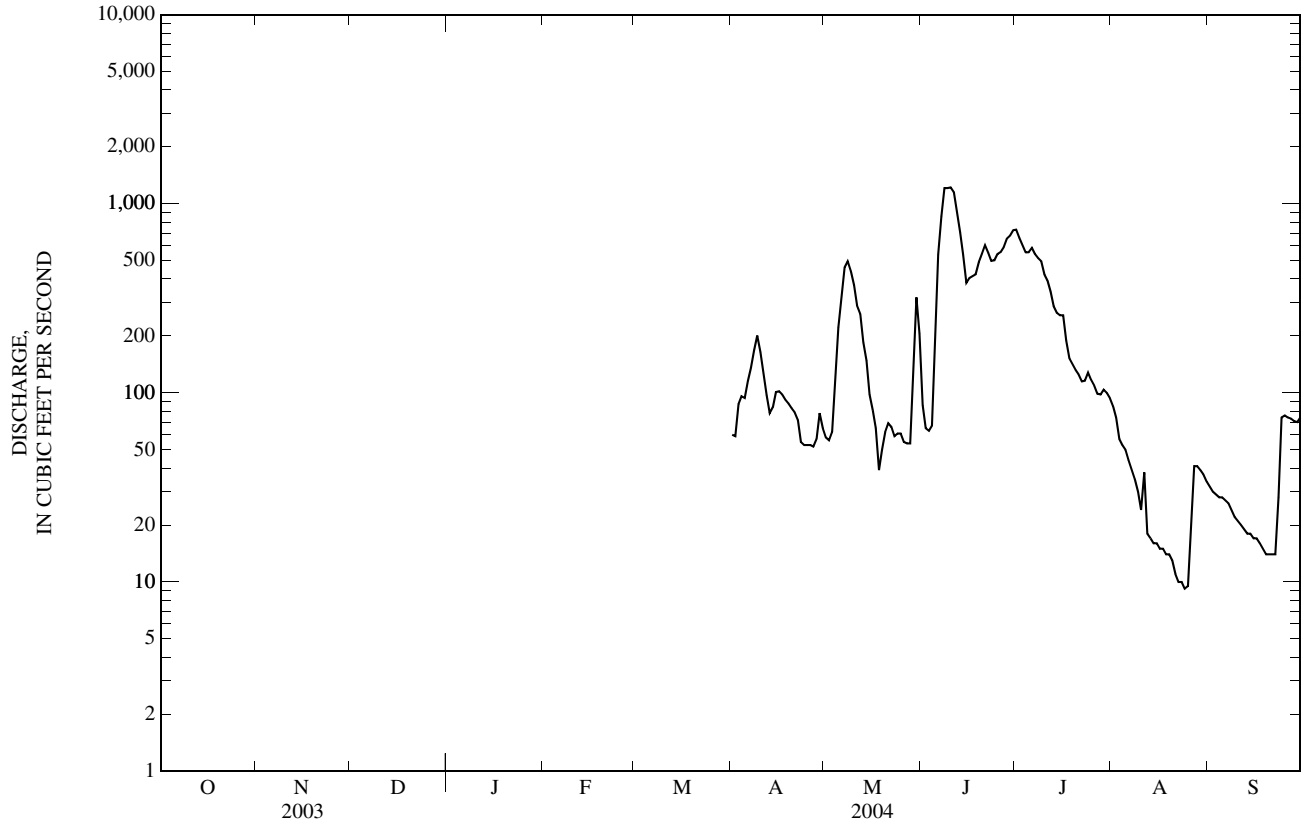
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2004, BY WATER YEAR (WY)*

MEAN	64.9	64.4	29.5	---	---	---	128	764	1,117	445	134	62.2
MAX	89.4	81.3	29.5	---	---	---	231	2,954	3,189	1,410	406	215
(WY)	(1990)	(1990)	(1988)	---	---	---	(2000)	(1997)	(1997)	(1995)	(1917)	(1997)
MIN	50.3	49.2	29.5	---	---	---	41.1	163	50.3	4.90	0.00	0.00
(WY)	(1988)	(1988)	(1988)	---	---	---	(1993)	(2004)	(2001)	(2001)	(2001)	(1994)

13015000 GROS VENTRE RIVER AT ZENITH, WY—Continued

SUMMARY STATISTICS	FOR 2004 WATER YEAR*		WATER YEARS 1917 - 2004*	
HIGHEST DAILY MEAN	1,220	Jun 10	6,710	Jun 6, 1997
LOWEST DAILY MEAN	9.2	Aug 24	0.00	Many days, some years
MAXIMUM PEAK STAGE	--		2,227	Jun 10, 1991

* For period of operation.



13016305 GRANITE CREEK ABOVE GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY

LOCATION.--Lat 43°36'14", long 110°48'17", in SW¼ SE¼ NE¼ sec.18, T.42 N., R.116 W., Teton County, Hydrologic Unit 17040103, Grand Teton National Park, on right bank 0.7 mi upstream from Granite Creek Supplemental and 5.7 mi southwest of Moose.

DRAINAGE AREA.--14.9 mi^2.

PERIOD OF RECORD.--June 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversions upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	6.8	4.9	e4.3	e3.3	3.9	13	26	64	201	30	16
2	7.7	e6.6	4.8	4.3	e3.4	3.9	14	33	66	184	29	16
3	7.6	e6.2	4.7	e3.8	e3.5	3.9	16	47	75	175	29	17
4	7.6	5.4	4.7	e3.5	e3.5	3.9	18	65	119	179	27	16
5	7.4	e4.7	e4.7	e3.1	e3.6	3.9	22	84	187	183	26	15
6	7.3	e4.6	4.7	e2.8	e3.7	3.8	25	97	272	168	25	14
7	7.1	e4.6	4.8	e3.0	e3.6	3.9	25	109	231	164	24	14
8	7.0	e4.5	4.6	e3.3	e3.4	4.4	25	105	228	151	22	14
9	6.8	e4.7	5.0	e3.5	e3.6	4.3	24	105	247	107	21	13
10	7.1	5.1	e4.7	e3.7	e3.5	4.4	22	90	232	101	21	13
11	7.0	4.9	e4.5	e3.5	e3.4	e4.4	20	84	173	100	20	13
12	6.8	5.2	4.7	e3.4	e3.1	4.4	20	72	131	91	19	12
13	6.9	5.5	e5.0	e3.4	e3.1	4.3	21	64	113	82	19	13
14	6.7	5.3	e5.2	e3.4	e3.0	4.3	23	58	111	77	18	13
15	6.6	5.2	e5.2	e3.4	e3.1	4.3	24	52	128	77	18	12
16	6.5	5.3	e5.0	e3.3	e3.3	4.3	23	50	135	73	17	12
17	6.4	5.4	e4.7	e3.6	e3.6	4.4	22	47	137	70	18	12
18	6.1	5.4	e5.0	e3.4	4.0	4.6	21	50	136	67	18	11
19	6.0	5.3	e5.2	e3.2	4.0	5.4	20	57	146	66	19	12
20	5.9	5.3	4.8	e3.4	3.8	6.1	19	65	168	62	17	13
21	5.9	5.8	e5.4	e3.4	e4.0	6.7	18	66	146	58	16	12
22	5.9	6.0	e4.7	e3.2	4.1	7.8	17	67	150	56	17	12
23	5.8	3.7	4.1	e3.1	4.4	9.8	17	64	165	52	28	11
24	5.8	4.4	4.4	e3.3	4.2	12	17	59	187	48	20	11
25	5.8	5.8	e5.6	e3.2	3.9	12	16	55	211	45	25	11
26	5.6	5.9	e5.8	e3.1	3.9	12	18	53	198	42	23	11
27	5.5	5.3	e5.0	e3.0	3.9	11	22	61	214	40	21	11
28	5.6	5.0	e4.4	e3.0	3.9	10	30	83	226	38	20	11
29	6.0	5.0	e4.0	e3.3	3.9	9.6	28	89	220	36	19	11
30	6.6	4.9	e4.1	e3.6	---	9.5	26	74	210	34	18	11
31	e6.7	---	e4.2	e3.6	---	11	---	67	---	32	17	---
TOTAL	203.4	157.8	148.6	105.1	105.7	198.2	626	2,098	5,026	2,859	661	383
MEAN	6.56	5.26	4.79	3.39	3.64	6.39	20.9	67.7	168	92.2	21.3	12.8
MAX	7.7	6.8	5.8	4.3	4.4	12	30	109	272	201	30	17
MIN	5.5	3.7	4.0	2.8	3.0	3.8	13	26	64	32	16	11
AC-FT	403	313	295	208	210	393	1,240	4,160	9,970	5,670	1,310	760

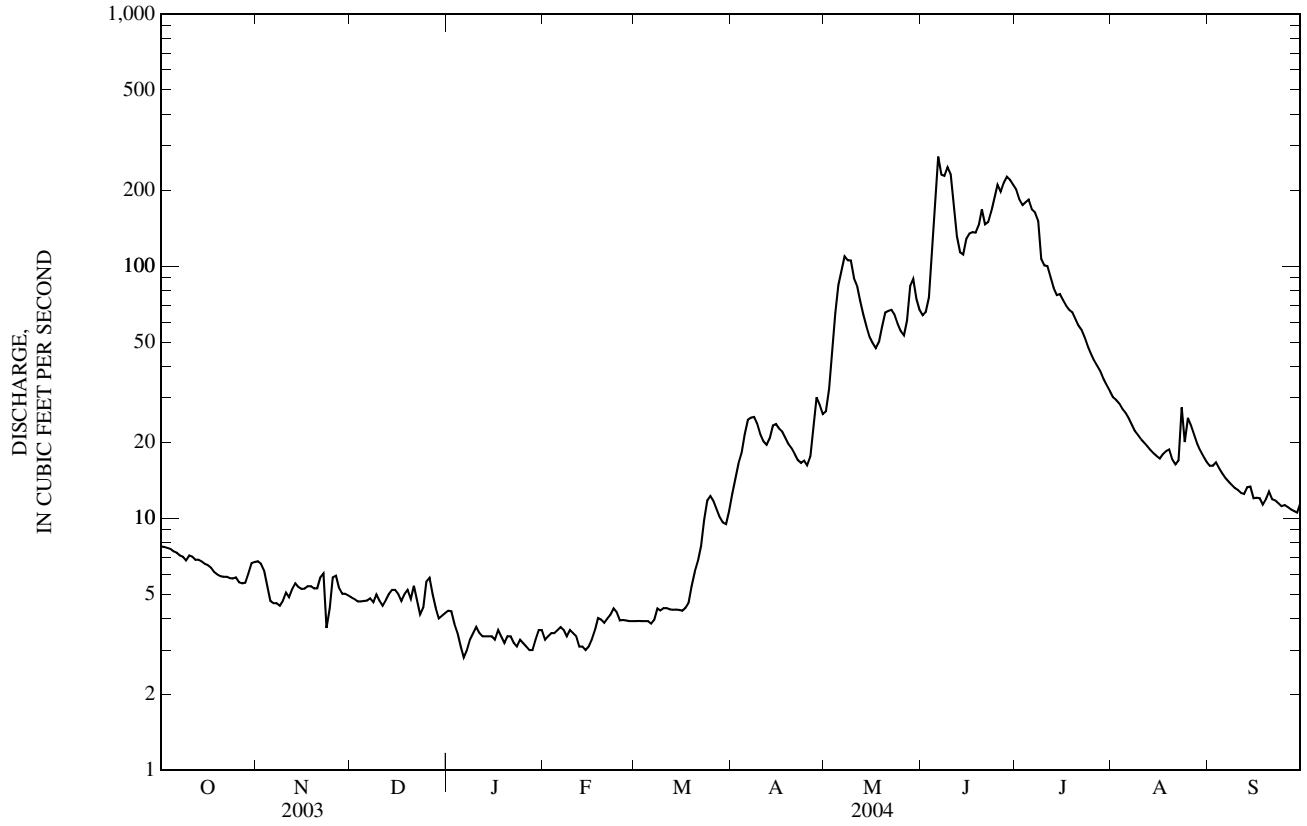
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2004, BY WATER YEAR (WY)

MEAN	9.11	7.91	6.08	4.95	4.49	4.83	12.4	90.8	195	108	26.4	13.0
MAX	16.0	14.5	8.73	8.10	6.32	6.39	20.9	149	349	184	48.7	22.5
(WY)	(1998)	(1998)	(1998)	(1998)	(1999)	(2004)	(2004)	(1997)	(1997)	(1998)	(1997)	(1997)
MIN	6.21	5.26	3.77	1.65	1.77	3.46	8.54	52.2	94.0	31.4	11.7	6.92
(WY)	(2002)	(2004)	(2001)	(2001)	(2001)	(1996)	(1999)	(1999)	(2001)	(2001)	(2001)	(2001)

13016305 GRANITE CREEK ABOVE GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1995 - 2004	
ANNUAL TOTAL	13,516.1		12,571.8		--	
ANNUAL MEAN	37.0		34.3		39.6	
HIGHEST ANNUAL MEAN	--		--		63.2	1997
LOWEST ANNUAL MEAN	--		--		26.7	2001
HIGHEST DAILY MEAN	343	May 31	272	Jun 6	490	Jun 9, 1997
LOWEST DAILY MEAN	3.5	Feb 24	2.8	Jan 6	1.2	Jan 9, 1996
ANNUAL SEVEN-DAY MINIMUM	3.8	Mar 1	3.1	Jan 22	1.3	Jan 5, 1996
MAXIMUM PEAK FLOW	--		315	Jun 6	599[a,b]	May 16, 2001
MAXIMUM PEAK STAGE	--		5.31	Jun 6	6.58[b]	Jun 9, 1997
ANNUAL RUNOFF (AC-FT)	26,810		24,940		28,680	
10 PERCENT EXCEEDS	141		108		132	
50 PERCENT EXCEEDS	7.0		11		9.2	
90 PERCENT EXCEEDS	4.1		3.6		4.0	

a Gage height, 5.02 ft.
b At datum then in use.
e Estimated.



13016450 FISH CREEK AT WILSON, WY

LOCATION.--Lat 43°30'03", long 110°52'15", in NW¼ NW¼ SE¼ sec.22, T.41 N., R.117 W., Teton County, Hydrologic Unit 17040103, on left bank 20 ft downstream from bridge on Fish Creek Road (County Road 3) in Wilson.

DRAINAGE AREA.--71.1 mi^2.

PERIOD OF RECORD.--March 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,150 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversion from Snake River through Granite Creek Supplemental for irrigation in Fish Creek Basin and by additional diversions upstream from station within Fish Creek Basin. See station 13016305.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	43	35	35	37	38	e68	54	425	587	430	310
2	67	42	35	34	37	38	e69	54	426	550	428	309
3	65	41	34	34	37	36	e70	56	441	520	425	333
4	64	40	34	34	37	35	e68	58	447	508	441	353
5	62	40	34	35	37	35	e67	76	522	543	442	343
6	61	39	35	35	37	35	e66	96	620	527	424	334
7	61	39	36	34	37	35	e65	171	718	488	401	328
8	60	39	35	34	37	36	e64	195	759	457	388	326
9	59	39	35	34	37	36	e63	219	802	440	383	328
10	58	39	34	35	37	37	e62	218	947	415	379	331
11	57	39	34	35	37	e38	e61	212	952	387	374	325
12	56	38	33	35	38	e38	e62	202	687	382	365	322
13	55	38	34	35	38	e38	e63	165	552	376	357	352
14	54	37	34	35	37	e38	e63	137	485	388	352	384
15	53	37	33	35	37	e39	e62	129	447	476	345	376
16	52	37	32	36	37	e39	e61	120	459	509	342	362
17	51	38	32	36	37	e40	e60	115	493	501	336	348
18	51	36	31	36	37	e42	e58	114	522	505	335	338
19	51	36	32	35	37	e46	57	128	518	525	358	333
20	50	37	32	35	36	e50	58	192	532	522	356	352
21	49	37	32	36	36	e58	60	181	594	496	344	343
22	49	36	32	37	36	e68	61	175	610	478	345	332
23	48	35	32	36	36	e74	60	190	598	494	411	328
24	47	35	32	36	36	e76	60	195	515	471	411	325
25	47	36	33	36	37	e76	59	194	480	432	435	317
26	46	36	34	36	38	e72	55	202	530	418	441	313
27	45	35	33	37	37	e68	52	215	577	395	432	306
28	45	35	33	37	38	e66	53	304	598	379	410	278
29	46	35	34	37	38	e66	54	402	586	377	388	226
30	44	35	35	37	---	e66	54	423	594	438	350	186
31	43	---	34	37	---	e66	---	422	---	438	316	---
TOTAL	1,668	1,129	1,038	1,099	1,073	1,525	1,835	5,614	17,436	14,422	11,944	9,741
MEAN	53.8	37.6	33.5	35.5	37.0	49.2	61.2	181	581	465	385	325
MAX	72	43	36	37	38	76	70	423	952	587	442	384
MIN	43	35	31	34	36	35	52	54	425	376	316	186
AC-FT	3,310	2,240	2,060	2,180	2,130	3,020	3,640	11,140	34,580	28,610	23,690	19,320

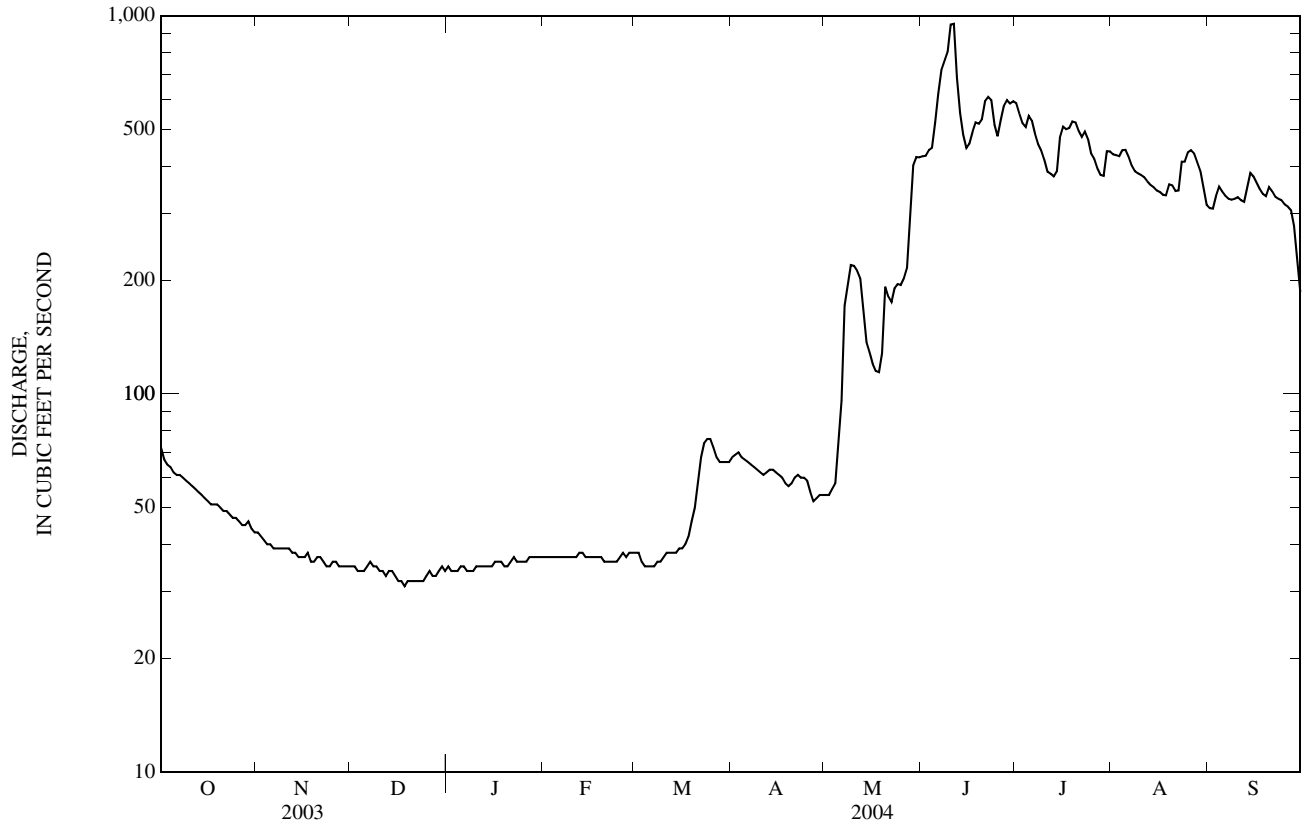
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)

MEAN	85.1	51.8	42.8	39.7	38.6	43.9	69.9	226	583	436	288	213
MAX	130	71.1	57.3	57.3	45.0	51.1	102	377	962	559	385	325
(WY)	(2001)	(2001)	(1996)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(1999)	(2004)	(2004)
MIN	53.8	37.6	33.5	31.8	31.8	36.6	49.5	139	351	280	224	137
(WY)	(2004)	(2004)	(2004)	(2002)	(2001)	(2002)	(2001)	(1995)	(1994)	(1994)	(1996)	(1994)

13016450 FISH CREEK AT WILSON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1994 - 2004	
ANNUAL TOTAL	65,522		68,524		--	
ANNUAL MEAN	180		187		181	
HIGHEST ANNUAL MEAN	--		--		222	1997
LOWEST ANNUAL MEAN	--		--		161	1995
HIGHEST DAILY MEAN	980	Jun 1	952	Jun 11	1,350	Jun 9, 1997
LOWEST DAILY MEAN	29	Jan 10	31	Dec 18	29	Jan 10, 2003
ANNUAL SEVEN-DAY MINIMUM	31	Jan 16	32	Dec 16	31	Jan 16, 2003
MAXIMUM PEAK FLOW	--		1,110	Jun 10	1,430	Jun 8, 1997
MAXIMUM PEAK STAGE	--		4.69	Jun 10	5.41	Jun 8, 1997
INSTANTANEOUS LOW FLOW	--				34	Jan 31, 1998
ANNUAL RUNOFF (AC-FT)	130,000		135,900		131,000	
10 PERCENT EXCEEDS	479		486		463	
50 PERCENT EXCEEDS	51		60		68	
90 PERCENT EXCEEDS	32		35		37	

e Estimated



13018300 CACHE CREEK NEAR JACKSON, WY

LOCATION.--Lat 43°27'08", long 110°42'12", in SW¼ SW¼ SE¼ sec.1, T.40 N., R.116 W., Teton County, Hydrologic Unit 17040103, Teton National Forest, on right bank 0.7 mi upstream from Salt Lick Draw, 2.4 mi southeast of Jackson, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--10.6 mi^2.

PERIOD OF RECORD.--June 1962 to current year.

REVISED RECORDS.--WDR WY-76-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,750 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	4.4	4.5	4.2	e3.5	3.4	4.6	9.0	24	24	11	6.8
2	4.7	5.7	4.4	4.2	3.7	3.4	4.8	10	24	23	11	6.9
3	4.7	5.4	4.5	4.3	3.7	3.4	5.0	11	25	22	11	7.4
4	4.6	4.4	4.5	4.2	3.7	3.4	5.0	13	28	22	10	6.9
5	4.5	4.2	4.5	4.1	3.7	3.4	5.5	16	31	22	10	6.8
6	4.5	3.7	4.6	4.1	3.7	3.4	5.6	19	33	22	9.9	6.8
7	4.5	5.7	4.6	4.2	3.7	4.0	5.8	20	33	21	9.8	6.7
8	4.5	12	4.6	4.2	3.7	3.4	6.0	21	33	21	9.4	6.7
9	4.4	4.7	e4.7	4.2	3.6	3.4	6.1	22	32	20	9.1	6.5
10	4.5	4.4	e4.7	4.1	3.6	3.5	5.7	21	33	20	8.9	6.6
11	4.5	4.3	4.7	4.1	3.5	3.4	5.5	22	32	19	8.7	6.5
12	4.5	4.3	4.6	4.2	3.4	3.4	5.7	20	32	18	8.5	6.5
13	4.4	4.3	4.7	4.0	3.6	3.5	6.4	18	30	18	8.3	6.8
14	4.4	4.3	4.7	4.0	3.5	3.5	7.2	17	29	17	8.1	6.8
15	4.4	4.3	e5.4	3.9	3.6	3.5	6.9	16	28	17	7.9	6.6
16	4.4	4.3	e6.0	3.9	3.6	3.5	6.6	16	27	17	7.8	6.6
17	4.4	4.3	e6.0	3.9	3.6	3.5	6.6	16	27	17	8.0	6.6
18	4.4	4.3	4.8	3.8	3.6	3.6	6.7	18	28	16	8.6	6.5
19	4.4	4.3	e5.0	3.8	3.5	3.7	6.6	19	28	16	8.7	7.2
20	4.4	4.3	e4.5	3.9	3.5	3.8	6.5	20	28	15	8.3	7.4
21	4.3	4.3	e4.7	3.8	e3.6	3.8	6.2	21	27	15	7.9	6.9
22	4.3	e4.1	4.5	3.7	3.7	4.0	6.1	21	26	15	8.2	6.8
23	4.3	e3.9	4.2	3.7	3.5	4.1	6.2	21	25	15	10	6.7
24	4.3	4.3	4.4	3.8	3.5	4.3	6.5	20	25	14	8.3	6.6
25	4.4	4.2	4.7	3.8	3.5	4.2	6.8	19	26	13	9.1	6.6
26	4.3	4.3	4.4	3.7	3.5	4.2	7.8	18	25	13	8.4	6.6
27	4.3	4.3	4.3	3.7	3.5	4.1	9.3	20	25	12	8.1	6.5
28	4.3	4.3	4.3	3.8	3.4	4.2	10	28	25	12	7.8	6.4
29	4.4	4.4	4.3	3.8	3.4	4.3	9.3	31	24	12	7.5	6.6
30	4.2	4.5	4.3	3.8	---	4.2	8.7	28	24	12	7.2	7.1
31	4.5	---	4.3	e3.8	---	4.4	---	26	---	11	7.0	---
TOTAL	137.4	140.2	144.4	122.7	103.6	115.9	195.7	597.0	837	531	272.5	202.4
MEAN	4.43	4.67	4.66	3.96	3.57	3.74	6.52	19.3	27.9	17.1	8.79	6.75
MAX	4.7	12	6.0	4.3	3.7	4.4	10	31	33	24	11	7.4
MIN	4.2	3.7	4.2	3.7	3.4	3.4	4.6	9.0	24	11	7.0	6.4
AC-FT	273	278	286	243	205	230	388	1,180	1,660	1,050	541	401

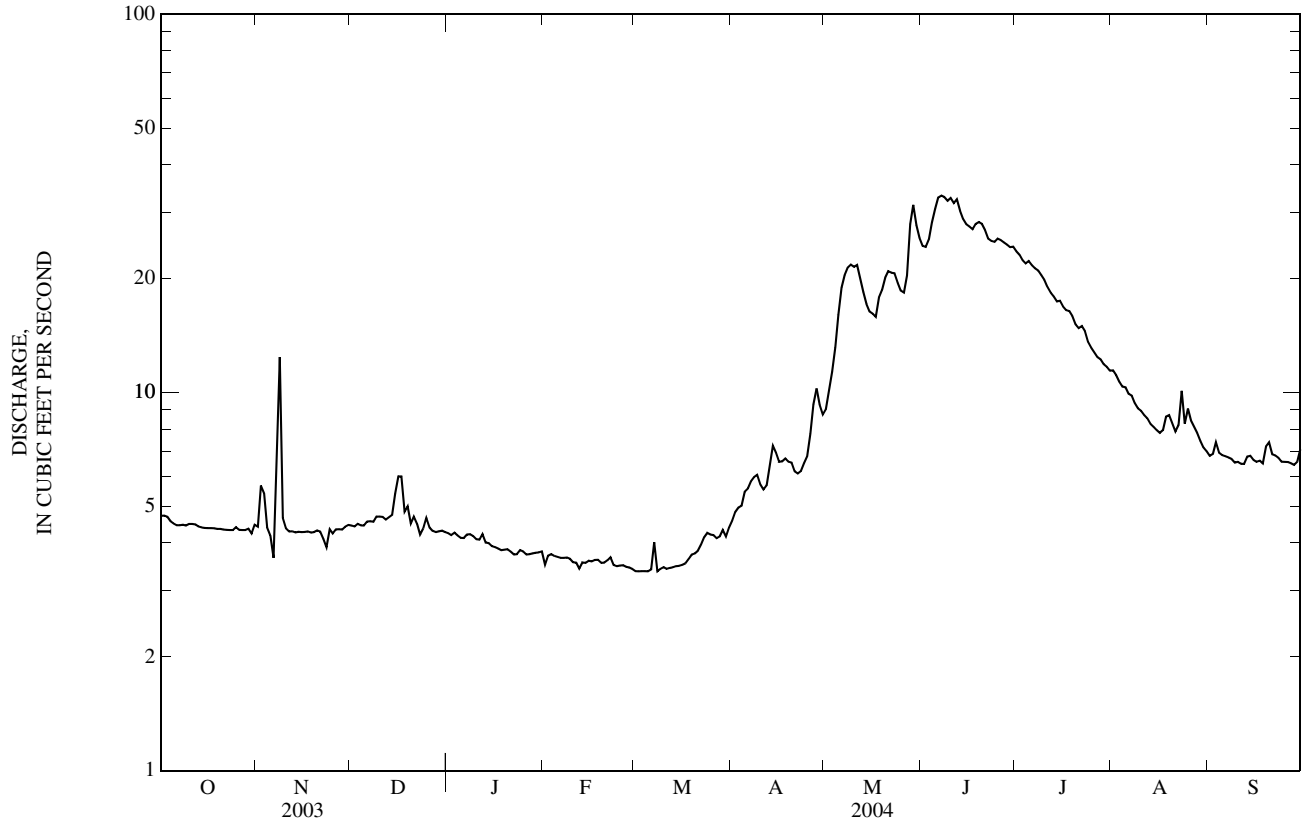
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2004, BY WATER YEAR (WY)

MEAN	6.66	5.63	4.95	4.30	3.96	4.00	6.41	25.3	47.9	23.4	11.8	8.16
MAX	9.43	7.57	6.85	5.91	6.09	7.25	14.2	52.1	103	42.0	18.5	12.3
(WY)	(1972)	(1997)	(1999)	(1981)	(1984)	(1984)	(1987)	(1997)	(1971)	(1965)	(1971)	(1971)
MIN	3.83	3.14	1.53	2.42	2.06	2.23	3.21	5.86	10.6	6.51	4.19	3.83
(WY)	(1993)	(1978)	(1991)	(1978)	(1992)	(1991)	(1991)	(1977)	(1992)	(1977)	(1992)	(1992)

13018300 CACHE CREEK NEAR JACKSON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	3,011.0		3,399.8		--	
ANNUAL MEAN	8.25		9.29		12.7	
HIGHEST ANNUAL MEAN	--		--		20.5	1997
LOWEST ANNUAL MEAN	--		--		5.64	1992
HIGHEST DAILY MEAN	62	May 30	33	Jun 6-8	161	Jun 24, 1971
LOWEST DAILY MEAN	2.2	Feb 24	3.4	Many days	1.1	Dec 23, 1990
ANNUAL SEVEN-DAY MINIMUM	2.6	Feb 19	3.4	Feb 28	1.3	Dec 20, 1990
MAXIMUM PEAK FLOW	--		36[a]	Jun 11	225[b]	Jun 24, 1971
MAXIMUM PEAK STAGE	--		4.10[c]	Dec 16	5.16[c]	Oct 31, 2002
ANNUAL RUNOFF (AC-FT)	5,970		6,740		9,210	
10 PERCENT EXCEEDS	18		22		31	
50 PERCENT EXCEEDS	4.7		5.5		6.4	
90 PERCENT EXCEEDS	3.0		3.6		3.6	

a Gage height, 3.93 ft.
b Gage height, 3.90 ft, site and datum then in use.
c Backwater from ice.
e Estimated.



13018350 FLAT CREEK BELOW CACHE CREEK, NEAR JACKSON, WY

LOCATION.--Lat 43°27'30", long 110°47'46", in SW¼ SE¼ NE¼ sec. 6, T.40 N., R.116 W., Teton County, Hydrologic Unit 17040103, on left bank 8 ft upstream from county bridge on High School Road, 2.1 mi southwest of Post Office in Jackson, and 3.0 mi downstream from Cache Creek.

DRAINAGE AREA.--129 mi^2.

PERIOD OF RECORD.--April 1989 to September 1996 (no winter records), October 1999 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,130 ft above NGVD of 1929, from topographic map. U.S. Geological Surver data collection platform with satellite telemetry at station.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	59	57	62	e50	54	55	97	121	172	88	36
2	38	60	55	59	e52	54	54	97	113	173	87	37
3	38	58	55	e58	e52	54	53	98	113	172	87	44
4	37	59	55	e56	53	54	54	105	119	173	84	42
5	36	e58	55	e54	52	54	53	108	130	165	83	40
6	36	e54	58	e47	e56	53	54	115	139	177	86	37
7	38	e52	63	e54	e56	62	55	119	143	185	80	35
8	51	e54	59	e60	55	58	55	118	146	181	78	34
9	66	e56	57	57	e56	57	60	122	151	177	77	33
10	65	57	56	54	e54	61	55	124	167	175	75	34
11	64	e58	57	56	e52	63	54	125	179	171	74	34
12	59	e54	57	e62	e44	63	54	127	184	167	70	34
13	62	e54	58	e60	e46	68	54	124	183	164	69	36
14	61	e56	60	e64	e45	70	48	116	173	162	68	39
15	61	55	62	e62	e50	72	40	108	159	166	67	39
16	61	55	e70	e66	57	86	40	103	149	164	65	38
17	61	57	e74	e64	60	90	41	98	146	161	66	38
18	61	61	e68	e60	63	90	39	98	153	163	63	37
19	60	56	e64	e64	62	91	40	100	161	161	54	46
20	62	e58	e66	e65	59	77	40	109	165	154	45	44
21	63	e56	68	e66	57	66	39	114	165	152	39	35
22	62	e54	e66	e62	61	62	38	118	166	151	41	32
23	59	e48	e54	e68	55	61	36	122	164	147	50	32
24	59	e52	e56	70	54	59	36	117	159	142	43	32
25	58	e54	e56	67	54	58	36	112	155	138	46	32
26	59	e56	56	e66	54	57	36	109	156	135	46	32
27	59	e56	e56	62	54	56	38	107	163	130	45	48
28	56	e58	e54	58	53	56	69	114	167	124	40	60
29	61	59	e54	54	54	55	79	128	167	119	39	60
30	59	63	e64	54	---	55	95	135	171	116	37	67
31	63	---	e62	e58	---	54	---	130	---	98	35	---
TOTAL	1,710	1,687	1,852	1,869	1,570	1,970	1,500	3,517	4,627	4,835	1,927	1,187
MEAN	55.2	56.2	59.7	60.3	54.1	63.5	50.0	113	154	156	62.2	39.6
MAX	66	63	74	70	63	91	95	135	184	185	88	67
MIN	35	48	54	47	44	53	36	97	113	98	35	32
AC-FT	3,390	3,350	3,670	3,710	3,110	3,910	2,980	6,980	9,180	9,590	3,820	2,350

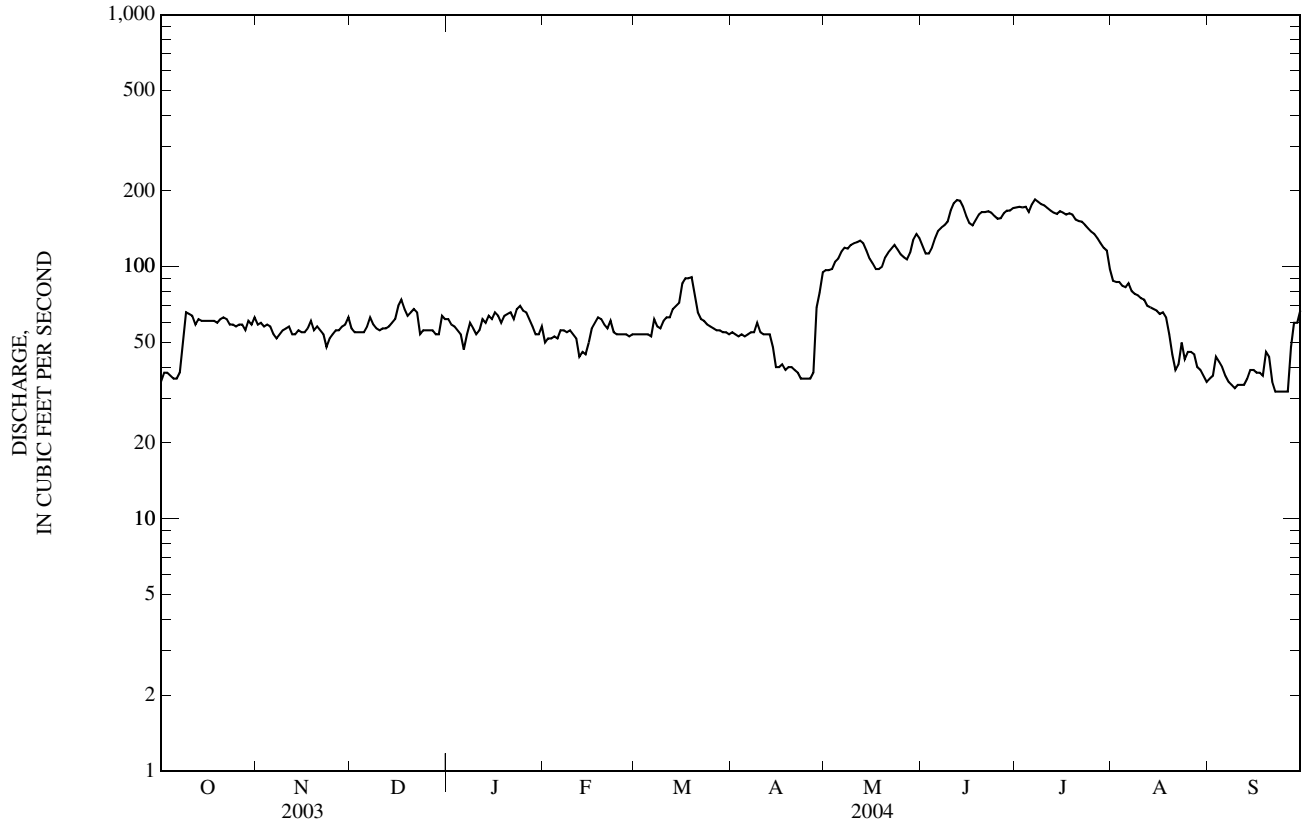
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

MEAN	72.6	69.4	66.4	60.2	58.9	63.7	61.6	99.1	132	114	75.7	53.0
MAX	111	97.7	98.2	85.3	80.4	78.9	70.1	123	218	189	162	84.2
(WY)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(1990)	(1993)	(1996)	(1995)	(1993)	(1991)
MIN	52.1	56.2	53.9	43.1	45.6	50.2	50.0	82.1	57.1	58.3	31.4	25.7
(WY)	(2002)	(2004)	(2002)	(2002)	(2002)	(2003)	(2004)	(1989)	(1992)	(1992)	(2003)	(2001)

13018350 FLAT CREEK BELOW CACHE CREEK, NEAR JACKSON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004*	
ANNUAL TOTAL	23,326		28,251		--	
ANNUAL MEAN	63.9		77.2		71.7	
HIGHEST ANNUAL MEAN	--		--		89.8	2000
LOWEST ANNUAL MEAN	--		--		62.7	2001
HIGHEST DAILY MEAN	215	Jun 3	185	Jul 7	256	Jul 13, 1995
LOWEST DAILY MEAN	25	Aug 12-14, 16-21	32	Sep 22-26	14	Sep 22, 2001
ANNUAL SEVEN-DAY MINIMUM	25	Aug 12	34	Sep 20	15	Sep 19, 2001
MAXIMUM PEAK FLOW	--		258	Jul 4	277[a]	Jul 12, 1995
MAXIMUM PEAK STAGE	--		2.81	Jul 4	4.18[b]	Dec 8, 2001
ANNUAL RUNOFF (AC-FT)	46,270		56,040		51,940	
10 PERCENT EXCEEDS	99		155		114	
50 PERCENT EXCEEDS	58		60		63	
90 PERCENT EXCEEDS	34		39		40	

* For period of operation.
a Gage height, 2.92 ft.
b Backwater from ice.
e Estimated.



13018750 SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY

LOCATION.--Lat 43°22'20", long 110°44'19"(revised), in NE¼SE¼ sec.3, T.39 N., R.116 W., Teton County, Wyoming, Hydrologic Unit 17040103, on left bank 20 ft upstream from county road bridge, about 1 mi downstream from Flat Creek, 4.8 mi upstream from Hoback River, 7.0 mi south of Jackson, and at mile 938.9.

DRAINAGE AREA.--2,627 mi^2.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--November 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,950 ft above NGVD of 1929, from topographic map. Data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,930	1,220	1,240	e1,100	e1,000	1,070	1,530	1,990	7,700	7,340	4,060	3,730
2	3,620	1,220	e1,250	e1,050	950	1,070	1,640	2,090	8,550	6,920	4,030	3,730
3	3,200	1,190	1,210	e1,050	e1,000	1,060	1,740	2,370	9,350	6,580	3,990	3,840
4	2,790	1,210	1,220	e1,050	1,080	1,070	1,770	2,820	9,620	6,330	3,930	3,940
5	2,650	1,210	1,200	e1,000	1,090	1,060	1,820	3,570	10,500	6,620	3,900	3,860
6	2,600	1,160	1,210	e1,000	1,100	1,080	1,890	4,170	11,500	6,620	3,900	3,770
7	2,440	1,150	1,280	1,100	1,080	1,040	1,970	4,510	12,200	6,280	3,840	3,750
8	2,360	1,140	1,250	1,130	1,100	1,040	2,060	4,660	12,600	6,120	3,810	3,710
9	2,240	1,160	1,230	1,140	1,090	1,060	2,070	4,660	12,900	6,000	3,780	3,690
10	2,090	1,200	1,200	1,130	1,050	1,090	1,950	4,410	13,900	5,900	3,710	3,660
11	1,910	1,240	1,190	1,120	e1,000	1,110	1,820	4,200	13,800	5,780	3,670	3,640
12	1,720	1,220	1,190	1,120	900	1,110	1,760	4,010	12,300	5,630	3,640	3,630
13	1,530	1,190	1,220	e1,100	930	1,120	1,760	3,620	11,300	5,470	3,620	3,690
14	1,440	1,210	1,240	e1,050	970	1,140	1,870	3,230	10,800	5,350	3,600	3,790
15	1,410	1,220	1,200	e1,050	e1,000	1,140	1,950	3,010	10,400	5,230	3,590	3,800
16	1,380	1,240	1,160	e1,100	1,060	1,180	1,900	2,860	10,400	5,300	3,580	3,760
17	1,370	e1,200	1,140	e1,050	1,090	1,250	1,870	2,760	10,100	5,120	3,620	3,740
18	1,360	e1,200	e1,100	e1,050	1,110	1,330	1,810	2,700	9,810	5,030	3,700	3,710
19	1,350	1,240	e1,150	e1,100	1,140	1,440	1,770	2,960	9,610	5,090	3,880	3,720
20	1,340	1,260	e1,150	e1,050	1,120	1,580	1,730	3,080	9,390	5,070	3,830	3,900
21	1,320	1,250	1,170	e1,050	1,090	1,550	1,690	3,350	9,220	4,940	3,760	3,840
22	1,290	1,200	1,150	e1,050	1,070	1,540	1,620	3,330	8,810	4,840	3,770	3,770
23	1,270	1,160	e1,100	e1,100	1,070	1,580	1,560	3,410	8,510	4,940	4,040	3,770
24	1,270	e1,100	e1,050	e1,100	1,070	1,690	1,560	3,280	8,410	4,880	4,030	3,820
25	1,250	1,140	e1,050	1,110	1,080	1,730	1,600	3,300	8,270	4,700	4,090	3,780
26	1,230	1,180	e1,000	1,110	1,110	1,690	1,620	3,320	8,290	4,590	4,160	3,770
27	1,230	1,180	e1,050	1,090	1,100	1,600	1,760	3,520	8,280	4,470	4,130	3,740
28	1,220	1,170	e1,100	1,090	1,090	1,510	2,060	4,470	8,100	4,380	4,040	3,460
29	1,270	1,190	e1,100	1,110	1,080	1,440	2,250	6,100	7,800	4,310	3,940	2,940
30	1,310	1,230	e1,150	e1,050	---	1,410	2,050	6,630	7,560	4,180	3,860	2,530
31	1,260	---	1,140	e1,000	---	1,440	---	7,110	---	4,130	3,770	---
TOTAL	56,650	35,880	36,090	33,400	30,620	40,220	54,450	115,500	299,980	168,140	119,270	110,480
MEAN	1,827	1,196	1,164	1,077	1,056	1,297	1,815	3,726	9,999	5,424	3,847	3,683
MAX	3,930	1,260	1,280	1,140	1,140	1,730	2,250	7,110	13,900	7,340	4,160	3,940
MIN	1,220	1,100	1,000	1,000	900	1,040	1,530	1,990	7,560	4,130	3,580	2,530
AC-FT	112,400	71,170	71,580	66,250	60,730	79,780	108,000	229,100	595,000	333,500	236,600	219,100

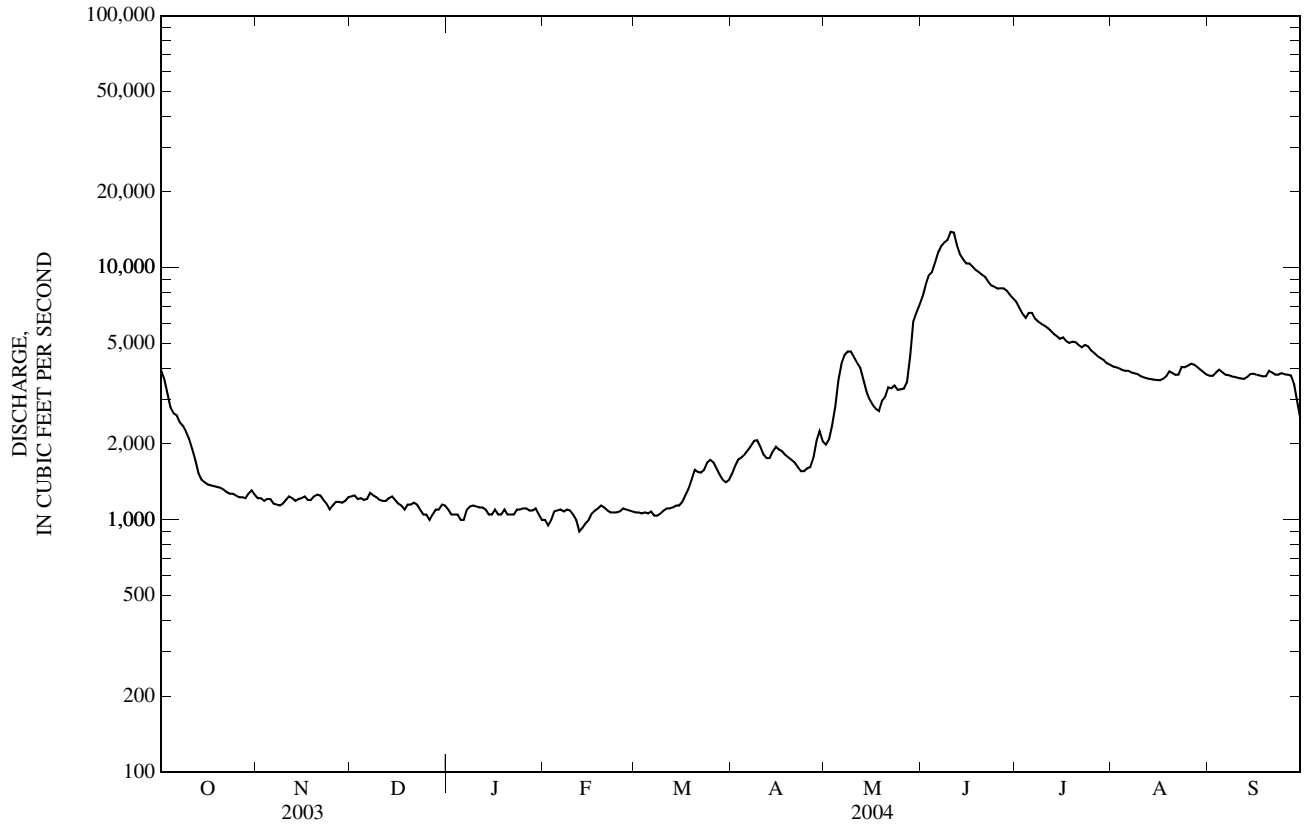
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2004, BY WATER YEAR (WY)

MEAN	1,853	1,532	1,383	1,300	1,327	1,580	2,595	6,578	10,900	6,688	4,404	3,572
MAX	3,093	2,747	1,998	2,345	2,491	3,686	5,435	12,060	22,180	14,090	7,253	6,464
(WY)	(1983)	(1984)	(1984)	(1997)	(1997)	(1997)	(1985)	(1997)	(1997)	(1982)	(1976)	(1984)
MIN	977	967	846	879	825	910	1,292	2,570	5,233	3,245	2,305	1,801
(WY)	(1989)	(1988)	(1988)	(1988)	(1989)	(1977)	(1977)	(1977)	(2001)	(1988)	(1981)	(1979)

13018750 SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1976 - 2004	
ANNUAL TOTAL	1,185,516		1,100,680		--	
ANNUAL MEAN	3,251		3,007		3,612	
HIGHEST ANNUAL MEAN	--		--		6,110	1997
LOWEST ANNUAL MEAN	--		--		2,469	1977
HIGHEST DAILY MEAN	12,400	Jun 1	13,900	Jun 10	30,200	Jun 11, 1997
LOWEST DAILY MEAN	900	Jan 10	900	Feb 12	690	Jan 19, 1988
ANNUAL SEVEN-DAY MINIMUM	986	Jan 15	987	Feb 10	785	Feb 4, 1989
ANNUAL RUNOFF (AC-FT)	2,353,000		2,183,000		2,617,000	
10 PERCENT EXCEEDS	6,740		6,590		7,970	
50 PERCENT EXCEEDS	1,660		1,760		2,050	
90 PERCENT EXCEEDS	1,050		1,070		1,110	

e Estimated.



13018750 SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2002 to September 2004 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
21...	1520	1,240	620	10.5	117	8.7	258	23.5	11.0	120	35.1	8.40	2.00
NOV													
17...	1600	1,150	603	12.3	117	8.9	225	.0	3.5	120	35.4	7.98	1.90
DEC													
16...	0900	1,110	620	10.8	91	8.2	262	-2.0	.0	130	37.7	8.62	1.96
JAN													
14...	0945	1,380	620	14.0	118	8.2	262	-13.5	.0	130	39.0	9.13	1.91
FEB													
23...	1515	980	608	13.4	127	8.8	279	4.0	3.5	130	38.4	8.87	1.93
MAR													
16...	1730	1,190	605	10.2	106	8.5	282	8.0	7.0	130	36.3	8.69	2.20
JUN													
02...	1325	8,100	618	9.8	114	7.8	192	23.0	12.5	78	23.6	4.64	1.63
JUL													
27...	0915	4,400	610	9.6	120	8.2	199	21.5	15.0	83	25.0	5.07	1.61
SEP													
09...	1400	3,500	606	9.5	120	8.4	209	25.5	15.0	84	25.1	5.29	1.89

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
21...	.3	8.20	112	3.90	.4	14.1	17.9	157	.20	483	144	<.04	<.06
NOV													
17...	.3	7.58	111	3.94	.4	13.8	18.2	156	.20	466	150	<.04	<.06
DEC													
16...	.3	8.29	117	4.23	.5	15.0	20.1	167	.22	491	165	E.02	E.04
JAN													
14...	.3	8.80	122	4.77	.5	15.9	20.5	174	.23	633	170	<.04	.07
FEB													
23...	.3	8.46	119	4.27	.4	14.2	21.5	170	.23	443	168	<.04	.06
MAR													
16...	.3	8.21	119	4.56	.4	13.7	20.5	166	.23	540	168	.08	E.04
JUN													
02...	.4	9.08	77	4.68	.7	13.9	12.4	117	.17	2,700	123	<.04	<.06
JUL													
27...	.4	7.78	85	4.06	.6	13.2	13.5	122	.17	1,480	124	<.04	<.06
SEP													
09...	.4	8.93	86	4.72	.6	13.9	13.3	125	.19	1,310	138	<.04	<.06

13018750 SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by anal ysis, mg/L (62855)	Total carbon, suspnd sedimnt total, mg/L (00694)	Organic carbon, water, fltrd, mg/L (00681)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)
OCT													
21...	<.008	--	E.004	.012	.05	--	--	E6	4.7	--	--	--	--
NOV													
17...	<.008	.04	E.003	.014	.11	.3	1.0	E4	4.8	<.006	E.017	<.006	.045
DEC													
16...	<.008	--	.006	.047	.10	--	--	E5	7.5	--	--	--	--
JAN													
14...	<.008	.02	.010	.021	.15	.3	1.0	E4	6.8	--	--	--	--
FEB													
23...	<.008	--	.014	.026	.16	--	--	E3	6.5	--	--	--	--
MAR													
16...	<.008	.07	.011	.034	.32	.5	2.5	8	7.6	--	--	--	--
JUN													
02...	<.008	.25	.009	.30	.48	3.3	5.8	7	4.9	<.006	<.006	<.006	<.005
JUL													
27...	<.008	<.02	.006	.016	.10	.2	1.4	E5	3.1	--	--	--	--
SEP													
09...	<.008	.03	E.003	.009	.08	.2	1.6	E4	1.9	--	--	--	--

Date	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)
OCT													
21...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
17...	<.005	.065	<.050	<.010	.007	<.041	<.020	<.005	<.006	<.018	.004	<.012	<.005
DEC													
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN													
02...	<.005	<.007	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005
JUL													
27...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--

13018750 SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Desulfinylfipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)
OCT 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	<.009	<.02	.016	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027
DEC 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 02...	<.009	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027
JUL 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p-' DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Propyzamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)
OCT 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	<.015	.436	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	.01	<.004	<.025
DEC 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 02...	<.015	<.013	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025
JUL 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--	--	--	--	--	--

13018750 SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Sima-zine, water, fltrd, ug/L (04035)	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)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
OCT											
21...	--	--	--	--	--	--	--	--	--	1	3.3
NOV											
17...	<.011	<.02	.120	<.02	<.034	<.02	<.010	<.002	E.007	4	12
DEC											
16...	--	--	--	--	--	--	--	--	--	3	9.0
JAN											
14...	--	--	--	--	--	--	--	--	--	2	7.5
FEB											
23...	--	--	--	--	--	--	--	--	--	4	11
MAR											
16...	--	--	--	--	--	--	--	--	--	10	32
JUN											
02...	<.011	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	312	6,820
JUL											
27...	--	--	--	--	--	--	--	--	--	5	59
SEP											
09...	--	--	--	--	--	--	--	--	--	3	28

< -- Less than
E -- Estimated value

13022500 SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WY

LOCATION.--Lat 43°11'46", long 110°53'22", Lincoln County, Hydrologic Unit 17040103, on right bank 0.3 mi downstream from Wolf Creek, 6.4 mi upstream from Greys River, 7.4 mi east of Alpine, 16.1 mi upstream from Palisades Dam, and at mile 917.5.

DRAINAGE AREA.--3,465 mi^2.

PERIOD OF RECORD.--March 1937 to March 1939 (published as "above Greys River, near Alpine"), July 1953 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,683.90 ft above NGVD of 1929, unadjusted. March 16, 1937 to March 31, 1939 at site 6.0 mi downstream at different datum. Data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,160	1,500	1,530	e1,450	e1,300	1,280	2,080	2,760	9,150	8,900	4,420	4,090
2	3,890	1,480	1,520	e1,400	e1,250	1,280	2,230	2,890	10,000	8,280	4,380	4,080
3	3,500	1,470	1,500	e1,400	e1,270	1,270	2,480	3,320	11,000	7,830	4,360	4,250
4	3,110	1,480	1,500	e1,400	e1,290	1,280	2,540	4,010	11,500	7,490	4,270	4,370
5	2,920	1,470	1,480	e1,380	e1,300	1,270	2,700	5,050	12,500	7,720	4,210	4,290
6	2,850	1,400	1,490	e1,300	e1,300	1,290	2,830	5,970	13,600	7,820	4,190	4,180
7	2,720	1,380	1,580	e1,350	e1,300	1,250	2,970	6,460	14,500	7,360	4,150	4,130
8	2,590	1,380	1,550	e1,400	e1,300	1,280	3,110	6,550	14,900	7,240	4,130	4,090
9	2,490	1,420	1,490	e1,450	e1,280	1,280	3,110	6,570	15,300	7,020	4,100	4,060
10	2,330	1,480	1,440	e1,400	e1,240	1,330	2,830	6,170	16,400	6,850	4,050	4,020
11	2,200	1,530	1,450	e1,400	e1,200	1,350	2,580	5,850	16,100	6,710	3,960	4,000
12	2,020	1,520	1,460	e1,400	e1,180	1,340	2,500	5,470	14,100	6,510	3,930	3,960
13	1,830	1,450	1,500	e1,400	e1,200	1,350	2,530	4,940	12,700	6,290	3,920	4,060
14	1,730	1,500	1,530	e1,400	e1,230	1,370	2,700	4,360	12,100	6,180	3,880	4,160
15	1,690	1,500	1,460	e1,400	e1,250	1,390	2,800	4,020	11,700	6,020	3,870	4,190
16	1,660	e1,500	1,420	e1,450	e1,300	1,420	2,690	3,760	11,800	6,120	3,870	4,130
17	1,640	e1,500	e1,400	e1,380	1,340	1,500	2,640	3,620	11,500	5,920	3,900	4,080
18	1,630	e1,500	e1,450	e1,370	1,340	1,600	2,560	3,600	11,300	5,780	3,970	4,040
19	1,620	1,520	e1,500	e1,400	1,380	1,730	2,470	3,940	11,300	5,820	4,240	4,050
20	1,600	1,540	e1,500	e1,400	1,340	1,940	2,390	4,140	11,200	5,770	4,150	4,280
21	1,590	1,540	e1,450	e1,380	1,280	1,960	2,330	4,530	11,000	5,570	4,090	4,220
22	1,560	1,470	e1,450	e1,370	1,270	1,980	2,230	4,530	10,500	5,430	4,080	4,120
23	1,550	e1,470	e1,400	e1,400	1,280	2,050	2,140	4,600	10,200	5,550	4,490	4,100
24	1,540	e1,450	e1,400	e1,400	1,280	2,200	2,150	4,410	10,100	5,460	4,450	4,130
25	1,520	e1,420	e1,450	e1,370	1,310	2,300	2,200	4,250	9,990	5,180	4,530	4,100
26	1,510	e1,480	e1,500	e1,370	1,330	2,250	2,250	4,250	9,940	5,050	4,680	4,070
27	1,510	e1,480	e1,400	e1,400	1,340	2,090	2,490	4,530	9,910	4,910	4,620	4,040
28	1,490	e1,500	e1,400	e1,400	1,320	1,940	2,940	6,050	9,700	4,790	4,470	3,830
29	1,530	e1,500	e1,450	e1,400	1,320	1,830	3,170	8,110	9,470	4,720	4,360	3,350
30	1,600	1,520	e1,500	e1,420	---	1,820	2,880	8,300	9,270	4,550	4,260	2,950
31	1,540	---	e1,450	e1,400	---	1,920	---	8,680	---	4,480	4,120	---
TOTAL	65,120	44,350	45,600	43,240	37,320	50,140	77,520	155,690	352,730	193,320	130,100	121,420
MEAN	2,101	1,478	1,471	1,395	1,287	1,617	2,584	5,022	11,760	6,236	4,197	4,047
MAX	4,160	1,540	1,580	1,450	1,380	2,300	3,170	8,680	16,400	8,900	4,680	4,370
MIN	1,490	1,380	1,400	1,300	1,180	1,250	2,080	2,760	9,150	4,480	3,870	2,950
AC-FT	129,200	87,970	90,450	85,770	74,020	99,450	153,800	308,800	699,600	383,500	258,100	240,800

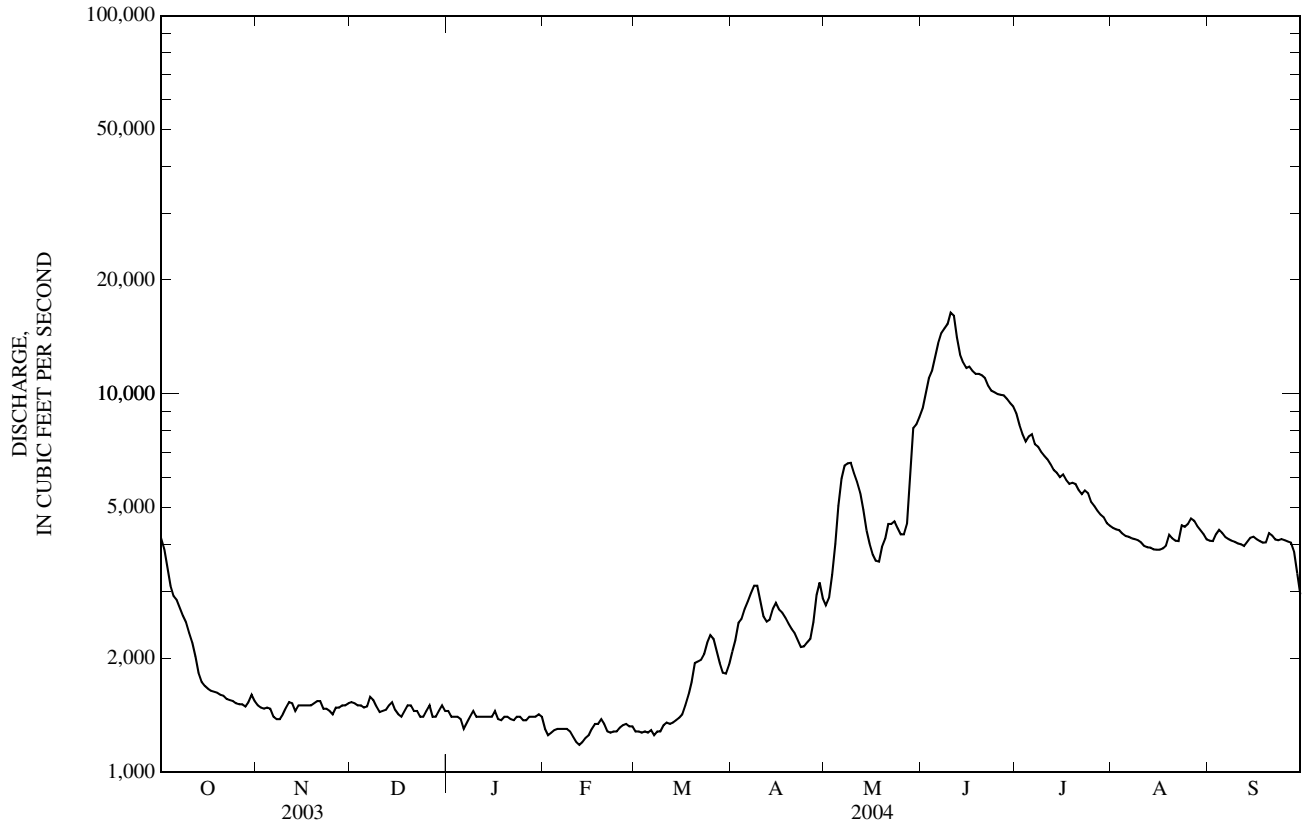
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2004, BY WATER YEAR (WY)

MEAN	2,176	1,841	1,681	1,509	1,589	1,827	3,319	8,771	13,300	8,434	5,352	4,100
MAX	3,605	4,244	5,795	2,694	3,381	4,116	6,820	15,890	28,180	15,790	7,541	7,595
(WY)	(1983)	(1957)	(1957)	(1997)	(1961)	(1997)	(1985)	(1997)	(1997)	(1982)	(1956)	(1984)
MIN	1,325	1,225	1,1001	1,069	1,071	1,099	1,506	2,995	6,249	3,802	2,494	2,241
(WY)	(1978)	(1978)	(1988)	(1964)	(1938)	(1955)	(1955)	(1977)	(2001)	(1988)	(1981)	(1977)

13022500 SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1937 - 2004	
ANNUAL TOTAL	1,397,900		1,316,550		--	
ANNUAL MEAN	3,830		3,597		4,514	
HIGHEST ANNUAL MEAN	--		--		7,525	1997
LOWEST ANNUAL MEAN	--		--		2,726	1977
HIGHEST DAILY MEAN	16,000	Jun 1	16,400	Jun 10	38,100	Jun 11, 1997
LOWEST DAILY MEAN	1,150	Jan 18	1,180	Feb 12	900	Dec 21, 1978
ANNUAL SEVEN-DAY MINIMUM	1,220	Jan 15	1,230	Feb 9	957	Jan 9, 1954
ANNUAL RUNOFF (AC-FT)	2,773,000		2,611,000		3,270,000	
10 PERCENT EXCEEDS	7,300		7,820		10,600	
50 PERCENT EXCEEDS	2,200		2,430		2,460	
90 PERCENT EXCEEDS	1,350		1,340		1,330	

e Estimated.



13023000 GREYS RIVER ABOVE RESERVOIR, NEAR ALPINE, WY

LOCATION.--Lat 43°08'34", long 110°58'36", in SW¼ SE¼ sec.34, T.37 N., R.118 W. (unsurveyed), Lincoln County, Wyoming, Hydrologic Unit 17040103, on right bank at Bridge Campground, 3.6 mi southeast of Alpine, 3.0 mi upstream from maximum flowline of Palisades Reservoir.

DRAINAGE AREA.--448 mi^2. Mean elevation, 8,080 ft.

PERIOD OF RECORD.--July to September 1917, June to September 1918, March 1937 to March 1939, October 1953 to current year. Published as "Greys River near Alpine, Idaho", 1917-1918, and as "Greys River near Alpine, Wyo.", 1937-39.

GAGE.--Water-stage recorder. Elevation of gage is 5,729 ft above NGVD of 1929, from topographic map. July 6 to September 30, 1917, and June 4 to September 30, 1918, nonrecording gage, and March 17, 1937 to March 31, 1939, water-stage recorder, at site 1.8 mi downstream, and October 1953 to September 22, 1965, water-stage recorder at site 1 mi downstream at different datums. Data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Less than 500 acres irrigated by diversions from Greys River and tributaries upstream from station. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	205	e180	e135	e155	146	554	664	1,230	1,080	455	331
2	238	192	177	e130	e160	139	605	739	1,200	1,030	454	332
3	242	e190	181	e130	e160	143	681	898	1,220	988	446	396
4	234	e185	184	e135	e165	146	701	1,110	1,370	961	433	389
5	232	e180	182	e125	e160	143	819	1,230	1,550	937	423	359
6	230	e185	194	e120	e160	148	796	1,320	1,660	894	416	343
7	229	e190	210	e130	e170	137	813	1,360	1,720	862	408	332
8	233	e195	199	e140	e170	141	829	1,330	1,670	861	402	325
9	227	e200	191	e140	e170	154	812	1,320	1,680	824	396	318
10	224	e205	178	e125	e160	173	689	1,250	1,720	790	389	312
11	225	209	194	e125	e160	180	628	1,250	1,660	752	383	305
12	223	200	189	e120	e130	185	611	1,100	1,440	720	379	305
13	222	190	181	e120	e140	190	660	1,010	1,310	700	374	346
14	221	e200	184	e115	e140	197	722	927	1,240	685	369	351
15	221	199	173	e115	e150	200	705	882	1,230	688	364	342
16	219	e200	e150	e120	e170	201	668	852	1,210	656	365	323
17	216	e195	e130	e110	e170	216	663	820	1,190	624	364	306
18	214	199	e130	e120	e170	239	653	878	1,230	613	386	300
19	212	187	e130	e120	e160	281	605	925	1,510	641	391	309
20	211	e190	e140	e125	e160	344	600	954	1,430	590	372	339
21	209	e170	e140	e100	e150	374	577	1,020	1,370	569	366	328
22	208	e155	e130	e115	e160	413	554	996	1,300	556	367	310
23	208	146	e110	e125	e160	479	535	1,010	1,270	552	449	307
24	206	141	e125	e140	e150	541	551	955	1,260	534	389	301
25	199	163	e140	e140	e150	538	552	891	1,270	522	422	294
26	200	171	e135	e135	e160	505	590	858	1,230	513	439	289
27	207	164	e120	e145	e150	441	704	1,050	1,240	506	418	286
28	206	e150	e125	e155	e150	396	835	1,600	1,200	493	376	284
29	220	e175	e135	e175	149	359	750	1,890	1,150	482	356	283
30	225	e190	e140	e175	---	383	669	1,550	1,140	475	344	296
31	198	---	e140	e165	---	448	---	1,350	---	463	338	---
TOTAL	6,797	5,521	4,917	4,070	4,559	8,580	20,131	33,989	40,900	21,561	12,233	9,641
MEAN	219	184	159	131	157	277	671	1,096	1,363	696	395	321
MAX	242	209	210	175	170	541	835	1,890	1,720	1,080	455	396
MIN	198	141	110	100	130	137	535	664	1,140	463	338	283
AC-FT	13,480	10,950	9,750	8,070	9,040	17,020	39,930	67,420	81,130	42,770	24,260	19,120

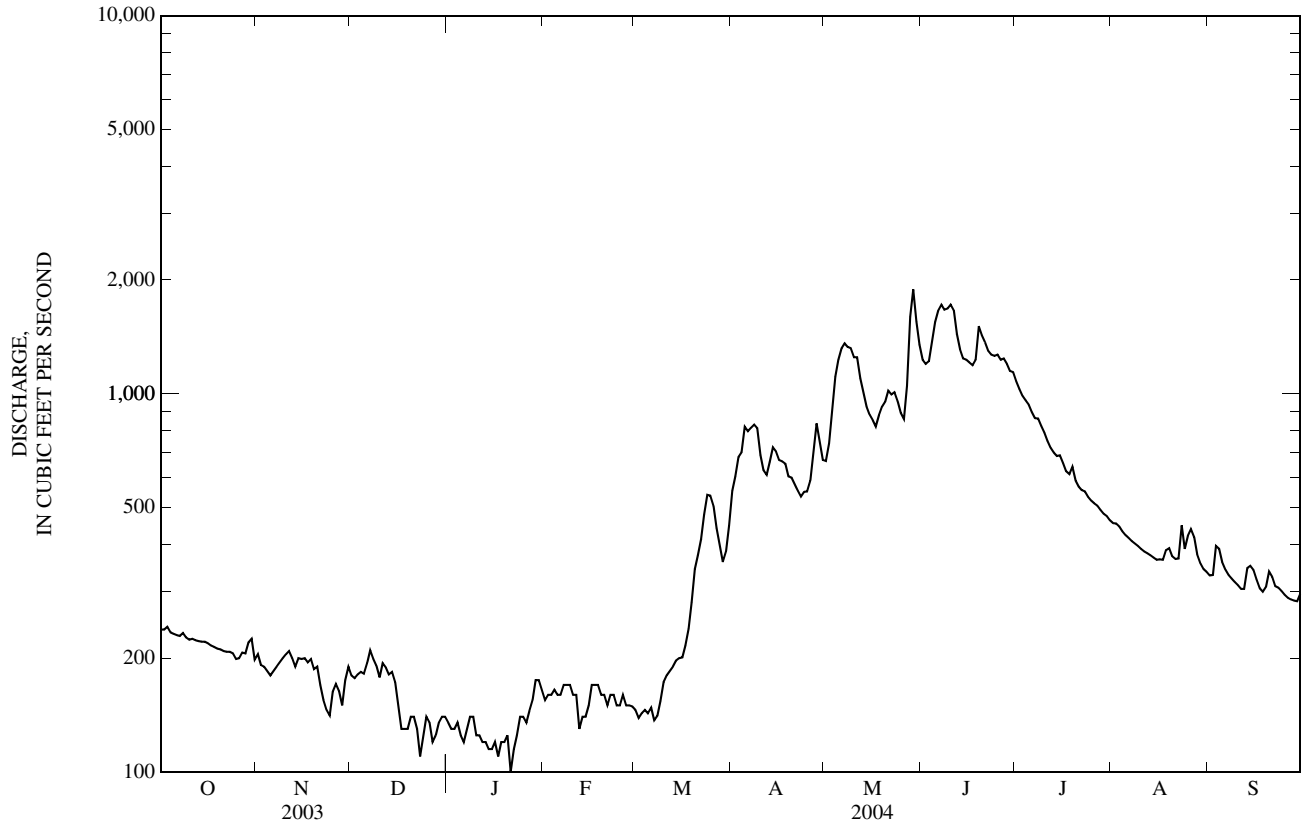
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2004, BY WATER YEAR (WY)

MEAN	312	264	228	210	202	231	638	1,754	1,9771	928	478	366
MAX	472	455	366	315	293	406	1,324	3,032	3,998	1,904	809	569
(WY)	(1983)	(1984)	(1984)	(1971)	(1963)	(1986)	(1962)	(1997)	(1971)	(1975)	(1971)	(1997)
MIN	191	150	142	131	132	164	238	333	387	228	205	198
(WY)	(1993)	(1993)	(1993)	(2004)	(1993)	(2002)	(1975)	(1977)	(1977)	(1977)	(1977)	(1977)

13023000 GREYS RIVER ABOVE RESERVOIR, NEAR ALPINE, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1937 - 2004	
ANNUAL TOTAL	178,884		172,899		--	
ANNUAL MEAN	490		472		637	
HIGHEST ANNUAL MEAN	--		--		1,022	1971
LOWEST ANNUAL MEAN	--		--		259	1977
HIGHEST DAILY MEAN	2,800	May 31	1,890	May 29	6,170	Jun 19, 1971
LOWEST DAILY MEAN	110	Dec 23	100	Jan 21	92	Jan 2, 1978
ANNUAL SEVEN-DAY MINIMUM	126	Dec 22	116	Jan 151	116	Jan 15, 2004
ANNUAL RUNOFF (AC-FT)	354,800		342,900		461,200	
10 PERCENT EXCEEDS	1,200		1,200		1,700	
50 PERCENT EXCEEDS	247		308		319	
90 PERCENT EXCEEDS	141		140		185	

e Estimated.



13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY

LOCATION.--Lat 43°04'47", long 111°02'14", in SW¼ NE¼ sec.28, T.36 N., R.119 W., Lincoln County, Wyoming, Hydrologic Unit 17040l05, on right bank 3.4 mi northwest of Etna, and 8.0 mi upstream from maximum flowline of Palisades Reservoir.

DRAINAGE AREA.--829 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,675.78 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation). Data collection platform with statellite telemetry at station.

REMARKS.--Records good. Diversions upstream from station for power developments, industry, municipal supply, and irrigation of about 60,500 acres of which about 1,000 acres are downstream from station (1966 determination). For details on adjudication of diversions, see Remarks for this station in WSP 1347. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

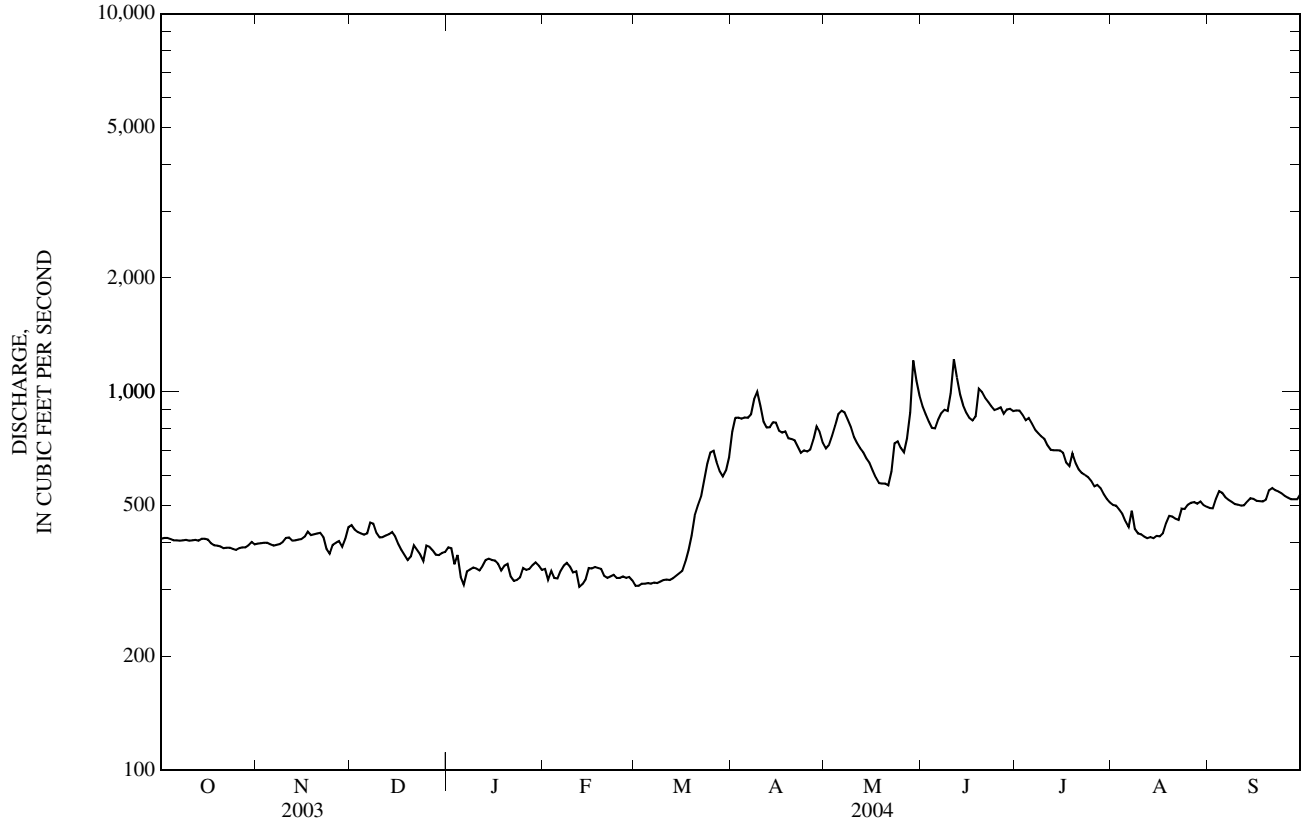
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	409	397	444	388	340	307	785	708	915	893	502	493
2	411	398	432	386	318	307	854	724	873	892	500	492
3	411	399	426	350	336	311	855	765	834	870	488	521
4	408	399	422	370	322	311	849	816	803	841	476	546
5	405	395	419	324	321	312	856	874	801	852	454	541
6	405	392	422	309	336	311	854	891	844	824	439	526
7	404	394	451	335	347	313	872	883	879	795	485	518
8	405	396	448	339	353	312	957	845	897	778	434	512
9	406	401	424	343	345	315	1,000	809	890	763	422	505
10	404	411	412	341	333	318	918	760	991	751	420	503
11	405	412	413	337	335	319	835	732	1,220	722	414	500
12	406	404	417	346	305	318	805	709	1,090	703	410	501
13	404	405	420	359	310	321	806	692	984	701	413	513
14	409	407	426	362	319	326	831	666	921	701	410	523
15	409	408	415	359	342	331	829	649	880	700	416	521
16	407	414	396	358	341	336	789	619	853	690	415	515
17	398	427	382	351	344	355	780	594	840	651	423	514
18	393	418	370	337	342	382	786	574	861	637	449	513
19	392	420	359	347	340	417	754	572	1,020	687	470	519
20	390	422	367	351	326	472	750	572	1,000	648	468	549
21	386	424	393	325	322	500	744	566	965	624	462	557
22	387	413	382	316	325	528	716	616	940	610	458	549
23	387	384	372	318	328	582	690	731	916	603	491	545
24	384	373	357	323	322	646	700	740	895	595	490	539
25	382	394	392	342	322	691	695	711	901	582	503	531
26	386	399	389	338	325	699	704	692	910	562	509	525
27	388	403	381	340	322	652	747	753	875	567	511	520
28	388	389	371	348	324	616	810	881	898	556	506	520
29	393	408	370	354	317	597	784	1,210	902	537	513	520
30	401	439	375	347	---	620	733	1,070	890	521	502	536
31	395	---	377	338	---	671	---	979	---	510	497	---
TOTAL	12,358	12,145	12,424	10,681	9,562	13,496	24,088	23,403	27,488	21,366	14,350	15,667
MEAN	399	405	401	345	330	435	803	755	916	689	463	522
MAX	411	439	451	388	353	699	1,000	1,210	1,220	893	513	557
MIN	382	373	357	309	305	307	690	566	801	510	410	492
AC-FT	24,510	24,090	24,640	21,190	18,970	26,770	47,780	46,420	54,520	42,380	28,460	31,080

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)

MEAN	606	576	506	442	431	472	946	1,670	1,444	834	611	626
MAX	912	838	712	584	702	1,121	2,204	3,586	3,486	1,809	997	691
(WY)	(1983)	(1984)	(1984)	(1997)	(1963)	(1986)	(1986)	(1997)	(1997)	(1975)	(1983)	(1971)
MIN	336	347	340	315	294	299	503	306	275	271	266	342
(WY)	(1978)	(1978)	(2002)	(2002)	(2002)	(2002)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)

13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004	
ANNUAL TOTAL	175,765		197,028		--	
ANNUAL MEAN	482		538		765	
HIGHEST ANNUAL MEAN	--		--		1,272	1997
LOWEST ANNUAL MEAN	--		--		397	2001
HIGHEST DAILY MEAN	1,430	Jun 1	1,220	Jun 11	5,030	Jun 2, 1986
LOWEST DAILY MEAN	293	Jan 18	305	Feb 12	180	Jan 7, 1971
ANNUAL SEVEN-DAY MINIMUM	304	Jan 16	310	Mar 1	226	May 10, 1977
ANNUAL RUNOFF (AC-FT)	348,600		390,800		554,000	
10 PERCENT EXCEEDS	786		871		1,480	
50 PERCENT EXCEEDS	404		452		568	
90 PERCENT EXCEEDS	325		330		372	



13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	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)
NOV													
18...	1010	420	623	11.0	102	8.1	499	2.0	3.5	<.04	1.09	<.008	<.02
FEB													
23...	1730	336	612	12.6	128	8.6	500	.0	6.5	<.04	1.07	E.006	<.02
JUN													
22...	1325	940	623	9.0	106	8.2	455	25.0	13.5	<.04	.57	<.008	<.02
JUL													
27...	1210	570	607	9.3	114	8.6	480	27.0	14.0	<.04	.94	E.004	<.02

Date	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)	Suspended sediment discharge, tons/d (80155)
NOV				
18...	E19	21	15	17
FEB				
23...	<1	E1	19	17
JUN				
22...	E14	31	13	33
JUL				
27...	29	32	7	11

<-- Less than

E-- Estimated value; for bacteria, estimated values are counts outside the acceptable range (non-ideal colony count)

13046680 BOUNDARY CREEK NEAR BECHLER RANGER STATION, WY

LOCATION.--Lat 44°11'07", long 111°00'28"(revised), T.49 N., R.118 W., Teton County, Hydrologic Unit 17040203, Yellowstone National Park, on right bank 0.4 mi upstream from confluence with the Bechler River, 3.8 mi north of the Bechler Ranger Station, and 28.0 mi northeast of Ashton, Idaho.

DRAINAGE AREA.--86.9 mi^2.

PERIOD OF RECORD.--August 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,360 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. No diversion or regulation. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	63	62	61	56	54	72	214	197	124	84	80
2	65	62	61	60	55	53	77	248	200	119	84	81
3	64	63	61	59	56	54	86	272	213	117	85	82
4	64	64	61	59	55	55	91	282	226	116	84	81
5	64	63	60	57	55	54	94	287	238	130	84	80
6	64	62	63	58	55	55	107	280	254	117	84	80
7	64	62	67	59	55	54	123	265	263	108	83	79
8	64	62	62	59	55	54	134	248	266	104	82	79
9	64	63	60	58	55	56	134	229	280	101	82	79
10	66	65	61	57	54	57	121	218	300	99	81	79
11	64	66	61	57	54	56	128	223	299	96	81	78
12	64	63	61	57	54	56	143	238	269	95	81	79
13	64	63	65	57	54	56	162	212	243	94	81	93
14	64	63	64	57	54	56	179	181	225	93	80	92
15	63	63	60	56	55	55	176	166	222	93	80	91
16	63	64	59	57	55	55	173	198	220	96	81	85
17	63	66	59	56	57	56	180	241	211	92	85	82
18	63	63	59	56	58	58	173	204	202	90	91	81
19	63	63	59	56	57	62	148	224	200	93	87	83
20	63	65	59	56	55	63	138	202	203	93	84	94
21	63	63	59	55	54	62	123	206	187	95	82	86
22	63	62	58	55	54	65	121	220	178	93	83	83
23	63	61	58	55	54	66	136	269	173	89	98	82
24	63	62	58	56	54	69	157	240	177	87	85	81
25	62	62	61	58	55	70	166	200	168	86	101	80
26	62	63	59	56	56	71	191	187	157	86	96	79
27	63	61	59	57	56	64	226	216	147	86	93	79
28	64	61	58	57	54	62	255	221	141	85	86	78
29	66	62	e60	58	54	61	187	274	136	85	83	78
30	64	64	e60	60	---	63	181	268	132	84	82	80
31	63	---	e60	56	---	68	---	224	---	84	81	---
TOTAL	1,973	1,889	1,874	1,775	1,595	1,840	4,382	7,157	6,327	3,030	2,634	2,464
MEAN	63.6	63.0	60.5	57.3	55.0	59.4	146	231	211	97.7	85.0	82.1
MAX	66	66	67	61	58	71	255	287	300	130	101	94
MIN	62	61	58	55	54	53	72	166	132	84	80	78
AC-FT	3,910	3,750	3,720	3,520	3,160	3,650	8,690	14,200	12,550	6,010	5,220	4,890

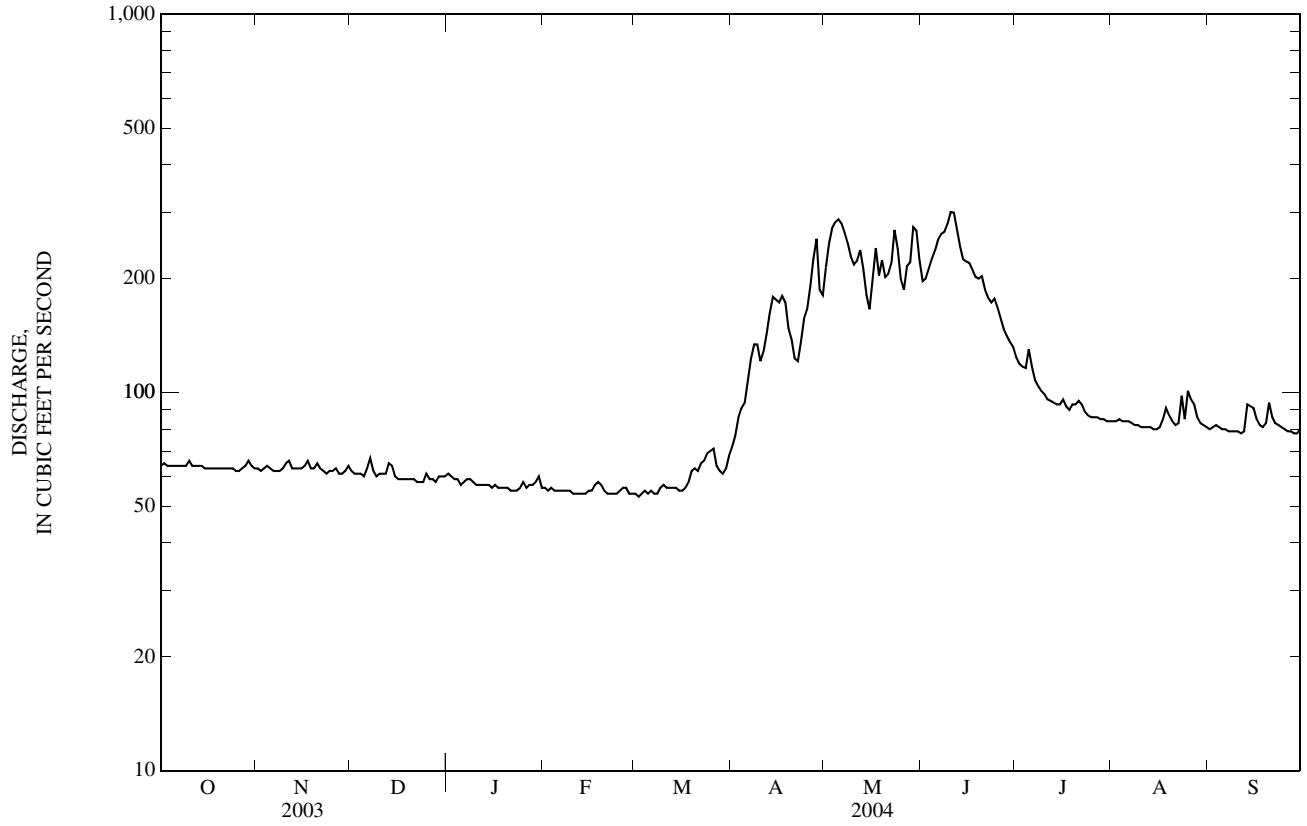
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2004, BY WATER YEAR (WY)

MEAN	80.0	79.5	75.9	71.9	68.5	69.9	124	268	228	102	83.5	80.3
MAX	120	108	101	100	88.5	91.3	215	460	566	179	139	129
(WY)	(1998)	(1998)	(1996)	(1997)	(1998)	(1997)	(1990)	(1997)	(1986)	(1997)	(1997)	(1997)
MIN	61.6	61.9	58.8	57.3	53.8	58.0	68.8	150	83.3	68.1	62.2	59.4
(WY)	(1993)	(1993)	(1993)	(2004)	(1989)	(1993)	(1991)	(1990)	(1987)	(1988)	(1988)	(1988)

13046680 BOUNDARY CREEK NEAR BECHLER RANGER STATION, WY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1946 - 2004	
ANNUAL TOTAL	32,650		36,940		--	
ANNUAL MEAN	89.5		101		111	
HIGHEST ANNUAL MEAN	--		--		169	1997
LOWEST ANNUAL MEAN	--		--		82.7	2001
HIGHEST DAILY MEAN	284	May 14	300	Jun 10	810	Jun 2, 1986
LOWEST DAILY MEAN	55	Feb 25	53	Mar 2	50	Feb 26, 2002
ANNUAL SEVEN-DAY MINIMUM	59	Dec 18	54	Feb 28	53	Feb 12, 1989
ANNUAL RUNOFF (AC-FT)	64,760		73,270		80,470	
10 PERCENT EXCEEDS	197		215		218	
50 PERCENT EXCEEDS	66		72		81	
90 PERCENT EXCEEDS	60		56		61	

e Estimated.



DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 2004

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		Yellowstone River Basin				
Dinwoody Canal 432302109215601	Wind River	Lat 41°23'02", long 109°21'56", in NE1/4 SW1/4 NW1/4 sec.28, T.5 N., R.5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 600 ft downstream from headgate, 2.7 mi upstream from aqueduct, and 2.7 mi south of Wilderness.		1988--96 1999 2001--04	05-13-04 06-28-04 08-13-04 09-09-04	113 55.5 200 146
37-C Lateral 425716108520401	Little Wind River	Lat 42°57'16", long 108°52'04", in SW1/4 SE1/4 SW1/4 sec.22, T.1 S., R.1 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank at headgate, 1.1 mi upstream from crossing on unimproved dirt road, and 2.4 mi southeast of Wind River		1988--97 1999 2001--04	05-13-04 06-17-04 06-23-04 08-03-04 09-08-04	23.9 78 74.6 60 45.9
65-C Lateral at Headworks 425515108485401	Little Wind River	Lat 42°55'15", long 108°48'54", in NE1/4 SE1/4 NE1/4 sec.1, T.2 S., R.1 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank at headgate, 1.1 mi upstream from crossing on light-duty road, and 3.4 mi northwest of Milford.		1988--97 1999 2001--04	05-20-04 06-22-04 08-03-04 09-08-04	31.3 71 56.8 41.4
Ray Canal Below 65 "C" Lateral 425513108485801	Little Wind River	Lat 42°55'13", long 108°48'58", in NE1/4 SE1/4 NE1/4 sec.1, T.2 S., R.1 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank, 400 ft downstream from 65-C Lateral, 0.9 mi upstream from crossing on unimproved dirt road, and 3.4 mi northwest of Milford.		1988--97 1999 2001--04	05-20-04 06-22-04 08-03-04 09-08-04	11.5 32.4 21.3 23.5
		Snake River Basin				
Lake Creek at State Hwy 390, near Wilson 433247110491701	Fish Creek	Lat 43°32'47", long 110°49'17", in SW1/4 SW1/4 NW1/4 sec.6, T.41 N., R.116 W., Teton County, Hydrologic Unit 17040103, at bridge on State Hwy 390, 2.8 mi south of Teton Village, and 4.1 mi northeast of Wilson.		1994--04	10-06-03	1.07

FREMONT COUNTY WEED AND PEST DISTRICT STUDY

YELLOWSTONE RIVER BASIN

425008108445401 SQUAW CREEK AT SMITH STREET, AT LANDER, WY (LAT 42 50 08 LONG 108 44 54)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	2,4,5-T water unfltrd ug/L (39740)	2,4-D water unfltrd ug/L (39730)	Dicamba water unfltrd ug/L (82052)	Dichlorprop, water, unfltrd ug/L (82183)
AUG													
30...	1220	10	630	9.7	116	8.2	796	26.5	14.5	<.03	<.02	<.03	<.02

Date	Picloram water unfltrd ug/L (39720)	Silvex, water, unfltrd ug/L (39760)
AUG		
30...	E.03	<.03

< -- Less than
E -- Estimated value

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM
YELLOWSTONE RIVER BASIN

Fixed Station Network

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)
OCT													
10...	0830	5,280	693	8.7	94	8.4	619	8.5	14.2	152	142	172	.0
NOV													
21...	1330	5,380	695	13.7	110	7.2	642	-1.0	2.5	163	144	176	--
DEC													
17...	1600	E4,500	705	13.2	98	8.2	649	6.5	.0	162	182	222	--
JAN													
23...	1000	E4,600	693	10.8	81	8.5	664	8.5	.0	156	196	239	--
FEB													
25...	1700	E4,200	698	12.1	91	7.5	659	10.0	.0	143	146	177	--
MAR													
24...	1500	4,520	687	10.7	107	8.2	679	23.5	11.0	159	152	176	5
MAY													
26...	1100	9,640	678	9.7	105	7.8	439	20.5	13.5	108	111	135	--
JUN													
15...	1200	19,300	696	9.2	105	7.9	300	22.0	17.5	80	74	91	--
JUL													
15...	1000	9,420	685	8.8	116	8.3	356	31.0	23.5	95	85	101	1
AUG													
27...	1030	3,610	701	9.2	104	8.4	647	23.5	17.0	153	133	145	8
SEP													
08...	1200	4,550	696	9.6	108	8.4	616	21.5	16.7	153	137	165	1

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	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, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)
OCT													
10...	9.05	158	<.04	.08	<.008	<.006	.027	.42	--	--	--	--	--
NOV													
21...	9.08	163	<.04	.35	E.005	<.006	.027	.62	<.006	E.004	<.006	<.005	<.005
DEC													
17...	8.96	167	E.03	.51	E.005	<.006	.021	.71	--	--	--	--	--
JAN													
23...	9.04	168	<.04	.51	E.004	<.006	.014	.75	<.006	<.006	<.006	<.005	<.005
FEB													
25...	8.89	175	.06	.39	E.007	.006	.100	.96	--	--	--	--	--
MAR													
24...	9.90	181	<.04	.37	.012	<.006	.069	.86	<.006	<.006	<.006	<.005	<.005
MAY													
26...	6.29	102	E.02	.29	.016	.012	.23	.46	<.006	<.006	<.006	<.005	<.005
JUN													
15...	3.69	55.0	<.04	.20	.010	.013	.30	.39	<.006	<.006	<.006	<.005	<.005
JUL													
15...	5.08	72.7	<.04	.09	<.008	<.006	.071	.37	<.006	<.006	<.006	<.005	<.005
AUG													
27...	9.46	170	<.04	E.03	<.008	<.006	.045	.41	<.006	<.010	<.006	<.005	<.005
SEP													
08...	8.50	150	<.04	.15	E.005	<.006	.056	.52	<.006	<.006	<.006	<.005	<.005

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM—Continued

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)
OCT													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
21...	E.007	<.050	<.010	<.004	E.005	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
DEC													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
23...	E.007	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
FEB													
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
24...	E.006	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
MAY													
26...	E.006	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
JUN													
15...	<.007	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
JUL													
15...	.017	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
AUG													
27...	<.010	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
SEP													
08...	<.010	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009

Date	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Desulfinyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	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)
OCT													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
21...	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
DEC													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
23...	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
FEB													
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
24...	<.02	<.020	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
MAY													
26...	<.02	.016	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
JUN													
15...	<.02	<.106	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
JUL													
15...	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
AUG													
27...	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
SEP													
08...	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM—Continued

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Propyzamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)
OCT 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 21...	E.007	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	E.01	<.004	<.025	<.011
DEC 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	E.007	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	.01	<.004	<.025	<.011
FEB 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 24...	<.013	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	.01	<.004	<.025	<.011
MAY 26...	.019	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	.01	<.004	<.025	<.011
JUN 15...	<.013	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011
JUL 15...	.023	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011
AUG 27...	.019	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011
SEP 08...	.016	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011

Date	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT 10...	--	--	--	--	--	--	--	--	16	228
NOV 21...	<.02	<.005	<.02	<.034	<.02	<.010	.006	<.009	16	232
DEC 17...	--	--	--	--	--	--	--	--	15	--
JAN 23...	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	4	--
FEB 25...	--	--	--	--	--	--	--	--	88	--
MAR 24...	<.02	<.005	<.02	<.034	<.02	<.010	.004	<.009	48	586
MAY 26...	<.02	<.005	<.02	<.034	<.02	<.010	.008	<.009	218	5,670
JUN 15...	<.02	<.005	<.02	<.034	<.02	<.010	.003	<.009	318	16,600
JUL 15...	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	55	1,400
AUG 27...	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	23	224
SEP 08...	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	37	455

< -- Less than
E -- Estimated value

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM—Continued

Fixed Station Network

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK NEAR WESTON, WY (LAT 44 55 37 LONG 105 21 10)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)
OCT													
16...	0850	.01	677	6.7	64	7.8	3,400	7.0	8.0	--	385	470	--
NOV													
14...	0800	.37	669	9.0	74	7.7	5,250	.0	1.0	415	306	373	--
DEC													
16...	1600	.80	674	10.0	78	7.9	3,690	3.0	.0	379	456	556	--
JAN													
21...	1400	.48	676	9.2	72	7.9	5,210	8.0	.0	533	706	813	24
FEB													
24...	1500	23	670	11.5	90	7.7	725	12.0	.0	98	95	116	--
MAR													
09...	1630	8.6	669	12.8	115	8.1	1,640	20.0	5.0	206	195	234	2
APR													
13...	1500	1.1	670	10.2	118	8.2	3,240	27.0	15.5	349	--	--	--
MAY													
11...	1630	.50	663	8.7	110	8.2	3,810	12.5	19.0	387	412	503	--
JUN													
07...	1435	.27	666	7.1	102	8.4	3,420	25.5	26.0	320	--	--	--
JUL													
07...	1300	21	667	6.9	90	8.2	3,600	32.0	21.0	331	311	373	3
AUG													
25...	0945	.04	666	5.7	69	8.1	3,030	22.5	17.5	377	--	--	--
SEP													
09...	1130	.23	671	8.2	106	8.1	3,340	26.5	21.0	363	420	512	--

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	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, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT											
16...	114	1,450	E.02	<.06	<.008	<.006	.053	.69	--	272	.01
NOV											
14...	190	2,560	E.04	<.06	<.008	<.006	.052	.68	--	175	.17
DEC											
16...	35.2	1,730	<.04	<.06	<.008	<.006	.013	.29	--	--	--
JAN											
21...	93.1	2,530	<.04	<.06	<.008	<.006	.038	.56	--	44	.06
FEB											
24...	21.9	214	<.04	.22	.011	.068	.36	2.25	--	383	24
MAR											
09...	30.9	595	<.04	<.06	<.008	<.006	.093	.65	--	51	1.2
APR											
13...	40.1	1,360	--	--	--	--	--	--	70	99	.29
MAY											
11...	64.4	1,710	<.04	<.06	<.008	<.006	.046	.61	--	140	.19
JUN											
07...	62.9	1,420	--	--	--	--	--	--	--	101	.07
JUL											
07...	40.5	1,590	<.04	<.06	<.008	<.006	.089	.92	--	96	5.5
AUG											
25...	80.1	1,210	--	--	--	--	--	--	--	162	.02
SEP											
09...	99.2	1,380	<.04	<.06	<.008	<.006	.022	.35	--	93	.06

< -- Less than
E -- Estimated value

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)
OCT													
09...	1200	4,040	705	8.9	93	8.4	692	25.5	13.8	160	124	146	2
NOV													
12...	1330	5,190	721	11.9	86	8.1	725	-.5	.0	181	170	207	--
DEC													
17...	1230	4,490	711	12.1	89	8.2	763	4.0	.0	186	192	234	--
JAN													
22...	1600	7,280	712	10.7	79	8.2	765	2.0	.0	177	174	212	--
FEB													
25...	1245	9,280	709	12.4	91	7.6	670	7.0	.0	151	151	184	--
MAR													
24...	0800	5,700	705	11.5	96	7.9	859	13.0	4.5	174	167	204	--
MAY													
25...	0800	6,680	696	9.7	98	8.6	578	6.5	11.5	127	126	134	10
JUN													
15...	1700	20,900	713	9.1	102	7.9	330	16.0	17.5	79	72	87	--
JUL													
15...	1530	9,310	705	8.1	107	8.2	372	33.5	25.5	100	93	111	1
AUG													
30...	0900	2,120	712	8.7	100	8.3	772	17.5	18.4	182	167	196	4
31...	0930	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
08...	1700	3,550	711	9.5	109	8.5	643	26.5	18.4	162	155	167	11

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	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, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)
OCT													
09...	11.4	179	<.04	<.06	<.008	<.006	.018	.23	--	--	--	--	--
NOV													
12...	10.8	183	.05	.50	E.005	<.006	.040	.75	<.006	<.006	<.006	<.005	<.005
DEC													
17...	12.4	204	E.03	.51	E.004	<.006	.018	.69	--	--	--	--	--
JAN													
22...	11.5	187	.06	.57	E.006	<.006	.025	.81	<.006	<.006	<.006	<.005	<.005
FEB													
25...	10.6	170	E.03	.49	.008	E.003	.101	1.08	--	--	--	--	--
MAR													
24...	16.7	252	<.04	.41	.008	<.006	.92	1.48	<.006	<.006	<.006	<.005	<.005
MAY													
25...	9.86	147	E.02	<.06	<.008	<.006	.27	.18	<.006	<.006	.006	<.005	<.005
JUN													
15...	3.99	67.1	<.04	.34	.027	.020	1.11	1.91	<.006	<.006	<.006	<.005	<.005
JUL													
15...	5.48	74.8	<.04	.12	<.008	E.004	.27	.70	<.006	<.006	<.006	<.005	<.005
AUG													
30...	11.0	208	<.04	<.06	<.008	<.006	.037	.33	<.006	<.006	<.006	<.005	<.005
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
08...	8.73	156	<.04	<.06	<.008	<.006	.048	.40	<.006	<.006	<.006	<.005	<.005

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM—Continued

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)
OCT													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
12...	E.005	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
DEC													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
22...	E.007	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
FEB													
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
24...	<.007	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
MAY													
25...	E.006	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
JUN													
15...	<.007	<.050	<.010	<.004	<.041	<.024	<.005	<.006	<.018	<.003	<.012	<.005	<.009
JUL													
15...	<.010	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
AUG													
30...	E.005	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
08...	<.010	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009

Date	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Desulfinyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	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)
OCT													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
12...	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
DEC													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
22...	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
FEB													
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
24...	<.02	<.200	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
MAY													
25...	<.02	--	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
JUN													
15...	<.02	<.005	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
JUL													
15...	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
AUG													
30...	<.02	<.036	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
08...	<.02	<.004	<.009	<.005	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM—Continued

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Propyzamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)
OCT													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
12...	<.013	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	M	<.004	<.025	<.011
DEC													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
22...	E.007	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	.01	<.004	<.025	<.011
FEB													
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
24...	<.013	<.006	<.003	<.007	<.005	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011
MAY													
25...	.017	<.006	<.050	<.007	<.003	<.010	<.004	<.022	<.011	.01	<.004	<.025	<.011
JUN													
15...	E.008	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011
JUL													
15...	.021	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011
AUG													
30...	.022	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011
31...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
08...	.019	<.006	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011

Date	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT											
09...	--	--	--	--	--	--	--	--	83	14	153
NOV											
12...	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	60	57	799
DEC											
17...	--	--	--	--	--	--	--	--	98	16	194
JAN											
22...	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	73	23	452
FEB											
25...	--	--	--	--	--	--	--	--	97	134	3,360
MAR											
24...	<.02	<.005	<.02	E.036	<.02	<.010	<.002	<.009	96	1,280	19,800
MAY											
25...	<.02	<.005	<.02	<.150	<.02	<.010	.008	<.009	95	440	7,940
JUN											
15...	<.02	<.005	<.02	<.034	<.02	<.010	.005	<.009	88	1,430	80,600
JUL											
15...	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	93	523	13,100
AUG											
30...	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	99	29	166
31...	--	--	--	--	--	--	--	--	--	--	--
SEP											
08...	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009	95	43	412

< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

POWDER RIVER BASIN WATER FLUX PROJECT

YELLOWSTONE RIVER BASIN

443855106051201 WILD HORSE CREEK TRIBUTARY, 0.2 MILES ABOVE MOUTH NEAR ARVADA, WY (LAT 44 38 56 LONG 106 05 18)

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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	0.00
23	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
24	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
29	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
30	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
31	---	---	---	---	---	---	---	---	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
MEAN	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
MAX	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
MIN	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00

POWDER RIVER BASIN WATER FLUX PROJECT—Continued

443855106051201 WILD HORSE CREEK TRIBUTARY, 0.2 MILES ABOVE MOUTH NEAR ARVADA, WY (LAT 44 38 56 LONG 106 05 18)

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	0.04	0.00	0.00
2	---	---	---	---	---	---	---	---	---	0.06	0.00	0.04
3	---	---	---	---	---	---	---	---	---	0.00	0.10	0.25
4	---	---	---	---	---	---	---	---	---	0.01	0.02	0.02
5	---	---	---	---	---	---	---	---	---	0.49	0.02	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	0.12
14	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
15	---	---	---	---	---	---	---	---	---	0.04	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	0.13
21	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
22	---	---	---	---	---	---	---	---	0.00	0.09	0.00	0.00
23	---	---	---	---	---	---	---	---	0.02	0.74	0.00	0.03
24	---	---	---	---	---	---	---	---	0.02	0.00	0.00	0.00
25	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	---	---	0.00	0.00	0.02	0.00
27	---	---	---	---	---	---	---	---	0.00	0.20	0.00	0.08
28	---	---	---	---	---	---	---	---	0.00	0.15	0.00	0.00
29	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
30	---	---	---	---	---	---	---	---	0.03	0.00	0.00	0.00
31	---	---	---	---	---	---	---	---	---	0.00	0.00	---

POTENTIAL EVAPOTRANSPIRATION (PET), CALCULATED BY PRIESTLEY-TAYLOR METHOD, MILLIMETERS PER HOUR
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	&3.80	&4.09	3.61
2	---	---	---	---	---	---	---	---	---	&4.33	&3.86	1.27
3	---	---	---	---	---	---	---	---	---	&4.13	&3.33	1.01
4	---	---	---	---	---	---	---	---	---	&3.45	&4.37	2.49
5	---	---	---	---	---	---	---	---	---	&2.21	&4.63	3.75
6	---	---	---	---	---	---	---	---	---	&5.70	4.30	2.63
7	---	---	---	---	---	---	---	---	---	&4.25	5.26	3.46
8	---	---	---	---	---	---	---	---	---	&3.96	4.95	2.90
9	---	---	---	---	---	---	---	---	---	&4.66	3.86	3.13
10	---	---	---	---	---	---	---	---	---	&4.00	3.73	1.33
11	---	---	---	---	---	---	---	---	---	&3.60	4.58	3.06
12	---	---	---	---	---	---	---	---	---	&4.75	4.19	2.37
13	---	---	---	---	---	---	---	---	---	&3.96	4.17	2.98
14	---	---	---	---	---	---	---	---	---	&4.81	4.13	2.66
15	---	---	---	---	---	---	---	---	---	&1.21	4.22	2.82
16	---	---	---	---	---	---	---	---	---	&4.89	4.02	2.76
17	---	---	---	---	---	---	---	---	---	&4.57	2.31	2.79
18	---	---	---	---	---	---	---	---	---	&4.16	3.67	1.85
19	---	---	---	---	---	---	---	---	---	&4.48	3.62	1.92
20	---	---	---	---	---	---	---	---	---	&3.42	3.29	0.89
21	---	---	---	---	---	---	---	---	---	&4.47	3.29	2.09
22	---	---	---	---	---	---	---	---	---	&3.28	3.16	2.76
23	---	---	---	---	---	---	---	---	---	&1.82	3.03	1.81
24	---	---	---	---	---	---	---	---	---	&4.90	3.80	1.93
25	---	---	---	---	---	---	---	---	---	&4.64	2.25	2.85
26	---	---	---	---	---	---	---	---	---	&3.56	2.88	2.77
27	---	---	---	---	---	---	---	---	---	&4.24	2.61	0.41
28	---	---	---	---	---	---	---	---	---	&6.01	3.54	1.78
29	---	---	---	---	---	---	---	---	---	&4.02	3.08	2.73
30	---	---	---	---	---	---	---	---	---	&4.30	3.56	0.99
31	---	---	---	---	---	---	---	---	---	&4.32	3.43	---

& V Value computed includes estimated unit values of soil moisture.

POWDER RIVER BASIN WATER FLUX PROJECT

YELLOWSTONE RIVER BASIN

443904106052301 WILD HORSE CREEK TRIBUTARY, 0.1 MILES ABOVE MOUTH NEAR ARVADA, WY (LAT 44 39 04 LONG 106 05 23)

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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	0.00
24	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
25	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
26	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
29	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
30	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
31	---	---	---	---	---	---	---	---	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
MEAN	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
MAX	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
MIN	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00

THIS PAGE IS INTENTIONALLY BLANK

Acid neutralizing capacity, definition of 27
Acme,
Goose Creek near 205
Prairie Dog Creek near 215
Acre-foot, definition of 27
Adenosine triphosphate, definition of 27
Adjusted discharge, definition of 27
Alcova, Sweetwater River near 402
Algae,
Blue-green, definition of 28
Fire, definition of 31
Green, definition of 32
Algal growth potential, definition of 27
Alkalinity, definition of 27
Alpine,
Greys River above Reservoir, near 553
Snake River above reservoir, near 551
Anchor Reservoir, South Fork Owl Creek below 130
Annual runoff, definition of 27
Annual 7-day minimum, definition of 27
Antelope Creek near Teckla 324
Aquifer,
Confined, definition of 29
Unconfined, definition of 41
Water-table, definition of 41
Archer, Crow Creek near 436
Arlington, Rock Creek above King Canyon Canal, near 396
Aroclor, definition of 27
Artificial substrate, definition of 27
Arvada,
Clear Creek near 290
Cottonwood Creek at mouth 271
Crazy Woman Creek at Upper Station, near 262
Ivy Creek at mouth 282
Powder River above Clear Creek, near 284
Powder River at 272
Spotted hHorse Creek at mouth 283
Wild Horse Creek at mouth 281
Wild Horse Creek near 277
Ash mass, definition of 27
Aspect, definition of 27

Bacteria, definition of 27
Enterococcus, definition of 30
Escherichia coli, definition of 31
Fecal coliform, definition of 31
Fecal streptococcal, definition of 31
Total coliform, definition of 39
Baggs,
Little Snake River below 490
Muddy Creek below Young Draw, nea 488
Bankfull stage, definition of 28
Barber Creek at mouth, near Buffalo 261
Barnum, Middle Fork Powder River near 232
Base discharge, definition of 28
Base flow, definition of 28
Basin, Bighorn River at 135
Battle Creek, West Fork, at Battle Creek Campground, near Savery . . . 485
Bear River
above reservoir, near Woodruff, UT 495
at Border 508
at Evanston 493
below Pixley Dam, near Cokeville 500
below reservoir, near Woodruff, UT 498
below Smiths Fork, near Cokeville 505
near Utah-Wyoming State line 491
Beaver Creek (tributary to Cheyenne River) at Mallo Camp, near Four Corners 342
Beaver Creek (tributary to Powder River) at mouth, near Sussex 251
Bechler Ranger Station, Boundary Creek near 558
Bed material, definition of 28
Bedload, definition of 28
Bedload discharge, definition of 28
Belfry, MT, Clarks Fork Yellowstone River near 75
Belle Fourche River
at Wyoming-South Dakota State Line 367
below Hulett 365
below Moorcroft 361
below Rattlesnake Creek, near Piney 348
Benthic organisms, definition of 28
Beulah,
Crow Creek near 377
Sand Creek near Ranch A, near 371
Big Horn,
Coney Creek above Twin Lakes, near 195
Coney Creek below Twin Lakes, near 197
Little Goose Creek in canyon, near 199
Big Piney, New Fork River near 445
Big Sandy Reservoir near Farson 458
Big Sandy River
at Gasson Bridge, near Eden 460
near Farson 456
Bighorn River
at Basin 135
at Kane 145
at Lucerne 132
near St. Xavier, MT 173
Biochemical oxygen demand, definition of 28
Biomass, definition of 28
Biomass pigment ratio, definition of 28
Bitter Creek near Garland 169
Black Thunder Creek near Hampshire 330
Blacks Fork
near Little America 474
near Lyman 470
near Robertson 466
Blue-green algae, definition of 28
Boiling River at Mammoth, Yellowstone National Park 66
Border,
Bear River at 508
Smiths Fork 502
Bosler, Laramie River near 421
Bottom material, definition of 28
Boundary Creek near Bechler Ranger Station 558
Box Elder Creek at Boxelder 406
Boxelder, Box Elder Creek at 406
Boysen Reservoir, Wind River below 128
Buckhorn, Cold Springs Creek at 369
Buffalo,
Barber Creek at mouth 261
Burger Draw at mouth 256
Clear Creek above Kumor Draw, near 287
Dead Horse Creek near 260
Powder River above Burger Draw, near 252
Powder River below Burger Draw, near 257
Rock Creek near 285
Van Houten Draw at mouth 259
Buffalo Bill Reservoir,
Shoshone River below 167
South Fork Shoshone River above 165
Buffalo Fork above Lava Creek, near Moran 520
Bulk electrical conductivity, definition of 28
Bull Lake Creek
above Bull Lake 91
near Lenore 93
Bull Lake, Bull Lake Creek above 91

Burgar Draw at mouth, near Buffalo 256
Burris,
Dinwoody Creek above Lakes, near 81
Dry Creek Canal at headgate, near 87
Dry Creek near 85
Upper Wind River A Canal at Headworks, near 83
Bushnell, NE, Lodgepole Creek 437

Caballo Creek
at mouth, near Piney 353
near Gillette 352
Cache Creek near Jackson 541
Canadian Geodetic Vertical Datum 1928, definition of 28
Casper, North Platte River below 405
Cell volume, definition of 28
Cells/volume, definition of 28
Cfs-day, definition of 29
Channel bars, definition of 29
Chemical oxygen demand, definition of 29
Cheyenne River
at Edgemont, SD 346
at Riverview 332
near Dull Center, WY 326
near Spencer, WY 334
Cheyenne, Crow Creek at 19th Street, at 434
Clarks Fork Yellowstone River
at Montana-Wyoming State line, near Cooke City, MT 74
near Belfry, MT 75
Clear Creek
above Double Crossing Creek, near 289
above Kumor Draw, near Buffalo 287
near Arvada 290
Clearmont, Clear Creek above Double Crossing Creek, near 289
Clostridium perfringens, definition of 29
Cokeville,
Bear River below Pixley Dam, near 500
Bear River below Smiths Fork, near 505
Smiths Fork at 504
Cold Springs Creek at Buckhorn 369
Coliphages, definition of 29
Color unit, definition of 29
Conductivity, definition of 38
Coney Creek
above Twin Lakes, near Big Horn 195
below Twin Lakes, near Big Horn 197
Confined aquifer, definition of 29
Contents, definition of 29
Continuous-record station, definition of 29
Control, definition of 29
Control structure, definition of 29
Cooke City, MT, Clarks Fork Yellowstone River near
Montana-Wyoming State line, at 74
Corwin Springs, MT, Yellowstone River at 72
Cottonwood Creek (tributary to Bighorn River) at High Island
Ranch, near Hamilton Dome 133
Cottonwood Creek (tributary to Powder River) at mouth, near Arvada . 271
Crazy Woman Creek at Upper Station, near Arvada 262
Crow Creek (tributary to North Fork Shoshone River) at mouth,
at Pahaska 148
Crow Creek (tributary to South Platte River)
at 19th Street, at Cheyenne 434
near Archer 436
Crow Creek (tributary to Redwater Creek) near Beulah 377
Crowheart,
Willow Creek near 89
Wind River near 95
Cubic foot per second, definition of 29
Cubic foot per second-day, definition of 29
Cubic foot per second per square mile, definition of 29

Daily mean suspended-sediment concentration, definition of 29
Daily record station, definition of 29
Daniel, Green River at Warren Bridge, near 439
Data collection platform, definition of 29
Data logger, definition of 29
Datum, definition of 29
Dayton,
East Pass Creek near 179
Highline Ditch near 183
Tongue River near 185
Dead Horse Creek near Buffalo 260
Decker, Tongue River at State line, near 221
Diamondville, Hams Fork near 473
Diatoms, definition of 30
Diel, definition of 30
Dinwoody Creek
above Lakes, near Burris 81
at Headworks, near Wilderness 560
Discharge, definition of 30
Dissolved, definition of 30
Dissolved oxygen, definition of 30
Dissolved solids concentration, definition of 30
Diversity index, definition of 30
Donkey Creek
near Gillette 355
near Moorcroft 359
Drainage area, definition of 30
Drainage basin, definition of 30
Dry Creek (tributary to Wind River) near Burris 85
Dry Creek Canal at headgate, near Burris 87
Dry Fork Little Powder River at mouth, near Gillette 310
Dry mass, definition of 30
Dry weight, definition of 30
Dubois,
Wind River above Red Creek, near 79
Wind River near 77
Dull Center, Cheyenne River near 326

East Fork of Smiths Fork near Robertson 468
East Pass Creek near Dayton 179
Eden, Big Sandy River at Gasson Bridge, near 460
Edgemont, SD, Cheyenne River at 346
Elk Mountain, Pass Creek near 391
Embeddedness, definition of 30
Encampment,
Encampment River above Hog Park Creek, near 385
Encampment River at mouth, near 387
Haggarty Creek above Belvidere Ditch, near 484
Encampment River
above Hog Park Creek, near Encampment 385
at mouth, near Encampment 387
Enterococcus bacteria, definition of 30
EPT Index, definition of 31
Escherichia coli (*E. coli*), definition of 31
Estimated (E) value, definition of 31
Etna, Salt River above Reservoir, near 555
Euglenoids, definition of 31
Evanston, Bear River at 493
Extractable organic halides, definition of 31

Farson,
Big Sandy Reservoir near 458
Big Sandy River near 456
Fecal coliform bacteria, definition of 31
Fecal streptococcal bacteria, definition of 31
Filmore, Little Laramie River near 419

Filtered, definition of 31
Filtered, recoverable, definition of 31
Fire algae, definition of 31
Firehole River near West Yellowstone, MT 43
Fish Creek at Wilson 539
Fivemile Creek
above Wyoming Canal, near Pavillion 124
near Shoshoni 126
Flagg Ranch, Snake River above Jackson Lake, at 510
Flat Creek below Cache Creek, near Jackson 543
Flow, definition of 30
Flow-duration percentiles, definition of 31
Fontenelle Creek near Herschler Ranch, near Fontenelle 451
Fontenelle Reservoir, Green River below 453
Fontenelle, Fontenelle Creek near Herschler Ranch, near 451
Fort Laramie, Laramie River near 428
Fort Washakie,
North Fork Little Wind River near 113
Ray Canal at Headworks, near 111
South Fork Little Wind River above Washakie Reservoir, near . . 107
South Fork Little Wind River below Washakie Reservoir, near . . 109
Trout Creek near 115
Four Corners, Beaver Creek at Mallo Camp, near 342
Fremont Lake,
Pine Creek above 441
Pine Creek below 443
Frontier, Hams Fork below Pole Creek, near 471

Gage datum, definition of 31
Gage height, definition of 32
Gage values, definition of 32
Gaging station, definition of 32
Gallatin Gateway, MT, Gallatin River near 54
Gallatin River near Gallatin Gateway, MT 54
Gardner River near Mammoth, Yellowstone National Park 70
Garland, Bitter Creek near 169
Gas chromatography/flame ionization detector, definition of 32
Geomorphic channel units, definition of 32
Gibbon River at Madison Junction, Yellowstone National Park 47
Gillette,
Caballo Creek near 352
Donkey Creek near 355
Dry Fork Little Powder River at mouth 310
Rawhide Creek at mouth 311
Stonepile Creek at mouth, near 357
Glendo Reservoir, North Platte River below 411
Goose Creek
below Sheridan 203
near Acme 205
Granite Creek above Granite Creek Supplemental, near Moose 537
Green algae, definition of 32
Green River
at Warren Bridge, near Daniel 439
below Fontenelle Reservoir 453
below Green River 465
near Green River 462
near Greendale, UT 478
near La Barge 449
Green River,
Green River below 465
Green River near 462
Greendale, UT, Green River near 478
Greybull River at Meeteetse 138
Greys River above Reservoir, near Alpine 553
Gros Ventre River at Zenith 535

Habitat, definition of 32
Habitat quality index, definition of 32
Haggarty Creek above Belvidere Ditch, near Encampment 484
Hamilton Dome, Cottonwood Creek at High Island Ranch, near 133
Hampshire,
Black Thunder Creek near 330
Little Thunder Creek near 329
Hams Fork
below Pole Creek, near Frontier 471
near Diamondville 473
Hanna, Medicine Bow River above Seminoe Reservoir, near 400
Hardness, definition of 32
Hazelton, North Fork Powder River near 234
Henrys Fork near Manila, UT 476
High tide, definition of 32
Highline Ditch near Dayton 183
Hilsenhoff's Biotic Index, definition of 32
Horizontal datum, definition of 32
Horse Creek at mouth, near Weston 312
Hulett, Belle Fourche River below 365
Hydrologic index stations, definition of 32
Hydrologic unit, definition of 32

Inch, definition of 32
Instantaneous discharge, definition of 32
International Boundary Commission Survey Datum, definition of 32
Island, definition of 32
Ivy Creek at mouth, near Arvada 282

Jack Creek above Coyote Draw, near Saratoga 389
Jackson,
Cache Creek near 541
Flat Creek below Cache Creek, near Jackson 543
Snake River below Flat Creek, near 545
Johnstown Ditch at Headworks, near Kinnear 99

Kane, Bighorn River at 145
Kinnear
Johnstown Ditch at Headworks, near 99
Wind River near 101

L X Bar Creek at mouth, near Moorhead, MT 299
La Barge, Green River near 449
LaBarge Creek above Viola 447
Laboratory reporting level, definition of 32
Lake Creek, at State Highway 390, near Wilson 560
Lamar River near Tower Falls Ranger Station, Yellowstone National Park 64
Lander Little Popo Agie River near 117
Land-surface datum, definition of 33
Laramie River
near Bosler 421
near Fort Laramie 428
Laramie River and Pioneer Canal near Woods 415
Latent heat flux, definition of 33
Lefthand Ditch at Headworks, near Riverton 103
Lenore,
Bull Lake Creek near 93
Wyoming Canal near 97
Light-attenuation coefficient, definition of 33
Lipid, definition of 33
Little America, Blacks Fork near 474
Little Bighorn River at State line, near Wyola, MT 175
Little Goose Creek
at Sheridan 201
in canyon, near Big Horn 199
Little Laramie River near Filmore 419
Little Medicine Bow River at Boles Spring, near Medicine Bow 398
Little Popo Agie River near Lander 117

Little Powder River
above Dry Creek, near Weston . . . 315
below Elk Creek at mouth, near Weston . . . 313
Little Snake River
below Baggs . . . 490
near Slater, CO . . . 482
Little Thunder Creek near Hampshire, WY . . . 329
Little Wind River
near Riverton . . . 119
North Fork, near Fort Washakie . . . 113
South Fork, above Washakie Reservoir, near Fort Washakie . . . 107
South Fork, below Washakie Reservoir, near Fort Washakie . . . 109
Lodgepole Creek at Bushnell, NE . . . 437
Long-term method detection level, definition of . . . 33
Lovell, Shoshone River near . . . 170
Low flow, 7-day, 10-year, definition of . . . 37
Low tide, definition of . . . 33
Lucerne, Bighorn River at . . . 132
Lyman, Blacks Fork near . . . 470

Macrophytes, definition of . . . 33
Madison River near West Yellowstone, MT . . . 51
Manila, UT, Henrys Fork near . . . 476
Mayoworth, North Fork Powder River below Pass Creek, near . . . 236
Mean concentration of suspended sediment, definition of . . . 33
Mean discharge, definition of . . . 33
Mean high tide, definition of . . . 33
Mean low tide, definition of . . . 33
Mean sea level, definition of . . . 33
Measuring point, definition of . . . 33
Medicine Bow River above Seminoe Reservoir, near Hanna . . . 400
Medicine Bow, Little Medicine Bow River at Boles Spring, near . . . 398
Meeteetse, Greybull River at . . . 138
Megahertz, definition of . . . 33
Membrane filter, definition of . . . 33
Metamorphic stage, definition of . . . 33
Method code, definition of . . . 33
Method detection limit, definition of . . . 33
Method of Cubatures, definition of . . . 34
Methylene blue active substances, definition of . . . 34
Micrograms per gram, definition of . . . 34
Micrograms per kilogram, definition of . . . 34
Micrograms per liter, definition of . . . 34
Microsiemens per centimeter, definition of . . . 34
Milligrams per liter, definition of . . . 34
Minimum reporting level, definition of . . . 34
Miscellaneous site, definition of . . . 34
Monarch, Tongue River at . . . 189
Moorcroft,
Belle Fourche River below . . . 361
Donkey Creek near . . . 359
Moorhead, MT
L X Bar Creek at mouth . . . 299
Powder River at . . . 301
S A Creek at mouth . . . 300
Moose,
Granite Creek above Granite Creek Supplemental, near . . . 537
Snake River at . . . 522
Moran,
Buffalo Fork above Lava Creek, near . . . 520
Pacific Creek at . . . 518
Snake River near . . . 516
Most probable number, definition of . . . 34
Muddy Creek below Young Draw near Baggs . . . 488
Multiple-plate samplers, definition of . . . 34
Murray Ditch above Headgate at Wyoming-South Dakota State line . . . 373

Nanograms per liter, definition of . . . 34
National Geodetic Vertical Datum of 1929, definition of . . . 34
Natural substrate, definition of . . . 34
Nekton, definition of . . . 34
New Fork River near Big Piney . . . 445
Newcastle, Stockade Beaver Creek near . . . 344
Nonfilterable, definition of . . . 34
North American Datum of 1927, definition of . . . 34
North American Datum of 1983, definition of . . . 34
North American Vertical Datum of 1988, definition of . . . 34
North Brush Creek, near Saratoga . . . 381
North Platte River
above Seminoe Reservoir, near Sinclair . . . 393
at Orin . . . 408
at Wyoming-Nebraska State line . . . 431
below Casper . . . 405
below Glendo Reservoir . . . 411
below Whalen Diversion Dam . . . 413
near Northgate, CO . . . 379
Northgate, CO, North Platte River near . . . 379

Olmstead Creek at mouth, near Weston . . . 314
Open interval, definition of . . . 35
Organic carbon, definition of . . . 35
Organic mass, definition of . . . 35
Organism count,
Area, definition of . . . 35
Total, definition of . . . 40
Volume, definition of . . . 35
Organochlorine compounds, definition of . . . 35
Orin, North Platte River at . . . 408
Owl Creek, South Fork below Anchor Reservoir . . . 130

Pacific Creek at Moran . . . 518
Pahaska, Crow Creek at mouth, at . . . 148
Parameter code, definition of . . . 35
Parkman, West Pass Creek near . . . 177
Partial-record station, definition of . . . 35
Particle size, definition of . . . 35
Particle-size classification, definition of . . . 35
Pass Creek (tributary to North Platte River), near Elk Mountain . . . 391
Pass Creek (tributary to Tongue River) near Wyola, MT . . . 181
Pavillion, Fivemile Creek above Wyoming Canal, near . . . 124
Peak flow, definition of . . . 35
Peak stage, definition of . . . 35
Percent composition, definition of . . . 35
Percent of total, definition of . . . 35
Percent shading, definition of . . . 35
Periodic-record station, definition of . . . 35
Periphyton, definition of . . . 36
Pesticides, definition of . . . 36
pH, definition of . . . 36
Phytoplankton, definition of . . . 36
Picocurie, definition of . . . 36
Pine Creek
above Fremont Lake . . . 441
below Fremont Lake . . . 443
Piney,
Belle Fourche River below Rattlesnake Creek, near . . . 348
Caballo Creek at mouth, near . . . 353
Pioneer Canal. See Laramie River and Pioneer Canal . . . 415
Plankton, definition of . . . 36
Polychlorinated biphenyls, definition of . . . 36
Polychlorinated naphthalenes, definition of . . . 36
Pool, definition of . . . 36
Porcupine Creek near Teckla . . . 320

Powder River
above Burger Draw, near Buffalo 252
at Arvada 272
above Clear Creek, near Arvada 284
at Moorhead, MT 301
at Sussex 240
below Burger Draw, near Buffalo 257
Middle Fork, near Barnum 232
North Fork, below Pass Creek, near Mayoworth 236
North Fork, near Hazelton 234
Prairie Dog Creek
at Wakeley Siding near Sheridan 211
near Acme 215
Primary productivity, definition of 36
Carbon method, definition of 36
Oxygen method, definition of 36
Pumpkin Creek near mouth, near Sussex 250

Radioisotopes, definition of 36
Rawhide Creek at mouth, near Gillette 311
Ray Canal
at Headworks, near Fort Washakie 111
at Headworks below 65-C Lateral, near Milford 560
Reach, definition of 36
Recoverable, definition of 36
Recurrence interval, definition of 37
Redwater Creek at Wyoming-South Dakota State line 375
Replicate samples, definition of 37
Return period, definition of 37
Riffle, definition of 37
River mileage, definition of 37
Riverton,
Lefthand Ditch at Headworks, near 103
Little Wind River near 119
Wind River at 105
Riverview, Cheyenne River at 332
Robertson,
Blacks Fork near 466
East Fork of Smiths Fork near 468
Rock Creek (tributary to Clear Creek) near Buffalo 285
Rock Creek (tributary to Medicine Bow River) above King Canyon Canal, near Arlington 396
Run, definition of 37
Runoff, definition of 37

S A Creek at mouth, near Moorhead, MT 300
Salinity, definition of 37
Salt Creek near Sussex 238
Salt River above Reservoir, near Etna 555
Sand Creek (tributary to Belle Fourche River) near Ranch A, near Beulah 371
Sand Creek (tributary to Laramie River) at Colorado-Wyoming State line 417
Saratoga,
Jack Creek above Coyote Draw, near 389
North Brush Creek near 381
South Brush Creek near 383
Savery, West Fork Battle Creek at Battle Creek Campground, near . . . 485
Screened interval, definition of 35
Sea level, definition of 37
Sediment, definition of 37
Sensible heat flux, definition of 37
Seven-day, 10-year low flow, definition of 37
Shell Creek
above Shell Reservoir 141
near Shell 143
Shell Reservoir, Shell Creek above 141
Shell, Shell Creek near 143
Shelves, definition of 37
Sheridan, ... 211
Little Goose Creek at 201
Prairie Dog Creek at Wakeley Siding near 211
Goose Creek below 203
Shoshone River
below Buffalo Bill Reservoir 167
near Lovell 170
North Fork, at Wapiti 161
South Fork above Buffalo Bill Reservoir 165
South Fork, near Valley 163
Shoshoni,
Fivemile Creek near 126
Wind River above Boysen Reservoir, near 122
Silver Gate, MT, Soda Butte Creek at Park Boundary, at 58
Sinclair, North Platte River above Seminoe Reservoir, near 393
Sixty-seven-C (67-C) Lateral at Headworks 560
Slater Fork near Slater, CO 486
Slater, CO
Little Snake River near 482
Slater Fork near 486
Smiths Fork (tributary to Bear River)
at Cokeville 504
near Border 502
Snake River
above Jackson Lake, at Flagg Ranch 510
above reservoir, near Alpine 551
at Moose 522
below Flat Creek, near Jackson 545
near Moran 516
Soda Butte Creek
at Park Boundary, at Silver Gate, MT 58
near Lamar Ranger Station, Yellowstone National Park 62
Sodium adsorption ratio, definition of 38
Soil heat flux, definition of 38
Soil-water content, definition of 38
South Brush Creek, near Saratoga 383
Specific electrical conductance (conductivity), definition of 38
Spencer, Cheyenne River near 334
Spencer, WY, Cheyenne River near ??– 341
Spotted Horse Creek at mouth, near Arvada 283
Squaw Creek at Smith Street, at Lander 561
St. Xavier, MT, Bighorn River near 173
Stable isotope ratio, definition of 38
Stage, definition of 38
Stage-discharge relation, definition of 38
Stockade Beaver Creek near Newcastle 344
Stonepile Creek at mouth, near Gillette 357
Streamflow, definition of 38
Substrate, definition of 38
Artificial, definition of 27
Natural, definition of 34
Substrate embeddedness class, definition of 38
Surface area of a lake, definition of 38
Surficial bed material, definition of 38
Surrogate, definition of 38
Suspended, definition of 38
Recoverable, definition of 38
Total, definition of 39
Suspended sediment, definition of 38
Suspended-sediment concentration, definition of 38
Suspended-sediment discharge, definition of 39
Suspended-sediment load, definition of 39
Suspended solids, total residue at 105 °C concentration, definition of . . 39

Sussex,
Beaver Creek near mouth . . . 251
Powder River at . . . 240
Pumpkin Creek near mouth . . . 250
Salt Creek near . . . 238
Willow Creek near mouth . . . 249
Sweetwater River near Alcova . . . 402
Sybille Creek
above Canal No. 3, near Wheatland . . . 425
above Mule Creek, near Wheatland . . . 423
Synoptic studies, definition of . . . 39

Taxa (Species) richness, definition of . . . 39
Taxonomy, definition of . . . 39
Teckla,
Antelope Creek near . . . 324
Porcupine Creek near . . . 320
Thalweg, definition of . . . 39
Thermograph, definition of . . . 39
Time-weighted average, definition of . . . 39
Tongue River
at Monarch . . . 189
at State line, near Decker . . . 221
near Dayton . . . 185
Tons per acre-foot, definition of . . . 39
Tons per day, definition of . . . 39
Total, definition of . . . 39
Total coliform bacteria, definition of . . . 39
Total discharge, definition of . . . 40
Total in bottom material, definition of . . . 40
Total length, definition of . . . 40
Total load, definition of . . . 40
Total organism count, definition of . . . 40
Total recoverable, definition of . . . 40
Total sediment discharge, definition of . . . 40
Total sediment load, definition of . . . 40
Transect, definition of . . . 40
Trout Creek near Fort Washakie . . . 115
Turbidity, definition of . . . 40

Ultraviolet (UV) absorbance (absorption), definition of . . . 41
Unconfined aquifer, definition of . . . 41
Unfiltered, definition of . . . 41
Unfiltered, recoverable, definition of . . . 41
Upper Wind River A Canal at Headworks, near Burris . . . 83, 560

Valley, South Fork Shoshone River near . . . 163
Van Houten Draw at mouth, near Buffalo . . . 259
Vertical datum, definition of . . . 41
Viola, LaBarge Creek above . . . 447
Volatile mass, definition of . . . 35
Volatile organic compounds, definition of . . . 41

Wapiti, North Fork Shoshone River at . . . 161
Water table, definition of . . . 41
Water-table aquifer, definition of . . . 41
Water year, definition of . . . 41
Watershed, definition of . . . 41
WDR, definition of . . . 41
Weighted average, definition of . . . 41
West Pass Creek near Parkman . . . 177
West Yellowstone, MT
Firehole River near . . . 43
Madison River near . . . 51
Weston,
Horse Creek at mouth . . . 312
Little Powder River above Dry Creek, near . . . 315
Little Powder River below Elk Creek at mouth . . . 313
Olmstead Creek at mouth . . . 314
Wet mass, definition of . . . 41
Wet weight, definition of . . . 42
Whalen Diversion Dam, North Platte River below . . . 413
Wheatland,
Sybille Creek above Canal No. 3, near . . . 425
Sybille Creek above Mule Creek, near . . . 423
Wheatland Creek below . . . 427
Wheatland Creek below Wheatland . . . 427
Wild Horse Creek
at mouth, near Arvada . . . 281
near Arvada . . . 277
Willow Creek (tributary to Wind River) near Crowheart . . . 89
Willow Creek (tributary to Powder River) near mouth, near Sussex . . . 249
Wilson, Fish Creek at . . . 539
Wind River
above Boysen Reservoir, near Shoshoni . . . 122
above Red Creek, near Dubois . . . 79
at Riverton . . . 105
below Boysen Reservoir . . . 128
near Crowheart . . . 95
near Dubois . . . 77
near Kinnear . . . 101
Wolf Creek at Wolf . . . 187
Wolf, Wolf Creek at . . . 187
Woodruff, UT
Bear River above reservoir, near . . . 495
Bear River below reservoir, near . . . 498
Woods, Laramie River and Pioneer Canal near . . . 415
WSP, definition of . . . 42
Wyola, MT
Little Bighorn River at State line, near . . . 175
Pass Creek near . . . 181
Wyoming Canal near Lenore . . . 97

Yellowstone National Park,
Boiling River at Mammoth . . . 66
Gardner River near Mammoth . . . 70
Gibbon River at Madison Junction . . . 47
Lamar River near Tower Falls Ranger Station . . . 64
Soda Butte Creek near Lamar Ranger Station . . . 62
Yellowstone River at Yellowstone Lake Outlet . . . 56
Yellowstone River
at Corwin Springs, MT . . . 72
at Forsyth, MT. . . . 562
at Yellowstone Lake Outlet, Yellowstone National Park . . . 56
near Sidney, MT . . . 566

Zenith, Gros Ventre River at . . . 535
Zooplankton, definition of . . . 42

Conversion Factors

Multiply	By	To obtain
	Length	
inch (in.)	2.54×10^{1}	millimeter (mm)
	2.54×10^{-2}	meter (m)
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 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)	1.233×10^{3}	cubic meter (m^3)
	1.233×10^{-3}	cubic hectometer (hm^3)
	1.233×10^{-6}	cubic kilometer (km^3)
	Flow	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter per second (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 (m^3/s)
	4.381×10^{1}	cubic decimeter per second (dm^3/s)
	Mass	
ton (short)	9.072×10^{-1}	megagram (Mg) or metric ton

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

°F = (1.8 x °C) + 32

Printed on recycled paper